



# METROPOLITAN WASHINGTON COUNCIL OF GOVERNMENTS (MWCOCG)

SUBSCRIBER RADIOS

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SECTION 1

# OPTIONAL TWO-WAY RADIO PRODUCTS

## 1.1 OPTIONAL TWO-WAY RADIO PRODUCTS

Comprehensive Two-Way Radio Product Catalog				
Product Category	Part Number (if different than manuf. Product #)	Brand Manufacturer	Manufacturer Product Number	Product Description
TWO WAY RADIOS PORTABLES	APX1000	Motorola Solutions	H84UCD9PW5 N	7/800 Portable Radio 1.5
(ECAT APC 536;426; 755; 756652; 562; 579)	APX1000	Motorola Solutions	H84UCF9PW6 N	7/800 Portable Radio 2
	APX1000	Motorola Solutions	H84UCH9PW7 N	7/800 Portable Radio 3
	APX1000	Motorola Solutions	H84QDD9PW5 N	UHF R1 Portable Radio 1.5
	APX1000	Motorola Solutions	H84QDF9PW6 N	UHF R1 Portable Radio 2
	APX1000	Motorola Solutions	H84QDH9PW7 N	UHF R1 Portable Radio 3
	APX1000	Motorola Solutions	H84SDD9PW5 N	UHF R2 Portable Radio 1.5
	APX1000	Motorola Solutions	H84SDF9PW6 N	UHF R2 Portable Radio 2
	APX1000	Motorola Solutions	H84SDH9PW7 N	UHF R2 Portable Radio 3
	APX1000	Motorola Solutions	H84KDD9PW5 N	VHF Portable Radio 1.5
	APX1000	Motorola Solutions	H84KDF9PW6 N	VHF Portable Radio 2
	APX1000	Motorola Solutions	H84KDH9PW7 N	VHF Portable Radio 3
	APX1000	Motorola Solutions	H84WCF9PW6 N	900 Portable 2



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	APX1000	Motorola Solutions	QA04096	ENH: P25 TRUNKING
	APX1000	Motorola Solutions	QA04097	ENH: P25 CONVENTIONAL
	APX1000	Motorola Solutions	QA01648	ADVANCED SYSTEM KEY - HARDWARE KEY
	APX1000	Motorola Solutions	G996	OTAP
	APX1000	Motorola Solutions	QA00580	TDMA
	APX1000	Motorola Solutions	QA09000	DIGITAL TONE SIGNAL
	APX1000	Motorola Solutions	H869	Multitkey
	APX1000	Motorola Solutions	QA03399	Enhanced Data
	APX1000	Motorola Solutions	QA09008	Group Services
	APX1000	Motorola Solutions	QA01767	P25 Link Layer Authent
	APX1000	Motorola Solutions	QA09012	Mission Critical GeoFence
	APX1000	Motorola Solutions	H885BK	3 Year SFS Lite
	APX1000	Motorola Solutions	Q887	5 Year SFS Lite
	APX1000	Motorola Solutions	HA00022AB	3 Year SFS Comprehensive
	APX4000	Motorola Solutions	H51UCF9PW6 N	7/800 Portable Radio 2
	APX4000	Motorola Solutions	H51UCH9PW7 N	7/800 Portable Radio 3
	APX4000	Motorola Solutions	H51KDF9PW6 N	VHF Portable Radio 2
	APX4000	Motorola Solutions	H51KDH9PW7 N	VHF Portable Radio 3
	APX4000	Motorola Solutions	H51QDF9PW6 N	UHF R1 Portable Radio 2
	APX4000	Motorola Solutions	H51QDH9PW7 N	UHF R1 Portable Radio 3
	APX4000	Motorola Solutions	H51SDF9PW6 N	UHF R2 Portable Radio 2
	APX4000	Motorola Solutions	H51SDH9PW7 N	UHF R2 Portable Radio 3
	APX4000	Motorola Solutions	H51WCF9PW6 N	900 Portable Radio 2
	APX4000	Motorola Solutions	H51WCH9PW7 N	900 Portable Radio 3



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Product Category	Part Number (if different than manuf. Product #)	Brand Manufacturer	Manufacturer Product Number	Product Description
	APX4000	Motorola Solutions	Q443	Analog 3600 BAUD
	APX4000	Motorola Solutions	Q811	P25 Conventional
	APX4000	Motorola Solutions	QA02756	3600 or 9600 Trunking
	APX4000	Motorola Solutions	QA02829	Analog Conventional
	APX4000	Motorola Solutions	G996	OTAP
	APX4000	Motorola Solutions	QA00580	TDMA
	APX4000	Motorola Solutions	H04	Tactical rekey with M/Key
	APX4000	Motorola Solutions	Q629	AES Encryption
	APX6000	Motorola Solutions	H98UCD9PW5BN	7/800 Portable Radio 1.5
	APX6000	Motorola Solutions	H98UCF9PW6BN	7/800 Portable Radio 2.5
	APX6000	Motorola Solutions	H98UCH9PW7BN	7/800 Portable Radio 3.5
	APX6000	Motorola Solutions	H98KGD9PW5BN	VHF Portable Radio 1.5
	APX6000	Motorola Solutions	H98KGF9PW6BN	VHF Portable Radio 2.5
	APX6000	Motorola Solutions	H98KGH9PW7BN	VHF Portable Radio 3.5
	APX6000	Motorola Solutions	H98QDD9PW5BN	UHF R1 Portable Radio 1.5
	APX6000	Motorola Solutions	H98QDF9PW6BN	UHF R1 Portable Radio 2.5
	APX6000	Motorola Solutions	H98QDH9PW7BN	UHF R1 Portable Radio 3.5
	APX6000	Motorola Solutions	H98SDD9PW5BN	UHF R2 Portable Radio 1.5
	APX6000	Motorola Solutions	H98SDF9PW6BN	UHF R2 Portable Radio 2.5
	APX6000	Motorola Solutions	H98SDH9PW7BN	UHF R2 Portable Radio 3.5
	APX6000	Motorola Solutions	Q241	Analog Operation
	APX6000	Motorola Solutions	Q806	Astro Digital CAI
	APX6000	Motorola Solutions	H35	Conventional Operation
	APX6000	Motorola Solutions	H38	Smartzone Operation
	APX6000	Motorola Solutions	Q173	Smartzone Omnilink



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Product Category	Part Number (if different than manuf. Product #)	Brand Manufacturer	Manufacturer Product Number	Product Description
	APX6000	Motorola Solutions	Q361	P25 9600 Baud Trunking
	APX6000	Motorola Solutions	H885BK	3 Year SFS Lite
	APX6000	Motorola Solutions	Q887	5 Year SFS Lite
	APX6000	Motorola Solutions	HA00022AB	3 Year SFS Comprehensive
	APX6000	Motorola Solutions	HA00025AG	5 Year SFS Comprehensive
	APX6000	Motorola Solutions	H869	Multitkey
	APX6000	Motorola Solutions	Q498	Astro P25 with OTAR
	APX6000	Motorola Solutions	H797	DVP-XL Encryption
	APX6000	Motorola Solutions	Q625	DES,DES-XL,DES-OFB
	APX6000	Motorola Solutions	Q629	AES Encryption
	APX6000	Motorola Solutions	Q15	AES/DES-XL/DES-OFB
	APX6000	Motorola Solutions	H799	Test Results
	APX8000	Motorola Solutions	H91TGD9PW5 N	All Band Portable 1.5
	APX8000	Motorola Solutions	H91TGD9PW6 N	All Band Portable 2.5
	APX8000	Motorola Solutions	H91TGD9PW7 N	All Band Portable 3.5
	APX8000	Motorola Solutions	Q241	Analog Operation
	APX8000	Motorola Solutions	Q806	Astro Digital CAI
	APX8000	Motorola Solutions	H35	Conventional Operation
	APX8000	Motorola Solutions	H38	Smartzone Operation
	APX8000	Motorola Solutions	Q173	Smartzone Omnilink
	APX8000	Motorola Solutions	Q361	P25 9600 Baud Trunking
	APX8000	Motorola Solutions	QA00580	TDMA Operation
	APX8000	Motorola Solutions	Q58	3 Year SFS Lite
	APX8000	Motorola Solutions	Q887AY	5 Year SFS Lite
	APX8000	Motorola Solutions	HA00022AE	3 Year SFS Comprehensive





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Product Category	Part Number (if different than manuf. Product #)	Brand Manufacturer	Manufacturer Product Number	Product Description
	APX8000	Motorola Solutions	HA00025AK	5 Year SFS Comprehensive
	APX8000	Motorola Solutions	QA01648	ADVANCED SYSTEM KEY - HARDWARE KEY
	APX8000	Motorola Solutions	G996	PROGRAMMING OVER P25
	APX8000	Motorola Solutions	Q387	Multicast Voting Scan
	APX8000	Motorola Solutions	QA01767	P25 Link Layer Authentication
	APX8000	Motorola Solutions	QA01843	MANDOWN OPERATION
	APX8000	Motorola Solutions	QA00631	DVRS PSU ACTIVATION
	APX8000	Motorola Solutions	Q445	APX Personnel Accountability
	APX8000	Motorola Solutions	H869	Multikey
	APX8000	Motorola Solutions	Q498	Astro P25 OTAR w M/Key
	APX8000	Motorola Solutions	QA03399	Enhanced Data
	APX8000	Motorola Solutions	QA00982	SITE SELECTABLE ALERT
	APX8000	Motorola Solutions	H02	TACTICAL RADIO STW
	APX8000	Motorola Solutions	QA09001	WiFi Capability
	APX8000	Motorola Solutions	QA09007	Out of the Box WiFi Provision
	APX8000	Motorola Solutions	QA09008	GROUP SERVICES
	APX8000	Motorola Solutions	QA09000	Digital Tone Signalling
	APX8000	Motorola Solutions	QA09012	Mission Critical GeoFence
	APX8000	Motorola Solutions	H797	DV-XL Encryption
	APX8000	Motorola Solutions	Q625	DES,DES-XL,DES-OFB
	APX8000	Motorola Solutions	Q629	AES ENCRYPTION
	APX8000	Motorola Solutions	Q15	AES/DES,DES-XL,DES-OFB
	APX8000	Motorola Solutions	Q53	Front Panel Programming
	APX8000	Motorola Solutions	H799	Test Results



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Product Category	Part Number (if different than manuf. Product #)	Brand Manufacturer	Manufacturer Product Number	Product Description
Accessories		Motorola Solutions	NNTN7869A	APX SURVEILLANCE KEYLOAD A
Adapters		Motorola Solutions	NNTN7526	APX FPP HW KEY (DONGLE)
(ECAT APC 742; 655)		Motorola Solutions	BDN6783B	AUDIO ACCY ADPT 3.5MM W/PTT
Antenna		Motorola Solutions	NAF5085A	APX 7000 700/800- GPS ANT
ECAT APC 555; 795; 536; 481)		Motorola Solutions	PMAE4065A	UHF (380-520) GPS ANTENNA
		Motorola Solutions	NAR6593A	ANT,HLCL,136MHZ MIN,1.577GHZ
		Motorola Solutions	PMAF4006A	DRIBBLE ANT 764-870MHZ + GPS
		Motorola Solutions	PMAE4080A	ANT, FLEX, 380-520MHZ + GPS
		Motorola Solutions	PMAD4125	DRIBBLE ANT 136-174MHZ + GPS
		Motorola Solutions	NAF5085A	APX 7000 700/800- GPS ANTENNA
		Motorola Solutions	PMAE4065A	UHF (380-520) GPS ANTENNA
		Motorola Solutions	NAR6593A	ANT,HLCL,136MHZ MIN,1.577GHZ
		Motorola Solutions	NAR6595A	ANT 1/4 WAVE 7/800 STUBBY
		Motorola Solutions	FAF5259A	UHF1 GPS STUBBY ANTENNA
		Motorola Solutions	FAF5260A	UHFR2 GPS STUBBY ANTENNA
		Motorola Solutions	NAR6594A	ANT VHF 7/800/GPS
		Motorola Solutions	PMAS4001A	UHF (380-520) /7-800 GPS
		Motorola Solutions	PMAT4001A	F (136-174), UHF (380-520), GPS ANTEN





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		Motorola Solutions	NAG4000	APX 7000 GPS STUBBY ANTENNA
		Motorola Solutions	PMAF4002	APX PSM 700/800MHZ ANTENNA
		Motorola Solutions	FAF5259A	UHF1 GPS STUBBY ANTENNA
Batteries		Motorola Solutions	NNTN8128BR	BATT IMP STD LI ION 1900M 2000T
(ECAT APC 453)		Motorola Solutions	NNTN8129AR	BATT IMP FM LI ION 2300M2350T
		Motorola Solutions	PMNN4424AR	BATT IMP LI ION 2300M 2350T
		Motorola Solutions	PMNN4448AR	BATTERY PACK
		Motorola Solutions	NNTN8305AR	BATT IMP STD LI ION 1250M 1300T
		Motorola Solutions	NNTN8560A	BATT IMPRES LIION TIA4950 IP67
		Motorola Solutions	NNTN8930	APX TIA4950 STD BATTERY
		Motorola Solutions	NNTN8921	ATT IMPRES 2 LIION TIA4950 R IP68 450
		Motorola Solutions	PMNN4485	BATT IMPRES 2 LIION R IP68 2550T
		Motorola Solutions	PMNN4486	BATT IMPRES 2 LIION R IP68 3400T
		Motorola Solutions	PMNN4487	BATT IMPRES 2 LIION R IP68 4850T
		Motorola Solutions	PMNN4494	BATT IMPRES 2 LIION R IP68 5100T
		Motorola Solutions	NNTN7033A	ATT IMP FM RUGGEDIZED LIION 4100M



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		Motorola Solutions	NNTN7035	BATT IMP FM R NIMH 2000M 2200T BLK
		Motorola Solutions	NNTN7392	IMPRES BATTERY DATA READER
		Motorola Solutions	NNTN8092	BATT IMP FM R LI ION 2300M 2350T BLK
		Motorola Solutions	PMNN4439A	CLAMSHELL BATTERY
Battery Chargers		Motorola Solutions	WPLN4232A	SINGLE-UNIT, IMPRES,
(ECAT APC 785)		Motorola Solutions	NNTN8525A	ASSEM, CHARGER, MTRBO TRAV
		Motorola Solutions	WPLN4219B	IMPRES MUC W/DISPLAY
		Motorola Solutions	WPLN4212B	IMPRES MUC - US/NA PLUG
		Motorola Solutions	WPLN4208D	VEHICULAR CHARGER, KIT
		Motorola Solutions	NNTN7616C	KIT,CHR IMP VEH EXT NA/EU BASE
		Motorola Solutions	RLN5382C	IMPRES CDM
		Motorola Solutions	NLN7967	WALL MOUNT KIT MUC
		Motorola Solutions	NNTN8170A	INSERT, UNIVERSAL MUC
		Motorola Solutions	NNTN8169A	INSERT, UNIVERSAL SUC
		Motorola Solutions	NNTN8860A	CHARGER, SINGLE-UNIT, IMPRES 2
		Motorola Solutions	NNTN8844A	HARGER, MULTI-UNIT, IMPRES 2, 6-DIS
		Motorola Solutions	NNTN7586	PX DUAL UNIT CHARGER WOUT DISPL
		Motorola Solutions	NNTN7593A	CHR IMP DISP DUC EXT US/NA/CA/LA



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		Motorola Solutions	NNTN7686A	X CHARGER INSERT ADAPTER FOR XT
		Motorola Solutions	NNTN7687A	X CHARGER INSERT ADAPTER FOR XT
		Motorola Solutions	RLN6434A	APX TRAVEL CHARGER
		Motorola Solutions	NNTN7624B	MPRES VEHICULAR CHARGER (FULL KI
Battery Fleet Management		Motorola Solutions	NNTN7677A	FLEET MGMNT CHRGR INTERFACE
(ECAT APC 291 & 785)		Motorola Solutions	NNTN8045A	INTRFCE UNT GEN1 IMPRES SUC
		Motorola Solutions	HKVN4036A	NA FLEET MGMT LICENSE KEY
		Motorola Solutions	NNTN7392	IMPRES BATTERY DATA READER
Bluetooth Mission Critical		Motorola Solutions	NTN2570C	WIRELESS ACCY KIT
(ECAT APC 742; 372; 115)		Motorola Solutions	NTN2571B	2.0 COMMPORT IC MODULE
		Motorola Solutions	NNTN8442A	REMOTE CONTROL KEYFOB
		Motorola Solutions	RLN6489A	COVERT PACK-N-GO KIT
		Motorola Solutions	RLN6501A	COVERT PACK-N-GO KIT, ADV
		Motorola Solutions	NNTN8434A	DISCREET WRLS SURVEIL KIT
		Motorola Solutions	RLN4922	DISCREET EARPICKE KIT
		Motorola Solutions	NNTN8385A	Y-ADAPTER FOR WRLS
		Motorola Solutions	NNTN8294A	1-WIRE EARBUD,29CM
		Motorola Solutions	NNTN8295A	1-WIRE EARBUD,116CM



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		Motorola Solutions	NNTN8298A	2-WIRE EARBUD,116CM
		Motorola Solutions	NNTN8296A	ACCY,KIT,EAR PIECE,2W SHORT
		Motorola Solutions	PMLN7052A	1-WIRE SURVEILLANCE KIT
Bluetooth Replacement Parts (ECAT APC 742; 372; 115)		Motorola Solutions	NNTN8299A	EARTIPS, REPLACEMENT
		Motorola Solutions	NNTN8361A	EARTIPS, BULK REPLACEMENT
		Motorola Solutions	NTN2572A	EARPIECE W/12" CABLE
		Motorola Solutions	NTN8821	COMMPORT MAINTENANCE KIT
		Motorola Solutions	NTN8988A	COMMPRT EARTRAP (PACK OF 10)
		Motorola Solutions	RLN5037	COMMPRT EAR UBES (PACK OF 10)
		Motorola Solutions	PMLN6246A	WIRELESS POD SWIVEL CLIP
		Motorola Solutions	PMPN4027A	PWRSUPPLY,SMPS MICROUSB-NA
		Motorola Solutions	NNTN8737A	3.5 EARBUD HEADSET ADAPTER
		Motorola Solutions	NNTN8457A	NECKLOOP RETENTION HOOK
		Motorola Solutions	RLN4921	DISCREET EARPIECE KIT
		Motorola Solutions	RNN4005	1.4V BATTERY - 6 PACK
		Motorola Solutions	GMLN5261A	PHONITO NANO EARPIECE - BEIGE
		Motorola Solutions	GMLN5262A	PHONITO NANO EARPIECE BROWN



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		Motorola Solutions	RLN4920A	NECKLOOP DISCREET EARP KIT
Belt Clips		Motorola Solutions	PMLN4651A	BELT CLIP 2"
(ECAT APC 271; 476; 795)		Motorola Solutions	PMLN7008A	2.5-INCH BELT CLIP
		Motorola Solutions	HLN6875A	3" PLASTIC BELT CLIP ATTACHMENT
		Motorola Solutions	NTN8266B	2.5" PLASTIC BELT CLIP ATTACHMENT
		Motorola Solutions	RLN6459A	BELT CLIP ONLY, FOR SWIVEL CASE
		Motorola Solutions	PMLN5407	X 7000 2.5"REPLACE SWIVEL BELT LO
		Motorola Solutions	PMLN5408	X 7000 2.75"REPLACESWIVEL BELT LO
		Motorola Solutions	PMLN5409	PX 7000 3"REPLACESWIVEL BELT LOO
		Motorola Solutions	NTN5243A	CARRY CASE SHOULDER STRAP
Carrying Solutions		Motorola Solutions	PMLN6327A	APX3000 COVERTCARRYHOLSTER
(ECAT APC 271; 795)		Motorola Solutions	PMLN6085A	APX2000/4000 ONE-KNOB
		Motorola Solutions	PMLN7182A	APX2000/4000 TWO-KNOB
		Motorola Solutions	PMLN5407	APX 7000 2.5" REPLSWIVEL LOOP
		Motorola Solutions	PMLN5657B	APX6000 CC 2.75 SWLBL 2900&2150MA
Earpieces		Motorola Solutions	PMLN5653A	BONE CONDUCTION EAR MIC



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(ECAT APC 742)		Motorola Solutions	0180300E25	EARGUARD
		Motorola Solutions	0180358B32	EARHOLDER SMALL BLK
		Motorola Solutions	0180358B33	EARHOLDER MEDIUM BLK
		Motorola Solutions	0180358B34	EARHOLDER LARGE BLK
		Motorola Solutions	0180358B36	EARHOLDER MEDIUM CLR
		Motorola Solutions	0180358B37	EARHOLDER LARGE CLR
Headsets		Motorola Solutions	PMLN5101A	IMPRES TEMPLE TRANSDUCER
(ECAT APC 742)		Motorola Solutions	RMN5058A	CORE L/W HEADSET
		Motorola Solutions	RLN6490A	XBT HEADSET BTN, HEAVY DUTY
		Motorola Solutions	RLN6491A	XBT HEADSET HB, HEAVY DUTY
Hearing Protection		Motorola Solutions	RLN6511A	ACCESSORY KIT,EP7-SM SONIC
(ECAT APC 742)		Motorola Solutions	RLN6512A	ACCESSORY KIT,EP7-M SONIC
		Motorola Solutions	RLN6513A	ACCESSORY KIT,EP7-LG SONIC
Public Safety Microphones		Motorola Solutions	PMMN4059B	PSM IP55 WITH 3.5MM JACK RX 18IN
(ECAT APC 372)		Motorola Solutions	PMMN4060B	PSM IP55 WITH 3.5MM JACK RX 24IN
		Motorola Solutions	PMMN4061B	PSM IP55 WITH 3.5MM JACK RX 30IN
Remote Speaker Microphones		Motorola Solutions	HMN4104B	IMPRES RSM DSPLY W JACK,
(ECAT APC 372)		Motorola Solutions	HMN4103B	IMPRES RSM DSPLY W JACK N CHL





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		Motorola Solutions	HMN4101B	IMPRES RSM NO DSPLY W JACK
		Motorola Solutions	PMMN4062A	APX7000 IMPRES RSM
		Motorola Solutions	PMMN4065A	APX IMPRES RSM W/VOL, IP57
		Motorola Solutions	PMMN4069A	IMPRES RSM, 3.5MM AUDIO JACK
		Motorola Solutions	PMMN4083A	IMPRES RSM DELTA-T
		Motorola Solutions	PMMN4084A	PLUS RSM NC IP54 3.5MM JACK RX
		Motorola Solutions	PMMN4099A	IMPRES WINDPORTING RSM, IP55
		Motorola Solutions	NMN6271A	MPRES XP RSM FOR APX W/ DUAL MIC
		Motorola Solutions	NMN6274A	3.5MM THRDJACK
		Motorola Solutions	RLN6554A	ACCESSORY KIT,APX WIRELESS RSM
		Motorola Solutions	RLN6544A	MISSION CRITICAL WIRELESS RSM
Surveillance Kits		Motorola Solutions	PMLN6123A	IMPRES 3 WIRE W/ TRANS TUBE-BLK
(ECAT APC 742)		Motorola Solutions	PMLN6124A	IMPRES 3 WIRE W/ TRANS TUBE-BGE
		Motorola Solutions	PMLN6125A	1 WIRE SURVEILLANCE KIT-BLACK
		Motorola Solutions	PMLN6126A	1 WIRE SURVEILLANCE KIT-BIEGE
		Motorola Solutions	PMLN6127A	IMPRES 2 WIRE SURVEILLANCE -BLK



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		Motorola Solutions	PMLN6128A	IMPRES 2 WIRE SURVEILLANCE-BGE
		Motorola Solutions	PMLN6129A	SMART 2 WIRE W/TRANS TUBE BLK
		Motorola Solutions	PMLN6130A	SMART 2 WIRE W/TRANS TUBE BIEGE
		Motorola Solutions	ZMN6039	SPKR MIC W XLOAD EARPIECE
		Motorola Solutions	ZMN6038	2-WIRE SURVEILL KIT WITH MIPHON
		Motorola Solutions	ZMN6031	3-WIRE SURVEILL KIT WITH MIPHON
		Motorola Solutions	ZMN6032	2-WIRE SURVEILLANCE KIT
		Motorola Solutions	BDN6664	EARPIECE RECEIVE ONLY BG
		Motorola Solutions	BDN6726	EARPIECE RECEIVE ONLY BLK
		Motorola Solutions	BDN6727	RECEIVE ONLY EARPIECE BLK
		Motorola Solutions	BDN6665	RX WITH EXTRA LOUDEARPHONE BG
		Motorola Solutions	BDN6666	RX WITH EXTRA LOUDEARPHONE BL
		Motorola Solutions	BDN6728	EARPIECE RECEIVE ONLY BLK
		Motorola Solutions	BDN6729	EARPCE & MICROPHONE & PTT
		Motorola Solutions	BDN6669	EARPIECE, MIC & PTT BEIGE
		Motorola Solutions	BDN6731	EARPIECE, MIC & PTT BLK
		Motorola Solutions	BDN6668	EARPC WITH MICROPHONE BGE
		Motorola Solutions	BDN6730	EARPC WITH MICROPHONE BLK



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Product Category	Part Number (if different than manuf. Product #)	Brand Manufacturer	Manufacturer Product Number	Product Description
		Motorola Solutions	BDN6670	EARPIECE W/MIC & PTT BEIGE
		Motorola Solutions	BDN6732	EARPIECE W/MIC & PTT BLK
		Motorola Solutions	RLN5314B	RECEIVE NLY SURV KIT BEIGE
		Motorola Solutions	RLN5313B	RECEIVE NLY SURV KIT BLK
		Motorola Solutions	RLN5312B	CMFRT EARPC W/MIC & PTT BLK
Fixed Stations		Motorola Solutions	T7039	GTR 8000 Base Radio
GTR8000		Motorola Solutions	CA00855AA	ADD: 700/800 MHZ
(ECAT APC 112)		Motorola Solutions	X640AL	ADD: UHF R2 (435-524 MHZ)
		Motorola Solutions	X448AA	ADD: UHF R1 (380-435 MHZ)
		Motorola Solutions	X530BG	ADD: VHF (136-174 MHZ)
		Motorola Solutions	CA02478AA	ADD: 800MHZ 150W HI POWER
		Motorola Solutions	CA01953AA	POWER EFFICIENCY PACKAGE
		Motorola Solutions	CA03111AA	CEC COMPLIANCE
		Motorola Solutions	CA02310AA	R&TTE CERTIFICATION
		Motorola Solutions	CA01504AA	ANTENNA RELAY
		Motorola Solutions	X182BW	DUPLEXER, 700 MHZ
		Motorola Solutions	X182BX	DUPLEXER, 800 MHZ
		Motorola Solutions	X182BZ	DUPLEXER, UHF
		Motorola Solutions	X182CC	DUPLEXER, 136-146 MHZ
		Motorola Solutions	X182CB	ADD: DUPLEXER, 144-160 MHZ
		Motorola Solutions	X182CA	DUPLEXER, 158-174 MHZ
		Motorola Solutions	CA00882AA	700 MHZ TX FILTER W/PMU
		Motorola Solutions	CA00883AA	800 MHZ TX FILTER W/PMU



Comprehensive Two-Way Radio Product Catalog				
Product Category	Part Number (if different than manuf. Product #)	Brand Manufacturer	Manufacturer Product Number	Product Description
		Motorola Solutions	X265AJ	BASE RADIO PRESELECTOR, 700 MHZ
		Motorola Solutions	X265AH	BR PRESELECTOR, 800 MHZ
		Motorola Solutions	X265AN	NARROW PRESELECTOR, 136-154 MHZ
		Motorola Solutions	X265AM	BR PRESELECTOR, 150-174 MHZ
		Motorola Solutions	X265AP	BR PRESELECTOR 380-512 MHZ
		Motorola Solutions	X676BF	0/800 MHZ EXTERNAL DUAL CIRCULATOR
		Motorola Solutions	X676BG	EXT DUAL CIRCULATOR (435-494 MHZ)
		Motorola Solutions	X676BJ	EXT DUAL CIRCULATOR, 136-146 MHZ
		Motorola Solutions	X676BI	EXT DUAL CIRCULATOR, 144-160 MHZ
		Motorola Solutions	X676BH	EXT DUAL CIRCULATOR, 158-174 MHZ
		Motorola Solutions	CA01842AA	P25 TDMA SOFTWARE
		Motorola Solutions	CA01902AA	P25 DYNAMIC CHANNEL SOFTWARE
		Motorola Solutions	CA01946AA	CONVENTIONAL MIXED MODE OPERATION
		Motorola Solutions	CA01502AA	STRO 25 CONVENTIONAL SIMULCAST SOFTWARE
		Motorola Solutions	CA01505AA	STRO 25 CONVENTIONAL VOTING SOFTWARE
		Motorola Solutions	CA01952AA	ANALOG CONVENTIONAL SIMULCAST SOFTWARE



Comprehensive Two-Way Radio Product Catalog				
Product Category	Part Number (if different than manuf. Product #)	Brand Manufacturer	Manufacturer Product Number	Product Description
		Motorola Solutions	CA01951AA	ANALOG CONVENT VOTING SOFTWARE
		Motorola Solutions	CA01503AA	LL BACK IN SIMULCAST CABINET REPE
		Motorola Solutions	CA01947AA	RECEIVER SCAN OPERATION
		Motorola Solutions	CA01950AA	CONVENTIONAL MULTI-NAC MULTI-PL
		Motorola Solutions	CA01954AA	WILDCARD W/GPIO
		Motorola Solutions	CA01955AA	MAIN/STANDBY OPERATION
		Motorola Solutions	CA02680AA	CONVENTIONAL TALKGROUPS BR
		Motorola Solutions	CA01954AA	WILDCARD W/GPIO
		Motorola Solutions	CA01955AA	MAIN/STANDBY OPERATION
		Motorola Solutions	CA01958AA	T2-2R RECEIVER MUTE
		Motorola Solutions	CA01959AA	T3-3R RECEIVE MUTE
		Motorola Solutions	CA01960AA	T4-4R RECEIVER MUTE
		Motorola Solutions	CA01961AA	RCVR SOFT NO SPLITTER
		Motorola Solutions	CA01957AA	T1-2R W/TALKAROUND
		Motorola Solutions	CA01962AA	T2-2R DUPLXR &TRPL RELAY
		Motorola Solutions	CA01400AA	POWER CABLE, DC
		Motorola Solutions	X153AW	RACK MOUNT HARDWARE
		Motorola Solutions	CA02446AA	-SERIES INDOOR CABINET 15 Rack Uni
		Motorola Solutions	CA02447AA	-SERIES INDOOR CABINET 24 Rack Uni
		Motorola Solutions	SQM01SUM7054	GTR 8000 EXPANDABLE SITE SUBSYSTEM



Comprehensive Two-Way Radio Product Catalog				
Product Category	Part Number (if different than manuf. Product #)	Brand Manufacturer	Manufacturer Product Number	Product Description
		Motorola Solutions	CA01821AA	ADD: 900 MHz
		Motorola Solutions	CA00855AA	ADD: 700/800 MHZ
		Motorola Solutions	X640AL	ADD: UHF R2 (435-524 MHZ)
		Motorola Solutions	X448AA	ADD: UHF R1 (380-435 MHZ)
		Motorola Solutions	X530BG	ADD: VHF (136-174 MHZ)
		Motorola Solutions	X301AE	ADD: QTY (1) GTR 8000 BASE RADIO
		Motorola Solutions	X302AE	ADD: QTY (2) GTR 8000 BASE RADIOS
		Motorola Solutions	X303AE	ADD: QTY (3) GTR 8000 BASE RADIOS
		Motorola Solutions	X304AE	ADD: QTY (4) GTR 8000 BASE RADIOS
		Motorola Solutions	X305AC	ADD: QTY (5) GTR 8000 BASE RADIOS
		Motorola Solutions	X306AC	ADD: QTY (6) GTR 8000 BASE RADIOS
		Motorola Solutions	CA02478AA	ADD: 800MHZ 150W HI POWER
		Motorola Solutions	CA00025AF	IRCUIT BASED MULTISITE BASE RADIO
		Motorola Solutions	CA01193AA	IP BASED MULTISITE BASE RADIO S/W
		Motorola Solutions	X591AE	ENH: ASTRO 25 SITE REPEATER SW
		Motorola Solutions	CA01430AA	STRO 25 EXPRESS SYSTEM SINGLE SIT
		Motorola Solutions	CA02207AA	600 TRUNKING SIMULCAST OPERATIO





Comprehensive Two-Way Radio Product Catalog				
Product Category	Part Number (if different than manuf. Product #)	Brand Manufacturer	Manufacturer Product Number	Product Description
		Motorola Solutions	CA02209AA	3600 INTELLIREPEATER SOFTWARE
		Motorola Solutions	CA01948AA	ADD: CONVENTIONAL SOFTWARE
		Motorola Solutions	CA01949AA	ADD: ANALOG ONLY CONV SW
		Motorola Solutions	CA00294AA	25 KHZ HIGH PERFORMANCE DATA SW
		Motorola Solutions	CA02219AA	ASTRO P25 IV&D SITE CONTROLLER
		Motorola Solutions	CA03177AA	ASTRO SITE REPEATER SC SW
		Motorola Solutions	CA02216AA	ANALOG CONV TO ASTRO UPGRADE
		Motorola Solutions	CA02218AA	A/LOG CONV TO ASTRO 25 IP SIMULC
Mobile Stations	APX1500	Motorola Solutions	M36URS9PW1 N	APX1500 7/800
Two Way Mobile Radios	APX1500	Motorola Solutions	M36KSS9PW1 N	APX1500 VHF
(ECAT APC 656)	APX1500	Motorola Solutions	M36QSS9PW1 N	APX1500 UHF1
	APX1500	Motorola Solutions	M36SSS9PW1 N	APX1500 UHF2
	APX4500	Motorola Solutions	M22URS9PW1 N	APX4500 7/800
	APX4500	Motorola Solutions	M22KSS9PW1 N	APX4500 VHF
	APX4500	Motorola Solutions	M22QSS9PW1 N	APX4500 UHF R1
	APX4500	Motorola Solutions	M22SSS9PW1 N	APX4500 UHF R2
	APX4500	Motorola Solutions	M22WRS9PW1 N	APX4500 900MHZ
	APX6500	Motorola Solutions	M25URS9PW1 N	APX6500 7/800 MHZ MID POWER MOBIL
	APX6500	Motorola Solutions	M25KSS9PW1 N	APX6500 VHF MID POWER



Comprehensive Two-Way Radio Product Catalog				
Product Category	Part Number (if different than manuf. Product #)	Brand Manufacturer	Manufacturer Product Number	Product Description
	APX6500	Motorola Solutions	M25QSS9PW1 N	APX6500 UHF R1 MID POWER
	APX6500	Motorola Solutions	M25SSS9PW1 N	APX6500 UHF R2 MID POWER
	APX6500	Motorola Solutions	M25KTS9PW1 N	APX6500 VHF HIGH POWER
	APX6500	Motorola Solutions	M25QTS9PW1 N	APX6500 UHF R1 HIGH POWER
	APX7500	Motorola Solutions	M30URS9PW1 N	7/800 SINGLE BAND APX7500
	APX7500	Motorola Solutions	M30KSS9PW1 N	APX7500 SINGLE BAND VHF MID POWE
	APX7500	Motorola Solutions	M30QSS9PW1 N	X7500 SINGLE BAND UHF R1 MID POW
	APX7500	Motorola Solutions	M30SSS9PW1 N	X7500 SINGLE BAND UHF R2 MID POW
	APX7500	Motorola Solutions	M30KTS9PW1 N	HF HIGH POWER SINGLE BAND APX750
	APX7500	Motorola Solutions	M30QTS9PW1 N	X7500 SINGLE BAND UHF R1 HIGH POW
	APX8500	Motorola Solutions	M37TSS9PW1 N	APX8500 ALL BAND MP MOBILE
	APX8500	Motorola Solutions	G48	CONVENTIONAL OPERATION
	APX8500	Motorola Solutions	G51	SMARTZONE OPERATION
		Motorola Solutions	GA00244	ADD: 7/800MHZ PRIMARY BAND
		Motorola Solutions	GA00306	ADD: VHF MP PRIMARY BAND
		Motorola Solutions	GA00307	VHF HP PRIMARY BAND
		Motorola Solutions	GA00341	ADD: UHF R1 MP PRIMARY BAND
		Motorola Solutions	GA00342	ADD: UHF R1 HP PRIMARY BAND



Comprehensive Two-Way Radio Product Catalog				
Product Category	Part Number (if different than manuf. Product #)	Brand Manufacturer	Manufacturer Product Number	Product Description
		Motorola Solutions	GA00345	ADD: UHF R2 MP PRIMARY BAND
		Motorola Solutions	GA00225	ADD: 7/800MHZ SECONDARY BAND
		Motorola Solutions	GA00308	ADD: VHF MP SECONDARY BAND
		Motorola Solutions	GA00309	ADD: VHF HP SECONDARY BAND
		Motorola Solutions	GA00343	ADD: UHF R1 MP SECONDARY BAND
		Motorola Solutions	GA00344	ADD: UHF R1 HP SECONDARY BAND
		Motorola Solutions	GA00346	ADD: UHF R2 MP SECONDARY BAND
		Motorola Solutions	GA00579	ENABLE DUAL BAND OPERATION
		Motorola Solutions	G50	SMARTNET OPERATION
		Motorola Solutions	G241	SW ASTRO READY (ANALOG)
		Motorola Solutions	G806	ASTRO DIGITAL CAI OPERATION
		Motorola Solutions	G48	CONVENTIONAL OPERATION APX6500
		Motorola Solutions	G51	SMARTZONE OPERATION APX6500
		Motorola Solutions	G173	SMARTZONE OMNILINK
		Motorola Solutions	G361	P25 TRUNKING SOFTWARE
		Motorola Solutions	QA00631	DVRS PSU ACTIVATION
		Motorola Solutions	GA00631	DVRS MSU ACTIVATION



Comprehensive Two-Way Radio Product Catalog				
Product Category	Part Number (if different than manuf. Product #)	Brand Manufacturer	Manufacturer Product Number	Product Description
		Motorola Solutions	QA02756	00 OR 9600 TRUNKBAUD SINGLE SYST
		Motorola Solutions	Q443	SOFTWARE ANALOG 3600 BAUD
		Motorola Solutions	QA02829	ANALOG CONVENTIONAL
		Motorola Solutions	Q811	SOFTWARE P25 CONVENTIONAL
		Motorola Solutions	GA01339	SW P25 TRUNKING
		Motorola Solutions	QA01648	VANCED SYSTEM KEY - HARDWARE K
		Motorola Solutions	GA00580	TDMA OPERATION
		Motorola Solutions	GA09008	GROUP SERVICES
		Motorola Solutions	GA00804	APX 02 CONTROL HEAD (Grey)
		Motorola Solutions	G72	03 CONTROL HEAD
		Motorola Solutions	G442	05 OCNTROL HEAD
		Motorola Solutions	GA00805	APX 07 CONTROL HEAD.
		Motorola Solutions	GA00245	09 CONTROL HEAD
		Motorola Solutions	G444	APX CONTROL HEAD SOFTWARE
		Motorola Solutions	G66	DASH MOUNT
		Motorola Solutions	G67	REMOTE MOUNT
		Motorola Solutions	G89	NO RF ANTENNA NEEDED
		Motorola Solutions	G174	ANT 3DB LOW-PROFILE 762-870
		Motorola Solutions	G175	ANT 3DB ELEVATED FEED 762-870
		Motorola Solutions	G335	ANT 1/4 WAVE 762-870MHZ



Comprehensive Two-Way Radio Product Catalog				
Product Category	Part Number (if different than manuf. Product #)	Brand Manufacturer	Manufacturer Product Number	Product Description
		Motorola Solutions	W484	ANT 3DB GAIN 762-870MHZ
		Motorola Solutions	G301	3BD ANT 136-174MHZ
		Motorola Solutions	G296	1/4 WAVE WHIP ROOF TOP 136-144
		Motorola Solutions	G297	1/4 WAVE ROOF TOP 144-150.8
		Motorola Solutions	G299	1/4 WAVE ROOF TOP 150.8-162
		Motorola Solutions	G300	1/4 WAVE ROOF TOP ANT VHF
		Motorola Solutions	G629	1/4 WAVE BROADBAND ANT 146-174
		Motorola Solutions	G792	VHF ANT WIDEBAND 136-174 MHZ
		Motorola Solutions	W652	1/4 WV BDBD ANT 136-162 MHZ
		Motorola Solutions	G427	ANT 3.5DB 380-420 MHZ MAXRAD
		Motorola Solutions	G429	ANT 5.0DB 380-420 MHZ MAXRAD
		Motorola Solutions	G430	ANT 5.0DB 445-470 MHZ
		Motorola Solutions	G425	ANT 1/4 WAVE WHIP 380-420 MHZ
		Motorola Solutions	G426	ANT 1/4 WAVE WHIP 450-470 MHZ
		Motorola Solutions	G428	ANT 3.5DB 450-470 MHZ
		Motorola Solutions	G431	ANT WIDEBAND 380-470 MHZ MAXRA
		Motorola Solutions	GA00505	ANT 2DB WIDEBAND 380-520 MHZ
		Motorola Solutions	G430	ANT 5.0DB 445-470 MHZ



Comprehensive Two-Way Radio Product Catalog				
Product Category	Part Number (if different than manuf. Product #)	Brand Manufacturer	Manufacturer Product Number	Product Description
		Motorola Solutions	G426	ANT 1/4 WAVE WHIP 450-470 MHZ
		Motorola Solutions	G428	ANT 3.5DB 450-470 MHZ
		Motorola Solutions	G490	ANT 1/4 WAVE 470-512 MHZ
		Motorola Solutions	G493	ANT 3 DB ROOF TOP 470-495 MHZ
		Motorola Solutions	G494	ANT 3 DB ROOF TOP 494-512 MHZ
		Motorola Solutions	G510	ANT LOW PROFILE 450-512 MHZ
		Motorola Solutions	G511	2DB ANT WIDEBAND 450-520 MHZ
		Motorola Solutions	GA00505	ANT 2DB WIDEBAND 380-520 MHZ
		Motorola Solutions	GA00652	ANT ROOF TOP 5 dB 470-494 MHz
		Motorola Solutions	G90	NO MICROPHONE NEEDED
		Motorola Solutions	W22	STD PALM MICROPHONE APEX
		Motorola Solutions	GA01354	GWAY RSM WLESS RSM VEH CHARGE
		Motorola Solutions	GA01438	GATEWAY RSM
		Motorola Solutions	GA01439	GATEWAY RSM AND WIRELESS RSM
		Motorola Solutions	W20	KEYPAD MIC GCAI
		Motorola Solutions	W382	CONTROL STATION DESK GCAI MIC
		Motorola Solutions	W872	VISOR MIC REMOTE MOUNT





Comprehensive Two-Way Radio Product Catalog				
Product Category	Part Number (if different than manuf. Product #)	Brand Manufacturer	Manufacturer Product Number	Product Description
		Motorola Solutions	GA00221	MODEL III GCAI KEYPAD HANDSET
		Motorola Solutions	G233	GOOSENECK PTT
		Motorola Solutions	W874	ANDSET/HANGUP MIC ARMORED CABL
		Motorola Solutions	G235	PTT FOOTSWITCH
		Motorola Solutions	GA00304	PUSHBUTTON PTT
		Motorola Solutions	G831	SPKR 15W WATER RESISTANT
		Motorola Solutions	G142	NO SPEAKER NEEDED
		Motorola Solutions	B18	AUXILARY SPKR 7.5 WATT
		Motorola Solutions	W432	AUXILARY SPKR 13W (3.2OHM)
		Motorola Solutions	G832	SPKR 7.5W WATER RESISANT
		Motorola Solutions	G91	CONTROL STATION POWER SUPPLY
		Motorola Solutions	W665	CONTROL STATION OPERATION
		Motorola Solutions	G387	MULITCAST VOTING SCAN
		Motorola Solutions	G996	OVER THE AIR PROVISIONING
		Motorola Solutions	GA09000	DIGITAL TONE SIGNALING
		Motorola Solutions	G170	TRUNKED RADIO TRACE/ REMOTE MO
		Motorola Solutions	G683	One Touch/Status Msg
		Motorola Solutions	GA01767	APX MOBILE RADIO AUTHENTICAT
		Motorola Solutions	QA03399	ENHANCED DATA
		Motorola Solutions	GA00982	ITE SELECTABLE ALERT P25 TRUNKIN



Comprehensive Two-Way Radio Product Catalog				
Product Category	Part Number (if different than manuf. Product #)	Brand Manufacturer	Manufacturer Product Number	Product Description
		Motorola Solutions	GA01202	APX GEOFENCE MOBILE
		Motorola Solutions	GA00226	GPS ANTENNA
		Motorola Solutions	GA00270	GPS ANTENNA GLASS MT
		Motorola Solutions	HKN6184C	CABLE CH, PROGRAMMING,USB
		Motorola Solutions	W969	ULTIPLE KEY ENCRYPTION OPERATIO
		Motorola Solutions	G298	ASTRO 25 OTAR W/ MULTIKEY
		Motorola Solutions	G843	AES ENCRYPTION APX
		Motorola Solutions	G625	DES/DES-XL/DES-OFB ENCRYPTION
		Motorola Solutions	W797	DVP-XL ENCRYPTION APX7500
		Motorola Solutions	G851	AES/DES-XL/DES-OFB ENCRYPTION
		Motorola Solutions	H04	TACTICAL OTAR APX
		Motorola Solutions	GA00236	3 DAY KEY RETENTION APX
	APX4500	Motorola Solutions	G24	YEAR SERVICE FROM THE START LIT
		Motorola Solutions	GA00318	YEAR SERVICE FROM THE START LIT
		Motorola Solutions	GA00249AC	3 YEAR SFS COMPREHENSIVE
	APX6500	Motorola Solutions	G24	YEAR SERVICE FROM THE START LIT
		Motorola Solutions	GA00318	YEAR SERVICE FROM THE START LIT
		Motorola Solutions	GA00249AC	3 YEAR SFS COMPREHENSIVE



Comprehensive Two-Way Radio Product Catalog				
Product Category	Part Number (if different than manuf. Product #)	Brand Manufacturer	Manufacturer Product Number	Product Description
	APX7500	Motorola Solutions	G78	YEAR SERVICE FROM THE START LIT
		Motorola Solutions	GA00318	YEAR SERVICE FROM THE START LIT
		Motorola Solutions	GA00249AB	3 YEAR SFS COMPREHENSIVE
		Motorola Solutions	GA00255AD	SFS COMPREHENSIVE 5 YR
	APX8500	Motorola Solutions	G78	3 YEAR SFS LITE
		Motorola Solutions	GA00318	4 YEAR SFS LITE
		Motorola Solutions	GA00249	3 YEARS SFS COMPREHENSIVE
		Motorola Solutions	GA00255	5 YEAR SFS COMPREHENSIVE
Consollette	APX7500	Motorola Solutions	L30KSS9PW1 N	APX7500 SINGLE BAND VHF MID PO
(ECAT APC 656 & 761)		Motorola Solutions	L30QSS9PW1 N	APX7500 SINGLE BAND UHF R1 MP
		Motorola Solutions	L30SSS9PW1 N	APX7500 SINGLE BAND UHF R2 MP
		Motorola Solutions	L30TSS9PW1 N	APX7500 CONSOLETTA DUAL BAND M
		Motorola Solutions	L30URS9PW1 N	APX7500 SINGLE BAND 7/800
		Motorola Solutions	GA00225	ADD: 7/800MHZ SECONDARY BAND
		Motorola Solutions	GA00244	ADD: 7/800MHZ PRIMARY BAND
		Motorola Solutions	GA00306	ADD: VHF MP PRIMARY BAND
		Motorola Solutions	GA00308	ADD: VHF MP SECONDARY BAND



Comprehensive Two-Way Radio Product Catalog				
Product Category	Part Number (if different than manuf. Product #)	Brand Manufacturer	Manufacturer Product Number	Product Description
		Motorola Solutions	GA00341	ADD: UHF R1 MP PRIMARY BAND
		Motorola Solutions	GA00343	ADD: UHF R1 MP SECONDARY BAND
		Motorola Solutions	GA00345	ADD: UHF R2 MP PRIMARY BAND
		Motorola Solutions	GA00346	ADD: UHF R2 MP SECONDARY BAND
		Motorola Solutions	GA00579	ADD: ENABLE DUAL BAND OPERATION
		Motorola Solutions	QA00579	ENABLE DUAL BAND OPERATION
		Motorola Solutions	G241	SW ASTRO READY (ANALOG)
		Motorola Solutions	G806	ASTRO DIGITAL CAI OPERATION
		Motorola Solutions	G48	CONVENTIONAL OPERATION
		Motorola Solutions	G50	SMARTNET OPERATION APX
		Motorola Solutions	G51	SMARTZONE OPERATION APX
		Motorola Solutions	QA01648	VANCED SYSTEM KEY - HARDWARE K
		Motorola Solutions	QA01749	SW KEY SUPPLEMENTAL DATA
		Motorola Solutions	QA02018	DD: ADVANCED WACN KEY SUPP DAT
		Motorola Solutions	G173	SMARTZONE OMNILINK
		Motorola Solutions	G361	P25 TRUNKING SOFTWARE
		Motorola Solutions	G387	MULITCAST VOTING SCAN
		Motorola Solutions	G996	OVER THE AIR PROVISIONING



Comprehensive Two-Way Radio Product Catalog				
Product Category	Part Number (if different than manuf. Product #)	Brand Manufacturer	Manufacturer Product Number	Product Description
		Motorola Solutions	GA00268	RFID LABEL
		Motorola Solutions	GA00469	XTENDED DISPATCH APX CONSOLETT
		Motorola Solutions	GA00580	TDMA OPERATION
		Motorola Solutions	QA03399	ENHANCED DATA
		Motorola Solutions	W947	ASTRO 25 INTEGRATED VOICE & DATA
Drop Ship Equipment		Motorola Solutions	DSAPEXIMAX808	SPD, TYPE 1, 120/240VAC
(ECAT APC 207)		Motorola Solutions	DS9130R0900N005	UPS, 9130 RACKMT
Computers & Modems		Motorola Solutions	L3523	ROCKETPORT -INCL 16 PORT
(ECAT APC 708)		Motorola Solutions	TT05409AA	GENWATCH3 OTAR CLIENT LIC
MCC7500 Dispatch Solution		Motorola Solutions	B1933	OTOROLA VOICE PROCESSOR MODUL
(ECAT APC 443)		Motorola Solutions	B1905	MCC 7500 ASTRO 25 SOFTWARE
		Motorola Solutions	CA01642AA	BASIC CONSOLE FUNCTION SWARE LI
		Motorola Solutions	CA00899AA	SPATCH CONSOLE SWARE REFRESH L
		Motorola Solutions	CA00900AA	AIS SOFTWARE REFRESH LICENSE
		Motorola Solutions	CA01643AA	TRUNKING OPERATION
		Motorola Solutions	CA01644AA	C 7500 /MCC 7100 ADV CONVL OPERAT
		Motorola Solutions	CA01972AA	ADVANCED SECURENET OPERATION



Comprehensive Two-Way Radio Product Catalog				
Product Category	Part Number (if different than manuf. Product #)	Brand Manufacturer	Manufacturer Product Number	Product Description
		Motorola Solutions	CA00147AF	MCC 7500 SECURE OPERATION
		Motorola Solutions	CA01220AA	MCC 7500 / MCC 7100 OTEK OPERATIO
Parts		Motorola Solutions	3080369B71	CABLE, ASSY. IBM TO RIB
ECAT APC 261;361;362;454; 455456; 744 & 950)		Motorola Solutions	3080369B72	9 PIN PC TO RADIO INTERFACE BOX
		Motorola Solutions	RKN4063	FLASH PROGRAMMING CABLE
		Motorola Solutions	1009422001	SUPPLY 9 V DC, 1.5 A, WALL MOUNT
		Motorola Solutions	RLN1015	SMART RIB
		Motorola Solutions	3080390B48	COMPUTER (9 PIN) TO SRIB CABLE
		Motorola Solutions	0180302E27	SMART RIB POWER SUPPLY
		Motorola Solutions	2580373E86	SMART RIB POWER SUPPLY
		Motorola Solutions	RKN4105	CABLE- PROGRAMMING USB
		Motorola Solutions	RKN4106	CABLE- PROGRAMMING, RS232
		Motorola Solutions	BLN6732	FOOT, SWITCH TRADITIONAL
MOTOTRBO		Motorola Solutions	AAM28JQN9WA1AN	MOTOTRBO XPR SERIES MOBILES
(ECAT APC 563)		Motorola Solutions		
MOTOTRBO		Motorola Solutions		MOTOTRBO LOW TIER REPEATER
(ECAT APC 521)		Motorola Solutions		





Comprehensive Two-Way Radio Product Catalog				
Product Category	Part Number (if different than manuf. Product #)	Brand Manufacturer	Manufacturer Product Number	Product Description
MOTOTRBO		Motorola Solutions		MOTOTRBO XPR SERIES PORTABLES
(ECAT APC 977)		Motorola Solutions		
MINITOR		Motorola Solutions	A04RAC8JA2AN	MINITOR PAGER
(ECAT APC 136)		Motorola Solutions		
MINITOR PARTS		Motorola Solutions		MINITOR PARTS

SECTION 2

# PRODUCT LITERATURE

Motorola Solutions has provided the Product Literature on the following pages.



# APX™ 6000 SINGLE-BAND PORTABLE RADIO



From day one, the single-band APX 6000 P25 portable radio has delivered legendary APX ruggedness and reliability, without compromising on the form factor or features required for routine activities and extreme emergencies. Now, as the ever-increasing needs of public safety personnel grow, we are evolving the APX 6000 to support newer technologies like Wi-Fi®, Adaptive Audio Engine, and Bluetooth® 4.0 wireless technology. These advances help improve the operational efficiency and response time of public safety agencies while enhancing the safety of personnel and communities.

## VOICE AND DATA, ALL AT ONCE

Update your radio fleet without interrupting voice communications with secure Wi-Fi. This dramatically improves the speed of configuring new codeplugs, firmware and software features over-the-air via Radio Management\*. Agencies can pre-provision up to 20 secure Wi-Fi hotspots so personnel can easily access updates at the facility or in the field.

## HEAR AND BE HEARD

The APX 6000 is equipped with a 3-watt speaker, 3 integrated microphones and the Adaptive Audio Engine. This changes the level of noise suppression, microphone gain, windporting and speaker equalization to produce clear and loud audio in any environment.

## SEAMLESS ON-SCENE COMMUNICATION

Ensure fast and seamless communication and collaboration across all responders arriving on a scene. Mission Critical Geofence automatically changes a radio's active talkgroup based on its GPS location and an agency-defined virtual barrier. For example, an incident commander can create a geofence around the 3-block radius of a burning building so that all arriving personnel are automatically placed in the same talkgroup.

## EMERGENCY FIND ME

Bluetooth 4.0 places a wide range of wireless accessories at your disposal and provides personnel with an added level of security by improving response time in emergencies. With Emergency Find Me, a Bluetooth-enabled beacon signal guides other Bluetooth-enabled APX radios within range to assist the user in distress.



\*Radio Management application simplifies APX radio configuration and management by programming up to 16 radios at one time and tracking which radios have been successfully programmed, providing a clear view of the entire radio fleet and a codeplug history for each radio.



## SPECIFICATIONS

### RF BANDS

- 700/800 MHz, VHF, UHF Range 1 & UHF Range 2
- 9600 Baud Digital APCO P25 Phase 1 FDMA and Phase 2 TDMA Trunking
- 3600 Baud SmartNet®, SmartZone®, SmartZone, Omnilink Trunking
- Digital APCO 25, Conventional, Analog MDC 1200, Quick Call II System Configurations Narrow and Wide Bandwidth Digital Receiver (6.25 kHz Equivalent/25/20/12.5 kHz)<sup>1</sup>

### STANDARD FEATURES

- Mission Critical Wireless Bluetooth® 4.0 (LE)<sup>2</sup>
- Emergency Find Me<sup>2</sup>
- ASTRO® 25 Integrated Voice & Data
- Integrated GPS/GLONASS for Outdoor Location Tracking
- Voice Announcements
- ISSI 8000 Roaming
- Radio Profiles
- Dynamic Zone
- Intelligent Lighting
- Single-Key ADP Encryption
- IP68 submersion (2 meters, 2 hours)
- IMPRES 2 Battery (PMNN4485)
- Text Message
- Software Key

### PROGRAMMING

- Utilizes Windows 7 & 8 Customer Programming Software (CPS) with Radio Management<sup>3</sup>

### ADAPTIVE AUDIO ENGINE (OPTIONAL)

- 3-W Speaker with Adaptive Equalization
- Adaptive Dual-Sided Operation
- Adaptive Noise Suppression Intensity
- Adaptive Gain Control
- Adaptive Windporting

### OPTIONAL FEATURES

- Wi-Fi 802.11 b/g/n
- LEX L10 Collaboration
- RFID Volume Knob
- Multi-key for 128 keys and Multi-Algorithm
- Programming Over Project 25 (OTAP)
- Over the Air Rekey (OTAR)
- Digital Tone Signaling
- Mission Critical Geofence
- P25 Authentication
- Man Down Capability
- High Impact Green and Public Safety Yellow Colored Housing Options
- Rugged Option: IP68 (2m/4hr), Mil Std 512.X Delta - T<sup>4</sup>
- Listed by UL to the standards ANSI/TIA 4950-A and CAN/CSA C22.2 NO. 157-92 Classification Rating: Class I, Division 1, Groups C, D; Class II, Division 1, Group E, F, G; Class III, Hazardous (Classified) Locations. ANSI/ISA 12.12.01-2015 and CAN/CSA C22.2 No. 213-15; Class I, Division 2, Groups A, B, C, D; T3C. Tamb = -25° C to +60° C. when used with Motorola Battery: NNTN8921A NNTN8930A 7.4V

<sup>1</sup> Per the FCC Narrowbanding rules, new products (APX6000 UHF1, UHF2 ) submitted for FCC certification after January 1, 2011 are restricted from being granted certification at 25 KHz for United States - State & Local Markets only.

<sup>2</sup> Compatible with BT 2.1, HSP, PAN, DUN and SPP Profiles found in off-the-shelf Bluetooth accessories and Bluetooth 4.x

<sup>3</sup> CPS version R12.00.00 and greater ordered after June 2014 will only support Windows 7 and 8

<sup>4</sup> Radios meet industry standards (IPx7) for submersion.




## TRANSMITTER - TYPICAL PERFORMANCE SPECIFICATIONS

		700/800	VHF	UHF Range 1	UHF Range 2
Frequency Range/Bandsplits	700 MHz 800 MHz	763-776, 793-806 MHz 806-824, 851-870 MHz	136-174 MHz	380-470 MHz	450-520 MHz
Channel Spacing		25/20/12.5 kHz	25/20/12.5 kHz	25/20/12.5 kHz	25/20/12.5 kHz
Maximum Frequency Separation		Full Bandsplit	Full Bandsplit	Full Bandsplit	Full Bandsplit
Rated RF Output Power Adj <sup>1</sup>		1-3 Watts Max	1-6 Watts Max	1-5 Watts Max	1-5 Watts
Frequency Stability <sup>1</sup> (-30°C to +60°C; +25°C Ref.)		±0.00010 %	±0.00010 %	±0.00010 %	±0.00010 %
Modulation Limiting <sup>1</sup>		±5 kHz / ±4 kHz / ±2.5 kHz	±5 kHz / ±4 kHz / ±2.5 kHz	±5 kHz / ±4 kHz / ±2.5 kHz	±5 kHz / ±4 kHz / ±2.5 kHz
Emissions (Conducted and Radiated) <sup>1</sup>		-75 dB	-75 dB	-75 dB	-75 dB
Audio Response <sup>1</sup>		+1, -3 dB	+1, -3 dB	+1, -3 dB	+1, -3 dB
FM Hum & Noise	25k 25.5k	-52 dB -47 dB	-55 dB -50 dB	-52 dB -47 dB	-52 dB -46 dB
Audio Distortion <sup>1</sup>	700 MHz 800 MHz	1.00 %	1.00 %	1.00 %	1.00 %

BATTERIES FOR APX 6000				
Battery Capacity / Type	Dimensions (HxWxD)	Weight	Battery Part Number	Battery Capacity
Li-Ion IMPRES 2 2550mAh <sup>1</sup>	3.4" x 2.3" x 1.5"	5.0 oz	PMNN4485	2550 mAh
Li-Ion IMPRES 2 3400mAh	3.4" x 2.3" x 1.7"	6.5 oz	PMNN4486	3400 mAh
Li-Ion IMPRES 2 4850mAh	5" x 2.3" x 1.7"	11.0 oz	PMNN4487	4850 mAh
Li-Ion IMPRES 2 5100mAh	5" x 2.3" x 1.7"	11.0 oz	PMNN4494	5100 mAh
Li-Ion IMPRES 2 2650 mAh <sup>2</sup>	3.4" x 2.3" x 1.7"	5.7 oz	NNTN8930	2650 mAh
Li-Ion IMPRES 2 4500mAh <sup>2</sup>	5" x 2.3" x 1.7"	11.0 oz	NNTN8921	4500 mAh

1 The standard shipping battery for the APX6000

2 HAZLOC approved.

RADIO MODELS			
			
	MODEL 1.5	MODEL 2.5	MODEL 3.5
Display	Full bitmap monochromatic LCD top display 1 line text x 8 characters 1 line of icons No menu support Multi-color backlight	Top display plus: Full bitmap color LCD display 4 lines of text x 14 characters 2 lines of icons 1 menu line x 3 menus White backlight	Top display plus: Full bitmap color LCD display 4 lines of text x 14 characters 2 lines of icons 1 menu line x 3 menus White backlight
Keypad	none	Backlit keypad 3 soft keys 4 direction Navigation key Home and Data buttons	Backlit keypad 3 soft keys 4 direction Navigation key 4x3 keypad Home and Data buttons
Channel Capacity <sup>1</sup>	96	1000	1000
FLASHport Memory	64 MB	64 MB	64 MB
700/800 MHz (763-870 MHz)	H98UCD9PW5BN	H98UCF9PW6BN	H98UCH9PW7BN
VHF (136-174 MHz)	H98KGD9PW5BN	H98KGF9PW6BN	H98KGH9PW7BN
UHF Range 1 (380-470 MHz)	H98QDD9PW5BN	H98QDF9PW6BN	H98QDH9PW7BN
UHF Range 2 (450-520 MHz)	H98SDD9PW5BN	H98SDF9PW6BN	H98SDH9PW7BN
Buttons & Switches	Large PTT button ■ Angled On/Off volume control ■ Orange emergency button ■ 16 position top-mounted rotary switch ■ 2-position concentric switch ■ Multi-color backlight ■ 3-position toggle switch ■ 3 programmable side buttons		
Regulatory Information			
	FCC ID	Industry Canada	
700/800 (764-869 MHz)	AZ489FT7086	109U-89FT7086	
VHF (136-174 MHz)	AZ489FT7087	109U-89FT7087	
UHF Range 1 (380-470 MHz)	AZ489FT7077	109U-89FT7077	
UHF Range 2 (420-520 MHz)	AZ489FT7085	109U-89FT7085	
FCC Emissions Designators			
FCC Emissions Designators	11K0F3E, 16K0F3E, 8K10F1D, 8K10F1E, 8K10F1W, 20K0F1E <sup>2</sup>		
Power Supply			
Power Supply	One rechargeable Li-Ion IMPRES 2 2550mAh battery standard (PMNN4485), with alternate battery options available.		

1 Enhancement package available

2 Per the FCC Narrowbanding rules, new products (APX6000 UHFRR1, UHFRR2 ) submitted for FCC certification after January 1, 2011 are restricted from being granted certification at 25 kHz for United States - State & Local Markets only.



RECEIVER - TYPICAL PERFORMANCE SPECIFICATIONS					
		700/800	VHF	UHF Range 1	UHF Range 2
Frequency Range/Bandsplits	700 MHz 800 MHz	763-776 MHz 851-870 MHz	136-174 MHz	380-470 MHz	450-520 MHz
Channel Spacing		25/20/12.5 kHz	25/20/12.5 kHz	25/20/12.5 kHz	25/20/12.5 kHz
Maximum Frequency Separation		Full Bandsplit	Full Bandsplit	Full Bandsplit	Full Bandsplit
Audio Output Power at Rated <sup>1</sup>		500 mW	500 mW	500 mW	500 mW
Analog Sensitivity <sup>2</sup>	12 dB SINAD	0.25 $\mu$ V	0.17 $\mu$ V	0.224 $\mu$ V	0.203 $\mu$ V
Digital Sensitivity <sup>3</sup>	1% BER (800 MHz)	0.375 $\mu$ V	0.243 $\mu$ V	0.298 $\mu$ V	0.296 $\mu$ V
	5% BER	0.24 $\mu$ V	0.15 $\mu$ V	0.200 $\mu$ V	0.204 $\mu$ V
Selectivity <sup>1</sup>	25 kHz channel	-76 dB	-78 dB	-77 dB	-76 dB
	12.5 kHz channel	-70 dB	-73 dB	-67 dB	-67 dB
Intermodulation		-80.1 dB	-80.2 dB	-80.3 dB	-80.2 dB
Spurious Rejection		-75 dB	-78 dB	-80.5 dB	-80.8 dB
FM Hum and Noise	25 kHz	-54 dB	-54.3 dB	-53.5 dB	-52.5 dB
	12.5 kHz	-79 dB	-50.1 dB	-47.5 dB	-47.3 dB
Audio Distortion at Rated <sup>1</sup>		0.90%	0.90%	0.70%	0.70%

1 Measured in the analog mode per TIA / EIA 603 under nominal conditions

2 Measured conductively in analog mode per TIA / EIA 603 under nominal conditions.

3 Measured conductively in digital mode per TIA / EIA IS 102.CAAA under nominal conditions.



PORTABLE MILITARY STANDARDS 810 C, D, E , F & G										
	MIL-STD 810C		MIL-STD 810D		MIL-STD 810E		MIL-STD 810F		MIL-STD 810G	
	Method	Proc./Cat.	Method	Proc./Cat.	Method	Proc./Cat.	Method	Proc./Cat.	Method	Proc./Cat.
Low Pressure	500.1	I	500.2	II	500.3	II	500.4	II	500.5	II
High Temperature	501.1	I, II	501.2	I/A1, II/A1	501.3	I/A1, II/A1	501.4	I/Hot, II/Basic Hot	501.5	I/A1, II/A2
Low Temperature	502.1	I	502.2	I/C3, II/C1	502.3	I/C3, II/C1	502.4	I/C3, II/C1	502.5	I/C3, II/C1
Temperature Shock	503.1	I	503.2	I/A1C3	503.3	I/A1C3	503.4	I	503.5	I/C
Solar Radiation	505.1	II	505.2	I	505.3	I	505.4	I	505.5	I/A1
Rain	506.1	I, II	506.2	I, II	506.3	I, II	506.4	I, III	506.5	I, III
Humidity	507.1	II	507.2	II	507.3	II	507.4	1 Proc	507.5	II/Aggravated
Salt Fog	509.1	I	509.2	I	509.3	I	509.4	1 Proc	509.5	1 Proc
Blowing Dust	510.1	I	510.2	I	510.3	I	510.4	I	510.5	I
Blowing Sand	1 Proc	1 Proc	510.2	II	510.3	II	510.4	II	510.5	II
Immersion	512.1	I	512.2	I	512.3	I	512.4	I	512.5	I
Vibration	514.2	VIII/F, Curve-W	514.3	I/10, II/3	514.4	I/10, II/3	514.5	I/24	514.6	I/24
Shock	516.2	I, III, V	516.3	I, V, VI	516.4	I, V, VI	516.5	I, V, VI	516.6	I, V, VI
Shock (Drop)	516.2	II	516.2	IV	516.4	IV	516.5	IV	516.6	IV



**DIMENSIONS OF THE RADIOS WITHOUT BATTERY**

Length	5.47 in	139 mm
Width Push-To-Talk button	2.39 in	60.7 mm
Depth Push-To-Talk button	1.40 in	35.6 mm
Width Top	2.98 in	75.7 mm
Depth Top	1.58 in	40.1 mm
Depth Bottom of Battery	1.24 in	31.5 mm
Weight of the radios without battery	10.9 oz	309 g

**ENCRYPTION**

Supported Encryption Algorithms	ADP, AES, DES, DES-XL, DES-OFB, DVP-XL
Encryption Algorithm Capacity	8
Encryption Keys per Radio	Module capable of storing 1024 keys. Programmable for 64 Common Key Reference (CKR) or 16 Physical Identifier (PID)
Encryption Frame Re-sync Interval	P25 CAI 300 mSec
Encryption Keying	Key Loader
Synchronization	XL – Counter Addressing OFB – Output Feedback
Vector Generator	National Institute of Standards and Technology (NIST) approved random number generator
Encryption Type	Digital
Key Storage	Tamper protected volatile or non-volatile memory
Key Erasure	Keyboard command and tamper detection
Standards	FIPS 140-2 Level 3 FIPS 197

**GPS/GPS/GNSS SPECIFICATIONS**

Constellations	GPS & GLONASS
Tracking Sensitivity	-164 dBm
Accuracy <sup>2</sup>	<5 meters (95%)
Cold Start	<60 seconds (95%)
Hot Start	<5 seconds (95%)
Mode of Operation	Autonomous (Non-Assisted)

**RUGGED SPECIFICATIONS**

Leakage (submersion)	MIL-STD-810 C, D, E, F and G Method 512.X Procedure I, IP68 (2 meters, 4 hours)
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**HOUSING COLOR**

Black (Standard), Public Safety Yellow, and High Impact Green
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**ENVIRONMENTAL SPECIFICATIONS**

Operating Temperature <sup>1</sup>	-30 °C to +60 °C
Storage Temperature <sup>1</sup>	-50 °C to +85 °C
Humidity Per MIL-STD	ESD IEC 801-2 KV
Water and Dust Intrusion	IP68 (2 meters, 4 hours)

1 Temperatures listed are for radio specifications. Battery storage is recommended at 25 °C, ±5 °C to ensure best performance.

2 Measured conductively with >6 satellites visible at a nominal -130 dBm signal strength. Specs provided are 95th percentile values.



#### EMISSION DESIGNATORS

LMR: 8K10F1D, 8K10F1E, 8K10F1W, 11K0F3E, 16K0F3E, 20K0F1E

Bluetooth: 852KF1D, 1M17F1D, 1M19F1D, 1M04F1D

WLAN (Wi-Fi): 13M7G1D, 17M0D1D, 18M1D1D

#### WIRELESS CONNECTIVITY AND SECURITY

Frequency Range/Bandsplits:

Bluetooth: 2402 - 2480 MHz, WLAN (Wi-Fi): 2400 - 2483.5 MHz

WLAN (Wi-Fi) 802.11 b/g/n supports WPA-2, WPA, WEP security protocols; radio can be pre-provisioned with up to 20 SSIDs<sup>1</sup>

Mission Critical Wireless Bluetooth 2.1 uses 96 bit encryption for pairing & 128 bit encryption for voice, signaling and data. The radio BT supports up to 6 data connections and 1 audio connection

Bluetooth 4.0 Low Energy uses 128-bit AES-CCM encryption

<sup>1</sup> 2400 - 2483.5 MHz for EMEA region and includes guardband.  
Channels 1 – 11 used for FCC/IC region.



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# APX™ 8000 ALL-BAND P25 PORTABLE RADIO

## UNLIMITED MOBILITY. UNCOMPROMISING PERFORMANCE.

Take command with a 4-in-1 radio that offers limitless interoperability, the clearest, loudest audio and seamless Wi-Fi® connectivity. The compact, rugged and secure APX 8000 redefines mission critical communications.

### ALL BANDS, NO BOUNDARIES

With four RF bands and multi-mode system access, the APX 8000 knows no limits when it comes to interoperability. Communicate across borders using a single device. Use analog MDC 1200 or digital P25 mode, conventional or trunked operation, SmartNet or SmartZone legacy systems, clear or secure - all across 7/800MHz, VHF and UHF Range 1 & 2 bands.

### HEAR AND BE HEARD MORE CLEARLY

Whether it's loud or windy, whether you whisper or yell, the APX 8000 adaptive audio engine and ultra-loud speaker brings clarity into every conversation. The radio dynamically changes the level of noise suppression, microphone gain, windporting and speaker equalization on the fly to consistently produce the loudest, clearest audio in any environment.

### VOICE AND DATA, ALL AT ONCE

With Wi-Fi® access, the APX 8000 can quickly receive new codeplugins, firmware and software features in order to redeploy the radio fleet with ease as users keep talking without interruption. Mission Critical Wireless Bluetooth® connects quickly and securely with remote speaker microphones, surveillance kits and the LEX L10 Mission Critical LTE Handheld for radio remote control.

**PRODUCT DATA SHEET** | APX™ 8000

### FIT FOR THE MISSION

Intuitively designed with a familiar look and feel, the compact APX 8000 is always comfortable to use, from your holster to your grip. It contains 4 radio bands packaged into the award-winning design of the APX 6000. The all-band antenna is flexible so it doesn't get in the way.

### RUGGED, ROBUST & RELIABLE

With a water-tight seal, drop-resistant dual battery latch, pressure-tested tempered glass display and a shock-absorbing aluminum alloy endoskeleton, the APX 8000 is ready for unpredictable environments. It can survive 2 meter water submersion for 2 hours (IP68) and Motorola's renowned Accelerated Life Test.

### DESIGNED TO SECURE & PROTECT

The APX 8000's voice and data is secured by multiple hardware encryption algorithms (256-bit AES, DES, ADP), up to 128 keys and the ability to re-key over the air so that sensitive information stays protected from scanners and eavesdroppers. P25 Radio Authentication ensures only valid users can access the system while two-factor authentication allows users to securely log in to databases.





#### RF BANDS:

700/800 MHz, VHF, UHF Range 1 & 2

#### OPERATION MODES:

9600 Baud Digital APCO P25 Phase 1 FDMA and Phase 2 TDMA Trunking

3600 Baud SmartNet®, SmartZone®, SmartZone, Omnilink Trunking

Digital APCO 25, Conventional, Analog MDC 1200, Quick Call II System Configurations

Narrow and wide bandwidth digital receiver (6.25 kHz equivalent/25/20/12.5 KHz)

#### STANDARD FEATURES:

Mission Critical Wireless Bluetooth\*

ASTRO 25 Integrated Voice & Data

Integrated GPS/GLONASS for outdoor location tracking

Software Key

Text-Messaging

Voice Announcements

ISSI 8000 Roaming

Radio Profiles, Dynamic Zone

Intelligent Lighting

Single-key ADP Encryption

IP68 submersion (2 meters, 2 hours)

IMPRES Battery

#### ADAPTIVE AUDIO ENGINE:

3 Watt Speaker with Adaptive Equalization

Adaptive Dual-sided Operation

Adaptive Noise Suppression Intensity

Adaptive Gain Control

Adaptive Windporting

#### PROGRAMMING:

Utilizes Windows 7 & 8 Customer Programming Software (CPS) with Radio Management

#### OPTIONAL FEATURES:

Wi-Fi® 802.11 b/g/n

RFID Volume Knob

Multi-key for 128 keys and multi-algorithm

Programming Over Project 25 (OTAP)

Over the Air Rekey (OTAR)

Digital Tone Signaling

LEX L10 Collaboration

P25 Authentication

Man Down Sensor

IP68 (2m/4hr), Mil Std 512.X Delta - T

\* Compatible with BT 2.1, HSP, PAN, DUN and SPP Profiles found in off-the-shelf BT accessories and BT 4.x

#### TRANSMITTER - TYPICAL PERFORMANCE SPECIFICATIONS

	700/800	VHF	UHF Range 1	UHF Range 2
Frequency Range/Bandsplits	764-776, 794-806 MHz 806-825, 851-870 MHz	136-174 MHz	380-470 MHz	450-520 MHz
Channel Spacing	25/20/12.5 kHz	25/20/12.5 kHz	25/20/12.5 kHz	25/20/12.5 kHz
Maximum Frequency Separation	Full Bandsplit	Full Bandsplit	Full Bandsplit	Full Bandsplit
Rated RF Output Power Adj <sup>1</sup>	700 MHz: 1-2.5 Watts 800 MHz: 1-3 Watts	1-6 Watts	1-5 Watts	1-5 Watts
Frequency Stability <sup>1</sup> (-30°C to +60°C; +25°C Ref.)	+/- 1.0 ppm	+/- 1.0 ppm	+/- 1.0 ppm	+/- 1.0 ppm
Modulation Limiting <sup>1</sup>	±5 kHz / ±4 kHz / ±2.5 kHz	±5 kHz / ±4 kHz / ±2.5 kHz	±5 kHz / ±4 kHz / ±2.5 kHz	±5 kHz / ±4 kHz / ±2.5 kHz
Emissions (Conducted and Radiated) <sup>1</sup>	-75 dBc	-75 dBc	-75 dBc	-75 dBc
Audio Response <sup>1</sup>	+1, -3 dB	+1, -3 dB	+1, -3 dB	+1, -3 dB
FM Hum & Noise (25kHz / 12.5kHz) <sup>1</sup>	700 MHz: -49 dB/-47 dB 800 MHz: -49 dB/-46 dB	-51 dB/-51 dB	-51 dB/-51 dB	-51 dB/-47 dB
Audio Distortion (25kHz / 12.5kHz) <sup>1</sup>	700 MHz: 0.90 % / 0.90 % 800 MHz: 0.60 % / 0.90 %	0.50 % / 0.90 %	0.50 % / 0.90 %	0.60 % / 0.90 %




#### BATTERIES FOR APX 8000

Battery Capacity / Type	Dimensions (HxWxD)	Weight	Battery Part Number	Battery Capacity
Li-Ion IMPRES 2, 3400 mAh**	3.4" x 2.3" x 1.7"	6.5 oz	PMNN4486	3400 mAh
Li-Ion IMPRES 2, 4850 mAh	5.0" x 2.3" x 1.7"	11.0 oz	PMNN4487	4850 mAh
Li-Ion IMPRES 2, 5100 mAh	5.0" x 2.3" x 1.7"	11 oz	PMNN4494	5100 mAh

#### KEY AUDIO ACCESSORIES

Name	Type	Part Number	Features
Extreme Policing (XP) RSM	Wired	NMN6271	Dual-Mic Noise Suppression, Emergency, Volume Control, Prog Button, IP68
Mission Critical Wireless (MCW) RSM	Bluetooth	RLN6554	Windporting, Audio Jack, Emergency, Volume Control, Task Light, IP55, 12 hour 5/35/60 Duty Cycle

\*\*Ships standard with radio

RADIO MODELS			
	 MODEL 1.5	 MODEL 2.5	 MODEL 3.5
Display	Full bitmap monochromatic LCD top display 1 line text x 8 characters 1 line of icons No menu support Multi-color backlight	<b>Top display plus:</b> Full bitmap color LCD display 4 lines of text x 14 characters 2 lines of icons 1 menu line x 3 menus White backlight	<b>Top display plus:</b> Full bitmap color LCD display 4 lines of text x 14 characters 2 lines of icons 1 menu line x 3 menus White backlight
Keypad	none	Backlit keypad 3 soft keys 4 direction Navigation key Home and Data buttons	Backlit keypad 3 soft keys 4 direction navigation key 4x3 keypad Home and Data buttons
Channel Capacity	1200	3000	3000
FLASHport Memory	2 GB	2 GB	2 GB
700/800 MHz (764-870 MHz)	H91TGD9PW5AN	H91TGD9PW6AN	H91TGD9PW7AN
VHF (136-174 MHz)			
UHF Range 1 (380-470 MHz)			
UHF Range 2 (450-520 MHz)			
Buttons & Switches	Large PTT button ■ Angled On/Off volume control ■ Orange emergency button ■ 16 position top-mounted rotary switch ■ 2-position concentric switch ■ Multi-color backlight ■ 3-position toggle switch ■ 3 programmable side buttons		
Regulatory Information			
FCC ID	AZ489FT7061		
Industry Canada	109U-89FT7061		
Emission Designators	LMR: 8K10F1D, 8K10F1E, 8K10F1W, 11K0F3E, 16K0F3E***, 20K0F1E*** Bluetooth: 852KF1D, 1M17F1D, 1M19F1D WLAN (Wi-Fi ): 13M7G1D, 17MOD1D, 18M1D1D		

\*\*\* In accordance with FCC mandate, the APX 8000 all band radio is restricted to 12.5kHz operation only and does NOT support 25kHz in the VHF and UHF Bands (excluding T-Band). This applies to customers under Rule Part 90.

RECEIVER - TYPICAL PERFORMANCE SPECIFICATIONS				
	700	800	VHF	UHF
Frequency Range/Bandsplits	764-776 MHz	851-870 MHz	136-174 MHz	380-520 MHz
Channel Spacing	25/20/12.5 kHz	25/20/12.5 kHz	25/20/12.5 kHz	25/20/12.5 kHz
Maximum Frequency Separation	Full Bandsplit	Full Bandsplit	Full Bandsplit	Full Bandsplit
Audio Output Power at Rated <sup>1</sup>	1 Watt	1 Watt	1 Watt	1 Watt
Frequency Stability <sup>1</sup> (-30°C to +60°C; +25°C Ref.)	+/- 1.0 ppm	+/- 1.0 ppm	+/- 1.0 ppm	+/- 1.0 ppm
Analog Sensitivity <sup>1</sup>	12 dB SINAD	0.224 uV	0.168 uV	0.199 uV
Digital Sensitivity <sup>2</sup>	1% BER	0.316 uV	0.251 uV	0.282 uV
	5% BER	0.211 uV	0.149 uV	0.158 uV
	5% BER Faded	0.562uV	0.562 uV	0.530 uV
Selectivity (25 kHz / 12.5 kHz) <sup>1, 5</sup>	79 dB / 72 dB	78 dB / 72 dB	82 dB / 77 dB	80 dB / 74 dB
Intermodulation Rejection <sup>1</sup>	81 dB	80 dB	82 dB	80 dB
Spurious Rejection <sup>1</sup>	98 dB	98 dB	92 dB	98 dB
FM Hum and Noise (25 kHz / 12.5 kHz) <sup>1</sup>	-55 dB / -53 dB	-54 dB / -52 dB	-57 dB / -55 dB	-56 dB / -54 dB
Audio Distortion <sup>1</sup>	0.9 %	0.9 %	0.9 %	0.9 %

## PORTABLE MILITARY STANDARDS 810 C, D, E, F & G

	MIL-STD 810C		MIL-STD 810D		MIL-STD 810E		MIL-STD 810F		MIL-STD 810G	
	Method	Proc./Cat.	Method	Proc./Cat.	Method	Proc./Cat.	Method	Proc./Cat.	Method	Proc./Cat.
Low Pressure	500.1	I	500.2	II	500.3	II	500.4	II	500.5	II
High Temperature	501.1	I, II	501.2	I/A1, II/A1	501.3	I/A1, II/A1	501.4	I/Hot, II/Hot	501.5	I/A1, II/A1
Low Temperature	502.1	I	502.2	I/C3, II/C1	502.3	I/C3, II/C1	502.4	I/C3, II/C1	502.5	I/C3, II/C1
Temperature Shock	503.1	I	503.2	I/A1C3	503.3	I/A1C3	503.4	I	503.5	I/C
Solar Radiation	505.1	II	505.2	I	505.3	I	505.4	I	505.5	I/A1
Rain	506.1	I, II	506.2	I, II	506.3	I, II	506.4	I, III	506.5	I, III
Humidity	507.1	II	507.2	II	507.3	II	507.4	1 Proc	507.5	II/Aggravated
Salt Fog	509.1	I	509.2	I	509.3	I	509.4	1 Proc	509.5	1 Proc
Blowing Dust	510.1	I	510.2	I	510.3	I	510.4	I	510.5	I
Blowing Sand	1 Proc	1 Proc	510.2	II	510.3	II	510.4	II	510.5	II
Submersion <sup>6</sup>	512.1	I	512.2	I	512.3	I	512.4	I	512.5	I
Vibration	514.2	VIII/F, Curve-W	514.3	I/10, II/3	514.4	I/10, II/3	514.5	I/24	514.6	I/24
Shock	516.2	I, III, V	516.3	I, V, VI	516.4	I, V, VI	516.5	I, V, VI	516.6	I, V, VI
Shock (Drop)	516.2	II	516.2	IV	516.4	IV	516.5	IV	516.6	IV

## DIMENSIONS OF THE RADIOS WITHOUT BATTERY

	Inches	Millimeters
Length	5.47	139
Width Push-To-Talk button	2.39	60.7
Depth Push-To-Talk button	1.40	35.6
Width Top	2.98	75.7
Depth Top	1.58	40.1
Depth Bottom of Battery	1.24	31.5
Weight of the radios without battery	11.25 oz	319 g

## ENCRYPTION

Supported Encryption Algorithms	ADP, 256-bit AES, DES, DES-XL, DES-OFB, DVP-XL, Localized Algorithm
Encryption Algorithm Capacity	8
Encryption Keys per Radio	Module capable of storing 1024 keys. Programmable for 128 Common Key Reference (CKR) or 16 Physical Identifier (PID)
Encryption Frame Re-sync Interval	P25 CAI 360 mSec
Encryption Keying	Key Loader and Over the Air Rekeying (OTAR)
Synchronization	XL – Counter Addressing OFB – Output Feedback
Vector Generator	National Institute of Standards and Technology (NIST) approved random number generator
Encryption Type	Digital and SecureNet
Key Storage	Tamper protected volatile or non-volatile memory
Key Erasure	Keyboard command and tamper detection
Standards	FIPS 140-2 Level 3 FIPS 197

## WIRELESS CONNECTIVITY & SECURITY

Frequency Range/Bandsplits:

Bluetooth: 2402 - 2480 MHz, WLAN (Wi-Fi<sup>®</sup>): 2400 - 2483.5 MHz

WLAN (Wi-Fi<sup>®</sup>) 802.11 b/g/n supports WPA-2, WPA, WEP security protocols; radio can be pre-provisioned with up to 20 SSIDs

Mission Critical Wireless Bluetooth 2.1 uses 96 bit encryption for pairing & 128 bit encryption for voice, signaling and data. The radio BT supports up to 6 data connections and 1 audio connection.

Bluetooth Low Energy uses 128-bit AES-CCM encryption

## GPS/GNSS SPECIFICATIONS

Constellations	GPS & GLONASS
Tracking Sensitivity	-164 dBm
Accuracy <sup>3</sup>	<5 meters (95%)
Cold Start <sup>3</sup>	<60 seconds (95%)
Hot Start <sup>3</sup>	<5 seconds (95%)
Mode of Operation	Autonomous (Non-Assisted)

## ENVIRONMENTAL SPECIFICATIONS

Operating Temperature <sup>4</sup>	-30°C / +60°C
Storage Temperature <sup>4</sup>	-40°C / +85°C
Humidity	Per MIL-STD
ESD	IEC 801-2 KV
Water and Dust Intrusion	IP68 (2 meters, 2 hours)

## RUGGED OPTION SPECIFICATIONS

Leakage (submersion) <sup>6</sup>	MIL-STD-810 C, D, E, F and G Method 512.X Procedure I, IP68 (2 meters, 4 hours)
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## HOUSING COLOR

Black (Standard), Public Safety Yellow, and High Impact Green

<sup>1</sup> Measured conductively in analog mode per TIA / EIA 603 under nominal conditions.

<sup>2</sup> Measured conductively in digital mode per TIA / EIA IS 102.CAAA under nominal conditions.

<sup>3</sup> Measured conductively with >6 satellites visible at a nominal -130 dBm signal strength. Specs provided are 95th percentile values.

<sup>4</sup> Temperatures listed are for radio specifications. Battery storage is recommended at 25°C, ±5°C to ensure best performance.

<sup>5</sup> Measured using the TIA-603 single-tone method.

<sup>6</sup> Rugged option only. Specifications subject to change without notice.

All specifications shown are typical.  
Radio meets applicable regulatory requirements.

Motorola Solutions, Inc. 1301 East Algonquin Road Schaumburg, Illinois 60196, U.S.A. 800-367-2346 [www.motorolasolutions.com/APX8000](http://www.motorolasolutions.com/APX8000)

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# APX™ 6500

## PROJECT 25 MOBILE RADIO

We've put exceptional flexibility into an advanced mission critical mobile radio that's easy to operate and intuitive to use. The APX 6500 P25 mobile allows users to choose from 4 control heads, mid and high power models and multiple installation configurations in an easy to install design. Innovative safety features such as GPS location tracking, intelligent lighting and one-touch controls help to keep first responders safer than ever before.

Focus on the task not the technology, with the hardworking mission critical mobile that turns mission critical into mission complete.



### FLEXIBLE PLATFORM

- Interchangeable control heads that best support your operational needs - 02, 03, 05, 07 and 09
- Two transceiver options - high-power and mid-power
- Dual control head support offered on the 02, 05, 07 and 09 control heads

### EASY TO INSTALL AND EFFORTLESS TO USE

- Mid-power model fits into any existing XTL footprint, so you can reuse mounting holes and cables
- High-power model trunnion design lets you remove the radio without removing the cables
- 12 character RF ID label helps you track information without uninstalling your radio

### CUTTING-EDGE TECHNOLOGY AND ADVANCED FEATURES

- Project 25 Phase 2 technology provides twice the voice capacity
- Integrated GPS lets you locate and track an individual or vehicle
- Advanced features like intelligent lighting, radio profiles and text messaging improve communication and coordination



# APX™ 6500 SPECIFICATIONS

## FEATURES AND BENEFITS:

Available in 700/800 MHz, VHF, UHF R1 and UHF R2 bands

Channels: 870\*

Trunking Standards supported:

- Clear or digital encrypted Trunked Operation
- Capable of SmartZone®, SmartZone Omnilink, SmartNet®

Analog MDC-1200 and Digital APCO P25 Conventional System Configurations

Narrow and wide bandwidth digital receiver (6.25kHz/12.5kHz/20kHz/25kHz)

Embedded digital signaling (ASTRO and ASTRO 25)

Integrated Encryption Hardware

Software Key

ASTRO 25 Integrated Voice & Data

Intelligent lighting

Integrated GPS/GLONASS for outdoor location tracking

Radio profiles

Unified Call List

Meets applicable MIL-STD 810C, D, E, F and G

Ships standard IP54

Utilizes Windows XP, Vista and Windows 7 and 8 Customer Programming Software (CPS)\*\*

- Supports USB Communications

- Built in FLASHport™ support

Re-use of most XTL™ accessories, plus new IMPRES accessories

## OPTIONAL FEATURES:

Enhanced Encryption Software Options

Programming over Project 25 (POP25)

Text Messaging

Over the Air Rekeying (OTAR)

12 character RF ID asset tracking

Tactical OTAR

Siren and Light Interface Module

\* Enhancement package available

\*\* CPS version R12.00.00 and greater ordered after June 2014 will only support Windows 7 and 8

## TRANSMITTER - TYPICAL PERFORMANCE SPECIFICATIONS

	700 MHz		800 MHz		VHF		UHF Range 1		UHF Range 2	
Frequency Range/Bandsplits	764-776 MHz 794-806 MHz		806-824 MHz 851-870 MHz		136-174 MHz		380-470 MHz		450-520 MHz	
Channel Spacing	25/20/12.5 kHz		25/20/12.5 kHz		25/20/12.5 kHz		25/20/12.5 kHz		25/20/12.5 kHz	
Maximum Frequency Separation	Full Bandsplit		Full Bandsplit		Full Bandsplit		Full Bandsplit		Full Bandsplit	
Rated RF Output Power Adj <sup>†</sup>	10-30 Watts		10-35 Watts		10-50 Watts or 25-110 Watts		10-40 Watts or 25-110 Watts		10-45 Watts (450-485 MHz) 10-40 Watts (485-512 MHz) 10-25 Watts (512-520 MHz)	
Frequency Stability <sup>*</sup> (−30°C to +60°C; +25°C Ref.)	±0.00015 %		±0.00015 %		±0.0002 %		±0.0002 %		±0.0002 %	
Modulation Limiting <sup>†</sup>	±5 kHz / ±2.5 kHz		±5 kHz/±4 kHz (NPSPAC) /±2.5 kHz		±5 kHz / ±2.5 kHz		±5 kHz / ±2.5 kHz		±5 kHz / ±2.5 kHz	
Modulation Fidelity (C4FM) 12.5kHz Digital Channel	±2.8 kHz		±2.8 kHz		±2.8 kHz		±2.8 kHz		±2.8 kHz	
Emissions <sup>*</sup>	Conducted+ −75/−85 dBc	Radiated+ −20/−40 dBm	Conducted −75 dBc	Radiated −20 dBm	Conducted −85 dBc	Radiated −20 dBm	Conducted −85 dBc	Radiated −20 dBm	Conducted −85 dBc	Radiated −20 dBm
Audio Response <sup>*</sup>	+1, −3 dB (EIA)		+1, −3 dB (EIA)		+1, −3 dB (EIA)		+1, −3 dB (EIA)		+1, −3 dB (EIA)	
FM Hum & Noise 25 kHz 12.5 kHz	−50 dB −48 dB		−50 dB −48 dB		−53 dB −52 dB		−53 dB −50 dB		−53 dB −50 dB	
Audio Distortion <sup>*</sup>	2 %		2 %		2 %		2 %		2 %	

## DIMENSIONS

	Inches	Millimeters
Mid Power Radio Transceiver	2 x 7 x 8.6	50.8 x 177.8 x 218.4
O5 Control Head	2 x 7 x 2.5	50.8 x 180.3 x 63.5
O2 Control Head	2.7 x 8 x 2.1	68.4 x 206 x 52.83
O7 Control Head	2 x 7 x 1.5	50.8 x 178 x 40
Mid Power Radio Transceiver and O5 Control Head—Dash Mount	2 x 7 x 9.6	50.8 x 180.3 x 243.8
Mid Power Radio Transceiver and O2 Control Head - Dash Mount	2.7 x 8 x 10.5	68.4 x 206 x 268
Mid Power Radio Transceiver and O7 Control Head - Dash Mount	2 x 7 x 10.3	50.8 x 178 x 262
Mid Power Radio Transceiver and Remote Mount	2.0 x 7 x 9.6	50.8 x 180.3 x 243.8
High Power Radio Transceiver	2.9 x 11.5 x 8.8	74 x 293 x 223
High Power Radio Transceiver with Handle	3.4 x 11.5 x 8.8	87 x 293 x 223
Mid Power Radio Transceiver and O5 Control Head Weight	6.6 lbs	3.0 kg
Mid Power Radio Transceiver and O2 Control Head Weight	7.12 lbs	3.23 kg
Mid Power Radio Transceiver and O7 Control Head Weight	6.74 lbs	3.06 kg
High Power Radio Transceiver Weight	With Trunnion Without Trunnion	14.2 lbs 12 lbs
		6.4 kg 5.4 kg



# APX 6500 CONTROL HEAD PORTFOLIO



## 02 RUGGED CONTROL HEAD

- Large color display with intelligent lighting
- 3 lines of text 14 characters max / 1 line of icons / 1 line of menus
- Built in 7.5 watt speaker
- Multiple control head configuration (up to 2)
- Multifunction volume/channel knob
- Night/day mode button

## 03 HAND HELD CONTROL HEAD

- Large color display with intelligent lighting
- 2 lines of text 14 characters max / 1 line of icons / 1 line of menus
- Integrated full size DTMF keypad
- Hand-held control head with intuitive user interface
- Two quick-access side buttons
- Display contrast selector

## 05 STANDARD CONTROL HEAD

- Tri-color display with intelligent lighting
- 2 lines of text 14 characters max / 1 line of icons / 1 line of menus
- Available with Keypad Microphone
- Multiple control head configuration (up to 2)
- Display contrast selector

## 07 ENHANCED CONTROL HEAD

- Large color display with intelligent lighting
- 3 lines of text 14 characters max / 1 line of icons / 1 line of menus
- Available with Lighting & Siren Controls or DTMF Keypad
- Multiple control head configuration (up to 2)
- Multifunction volume/channel knob
- Night/day mode button

## 09 INTEGRATED CONTROL HEAD

- Extra-large full color display with intelligent lighting
- 2 lines of text 14 characters max / 1 line of icons / 1 line of menus
- Integrated full size DTMF keypad
- Large programmable one-touch buttons
- Dedicated siren controls
- Integrated Response Selector
- Night/day mode button

## RECEIVER – TYPICAL PERFORMANCE SPECIFICATIONS

		700 MHz	800 MHz	VHF		UHF Range 1		UHF Range 2	
Frequency Range/Bandsplits		764-776 MHz	851-870 MHz	136-174 MHz		380-470 MHz		450-520 MHz	
Channel Spacing		25/20/12.5 kHz	25/20/12.5 kHz	25/20/12.5 kHz		25/20/12.5 kHz		25/20/12.5 kHz	
Maximum Frequency Separation		Full Bandsplit	Full Bandsplit	Full Bandsplit		Full Bandsplit		Full Bandsplit	
Audio Output Power at 3% distortion*		7.5 W or 15 W ++	7.5 W or 15 W ++	7.5 W or 15 W ++		7.5 W or 15 W ++		7.5 W or 15 W ++	
Frequency Stability* (-30°C to +60°C; +25°C Ref.)		+/-0.8 PPM	+/-0.8 PPM	+/-0.8 PPM		+/-0.8 PPM		+/-0.8 PPM	
Analog Sensitivity*	12 dB SINAD	-121 dBm	-121 dBm	Pre-Amp -123 dBm	Standard -119 dBm	Pre-Amp -123 dBm	Standard -119 dBm	Pre-Amp -123 dBm	Standard -119 dBm
Digital Sensitivity	5% BER	-121.5 dBm	-121.5 dBm	-123 dBm	-119 dBm	-123 dBm	-119 dBm	-123 dBm	-119 dBm
Intermodulation	25 kHz 12.5 kHz	82 dB 82 dB	82 dB 82 dB	84 dB 85 dB	86 dB 86 dB	82 dB 83 dB	86 dB 85 dB	82 dB 83 dB	86 dB 85 dB
Spurious Rejection		91 dB	91 dB	95 dB		93 dB		93 dB	
Audio Distortion at rated*		1.20%	1.20%	1.20%		1.20%		1.20%	
FM Hum & Noise	25 kHz 12.5 kHz	59 dB 50 dB	59 dB 50 dB	59 dB 50 dB		55 dB 50 dB		57 dB 50 dB	
Selectivity*	25 kHz 12.5 kHz 30 kHz	85 dB 75 dB —	85 dB 75 dB —	85 dB 75 dB 90 dB		85 dB 75 dB —		85 dB 75 dB —	

## SIGNALING (ASTRO MODE)

Signaling Rate	9.6 kbps
Digital ID Capacity	10,000,000 Conventional / 48,000 Trunking
Digital Network Access Codes	4,096 network site addresses
ASTRO® Digital User Group Addresses	4,096 network site addresses
Project 25 – CAI Digital User Group Addresses	65,000 Conventional / 4,094 Trunking
Error Correction Techniques	Golay, BCH, Reed-Solomon codes
Data Access Control	Slotted CSMA: Utilizes infrastructure-sourced data status bits embedded in both voice and data transmissions.

## GPS SPECIFICATIONS

Channels	12
Tracking Sensitivity	-153 dBm
Accuracy**	<10 meters (95%)
Cold Start	<60 seconds (95%)
Hot Start	<10 seconds (95%)
Mode of Operation	Autonomous (Non-Assisted) GPS

## POWER AND BATTERY DRAIN

Model Type	136-174 MHz, 380-470 MHz, 450-520 MHz, 764-870 MHz					
Minimum RF Power Output	10-35 Watt (764-870 MHz), 10-50 Watts or 25-110 Watts (136-174 MHz), 10-40W or 25-110 Watts (380-470 MHz), 10-45Watts (450-485 MHz), 10-40Watts (485-512 MHz), 10-25Watts (512-520 MHz)					
Operation	13.8V DC $\pm$ 20% Negative Ground					
Standby at 13.8V	0.85A (764-870 MHz), 0.85A (136-174 MHz), 0.85A (380-470 MHz), 0.85A (450-520 MHz)					
Receive Current at Rated Audio at 13.8V	3.2A (764-870 MHz), 3.2A (136-174 MHz), 3.2A (380-470 MHz), 3.2A (450-520 MHz)					
Transmit Current (A) at Rated Power	136-174 MHz (10-50 Watt) 380-470 MHz (10-40 Watt) 380-470 MHz (10-40 Watt)	13A (50W) 11A (40W) 11A (45W)	8A (15W) 8A (15W) 8A (15W)	764-870 MHz (10-35 Watt) 136-174 MHz (25-110 Watt) 380-470 MHz (25-110 Watt)	12A (50W) 20A (110W) 24A (110W)	8A (15W)

## MOBILE MILITARY STANDARDS 810 C, D, E, F & G

	MIL-STD 810C		MIL-STD 810D		MIL-STD 810E		MIL-STD 810F		MIL-STD 810G	
	Method	Proc./Cat.	Method	Proc./Cat.	Method	Proc./Cat.	Method	Proc./Cat.	Method	Proc./Cat.
Low Pressure	500.1	I	500.2	II	500.3	II	500.4	II	500.5	II
High Temperature	501.1	I, II	501.2	I/A1, II/A1	501.3	I/A1, II/A1	501.4	I/Hot, II/Hot	501.5	I-A1, II
Low Temperature	502.1	I	502.2	I/C3, II/C1	502.3	I/C3, II/C1	502.4	I/C3, II/C1	502.5	I-C3, II
Temperature Shock	503.1	1 Proc	503.2	I/A1C3	503.3	I/A1C3	503.4	I	503.5	I-C
Solar Radiation	505.1	II	505.2	I	505.3	I	505.4	I	505.5	I-A1
Rain	506.1	I, II	506.2	I, II	506.3	I, II	506.4	I, III	506.5	I, III
Humidity	507.1	II	507.2	II	507.3	II	507.4	1 Proc	507.5	II-Aggravated
Salt Fog	509.1	1 Proc	509.2	1 Proc	509.3	1 Proc	509.4	1 Proc	509.5	1 Proc
Blowing Dust	510.1	I	510.2	I, II	510.3	I, II	510.4	I, II	510.5	I, II
Vibration	514.1w	VIII/F, Curve-W	514.3	I/10, II/3	514.4	I/10, II/3	514.5	I/24	514.6	I-cat.24
Shock	516.2	I, III, V	516.3	I, V, VI	516.4	I, V, VI	516.5	I, V, VI	516.6	I, V, VI

## ENCRYPTION

Supported Encryption Algorithms	ADP, AES, DES, DES-XL, DES-OFB, DVP-XL
Encryption Algorithm Capacity	8
Encryption Keys per Radio	Module capable of storing 1024 keys. Programmable for 64 Common Key Reference (CKR) or 16 Physical Identifier (PID)
Encryption Frame Re-sync Interval	P25 CAI 300 mSec
Encryption Keying	Key Loader
Synchronization	XL – Counter Addressing, OFB – Output Feedback
Vector Generator	National Institute of Standards and Technology (NIST) approved random number generator
Encryption Type	Digital
Key Storage	Tamper protected volatile or non-volatile memory
Key Erasure	Keyboard command and tamper detection
Standards	FIPS 140-2 Level 3 FIPS 197

## ENVIRONMENTAL SPECIFICATIONS

Operating Temperature	-30°C / +60°C
Storage Temperature	-40°C / +85°C
Humidity	Per MIL-STD
ESD	IEC 801-2 KV
Water and Dust Intrusion	IP54, MIL-STD

## FCC TYPE ACCEPTANCE ID

BAND	OUTPUT POWER	TRANSMITTER NUMBER
764-870 MHz	10-35 Watts	AZ492FT5858
136-174 MHz	25-110 Watts	AZ492FT3821
136-174 MHz	10-50 Watts	AZ492FT3824
380-470 MHz	10-40 Watts	AZ492FT4894
380-470 MHz	25-110 Watts	AZ492FT4897
450-520 MHz	10-45 Watts	AZ492FT4896

\* Measured in the analog mode per TIA/EIA 603 under nominal conditions

\*\* Accuracy specs are for long-term tracking  
(95th percentile values >5 satellites visible at a nominal -130 dBm signal strength)

+ Specs includes performance for the non-GNSS/GNSS bands

++ Output power in to 8 and 3.2 Ohm external speakers respectively

Specifications subject to change without notice. All specifications shown are typical.  
Radio meets applicable regulatory requirements.

Motorola Solutions, Inc. 1301 E. Algonquin Road, Schaumburg, Illinois 60196 U.S.A. [motorolasolutions.com](http://motorolasolutions.com)

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# APX<sup>TM</sup> 8500

ALL-BAND P25 MOBILE RADIO

UNLIMITED MOBILITY.  
MAXIMUM CONNECTIVITY.





**FIRST RESPONDERS  
MUST BE READY  
TO COMMUNICATE  
AT A MOMENT'S  
NOTICE IN ANY  
SITUATION**



# APX 8500

**UNLIMITED MOBILITY.  
MAXIMUM CONNECTIVITY.**

During an emergency - a highspeed chase, massive traffic accident, or natural disaster - public safety officials from different agencies must be able to effectively communicate with each other to coordinate personnel and improve response time.



The APX 8500 all-band mobile radio enables first responders to use a single mobile radio to exchange critical voice and data communications seamlessly with multiple agencies and jurisdictions operating on different radio bands.

The APX 8500 combines unlimited interoperability, secure Wi-Fi® connectivity and purpose-built design enabling ease of installation and removal. It can easily connect to the VML750 LTE vehicle modem via micro USB interface and utilize the (4G/3G) commercial network to create an in-vehicle ecosystem for offloading data applications in the field increasing the safety and efficiency of public safety users in and around the vehicle.



## KEY FEATURES

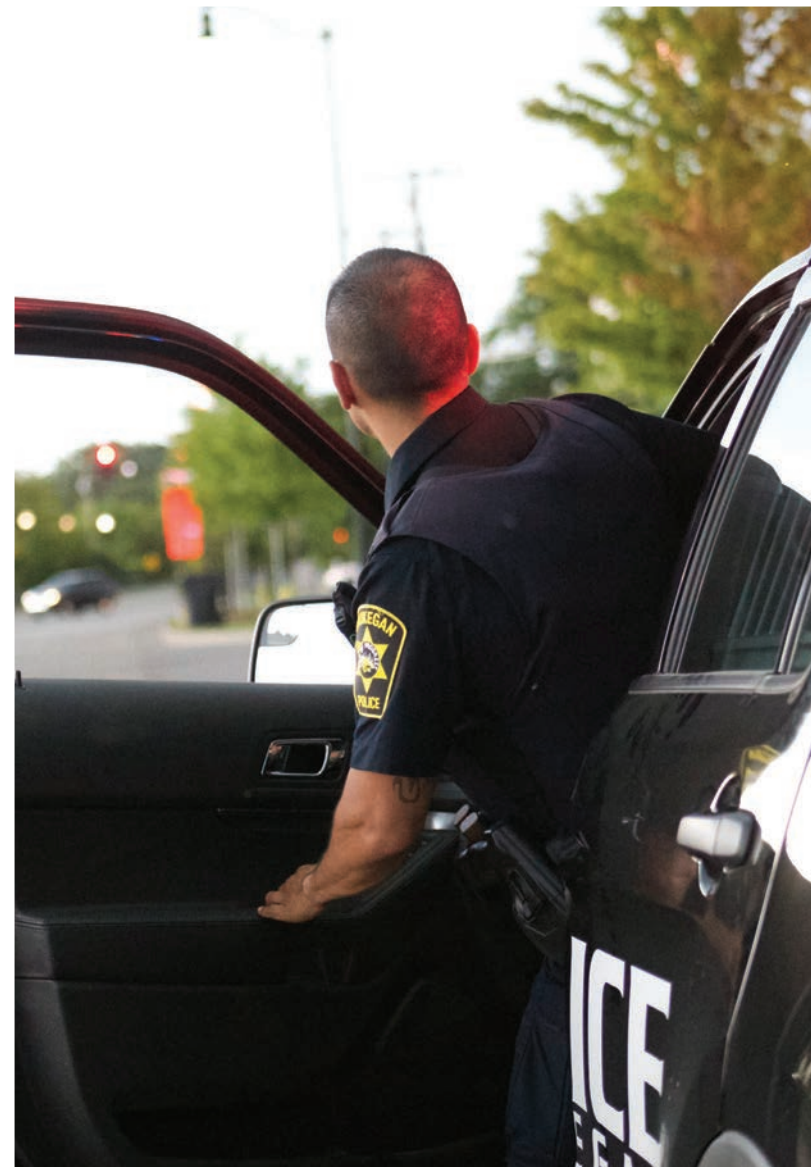
- All-band functionality expands voice and data communications across multiple agencies
- Secure Wi-Fi configures the APX 8500 all-band mobile radio with software updates in seconds
- Mission Critical Geofence ensures fast communication across personnel arriving on-scene
- Leverage LTE network (4G/3G) with VML 750 and Sierra Wireless GX450 (sold separately)
- Purpose built design for ease of installation and removal
  - Available in dash, remote, motorcycle, and control station configurations
  - Compatible with 09, 07, 05, 03, and 02 control heads
  - IP56 and MILSTD 810 Rated G







## IMPROVE RESPONSE TIMES WITH THE APX 8500 ALL-BAND RADIO



### ALL-BAND

#### Unlimited Mobility

With a 4-in-1 mobile radio and an all-band antenna, you now have the ability to stay connected and expand voice and data communications across multiple agencies with one device. Improve response time by instantly operating on digital or analog networks, in 7/800, VHF, UHF Range 1 and UHF Range 2 bands at any given time.



### SECURE Wi-Fi

#### Voice and Data, All at Once

Update your radio fleet without interrupting voice communications with secure Wi-Fi. This dramatically improves the speed of configuring new codeplugs, firmware and software features over-the-air via Radio Management<sup>1</sup>. Agencies can pre-provision up to 20 secure Wi-Fi hotspots so personnel can easily access updates at the facility or in the field.



### MISSION CRITICAL GEOFENCE

#### Seamless On-scene Communication

Ensure fast and seamless communication and collaboration across all responders arriving on a scene. Mission Critical Geofence (also referred to as Enhanced Geoselect) automatically changes a radio's active talkgroup based on its GPS location and an agency-defined virtual barrier. For example, an incident commander can create a geofence around the 3-block radius of a burning building so that all arriving first responders are automatically placed in the same talkgroup.



### DATA MODEM CONNECTION

#### Leverage LTE network

The APX 8500 can easily connect to the VML750 LTE vehicle modem via micro USB interface. The VML750 provides cellular carrier network (4G/3G) access so personnel have the flexibility to instantly offload/update the APX 8500 with radio data software applications such as: GPS, OTAR (over-the-air-rekeying), advanced messaging solution (text message), firmware refreshes, flashport, etc. without voice interruption. Fall back on Integrated Voice and Data (IV&D) when the cellular network is unavailable.



### PURPOSE-BUILT DESIGN

#### Ease of Installation and Removal

Since vehicle space is limited for communication equipment, we designed the APX 8500 to allow for all cables to be wired on one side of the mobile, providing additional flexibility for installation. Agencies can also reuse the existing mounting holes, cables and install space of an APX 7500 mobile for easier access, installation and removal. The mid-power trunion was completely redesigned to provide better engagement into the tray and secure grip. The APX 8500 supports dash, remote, motorcycle, and control station configurations.



APX 8500 All-Band Mobile Radio



VML750 LTE Vehicle Modem

<sup>1</sup>Radio Management application simplifies APX radio configuration and management by programming up to 16 radios at one time and tracking which radios have been successfully programmed, providing a clear view of the entire radio fleet and a codeplug history for each radio.



APX 8500 ALL-BAND P25 MOBILE RADIO  
CONTROL HEAD PORTFOLIO



02 RUGGED CONTROL HEAD	03 HAND HELD CONTROL HEAD	05 STANDARD CONTROL HEAD	07 ENHANCED CONTROL HEAD	09 INTEGRATED CONTROL HEAD
Large color display with intelligent lighting	Large color display with intelligent lighting	Tri-color display with intelligent lighting	Large color display with intelligent lighting	Extra-large full color display with intelligent lighting
3 lines of text 14 characters max / 1 line of icons / 1 line of menus	2 lines of text 14 characters max / 1 line of icons / 1 line of menus	2 lines of text 14 characters max / 1 line of icons / 1 line of menus	3 lines of text 14 characters max / 1 line of icons / 1 line of menus	2 lines of text 14 characters max / 1 line of icons / 1 line of menus
Built in 7.5 watt speaker	Integrated full size DTMF keypad	Available with keypad microphone	Available with lighting & siren controls or DTMF keypad	Integrated full size DTMF keypad
Multiple control head configuration (up to 4)	Hand-held control head with intuitive user interface	Multiple control head configuration (up to 4)	Multiple control head configuration (up to 4)	Large programmable one-touch buttons
Motorcycle configuration available	Two quick-access side buttons	Motorcycle configuration available	Configuration available	Dedicated siren controls
Multi-function volume/channel knob	Display contrast selector	Display contrast selector	Multi-function volume/channel knob	Integrated response selector
Night/day mode button			Night/day mode button	Night/day mode button

APX 8500 ALL-BAND P25 MOBILE RADIO  
SPECIFICATIONS

RF BANDS

700/800 MHz, VHF, UHF Range 1 & UHF Range 2  
9600 Baud Digital APCO P25 Phase 1 FDMA and Phase 2 TDMA Trunking  
3600 Baud SmartZone®, Omnilink Trunking  
Digital APCO 25, Conventional, Analog MDC 1200, Quick Call II  
System Configurations  
Narrow and Wide Bandwidth  
Digital Receiver  
(6.25 kHz equivalent/25/20/12.5 KHz)<sup>1</sup>

STANDARD FEATURES

All-Band Antenna  
Up to 3000 Channels  
Text Messaging  
ASTRO 25 Integrated Voice & Data  
Dynamic Zone  
Integrated GPS/GLONASS for Outdoor Location Tracking  
Single-key ADP Encryption  
Software Key  
Radio Profiles  
Unified Call List  
Expansion Slot Standard  
Meets Applicable MIL-specs 810C, D, E, F and G  
IP56  
Reuse of Most XTL/APX™ Accessories

PROGRAMMING

Utilizes Windows 7,8 and 10 Customer Programming Software (CPS) with Radio Management<sup>2</sup>

OPTIONAL FEATURES

Wi-Fi 802.11 b/g/n  
Data Modem Connection  
Mission Critical Geofence  
12 Character RF ID Asset Tracking  
Multi-key for 128 Keys and MultiAlgorithm  
Programming Over Project 25 (OTAP)  
Over the Air Rekey (OTAR)  
Digital Tone Signaling  
Siren and Light Interface Module

<sup>1</sup> Per the FCC Narrowbanding rules, new products (APX6000 UHFR1, UHFR2) submitted for FCC certification after January 1, 2011 are restricted from being granted certification at 25KHz for United States - State & Local Markets only.  
<sup>2</sup> CPS version R12.00.00 and greater ordered after June 2014 will only support Windows 7 and 8.



# APX 8500 ALL-BAND P25 MOBILE RADIO SPECIFICATIONS

SIGNALLING (ASTRO MODE)	
Signalling Rate	9.6 kbps
Digital ID Capacity	10,000,000 Conventional / 48,000 Trunking
Digital Network Access Codes	4,096 network site addresses
ASTRO Digital User Group Addresses	4,096 network site addresses
Project 25 – CAI Digital User Group Addresses	65,000 Conventional / 4,094 Trunking
Error Correction Techniques	Golay, BCH, Reed-Solomon codes
Data Access Control	Slotted CSMA: Utilizes infrastructure-sourced data status bits embedded in both voice and data transmissions.

MOBILE APX 8500		
	Inches	Millimeters
Mid Power Radio Transceiver	2 x 7 x 8.4	50.8 x 178 x 213
O5 Control Head	2 x 7 x 2.93	50.8 x 178 x 74.4
O2 Control Head	2.7 x 8.1 x 3.8	68.4 x 206.3 x 96.4
O7 Control Head	2 x 7 x 3.2	50.8 x 178 x 81.4
Mid Power Radio Transceiver and O5 Control Head - Dash Mount	2 x 7 x 9.8	50.8 x 178 x 250
Mid Power Radio Transceiver and O2 Control Head - Dash Mount	2.7 x 8.1 x 10.7	68.4 x 206.3 x 270.6
Mid Power Radio Transceiver and O7 Control Head - Dash Mount	2 x 7 x 10.1	50.8 x 178 x 255.5
Mid Power Radio Transceiver and Remote Mount	2.0 x 7 x 9.1	50.8 x 178 x 231.5
	lbs	kg
Mid Power Radio Transceiver and O5 Control Head Weight	6.8 lbs	3.1 kg
Mid Power Radio Transceiver and O2 Control Head Weight	7.23 lbs	3.28 kg
Mid Power Radio Transceiver and O7 Control Head Weight	6.8 lbs	3.1 kg

TRANSMITTER - TYPICAL PERFORMANCE SPECIFICATIONS										
	700 MHz		800 MHz		VHF		UHF Range 1		UHF Range 2	
Frequency Range/Bandsplits	764-776, 794-806 MHz 806-825, 851-870 MHz		764-776, 794-806 MHz 806-825, 851-870 MHz		136-174 MHz		380-470 MHz		450-520 MHz	
Channel Spacing	25/20/12.5 kHz		25/20/12.5 kHz		30/25/12.5 kHz		25/20/12.5 kHz		25/20/12.5 kHz	
Maximum Frequency Separation	Full Bandsplit		Full Bandsplit		Full Bandsplit		Full Bandsplit		Full Bandsplit	
Rated RF Output Power Adj <sup>1</sup>	1-30 Watts		1-35 Watts		1-50 Watts		1-40 Watts		1-45 Watts (450-485 MHz) 1-40 Watts (485-512 MHz) 1-25 Watts (512-520 MHz)	
Frequency Stability <sup>1</sup> (–30°C to +85°C; +25°C Ref.)	±0.8 PPM		±0.8 PPM		±0.8 PPM		±0.8 PPM		±0.8 PPM	
Modulation Limiting <sup>1</sup>	±5 kHz / ±2.5 kHz		±5 kHz/±4 kHz (NPSPAC) /±2.5 kHz		±5 kHz / ±2.5 kHz		±5 kHz / ±2.5 kHz		±5 kHz / ±2.5 kHz	
Modulation Fidelity (C4FM) 12.5kHz Digital Channel	1.10%		1.10%		1.10%		1.10%		1.10%	
Emissions <sup>1</sup>	Conducted –75/–85 dBc	Radiated –20/–40 dBm	Conducted –75 dBc	Radiated –20 dBm	Conducted –85 dBc	Radiated –20 dBm	Conducted –85 dBc	Radiated –20 dBm	Conducted –85 dBc	Radiated –20 dBm
Audio Response <sup>1</sup>	+1, –3 dB (EIA)		+1, –3 dB (EIA)		+1, –3 dB (EIA)		+1, –3 dB (EIA)		+1, –3 dB (EIA)	
FM Hum & Noise <sup>1</sup>	25 kHz 12.5 kHz	50 dB 48 dB	50 dB 48 dB		53 dB 52 dB		53 dB 50 dB		53 dB 50 dB	
Audio Distortion <sup>1</sup>	25 & 20 kHz 12.5 kHz	0.50% 0.50%	0.50% 0.50%		0.50% 0.50%		0.50% 0.50%		0.50% 0.50%	

# APX 8500 ALL-BAND P25 MOBILE RADIO SPECIFICATIONS

RECEIVER – TYPICAL PERFORMANCE SPECIFICATIONS								
	700 MHz	800 MHz	VHF	UHF Range 1		UHF Range 2		
Frequency Range/Bandsplits	764-776 MHz	851-870 MHz	136-174 MHz	380-470 MHz		450-520 MHz		
Channel Spacing	25/20/12.5 kHz	25/20/12.5 kHz	30/25/12.5 kHz	25/20/12.5 kHz		25/20/12.5 kHz		
Maximum Frequency Separation	Full Bandsplit	Full Bandsplit	Full Bandsplit	Full Bandsplit		Full Bandsplit		
Audio Output Power at 3% distortion <sup>1</sup>	7.5 W or 15 W <sup>4</sup>	7.5 W or 15 W <sup>4</sup>	7.5 W or 15 W <sup>4</sup>	7.5 W or 15 W <sup>4</sup>		7.5 W or 15 W <sup>4</sup>		
Frequency Stability <sup>1</sup> (–30°C to +85°C; +25°C Ref.)	±0.8 PPM	±0.8 PPM	±0.8 PPM	±0.8 PPM		±0.8 PPM		
Analog Sensitivity <sup>1</sup> 12 dB SINAD	-121 dBm	-121 dBm	Pre-Amp -123 dBm	Standard -119 dBm	Pre-Amp -123 dBm	Standard -119 dBm	Pre-Amp -123 dBm	Standard -119 dBm
Digital Sensitivity 5% BER	-121.5 dBm	-121.5 dBm	-123 dBm	-119 dBm	-123 dBm	-119 dBm	-123 dBm	-119 dBm
Intermodulation	25 kHz 12.5 kHz	85 dB 85 dB	85 dB 85 dB	84 dB 86 dB	82 dB 83 dB	86 dB 86 dB	82 dB 83 dB	86 dB 86 dB
Spurious Rejection	100 dB	100 dB	90 dB	90 dB		90 dB		
Audio Response <sup>1</sup>	+1, –3 dB (EIA)	+1, –3 dB (EIA)	+1, –3 dB (EIA)	+1, –3 dB (EIA)		+1, –3 dB (EIA)		
Audio Distortion at rated <sup>1</sup>	1.20%	1.20%	1.20%	1.20%		1.20%		
Selectivity <sup>1</sup>	25 kHz 12.5 kHz 30 kHz	85 dB 72 dB —	85 dB 72 dB —	87 dB 76 dB 90 dB	82 dB 76 dB —	82 dB 76 dB —		

POWER AND BATTERY DRAIN					
Model Type	136-174 MHz, 380-470 MHz, 450-520 MHz, 764-870 MHz				
Minimum RF Power Output	1-35 Watt (764-870 MHz), 1-50 Watts 10-40W, 1-45Watts (450-485 MHz), 1-40Watts (485-512 MHz), 1-25Watts (512-520 MHz)				
Operation	13.8V DC ±20% Negative Ground				
Standby at 13.8V	1.4A (764-870 MHz), 1.4A (136-174 MHz), 1.4A (380-470 MHz), 1.4A (450-520 MHz)				
Receive Current at Rated Audio at 13.8V	3.2A (764-870 MHz), 3.2A (136-174 MHz), 3.2A (380-470 MHz), 3.2A (450-520 MHz)				
Transmit Current (A) at Rated Power	136-174 MHz (1-50 Watt) 380-470 MHz (1-40 Watt) 450-520 MHz (1-45 Watt)	15A (50W) 15A (40W) 13A (45W)	8A (15W) 8A (15W) 8A (15W)	764-870 MHz (1-35 Watt)	13A (50W)    8A (15W)

GPS SPECIFICATIONS	
Channels	12
Tracking Sensitivity	-164 dBm
Accuracy <sup>2</sup>	<5 meters (95%)
Cold Start	<60 seconds (95%)
Hot Start	<5 seconds (95%)
Mode of Operation	Autonomous (Non-Assisted) GNSS or SBAS



APX 8500 ALL-BAND P25 MOBILE RADIO
SPECIFICATIONS

MOBILE MILITARY STANDARDS 810 C, D, E , F & G										
	MIL-STD 810C		MIL-STD 810D		MIL-STD 810E		MIL-STD 810F		MIL-STD 810G	
	Method	Proc./Cat.	Method	Proc./Cat.	Method	Proc./Cat.	Method	Proc./Cat.	Method	Proc./Cat.
Low Pressure	500.1	I	500.2	II	500.3	II	500.4	II	500.5	II
High Temperature	501.1	I, II	501.2	I/A1, II/A1	501.3	I/A1, II/A1	501.4	I/Hot, II/ Hot	501.5	I/A1, II
Low Temperature	502.1	I	502.2	I/C3, II/C1	502.3	I/C3, II/C1	502.4	I/C3, II/C1	502.5	I/C3, II
Temperature Shock	503.1	1 Proc	503.2	I/A1C3	503.3	I/A1C3	503.4	I	503.5	I/C
Solar Radiation	505.1	II	505.2	I	505.3	I	505.4	I	505.5	I/A1
Rain	506.1	I, II	506.2	I, II	506.3	I, II	506.4	I, III	506.5	I, III
Humidity	507.1	II	507.2	II	507.3	II	507.4	1 Proc	507.5	II/Aggravated
Salt Fog	509.1	1 Proc	509.2	1 Proc	509.3	1 Proc	509.4	1 Proc	509.5	1 Proc
Blowing Dust	510.1	I	510.2	I, II	510.3	I, II	510.4	I, II	510.5	I, II
Vibration	514.2	VIII/F, Curve-W	514.3	I/10, II/3	514.4	I/10, II/3	514.5	I/24	514.6	I/24
Shock	516.2	I, III, V	516.3	I, V, VI	516.4	I, V, VI	516.5	I, V, VI	516.6	I, V, VI

Encryption	
Supported Encryption Algorithms	ADP, AES, DES, DES-XL, DES-OFB, DVP-XL
Encryption Algorithm Capacity	8
Encryption Keys per Radio	Module capable of storing 1024 keys. Programmable for 128 Common Key Reference (CKR) or 16 Physical Identifier (PID)
Encryption Frame Re-sync Interval	P25 CAI 300 mSec
Encryption Keying	Key Loader
Synchronization	XL – Counter Addressing OFB – Output Feedback
Vector Generator	National Institute of Standards and Technology (NIST) approved random number generator
Encryption Type	Digital
Key Storage	Tamper protected volatile or non-volatile memory
Key Erasure	Keyboard command and tamper detection
Standards	FIPS 140-2 Level 3 FIPS 197

Environmental Specifications	
Operating Temperature	-30°C / +60°C
Storage Temperature	-40°C / +85°C
Humidity	Per MIL-STD
ESD	IEC 801-2 KV
FCC/IC Type Acceptance ID	
FCC/IC ID	BAND AND POWER LEVEL
FCC ID: AZ492FT7089	764-776 MHz (10-30 Watts)
IC ID: 109U-92FT7089	794-806 MHz (10-30 Watts)
	806-824 MHz (10-35 Watts)
	851-870 MHz (10-35 Watts)
	136-174 MHz (10-50 Watts and 25-110 Watts)
	380-470 MHz (10-40 Watts and 25-110 Watts)
	450-485 MHz (10-45 Watts)
	485-512 MHz (10-40 Watts)
	512-520 MHz (10-25 Watts)

<sup>1</sup> Measured in the analog mode per TIA / EIA 603 single-tone method under nominal conditions

<sup>2</sup> Measured conductivity with > 6 satellites visible at a nominal -130 dBm signal strength. Specs provided are 95th percentile values.

<sup>3</sup> Specs includes performance for the non-GNSS/GNSS bands

<sup>4</sup> Output power in to 8 and 3.2 Ohm external speakers respectively

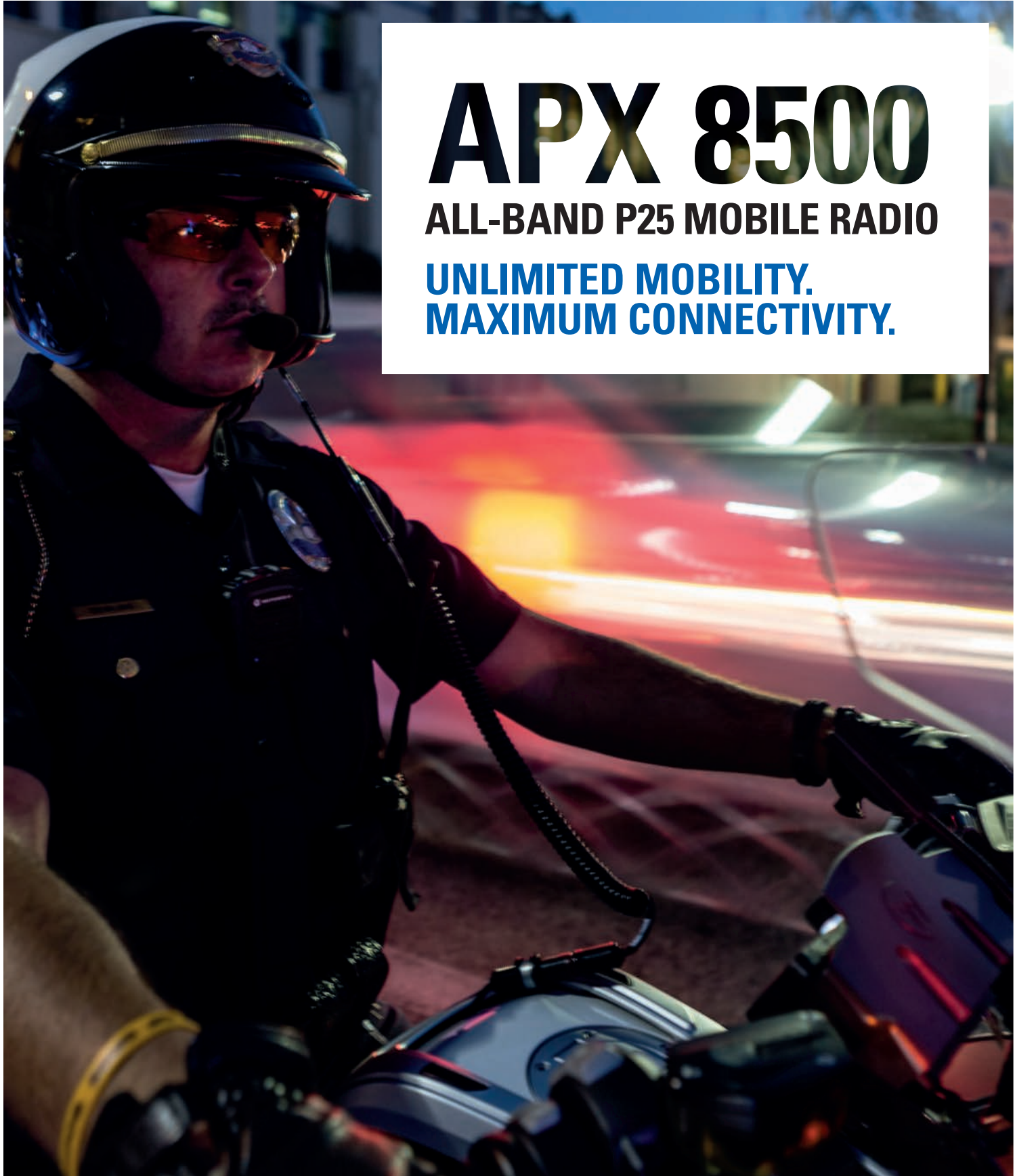
Specifications subject to change without notice. All specificationsshown are typical. Radio meets applicable regulatoryrequirements.



APX 8500
UNLIMITED MOBILITY.
MAXIMUM CONNECTIVITY.







# APX 8500

**ALL-BAND P25 MOBILE RADIO**

**UNLIMITED MOBILITY.  
MAXIMUM CONNECTIVITY.**

For more information, please visit: [www.motorolasolutions.com/APX8500](http://www.motorolasolutions.com/APX8500)

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**MOTOROLA SOLUTIONS**



# KEEP PERSONNEL AND COMMUNITIES SAFER

**APX MISSION-CRITICAL P25 COMMUNICATIONS**







# THE BEST OF WHAT WE DO

Whether you're a state trooper, firefighter, law enforcement officer or highway maintenance technician, people count on you to get the job done. There's no room for error. This is mission critical.

APX™ radios exist for this purpose. They're designed to be reliable and to optimize your communications, specifically in extreme environments and during life-threatening situations.

Even with the widest portfolio in the industry, APX continues to evolve. The latest APX NEXT smart radio delivers revolutionary new capabilities to keep you safer and more effective.

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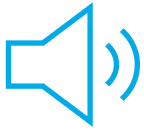
**WE'VE PUT EVERYTHING WE'VE LEARNED  
OVER THE LAST 90 YEARS INTO APX.  
THAT'S WHY IT REPRESENTS THE VERY  
BEST OF THE MOTOROLA SOLUTIONS  
PORTFOLIO. THERE IS NO BETTER.**



## OUTLAST AND OUTPERFORM

### RELIABLE COMMUNICATIONS ARE NON-NEGOTIABLE

APX two-way radios are designed for extreme durability, so you can count on them to work under the toughest conditions. From the rugged aluminum endoskeleton of our portable radios to the steel encasement of our mobile radios, APX is built to last.



## HEAR AND BE HEARD

### CLEAR COMMUNICATION CAN MAKE A DIFFERENCE

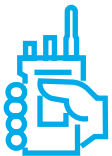
The APX family is designed to help you hear and be heard with unparalleled clarity, so you're confident your message will always get through. Multiple microphones and adaptive windproofing technology minimize noise from wind, crowds and sirens. And the loud and clear speaker ensures you can hear over background sounds.



## KEEP INFORMATION PROTECTED

### EVERYDAY, SECURITY IS BEING PUT TO THE TEST

With the APX family, you can be sure that your calls stay private, secure, and confidential. APX supports multiple types of standard and custom encryption. The MACE hardware encryption module equipped within an APX radio provides a hardened tamper-resistant chassis for storing encryption keys.



## MADE FOR THE MISSION

### APX RADIOS ARE INTUITIVE AND EASY TO USE FOR YOUR MISSION

A distinctive "T-grip" shape allows devices to be easily held with gloved hands or in wet environments. Positive action controls minimize the risk of accidental operation, while extreme ergonomic models are designed for specialized conditions. Easy to read displays, day and night, placed just where you need them for 'at-a-glance' status, or no display for covert operations.



## INTELLIGENCE IN ACTION

### AN ECOSYSTEM OF CONNECTIVITY HELPS TO KEEP YOU SAFE

APX radios can prioritize emergency calls, send a signal automatically when they sense "man down" or a collision, provide a Bluetooth® beacon to find missing personnel, and automate responses to specific events or when detecting a geofence. And upon recognizing poor signal quality, APX radios can route voice and data over broadband.



Pressure-tested tempered glass display

Shock-absorbing aluminum alloy endoskeleton

Water-tight seal

# APX NEXT ALL-BAND P25 SMART RADIO

IN PUBLIC SAFETY, FOCUS IS YOUR  
GREATEST RESOURCE. PROTECT  
THAT FOCUS WITH APX NEXT –  
OUR REVOLUTIONARY NEW  
SMART RADIO.

APX NEXT™ is our next step in advancing the lifeline. Designed to military standards for extreme ruggedness, the touchscreen works with or without gloves, in rain, dirt, and snow. High Dynamic Range mics and high-power speakers deliver our best audio ever, while SmartConnect keeps you connected beyond your P25 system. The result is a radio that works when you need it, without pause, distraction or doubt.

APX NEXT is designed for effortless usability when everything is on the line. Intuitive knobs and buttons can be distinguished by touch. A mission-critical touchscreen makes it fast and easy to operate your radio. The ViQi virtual assistant understands natural language voice commands, giving you eyes-up awareness. Every interaction is simple, fast and logical. You stay focused on what matters: your mission and your safety.



APX NEXT mission-critical apps bring new intelligence to the field. ViQi enables natural language database queries, rapidly delivering vital information to the front line. And as part of our unique, end-to-end public safety ecosystem, new capabilities can be added seamlessly as your needs evolve.

APX NEXT gives you back time. A cloud-based provisioning system allows radio managers to prepare radios even before they arrive, while remote updating keeps them in the field, with zero touch and zero downtime, and a range of services helps you manage your operation. With APX NEXT, your ownership experience is streamlined, so your valuable resources stay focused and ready.





# APX 8000 SERIES ALL-BAND P25 PORTABLE AND MOBILE RADIOS

**CHAOS DOESN'T STOP AT BORDERS.  
CRIMINALS DON'T RESPECT BOUNDARIES.  
SO YOUR COMMUNICATIONS SHOULDN'T BE  
LIMITED TO LOCAL FREQUENCIES.**

With multi-mode access to all four major P25 bands, APX 8000 series radios know no limits when it comes to interoperability. You can work seamlessly with virtually any agency on any P25 system—and all from a single radio. Stay connected further with the high-power configuration of the APX 8500 mobile. And if that isn't enough – APX 8000 series radios can reroute your P25 communication over available broadband networks and keep you connected when outside of P25 coverage.

Whether you're frantically yelling for backup or quietly whispering for assistance, you still need that message to get through. The APX 8000 Adaptive Audio Engine dynamically adjusts the radio's audio response to deliver optimal clarity. Wind is filtered out and background noise is wiped away. Quiet audio is boosted and feedback howl is suppressed.

Security is more important than ever. Criminals are testing you on the streets and over the air. Fight back with the entire toolbox. Supporting simultaneous multi-protocol encryption and certified to FIPS 140-2 level 3, the APX 8000 series radios keep your critical communications absolutely iron-tight.



## APX 8000HXE

**360 DEGREES OF  
SAFETY**

All-band HazLoc  
portable radio for fire  
and rescue teams.



## APX 8000H

**360 DEGREES OF  
PROTECTION**

All-band HazLoc  
portable radio for  
first responders and  
military teams.



## APX 8000XE

**UNLIMITED  
MOBILITY.  
EXTREME  
PERFORMANCE.**

All-band portable  
radio for fire and  
rescue teams.



## APX 8000

**UNLIMITED  
MOBILITY.  
UNCOMPROMISING  
PERFORMANCE.**

All-band portable radio  
for first responders.



## APX 8500

**UNLIMITED MOBILITY.  
MAXIMUM CONNECTIVITY**

All-band mobile radio available in  
high power and mid power versions.



# APX 6000 SERIES SINGLE-BAND P25 PORTABLE AND MOBILE RADIOS

THE APX 6000 IS BUILT ON DECADES OF PUBLIC SAFETY EXPERIENCE TO DELIVER EFFORTLESS COMMUNICATION WHEN YOU NEED IT THE MOST.

For a single-band radio, the APX 6000 series does not lack in features. From ergonomics to audio quality, these radios are designed to outperform.

A non-slip T-grip shape sets the portable radio firmly in your hands while optimized placement of button and knobs offer immediate access to radio controls. Need to find the emergency button? Simply slide your hand down the portable radio antenna or reach for the top right corner of the mobile.

The APX 6000 picks up your speech from any direction and then the innovative APX Adaptive Audio Engine applies exactly the right amount of processing: enough to remove background noise, but not enough to degrade speech quality. Dynamically adjusting its algorithms as external conditions change, the APX 6000 automatically gives you the best audio that's possible.

Out on the streets, APX 6000 series radios are ready to take all the abuse you can throw at them. A rugged aluminum endoskeleton protects portable radios against drops, water and dust, while the steel shell helps mobile radios survive impacts. Because when your life is on the line every day, you can't afford to carry an ordinary radio.



**APX 6000XE**  
RELIABLE.  
RESPONSIVE.  
READY FOR THE  
EXTREMES.

Single-band portable  
radio for fire and  
rescue teams.



**APX 6000**  
RELIABLE.  
RESPONSIVE.  
READY FOR  
ANYTHING.

Single-band  
portable radio for  
first responders.



**SRX 2200**  
RELIABLE.  
RESPONSIVE.  
READY FOR  
ACTION.

Single-band  
portable radio for  
military teams.



**APX 6500**  
RELIABLE.  
RESPONSIVE.  
READY FOR  
THE STREETS.

Single-band  
mobile radio.





# APX 3000 AND APX 4000 SERIES SINGLE-BAND P25 PORTABLE AND MOBILE RADIOS

## P25 RELIABILITY AND PERFORMANCE WITH SOME OF OUR MOST POPULAR FEATURES.

You need P25 technology and you need the legendary reliability and performance of an APX radio, but you may not need all the features of a high-tier radio. The APX 4000 and 3000 series radios seamlessly connect agencies and departments throughout your city for fast, interoperable communications.

Built on a rugged, reliable platform, the APX 4000 is engineered to survive in the real world, with a screen made from tough Gorilla Glass. Equipped with dual microphones, noise cancellation and powerful audio processing the APX 4000 delivers great audio in noisy conditions.

With no display or speaker, the APX 3000 is designed to be used with earpieces and remote PTT buttons for covert operations.

But we know its not just about the audio and reliability, which is why we also included advanced features - like hardware-based encryption, Mission-Critical Bluetooth, GPS location-tracking and IMPRES smart battery support.



### APX 4000XH

**BUILT SAFE.  
INSIDE AND OUT.**

Single-band HazLoc  
portable radio  
for Canada.



### APX 4000

**BETTER EQUIPPED  
FOR CLOSER  
COLLABORATION.**

Single-band  
portable radio for  
first responders.



### APX 3000

**STAY SAFE,  
CONNECTED  
AND DISCREET**

Specialized  
covert radio for  
undercover teams.



### APX 4500

**BETTER EQUIPPED  
FOR CLOSER  
CONNECTIVITY.**

Single-band mobile radio.





# APX 900 AND APX 1000 SERIES SINGLE-BAND P25 PORTABLE AND MOBILE RADIOS

## P25 CONNECTIVITY. EXCEPTIONAL PRICE.

From city festivals to natural disasters, seamless communication is critical to coordinating effective and safe responses. The APX 900 and APX 1000 series radios are simple to use and are certified for reliable P25 communication on P25 compliant radio networks.

The APX 1000 comes with a simplified feature set that's easily accessible through the one-knob user interface; it's a radio that your teams will quickly master.

The APX 900 provides additional ruggedness and complies with P25 encryption algorithms, so you can collaborate confidently and securely between agencies.

The APX 1500 mobile radio provides rugged simplicity with built-in loud and clear speaker, full color display and single knob controls. This self-contained dash-mount configuration is easy to install in most vehicles.



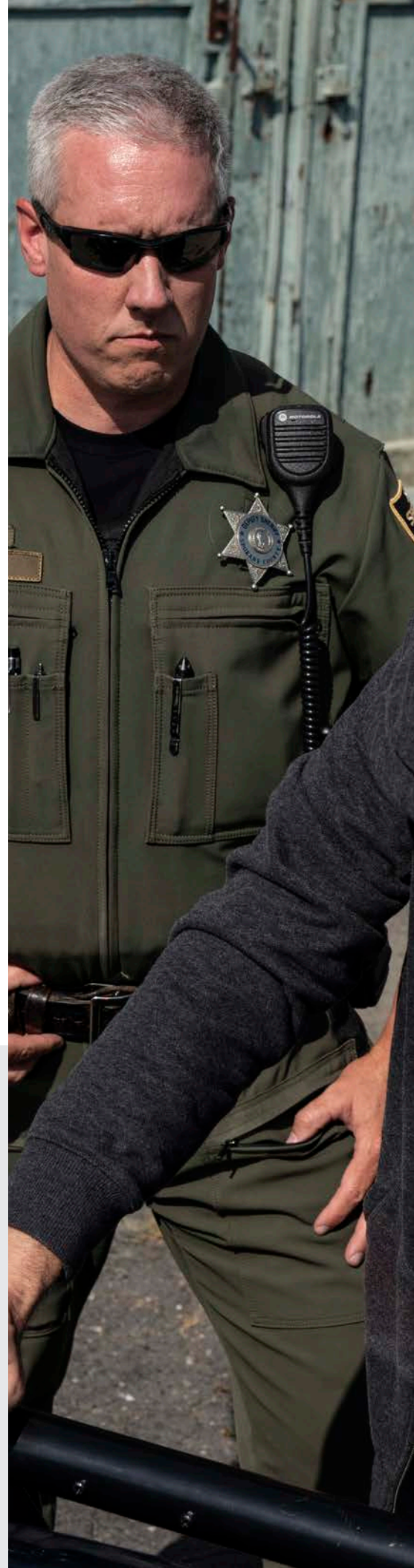
**APX 1000**  
SIMPLE. EASY.  
MISSION-CRITICAL.  
Single-knob, single-band  
portable radio.



**APX 900**  
ESSENTIAL  
COMMUNICATION.  
EXCEPTIONAL  
SERVICE.  
Dual-knob, single-band  
portable radio.



**APX 1500**  
SIMPLE. EASY-INSTALL.  
MISSION-CRITICAL.  
Single-band mobile radio.



# APX ACCESSORIES



ENERGY



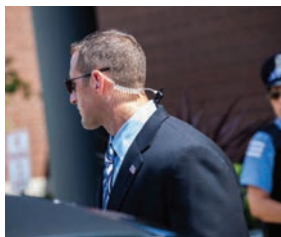
AUDIO



CARRY



MOBILE



COVERT

## APX CONTROL HEADS

MOBILE RADIOS ARE IDEAL FOR MANY APPLICATIONS, FROM A SIMPLE IN-CAR INSTALLATION, TO A WEATHERPROOF MOTORCYCLE MOUNT, TO A MULTI-HEAD FIRE TRUCK SYSTEM, TO A DESKTOP DISPATCH POSITION. WHATEVER YOU NEED, OUR PORTFOLIO OF CONTROL HEADS HELPS YOU GET THE MOST FROM YOUR RADIO.



### INTEGRATED MULTI-FUNCTIONALITY

The O7 is a sophisticated control head with a color display and built-in keypad. It can integrate with your vehicle controls for a single ergonomic interface.



### BEST-IN-CLASS READABILITY

The E5 control head has a bright hi-res display combined with intelligent use of colors to provide all the information you need at-a-glance, day or night.



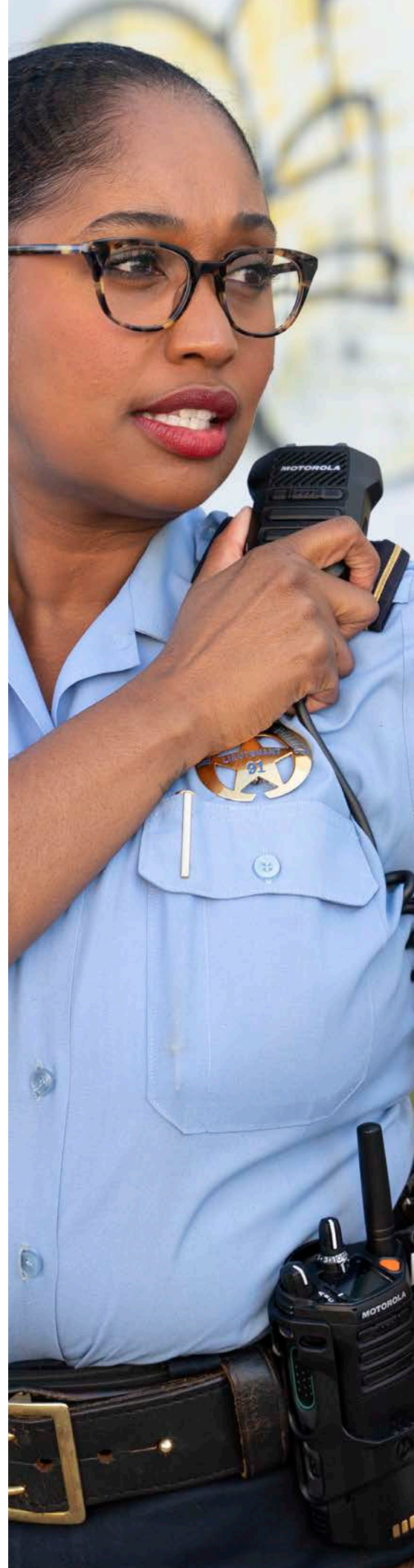
### EXTREME USABILITY

The O2 control head provides rugged simplicity for efficient and confident communication.



### HANDHELD FLEXIBILITY

The O3 corded control head fits all your mobile controls in your hand. With the O3 your radio controls are never out of reach.



# APX PORTABLE RADIOS

		SMART	ALL-BAND	SINGLE-BAND	SINGLE-BAND			SINGLE-BAND	
		APX NEXT	APX 8000 Series	APX 6000 Series & SRX 2200	APX 4000XH	APX 4000	APX 3000	APX 1000	APX 900
FREQUENCY BANDS									
VHF	136-174 MHz	Y	Y	(Y)	-	(Y)	(Y)	(Y)	(Y)
UHF Range 1	380-470 MHz	Y	Y	(Y)	-	(Y)	(Y)	(Y)	(Y)
UHF Range 2	450-512 MHz	Y	Y	(Y)	-	(Y)	(Y)	(Y)	(Y)
700/800 MHz	762-870 MHz	Y	Y	(Y)	-	(Y)	(Y)	(Y)	(Y)
900 MHz	896-902, 935-941MHz	-	-	-	-	(Y)	-	(Y)	(Y)
8/900 MHz	851-870 and 935-940 MHz bands	-	-	-	Y	-	-	-	-
All-Band	VHF, UHF R1, UHF R2, 700/800 simultaneously	Y	Y	-	-	-	-	-	-
Number of Channels	Max number of channels programmable	3000	3000	1000 (3000)	512 (1000)	512 (1000)	512	512	512
OPERATION MODES									
Analog Conventional	FM analog non-trunked communications	Y	Y	Y	Y	Y	Y	-	-
Analog Trunking	SmartNet, SmartZone, QCI	(Y)	(Y)	(Y)	(Y)	(Y)	(Y)	-	-
Digital P25 Phase I	FDMA, Conventional and Trunking	(Y)	(Y)	(Y)	(Y)	(Y)	(Y)	(Y)	(Y)
Digital P25 Phase II	TDMA Trunking	(Y)	(Y)	(Y)	(Y)	(Y)	(Y)	(Y)	(Y)
Dynamic Dual Mode	Automatic switching between P25 Phase I and II	(Y)	(Y)	(Y)	(Y)	(Y)	(Y)	(Y)	(Y)
IV&D	Integrated Voice and Data	Y	Y	Y	Y	Y	Y	Y	Y
ENVIRONMENTAL									
Ingress Protection	Sealing against dust and water	IP68: 2 m, 4 hr	APX 8000HXE & XE - IP68: 2 m, 4 hr APX 8000H & 8000 - IP68: 2 m, 2 hr	APX 6000XE & SRX 2200 - IP68: 2 m, 4 hr APX 6000 - IP68: 2 m, 2 hr	IP68: 2 m, 2 hr	IP67	IP67	IP54	IP68: 2 m, 2 hr
Delta-T Testing	Differential temperature sealing test	Y	APX 8000HXE & XE - Y APX 8000H & 8000 - (Y)	APX 6000XE & SRX 2200 - Y APX 6000 - (Y)	-	(Y)	-	-	-
HazLoc	Hazardous location certification	(Class I, Div 2)	APX 8000HXE & H - Class I, Div 1 & 2 APX 8000XE, (8000) - Class I, Div 2	Class I, Div 1 & 2	CSA 157	(Class I, Div 1 & 2)	-	(Class I, Div 1 & 2)	(Class I, Div 1 & 2)
AUDIO									
Adaptive Audio Engine	Dynamic optimization of noise suppression	Y	Y	(Y)	-	-	-	-	-
Number of Microphones	Support for multi-mic noise suppression	3	3	3	2	2	-	2	1
Output Power	Maximum rated audio power	3 W	3 W	500 mW (3 W)	500 mW	500 mW	-	500 mW	500 mW
SECURITY, SAFETY									
Algorithms	Supported encryption algorithms	(256-bit AES, ADP, DES, DES-XL, DES-OFB, DVP-XL)	(256-bit AES, ADP, DES, DES-XL, DES-OFB, DVP-XL)	(256-bit AES, ADP, DES, DES-XL, DES-OFB, DVP-XL)	ADP	(256-bit AES, ADP)	(256-bit AES, ADP, DES, DES-XL, DES-OFB, DVP-XL)	(ADP)	(256-bit AES SW, ADP)
Multikey	Number of programmable keys	128	128	64	1	48	48	8	8
Method	Encryption implementation	Hardware	Hardware	Hardware	Hardware			Software	
Encryption Standards	Level of encryption offered	FIPS 140-2 Level 3 FIPS 197	FIPS 140-2 Level 3, FIPS 197	FIPS 140-2 Level 3, FIPS 197	FIPS 140-2 Level 3, FIPS 197			FIPS 140-2 Level 1 FIPS 197	
Over-the-Air Rekeying	Remote update of encryption keys	(Y)	(Y)	(Y)	-	-	(Y)	-	-
CONNECTIVITY									
Broadband	Broadband network support	LTE, WiFi	(WiFi)	(WiFi)	-	-	-	-	-
SmartConnect	Seamlessly switch between P25 and broadband	(via LTE)	(via WiFi)	(via WiFi)	-	-	-	-	-
Bluetooth	Secure personal area network, for wireless accessories	5.0	4.0 MPP	4.0 MPP	2.1	2.1	2.1	-	4.0 LE
Data Modem Tethering	Data offload to external modem via WiFi	-	(Y)	(Y)	-	-	-	-	-
LOCATION-TRACKING									
GPS/GLONASS	Receiver for radio location-tracking	Y	Y	Y	Y	Y	Y	Y	Y
Mission-Critical Geofence	Automated responses to changes in radio location	-	(Y)	(Y)	(Y)	(Y)	(Y)	(Y)	-
SmartLocate	Route location data over broadband	Y	-	-	-	-	-	-	-
SmartMapping	Mapping app to locate other radios	(Y)	-	-	-	-	-	-	-
OTHER FEATURES									
ViQi Virtual Partner	Database query using virtual assistant	(Y)	(Y)	(Y)	-	-	-	-	-
ViQi Voice Control	Operate radio using spoken commands	(Y)	-	-	-	-	-	-	-
SmartMessaging	Multimedia messaging	(Y)	-	-	-	-	-	-	-
RFID	Embedded wireless inventory tracking tag	-	(Y)	(Y)	-	(Y)	-	(Y)	(Y)
Voice Announcement	Audio announcement of change in radio status	Y	Y	Y	Y	Y	Y	Y	Y
Intelligent Lighting	Programmable display backlight color alert	Y	Y	Y	Y	Y	Y	Y	-
Instant Recall	Replay of last received call	-	Y	Y	Y	Y	Y	Y	Y
Man Down	Programmable response to movement & orientation	Y	(Y)	(Y)	(Y)	(Y)	(Y)	-	-
IMPRES / IMPRES 2	Intelligent battery and charging technology,	N/Y	Y/Y	Y/Y	Y/N	Y/N	Y/N	Y/N	Y/N
DISPLAY & KEYPAD CONFIGURATION MODELS									
4.5: Touchscreen and top display		Y	-	-	-	-	-	-	-
3.5: Front display, full keypad, top display		-	(Y)	(Y)	-	-	-	-	-
2.5: Front display, limited keypad, top display		-	(Y)	(Y)	-	-	-	-	-
1.5: Top display only		-	(Y)	(Y)	-	-	-	-	-
3: Front display, full keypad		-	-	-	Y	(Y)	-	(Y)	(Y)
2: Front display, limited keypad		-	-	-	-	(Y)	-	(Y)	(Y)
1: No display or keypad		-	-	-	-	-	Y	-	-



# APX MOBILE RADIOS

		ALL-BAND	SINGLE-BAND	SINGLE-BAND	SINGLE-BAND
		APX 8500	APX 6500	APX 4500	APX 1500
FREQUENCY BANDS					
VHF	Operation in 136-174 MHz band	Y	(Y)	(Y)	(Y)
UHF Range 1	Operation in 380-470 MHz band	Y	(Y)	(Y)	(Y)
UHF Range 2	Operation in 450-512 MHz band	Y	(Y)	(Y)	(Y)
700/800 MHz	Operation in 762-870 MHz band	Y	(Y)	(Y)	(Y)
900 MHz	Operation in 896-941MHz band	-	-	(Y)	-
All-Band	VHF, UHF R1, UHF R2, 700/800 simultaneously	Y	-	-	-
Number of Channels	Max number of channels programmable	3000	1000 (3000)	512 (1000)	512
High-power Version	Availability of 110 W radio variant	(Y)	-	-	-
OPERATION MODES					
Analog Conventional	FM analog non-trunked communications	Y	Y	Y	-
Analog Trunking	SmartNet, SmartZone, QCI	(Y)	(Y)	(Y)	-
Digital P25 Phase I	FDMA, Conventional and Trunking	(Y)	(Y)	(Y)	Y
Digital P25 Phase II	TDMA Trunking	(Y)	(Y)	(Y)	(Y)
Dynamic Dual Mode	Automatic switching between P25 Phase I and II	(Y)	(Y)	(Y)	(Y)
IV&D	Integrated Voice and Data	Y	Y	Y	Y
AUDIO					
Audio Output Power	Maximum rated audio power	7.5 W, 8 Ω 15 W, 3.2 Ω	7.5 W, 8 Ω 15 W, 3.2 Ω	7.5 W, 8 Ω 15 W, 3.2 Ω	7.5 W, 8 Ω 15 W, 3.2 Ω
SECURITY, SAFETY					
Algorithms	Supported encryption algorithms	(256-bit AES, ADP, DES, DVP)	(256-bit AES, ADP, DES, DVP)	(256-bit AES, ADP, DES, DVP)	256-bit AES SW, ADP
Algorithm Capacity	Number of simultaneous encryption schemes	8	8	8	8
Multikey	Number of programmable keys	128	64	8	8
Method	Encryption implementation	Hardware & Software	Hardware & Software	Hardware & Software	Software
Encryption Standards	Level of encryption offered	FIPS 140-2 Level 3 FIPS 197	FIPS 140-2 Level 3 FIPS 197	FIPS 140-2 Level 3 FIPS 197	FIPS 140-2 Level 1 FIPS 197
Over-the-Air Rekeying	Remote update of encryption keys	(Y)	(Y)	-	-
CONNECTIVITY					
WiFi	Local area network support	(Y)	(Y)	(Y)	-
SmartConnect	Seamless switch between P25 and broadband	(tethered, or via WiFi)	(tethered, or via Wi-Fi)	-	-
Data Modem Tethering	Data offload to external modem such as LTE, Wi-Fi or satellite	(Y)	(Y)	(Y)	-
LOCATION-TRACKING					
GPS/GLONASS	Receiver for radio location-tracking	Y	Y	Y	Y
Mission-Critical Geofence	Automated responses to changes in radio location	(Y)	(Y)	(Y)	(Y)
OTHER FEATURES					
ViQi Virtual Partner	Database query using virtual assistant	(Y)	(Y)	-	-
RFID	Embedded wireless inventory tracking tag	(Y)	(Y)	(Y)	(Y)
Voice Announcement	Audio announcement of change in radio status	Y	Y	Y	Y
Instant Recall	Replay of last received call	Y	Y	Y	Y
Intelligent Lighting	Programmable display backlight color alert	(Y)	(Y)	(Y)	-
Impact Detection	Automatic alert to a collision	(Y)	(Y)	(Y)	-
CONTROL HEAD COMPATIBILITY					
07 Enhanced Control Head		(Y)	(Y)	-	-
E5 Control Head		(Y)	(Y)	-	-
05 Standard Control Head		(Y)	(Y)	-	-
03 Handheld Control Head		(Y)	(Y)	-	-
02 Rugged Control Head (Green/Gray)		(Y)	(Y)	Y	Gray Only

( ) indicates optional feature



## ALL THE SUPPORT YOU NEED

### MANAGE YOUR APX RADIOS IN THE WAY THAT SUITS YOU BEST

Motorola Solutions offers flexible services consumption options to manage your mission critical communication systems. From hardware repair to preventive maintenance, technical support to programming and provisioning, our services ensure that your radio fleet is fully operational and available for end-users. The services are centrally delivered with the right combination of people, process and tools.

For more information, please visit us on the web at: [www.motorolasolutions.com/APX](http://www.motorolasolutions.com/APX)



Motorola Solutions, Inc. 500 West Monroe Street, Chicago, IL 60661 U.S.A. [motorolasolutions.com](http://motorolasolutions.com)

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# SAFETY DOESN'T END WITH THE RADIO



ACCESSORIES FOR MOTOROLA'S APX™  
PROJECT 25 PORTABLES





## MISSION CRITICAL DEMANDS. SAFETY FOCUSED

The APX P25 mission critical two-way radio series redefines safety in portable communication. From the fire line to the factory line, APX puts the right device into the hands of the right user. Every feature and function is designed with its users in mind – from the rugged, easy to operate design to the loudest, clearest audio. The result is the ability to keep your people and community safer than ever before.

Extend the power and reliability of your radio with the only complete line of accessories designed, tested and certified for optimal performance with APX portables. This flexible portfolio offers solutions that meet your customers' specific needs. This includes a robust and complete portfolio of remote speaker microphones including the XE Remote Speaker Microphone which has been designed specifically for harsh conditions on the fireground. And the APX Mission Critical Wireless portfolio delivers best-in-class Bluetooth® wireless designed specifically for first responders. While our IMPRES smart battery and charger solutions ensure your responders have a battery that is ready to go at the moment they need it.

Every Motorola battery, charger, audio accessory, carry case and antenna is best-in-class technology, designed and optimized specifically for your APX portable.



APX 7000



APX 5000



APX 2000



# AUDIO ACCESSORIES

## IMPRES XE REMOTE SPEAKER MICROPHONE (RSM)

Features dual microphones that help suppress interfering background noise in high-noise environments. This high-visibility, high impact green XE RSM features a large push-to-talk button, emergency button and toggle volume switch that are both easy to locate, but shielded so they're not set off accidentally when running, crawling or climbing. A strobe light activates when the emergency button is pressed, projecting light up to 10 feet in thick smoke. A large metal D-ring and sturdy clamping clip secure the RSM to your turnout gear. *This microphone is not compatible with the APX 2000.*



### NNTN8203

IMPRES XE Remote Speaker Microphone with toggle volume switch, emergency button, strobe light, strobe light control button and programmable button. Windporting and Rugged\*.

## IMPRES DISPLAY REMOTE SPEAKER MICROPHONES

IMPRES-enabled RSMs include an easy-to-read display that mirrors the radio's top display to show zone and channel information at-a-glance. Meets rugged\*\* specifications for submersibility and includes a rugged, submersible audio jack.



### HMN4104

IMPRES Display Remote Speaker Microphone with audio jack, channel selector, radio volume control, 2 programmable buttons and orange button. Windporting and Rugged\*.



### HMN4103

IMPRES Display Remote Speaker Microphone with audio jack, radio volume control, 2 programmable buttons and orange button. Windporting and Rugged\*.

## RECEIVE AND TRANSMIT BOOMLESS TEMPLE TRANSDUCER

Communicate effectively in extreme noise environments. This headset uses bone conduction to both transmit and receive communications, eliminating the need for a boom microphone. You can also wear much needed ear protection and still communicate on your radio.



### RMN5116

Receive and Transmit Boomless Temple Transducer\*

## RSM REPLACEMENT PARTS



### RLN6424

Receive-Only Earpiece with translucent tube and rubber eartip, IP54\*



### 3075336B17

Replacement Cord for HMN4104, HMN4103 and HMN4101



### 0105954U29

Replacement Clear Acoustic Tube with Rubber Eartip for RLN6424



### 67009254001

Replacement Rubber Eartip for RLN6424 (10 per pack)

## AUDIO ADAPTERS

### BDN6783

3.5 mm Audio Adapter

### NNTN7869

APX Surveillance Keyload Adapter

\* Intrinsically Safe: Motorola approved accessories are a critical part of the specific radio and accessory system certified by a recognized testing organization as intrinsically safe. Non-Motorola approved accessories are not certified as part of the overall Motorola APX system. Use of non-Motorola approved accessories could result in equipment that is unapproved or unsafe in a hazardous environment.

\*\* Rugged accessories and batteries exceed industry standards (IPx7) for submersibility and provide a higher level of water protection—MIL-STD-810E, Method 512.3 Immersion. These accessories and batteries meet the incremental requirement of submersion in 1 meter of fresh water that is 27C colder than the product.

# AUDIO ACCESSORIES

## REMOTE SPEAKER MICROPHONE INTERFACE CABLES

These cables provide a standard connection point from the remote speaker microphone to third party accessory products. These cables are compatible with HMN4104, HMN4103 and HMN4101.



**PMKN4107**  
5 Pin Nexus Male Plug



**PMKN4112**  
4 Pin Nexus Female Receptacle



**PMKN4113**  
12 Pin Hirose Male Connector

## IMPRES TEMPLE TRANSDUCER

This headset allows the user to receive audio without covering the ear, allowing users to have their ears open to all external sounds such as warning and fire alarms, machinery and outside traffic.



**PMLN5101**  
IMPRES Temple Transducer with boom microphone and in-line push-to-talk button\*

## IMPRES REMOTE SPEAKER MICROPHONES

All RSMs include a push-to-talk switch, swivel clip and quick disconnect latch. They also have been designed with a large housing for users operating with gloves or in more rugged environments.



**HMN4101**  
IMPRES Remote Speaker Microphone with rugged, submersible audio jack, radio volume control, 2 programmable buttons and orange button. Windporting and Rugged\*



**PMMN4062**  
IMPRES Remote Speaker Microphone with 3.5mm audio jack on the head of the microphone, orange button. Noise-canceling, IP54\*



**PMMN4065**  
IMPRES Remote Speaker Microphone with volume switch (high/low), orange button and one programmable button, Windporting, Rugged\*



**PMMN4069**  
IMPRES Remote Speaker Microphone with Windporting, IP55\*



**RLN6075**  
IMPRES Remote Speaker Microphone replacement coil cord for PMMN4062, PMMN4065 and PMMN4069

## IMPRES PUBLIC SAFETY MICROPHONE (PSM)

This IMPRES-enabled microphone is designed with an antenna to provide better coverage when you're wearing a radio under a jacket or coat. All PSMs include 3.5mm audio jack, orange button and radio volume control. Antenna is sold separately.

Public Safety Microphones are available with 700/800 MHz portables only.  
*PSMs are not compatible with the APX 2000.*



**PMMN4061**  
IMPRES Public Safety Microphone (30 inch cable) Windporting, IP55\*

**PMMN4060**  
IMPRES Public Safety Microphone (24 inch cable) Windporting, IP55

**PMMN4059**  
IMPRES Public Safety Microphone (18 inch cable) Windporting, IP55\*

## APX SPEAKER MICROPHONES OFFER ENHANCED AUDIO CAPABILITIES.

Our robust portfolio of Remote Speaker Microphones (RSMs) and Public Safety Microphones (PSMs) are innovatively engineered to give you greater capabilities and clearer communications than ever before. The APX Remote Speaker Microphones and Public Safety Microphones deliver audio that is clearer, more easy to understand and **up to 50% louder** than XTS-series RSMs.

The **Windporting** feature on select RSMs/PSMs is specifically designed for windy outdoor environments and dramatically reduces the noise caused by howling winds and harsh weather.

The **noise-canceling acoustics** on select RSMs negates background noise so your voice comes through loud and clear when you speak into the microphone.

Whatever your work condition, there's a microphone made for you.

# AUDIO ACCESSORIES

## RSM AND PSM ACCESSORIES

Allow users to receive audio discreetly when wearing an RSM. Any of the above microphones that have a 3.5mm audio jack are compatible with the following:



**AARLN4885**

Receive-Only Covered Earbud with coiled cord\*



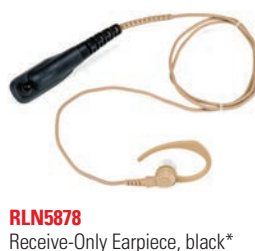
**RLN4941**

Receive-Only Earpiece with translucent tube and rubber eartip\*



**WADN4190**

Receive-Only Flexible Earpiece\*



**RLN5878**

Receive-Only Earpiece, black\*

**RLN5879**

Receive-Only Earpiece, beige\*

## IMPRES 2-WIRE AND 3-WIRE SURVEILLANCE KITS

Allow the user to both transmit and receive discreet communications. All kits include one programmable-button for quick and easy access to critical radio features. 2-Wire kits include one wire for receiving and one wire for the microphone. 3-Wire kits include one wire for receiving, one wire for the microphone and one wire for the push-to-talk.



**RLN5880**

IMPRES 2-Wire Surveillance Kit, black\*



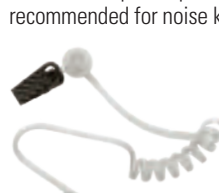
**RLN5882**

IMPRES 2-Wire Surveillance Kit with translucent tube, black\*



**PMLN5111**

IMPRES 3-Wire Surveillance Kit with translucent tube, black\*



**RLN5886**

Low Noise Kit, includes 1 clear rubber eartip. For low-noise environments (does not provide hearing protection)\*



**RLN5887**

Extreme Noise Kit, includes 2 foam earplugs. For high-noise environments (Noise Reduction = 24dB)\*

## HIROSE CONNECTOR ENABLED SURVEILLANCE KITS

These surveillance kits require NNTN7869 Hirose Surveillance Keyload adapter. These kits enable customers to easily connect and disconnect the surveillance kit when they need to do keyloading.



**ZMN6039**

3-Wire Surveillance Kit with extra loud earpiece, beige. Microphone and PTT are separate. Requires NNTN7869 Hirose adapter.



**ZMN6038**

2-Wire Surveillance Kit with extra loud earpiece, beige. Microphone and PTT combined. Requires NNTN7869 Hirose adapter.



**ZMN6031**

3-Wire Surveillance Kit, beige. Microphone and PTT are separate. Requires NNTN7869 Hirose adapter.



**ZMN6032**

2-Wire Surveillance Kit, beige. Microphone and PTT combined. Requires NNTN7869 Hirose adapter.

# AUDIO ACCESSORIES

## MISSION CRITICAL WIRELESS EARPIECE

This earpiece is designed specifically for first responders. Features secure, touch pairing to ensure you are able connect quickly and securely and a fast push-to-talk ensures there is no delay in voice communication.

This lightweight earpiece can be worn comfortably for long shifts and performs well in loud environments. A wireless push-to-talk is also available to allow you to seamlessly and wirelessly connect with the Mission Critical Wireless earpiece.



**NTN2573**  
Mission Critical Wireless Earpiece with 9" cable; comes with U.S. Plug charger



**NTN2570**  
Mission Critical Wireless Earpiece with 12.5" cable; comes with U.S. Plug charger



**NTN2571**  
Mission Critical Wireless Push-to-Talk, requires APX radio software release 7.11.5



**NTN2575**  
Replacement Wireless Earpiece, 9" cable



**NTN2572**  
Replacement Wireless Earpiece, 12.5" cable

## IMPRES EAR MICROPHONE SYSTEM

Lightweight earpiece uses bone conduction to pick up the user's voice from bone vibrations in the inner ear and eliminates the need for a boom microphone. No matter how loud the environment is, it will not transmit external noise--only the speaker's voice. When receiving audio, the accessory acts like a normal earpiece, yet still allows you to hear the message loud and clear.



**PMLN5653**  
IMPRES Ear Microphone System with large, protected ring push-to-talk button and one programmable button

## HEAVY DUTY HEADSET

Designed for rugged use in noisy environments where hearing protection is required. This dual-muff headset includes flexible noise-canceling boom microphone with a push-to-talk switch located on the earcup. This can be worn with or without a helmet.



**PMLN5275**  
Heavy Duty Headset, Noise Reduction = 24dB\*

## LIGHTWEIGHT HEADSET

Provides high-clarity, hands-free discreet two-way communication, while maintaining, the comfort necessary for extended wear in moderate noise environments. This single-muff adjustable headset comes with rotating boom microphone for left or right positioning. Includes an in-line push-to-talk button.



**RMN5058**  
Lightweight Headset, over-the-head, single-muff with in-line push-to-talk\*

# CARRY DEVICES

## UNIVERSAL CARRY HOLDER

Sturdy hard-plastic case with a belt clip designed to support APX dual-display portables. The large display remains protected by facing in on the belt. Each case supports all available APX batteries compatible with its radio.



**PMLN5331**  
APX 7000 Universal Carry Holder for Model 1.5 and 3.5

**PMLN5709**  
APX 5000 Universal Carry Holder for Models 1.5, 2.5, 3.5

## ADVANCED IMPRES AUDIO ACCESSORIES

Whether it's a whisper during a covert operation in a dark alley or commanding a noisy fire scene, Motorola's exclusive IMPRES audio accessories are designed to optimize its output based on the accessory worn. This means a covert officer whispering into his IMPRES 3-wire surveillance microphone is heard clearly by his commanding officer or a fireman shouting over the pumper panel is still understood clearly by the chief.

\* Intrinsically Safe: Motorola approved accessories are a critical part of the specific radio and accessory system certified by a recognized testing organization as intrinsically safe. Non-Motorola approved accessories are not certified as part of the overall Motorola APX system. Use of non-Motorola approved accessories could result in equipment that is unapproved or unsafe in a hazardous environment.

# CARRY DEVICES

## LEATHER CARRY CASES

Constructed of top-grain leather designed to withstand the harsh conditions of public safety use. Choose a fixed or swivel belt loop solution. Swivel belt loop cases include a metal D-ring to help the case stay secure in high activity applications while allowing the radio to swing freely with body movements

**Note:** The APX 5000 does not have leather carry cases available for the NNTN7035, NNTN7036, NNTN7037 and NNTN7573 batteries.

### APX 7000 LEATHER CARRY CASES



#### **PMLN5323**

APX 7000 Leather Carry Case with 3" fixed belt loop for NNTN7038, PMNN4403 and NNTN8092 batteries



#### **PMLN5324**

APX 7000 Leather Carry Case with 2.75" swivel belt loop, D-rings for NNTN7038, PMNN4403, NNTN8092 batteries



#### **PMLN5326**

APX 7000 Leather Carry Case with 3" fixed belt loop for NNTN7033 and NNTN7034 batteries



#### **PMLN5327**

APX 7000 Leather Carry Case with 2.75" swivel belt loop for NNTN7033 and NNTN7034 batteries



#### **PMLN5329**

APX 7000 Leather Carry Case with 3" fixed belt loop, for NNTN7035, NNTN7036, NNTN7037 and NNTN7573 batteries



#### **PMLN5330**

APX 7000 Leather Carry Case with 2.75" swivel belt loop, for NNTN7035, NNTN7036, NNTN7037 and NNTN7573 batteries

### APX 5000 LEATHER CARRY CASES



#### **PMLN5658**

APX 5000 Leather Carry case with 3" fixed belt loop for NNTN7038, PMNN440 and NNTN8092 batteries



#### **PMLN5657**

APX 5000 Leather Carry Case with 2.75" swivel belt loop for NNTN7038, PMNN4403, NNTN8092 batteries



#### **PMLN5660**

APX 5000 Leather Carry case with 3" fixed belt loop for NNTN7033 and NNTN7034 batteries



#### **PMLN5659**

APX 5000 Leather Carry Case with 2.75" swivel belt loop for NNTN7033 and NNTN7034 Batteries

### APX 2000 LEATHER CARRY CASE



#### **PMLN6085**

APX 2000 Leather Carry Case with 2.5" swivel belt loop, compatible with all APX 2000 batteries

# CARRY DEVICES

## APX 7000 LEATHER FLIP CARRY CASE

This innovative carry case is designed to allow users to flip down the carry case to view the radio display and operate the radio keys without having to remove the radio from the belt. Users access key information while on the go and the radio remains protected in its case. This case is constructed of top-grain leather designed to withstand the harsh conditions of public safety use.



**PMLN5560**  
APX 7000 Dual Display Portable Leather Flip Carry Case for NNTN7038, PMNN4403, NNTN8092 batteries

## APX 7000 NYLON CARRY CASES

A cost-effective sturdy solution for users on the go. Nylon cases feature D-rings that allow the case to be attached to a carrying strap



**PMLN5322**  
APX 7000 Nylon Carry Case with 3" fixed belt loop for NNTN7038, PMNN4403 and NNTN8092 batteries



**PMLN5325**  
APX 7000 Nylon Carry Case with 3" fixed belt loop for NNTN7033 and NNTN7034 batteries



**PMLN5328**  
APX 7000 Nylon Carry Case with 3" fixed belt loop for NNTN7035, NNTN7036, NNTN7037 and NNTN7573 batteries

## BELTS AND STRAPS



**NTN5243**  
Adjustable Carrying Strap



**4200865599**  
1.75" Wide Leather Belt

## BELT LOOPS AND CLIPS



**PMLN5407**  
2.5" Stainless Steel Swivel Belt Loop (Replacement loop for carry cases with a swivel belt loop)



**PMLN5409**  
3.0" Stainless Steel Swivel Belt Loop (Replacement loop for carry cases with a swivel belt loop)



**PMLN5408**  
2.75" Stainless Steel Swivel Belt Loop (Replacement loop for carry cases with a swivel belt loop)



**NTN9212**  
Replacement D-clip Button  
**NTN9213**  
Replacement Leather Swivel Belt Loop

## APX 7000, APX 5000, BELT CLIPS



**NTN8266**  
2.25" Hard Plastic Belt Clip, not compatible with any APX UHF radios  
**HLN6875**  
3" Plastic Belt Clip

## APX 2000 BELT CLIPS



**PMLN4651**  
2" Hard Plastic Belt Clip  
**PMLN7008**  
2.5" Hard Plastic Belt Clip

# ANTENNAS



## SINGLE-BAND ANTENNAS

Optimum length designed for higher gain to maximize range. This rugged capless design provides maximum flexibility. Also provides built-in GPS capability.

**NAF5085**  
700/800 MHz Whip Antenna (764-870 MHz)

**PMAE4065**  
UHF Whip Antenna (380-520 MHz)

**NAR6593**  
VHF Antenna (136-174 MHz)

## APX 5000, APX 2000 SINGLE-BAND STUBBY ANTENNAS

These antennas also provide built-in GPS capability.

**NAR6595**  
700/800 MHz Antenna (764-870 MHz) (also compatible with APX 7000)

**FAF5259A**  
UHF Range 1 Antenna (380-470 MHz)

**FAF5260**  
UHF Range 2 Antenna (470-520 MHz)

## DUAL-BAND ANTENNAS

Maximize interoperability with a dual band antenna. These whip antennas have one-piece finish, steel core and spiral wound conductor for optimal radiation characteristics. Also provides built-in GPS capability. These antennas are compatible with APX 7000.

**NAR6594**  
VHF (136-174 MHz) and 700/800 MHz (764-870 MHz) Antenna

**PMAS4000**  
UHF (380-520 MHz) and 700/800 MHz (764-870 MHz) Antenna

**PMAT4001**  
VHF (136-174 MHz) and UHF (380-520 MHz) Antenna



# ANTENNAS



## GPS ANTENNA

This antenna is used when a Public Safety Microphone is attached to the radio and the radio still requires GPS capability. This antenna attaches to the APX radio directly and is only used when the radio is operating in a single band.

### NAG4000

GPS Stubby Antenna



## PUBLIC SAFETY MICROPHONE ANTENNA

Stubby antenna designed to attach to the Public Safety Microphone.

### PMAF4002

700/800 MHz Stubby Antenna for the Public Safety Microphone

# BATTERIES

## IMPRES BATTERIES

Get the most out of your battery by maximizing its life. IMPRES automates battery reconditioning adapting the reconditioning intervals to each battery's usage pattern.

### APX 7000 AND APX 5000 IMPRES BATTERIES



#### PMNN4403

IMPRES Li-Ion  
2150mAh, Slim, IP67



#### NNTN7038

IMPRES Li-Ion  
2900mAh, IP67



#### NNTN8092

IMPRES Li-Ion  
2300mAh, Intrinsically  
Safe\*, Rugged\*\*



#### NNTN7034

IMPRES Li-Ion  
4200mAh IP67



#### NNTN7033

IMPRES Li-Ion  
4100mAh Intrinsically  
Safe\*, IP67



#### NNTN7037

IMPRES NiMH  
2100mAh IP67



#### NNTN7573

IMPRES NiMH  
2100mAh Rugged\*\*



#### NNTN7036

IMPRES NiMH  
2000mAh Intrinsically  
Safe\*, IP67



#### NNTN7035

IMPRES NiMH  
2000mAh Intrinsically  
Safe\*, Rugged\*\*

### APX 2000 IMPRES BATTERIES



#### NNTN8128

IMPRES Li-Ion  
1900 mAh, slim, IP67



#### NNTN8129

IMPRES Li-Ion  
2300 mAh Intrinsically  
Safe\*, IP67



#### PMNN4424

IMPRES Li-Ion  
2300 mAh, IP67

## ADVANCED IMPRES BATTERIES AND CHARGERS

We know that when heading into the burning building or staking out a hostage situation, first responders need to be assured their batteries will last. Motorola's innovative IMPRES battery charging and reconditioning system streamlines and automates battery maintenance. It draws on our exclusive technology to enable communication between your battery and charger to help lengthen battery life and extend talk time. IMPRES batteries can be left in IMPRES chargers for extended periods without heat damage from the charger, assuring your battery is safely charged to the right capacity and always ready when you head out for a call.

\*\* International Protection (IP) is a global standard for rating dust and water protection. The first digit IP5x or IP6x represents increased levels of dust protection, while the second digit, IPx7 represents withstanding submersion in 1 meter of fresh water for 30 minutes. Rugged batteries exceed industry standards (IPx7) for submersibility and provide a higher level of water protection – MIL-STD-810E, Method 512.3 (Immersion). These batteries meet the incremental requirement of submersion in 1 meter of fresh water that is 27C colder than the product for 2 hours.



# CHARGERS

## IMPRES SINGLE UNIT CHARGER

Ensures maximum talk time and optimized battery cycle life. Automatically reconditions IMPRES batteries based on actual usage, keeping them in peak condition.



### NNTN7080

IMPRES Single-Unit Charger for APX 7000 and APX 5000 with U.S. plug

### NNTN7081

IMPRES Single Unit Charger for APX 7000 and APX 5000 with Euro plug

### NNTN7084

IMPRES Single Unit Charger for APX 7000 and APX 5000 with Argentina plug

### NNTN8232

IMPRES Single Unit Charger for APX 7000 and APX 5000 with Brazil plug



### WPLN4232

IMPRES Single-Unit Charger for APX 2000 with U.S. plug

### WPLN4234

IMPRES Single-Unit Charger for APX 2000 with Euro plug

### WPLN4236

IMPRES Single-Unit Charger for APX 2000 with Argentina plug

### WPLN4281

IMPRES Single-Unit Charger for APX 2000 with Brazil plug

## IMPRES MULTI-UNIT CHARGER

Ensures maximum talk-time and optimized battery cycle life. Automatically reconditions IMPRES batteries based on actual usage, keeping them in peak condition. These rapid rate 6-unit chargers are available with or without a display. Display modules provide powerful analyzing information, such as current charge status and actual battery capacity in milli amp hours (mAh). A separate charger is required for APX 2000 radios and batteries.



### NNTN7073

IMPRES Multi-Unit Charger with Displays for APX 7000 and APX 5000 with U.S. plug

### NNTN7069

IMPRES Multi-Unit Charger for APX 7000 and APX 5000 with Displays with Argentina plug

### NNTN7065

IMPRES Multi-Unit Charger (no displays) for APX 7000 and APX 5000 with U.S. plug

### NNTN7066

Multi-Unit Charger (no displays) for APX 7000 and APX 5000 with Euro plug

### NNTN7086

IMPRES Multi-Unit Charger with Displays for APX 7000 and APX 5000 with Euro plug

### NNTN8228

IMPRES Multi-Unit Charger with Displays for APX 7000 and APX 5000 with Brazil Plug

### NNTN7069

Multi-Unit Charger (no displays) for APX 7000 and APX 5000 with Argentina plug

### NNTN8230

Multi-Unit Charger (no displays) for APX 7000 and APX 5000 with Brazil plug



### WPLN4219

IMPRES Multi-Unit Charger with Displays for APX 2000 with U.S. plug

### WPLN4223

IMPRES Multi-Unit Charger with Displays for APX 2000 with Argentina Plug

### WPLN4212

IMPRES Multi-Unit Charger (no displays) for APX 2000 with U.S. plug

### WPLN4216

IMPRES Multi-Unit Charger (no displays) for APX 2000 with Argentina Plug

### WPLN4220

IMPRES Multi-Unit Charger for APX 2000 with Displays with Euro Plug

### WPLN4278

IMPRES Multi-Unit Charger with Displays for APX 2000 with Brazil Plug

### WPLN4213

IMPRES Multi-Unit Charger (no displays) for APX 2000 with Euro plug

### WPLN4277

IMPRES Multi-Unit Charger (no displays) for APX 2000 with Brazil Plug



### RLN5382

Individual IMPRES Display Module for NNTN7065, NNTN7069, HNNTN7066, NNTN8230, WPLN4212, WPLN4213, WPLN4216, and WPLN4277.

## APX INSERTS FOR XTS CHARGERS

These inserts allow APX batteries to be charged in existing XTS IMPRES single unit and multi-unit chargers.

### APX 7000 AND APX 5000 CHARGER INSERTS



### NNTN7686

Insert for WPLN4108/4130 XTS Multi-Unit Charger. Requires charger containing software version 3.4 or greater.



### NNTN7687

Insert for NTN1873/WPLN4111 XTS Single-Unit Charger. Requires charger containing software version 3.4 or greater.

### APX 2000 CHARGER INSERTS



### NNTN8170

Insert for WPLN4108/4130 XTS Multi-Unit Charger. Requires charger containing software version 3.4 or greater.



### NNTN8169

Insert for NTN1873/WPLN4111 XTS Single-Unit Charger. Requires charger containing software version 3.4 or greater.

## IMPRES VEHICULAR CHARGER

The APX IMPRES vehicular charger has full IMPRES charger to battery communication capability. This ensures continuity of IMPRES battery charge data logging in a vehicular environment, so the IMPRES battery will receive timely adaptive, automatic reconditioning and will qualify for the 6-month capacity warranty extension.

NOTE: The IMPRES compatible vehicular charger will not recondition IMPRES batteries while in a vehicle, but it will provide an indication when reconditioning is required in an IMPRES desktop charger.



### NNTN7624

IMPRES Vehicular Charger for APX 7000 and APX 5000



### NNTN7616

IMPRES Vehicular Charger for APX 2000

# CHARGERS

## APX TRAVEL CHARGER

Its small compact design allows the radio to be used while rapid charging in the charger base. Unit includes a voltage regulated vehicular charger adapter, custom charger base, mounting bracket and coil cord.



### **RLN6434**

Travel Charger for APX 7000 and APX 5000



### **RLN6433**

Travel Charger for APX 2000

## IMPRES BATTERY READER

The industry exclusive IMPRES Battery Reader provides IMPRES battery users the ability to access charging, reconditioning and key usage data that can affect overall battery performance. By keeping batteries in peak condition, talk time and cycle life are optimized, reducing battery replacement. Package includes IMPRES Battery Reader, system software, USB cord and adapter inserts for APX Series radios.



### **NNTN7392**

IMPRES Battery Reader

# APX P25 TWO-WAY RADIOS AND ACCESSORIES SAFETY REDEFINED



**MOTOROLASOLUTIONS.COM/APX**

**TECHNOLOGY THAT'S SECOND NATURE™**

APX P25 two-way radios are part of the Next Generation Public Safety Mission Critical Portfolio of products that offer seamless connectivity between first responders. Motorola puts real-time information in the hands of public safety personnel to provide better information that enables better decisions for better outcomes. It's Technology That's Second Nature™.

For more information, please visit  
**[www.motorolasolutions.com/caribbean/astro](http://www.motorolasolutions.com/caribbean/astro)**

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RC-3-1006F

# APX ACCESSORIES. TURN UP SAFETY AND EASE.



ACCESSORIES FOR MOTOROLA'S APX™  
PROJECT 25 MOBILES







## MOTOROLA'S MOST ADVANCED MOBILE ACCESSORIES DELIVER EXCEPTIONAL PERFORMANCE.

During a high speed pursuit or commanding a Fireground scene, communication is vital; your focus can't be on operating the radio. The radio has to perform so you can communicate while remaining focused on the mission. Mobile accessories are a critical part of your communications as well. Every mobile microphone, speaker, alarm, and control station accessory is best-in-class technology, designed and optimized specifically for your APX mobile. Many accessories from the Motorola XTL radios that utilize the O5 and O3 control heads can be re-used – maximizing your investment while maintaining the latest technology.



## MAKE SURE YOUR VOICE IS HEARD

During a high-speed pursuit, your focus can't be on operating the radio. Mission critical voice transmissions have to be heard over engine, siren and wind noise. The IMPRES™ visor microphone allows hands-free communication and IMPRES technology helps ensure your voice is heard regardless of how closely you are speaking into the microphone or how much wind or road noise is in the background.



# APX P25 MOBILES

## THE MOST COMPLETE LINEUP OF SAFETY-FOCUSED MOBILES

For any agency and any budget, the APX Mobile platform offer the most flexibility in meeting mission-critical communication needs – so you optimize every dollar, and equip first responders with the world’s safest mobile radios. A complete line of APX mobiles, control heads and accessories – all designed to our legendary quality standards – are key to creating solutions for all types of installations, from squad cars and motorcycles to fire apparatus and military vehicles.



## COMMUNICATION IS VITAL WHEN COMMANDING A FIREGROUND SCENE

In the midst of chaos when the noise has reached a deafening level, you need every word to reach the places you can't. Dangerous situations can rapidly intensify, you need the ability to communicate in an instant to coordinate response. The APX mobile keypad microphone provides instant access to key radio functions and ensures your voice is heard loud and clear, no matter the conditions.



# AUDIO ACCESSORIES

## KEYPAD MICROPHONE

Access critical features directly on the microphone. Navigational buttons and a full keypad allow users to navigate radio menus, dial phone numbers and send text messages. Three programmable buttons are available for additional customization.



**HMN4079**  
Keypad Microphone

## PALM MICROPHONE

Sturdy and durable microphone that provides basic push-to-talk functionality for dependable communications.



**HMN1090**  
Standard Palm Microphone



**HMN1089**  
Water Resistant Palm Microphone



**HMN1079**  
Water Resistant Palm Microphone for motorcycle mounted mobiles (only available with the APX 7500)



**HLN5391**  
Spare Microphone Hang-Up Clip

## MICROPHONE EXTENSION CABLES

Allow users to extend microphone cord length. Compatible with HMN1089 and HMN1090 only.



**PMKN4033**  
Microphone Extension Cable – 10 feet  
**PMKN4034**  
Microphone Extension Cable – 20 feet  
**PMKN4093**  
Microphone Extension Cable – 2 feet



**HMN4097**  
Telephone Keypad Handset with Hang Up Cup



**HKN1018**  
Hang Up Handset with Normal Armored Cable (Old Style)

## HANDS-FREE AUDIO ACCESSORIES

### IMPRES Visor Microphone

IMPRES technology optimizes audio communication despite the vehicle background noise. This small microphone mounts to vehicle's visor for convenient hands-free radio operation and safety while in a vehicle.



**HLN1457A**  
Handset with Hang Up Cup



**RMN5054**  
IMPRES Visor Microphone

## ADVANCED IMPRES™ AUDIO ACCESSORIES

Mission critical voice transmissions have to be heard over engine, siren, road and wind noise. Fortunately, Motorola's exclusive IMPRES audio accessories are designed to optimize its output based on the accessory in use. IMPRES Visor Microphones are able to pick up and transmit the user's voice consistently to the receiving user regardless of how close they are speaking into the microphone.

# AUDIO ACCESSORIES

## EMERGENCY SWITCHES

These accessory switches interface with the visor microphone and enable users to send emergency messages to desktop consoles where signaling unit ID number is displayed and alarm is sounded.



**HLN5113**  
Emergency Footswitch



**HLN5131**  
Emergency Push Button

## EXTERNAL PUSH-TO-TALK OPTIONS



**GLN7278**  
Footswitch Push-to-Talk



**RLN5926**  
Push button Push-to-Talk

# CONTROL STATIONS, TRUNIONS, ALARMS & CABLES

## CONTROL STATION ACCESSORIES

**Desktop Microphone and Tray**  
Users can conveniently convert an APX mobile into a basic base station. This is an ideal solution for dispatch and transportation users.



**RMN5070**  
Desktop Microphone



**HLN6042**  
Desktop Tray with Speaker



**HPN4007**  
Control Station Power Supply (110V, 15 amps 25-60W rated)  
**3060665A04**  
110V Line Cord

## HARDWARE KITS

### Trunion Kits

These hardware kits mount the mobile in the vehicle



**HLN7003**  
High Power Trunion Kit (Quick Release with Lock)



**HLN7002**  
Mid Power Trunion Kit (Standard Bracket Installation)

**HLN6372**  
Mid Power Trunion Lock

## ALARMS

### External Alarm Accessories

These accessories enable additional switching power when external accessories are attached.



**HLN6953**  
External Alarm Buzzer



**HLN6969**  
External Alarm Relays



**HLN1224**  
Auxiliary Switch Panel

# CONTROL STATIONS, TRUNIONS, ALARMS & CABLES

## CABLES

### 03 Handheld Control Head Cables



**PMLN4958**  
03 Handheld Control Head 17-foot Extension Cable - connects the 03 control head to the transceiver



**PMLN4959**  
03 Handheld Control Head Accessory Cable - provides additional connections on the transceiver for mobile accessories

## CONTROL HEAD ACCESSORY CABLES

These cables connect the APX mobile to the car battery



**HKN6187**  
Cable provides connections for control head power, speaker, headset jack

## PROGRAMMING CABLES



**HKN6188**  
Cable provides Control Head Power and Speaker



**HKN6163**  
6-foot USB Cable, rear accessory port connection, dash mount installations, for use with the customer programming software (CPS)

**HKN6172**  
15-foot USB Cable rear accessory port connection, remote mount installations, for use with the customer programming software (CPS)

## POWER CABLES



**HKN4191**  
10-foot Mid Power Cable for dash mount installations



**HKN4192**  
20-foot Mid Power Cable for remote mount installations



**HKN6110**  
20-foot 100W Power Cable for high power remote mount installations



**PHLN6863**  
Mid-Power Rear Ignition Cable for dash mount installations

## DATA CABLES



**HKN6160**  
6-foot RS232 Cable for rear accessory port, dash mount installations



**HKN6161**  
20-foot RS232 Cable for rear accessory port, remote mount installations

**HKN6183**  
RS232 Cable for mobile microphone port (MMP)



**HKN6122**  
22-foot RS232 Cable for J600 transceiver interconnect board (TIB)

## REMOTE MOUNT CONTROL HEAD CABLES

Remote Mount cables enable users to separate the mobile control head from the transceiver. This is beneficial when there is limited space in the dash or console for the mobile.

**HKN6164**  
131-Foot Remote Mount Cable  
**HKN6165**  
115-Foot Remote Mount Cable  
**HKN6166**  
75-Foot Remote Mount Cable  
**HKN6167**  
50-Foot Remote Mount Cable  
**HKN6168**  
30-Foot Remote Mount Cable



**HKN6169**  
17-Foot Remote Mount Cable  
**HKN6170**  
10-Foot Remote Mount Cable



**HKN6186**  
Remote Mount Control Head Trunion bracket to mount control head  
**HLN7031**  
Low Profile Remote Mount Control Head Trunion Kit bracket to mount control head

# CONTROL STATIONS, TRUNIONS, ALARMS & CABLES

## MOTORCYCLE ENCLOSURES

Weather-resistant metal enclosure houses the radio on a motorcycle. Available only with the APX 7500.



**HLN7022**  
Motorcycle Enclosure, Black

**HKN6196**  
Remote Control Head Vehicular Interface Port (VIP) Connector for 05 Control Heads



**HLN6961**  
Remote Control Head Mobile Accessory Port (MAP) Connector for 05 Control Heads (rear connector)

## MISCELLANEOUS CABLES



**HKN6032**  
Motorcycle Power Cable



**3075217A01**  
Motorcycle Remote Cable for 05 Control Head



**TKN8531**  
Keyloader Cable KVL3000



**HKN6182**  
Keyloader Adapter for mobile microphone port (MMP), 1.5" Cable

# SPEAKERS & SIRENS

## SPEAKERS

**External Loudspeakers**  
Control station accessories that enable users to listen to radio communications in high noise environments. The 13 watt model provides the audio level needed for extreme noise environments.



**HSN4038**  
Water Resistant Speaker (7.5 Watt Rated Audio), Remote Mount



**HSN4040**  
Water Resistant Speaker (15 Watt Rated Audio), Remote Mount



**HSN4018**  
Water Resistant Motorcycle Speaker (13 Watt Rated Audio)

## SIREN HORNS

**For Sirens and Public Address Kits**  
These external loudspeakers enable users to utilize the radio as a public address system.



**HSN4032**  
Non Water-resistant Speaker (13 Watt Rated Audio)



**TDN6251**  
Siren Speaker, Round with Chrome Finish



**TDN6252**  
Siren Speaker, Rectangular with White Finish



**TDN6253**  
Siren Speaker, Under Hood with Gray Finish



**TDN6254**  
Siren Speaker, Round with Gray Finish



SPEAKERS & SIRENS

SIRENS/DIRECT ENTRY KEYPADS

Direct Entry Keypads give users the ability to transmit short messages or operate mode functions such as opening a door or activating a siren via the mobile radio.



**H1338**  
Status/Message Direct Entry Keypad – 8 button  
**H1339**  
Status/Message Direct Entry Keypad – 16 button



**H1615**  
Mode Direct Entry Keypad – 8 button

**H1336**  
Siren/Public Address Kit with Direct Entry Keypad – 8 Button. This siren/public address kit provides controlled tones for hi/low, yelp and airhorn through supplemental housing. This kit works with the O5 Control Head only. This siren/public address kit provides controlled tones for hi/low, yelp and airhorn through supplemental housing. This kit works with the O5 Control Head only.

**HLN1439**  
Mobile Siren



**HLN6819**  
Siren Switchbox



**HKN6146**  
Siren Cable, connects the O3 siren to switchbox



**HKN6145**  
Siren Cable to Direct Entry Keypad for APX mobiles with the O3 handheld control head

**HKN6189**  
Direct Entry Keypad Cable Adapter - connects DEK assembly to rear of O5 control head  
**HKN4363**  
Siren Cable, connects to O5 siren to switch box



UNIVERSAL RELAY CONTROLLER (URC)

URCs connect with the O9 control head and allow it to operate the lightbar.



**PMUN1046**  
Includes 10 DC outputs with 15 amps per channel  
**3064153H02**  
Universal Relay Controller to Transceiver Cable

ANTENNAS

THROUGH-HOLE MOUNT ANTENNAS

If the mobile is programmed with multiple RF bands, one mobile antenna is required for each band. Each frequency band has its own RF port.

VHF ANTENNAS

**HAD4006**  
136-144 MHz 1/4 Wave  
**HAD4007**  
144-150.8 MHz 1/4 Wave  
**HAD4008**  
150.8-162 MHz 1/4 Wave



**HAD4009**  
162-174 MHz 1/4 Wave  
**HAD4016**  
136-162 MHz 1/4 Wave  
**HAD4017**  
146-174 MHz 1/4 Wave

**HAD4021**  
136-174 MHz Wideband  
**HAD4022**  
136-174 MHz 3.0dB Gain  
**RAD4010ARB**  
136-174 MHz, 3dB Gain



**HAE6012**  
380-433 MHz, 1/4 Wave  
**HAE4003**  
450-470 MHz, 1/4 Wave  
**HAE4004**  
470-512 MHz, 1/4 Wave



**HAE4011**  
450-470 MHz, 3.5 dB Gain  
**HAE4012**  
470-495 MHz, 3 dB Gain  
**HAE4013**  
494-512 MHz, 3 dB Gain



ANTENNAS

**HAE6010**  
380-433 MHz, 3.5 dB Gain  
**HAE6011**  
380-433 MHz, 5 dB Gain



**RAE4014ARB**  
445-470 MHz, 5 dB Gain  
**RAE4016ARB**  
494-512 MHz, 5 dB Gain



**HAE6013**  
380-470 MHz, 2 dB Gain Wideband  
**HAE6015**  
450-520 MHz, 2 dB Gain Wideband  
**HAE6031**  
380-520 MHz, 2 dB Gain Wideband



**HAE6016**  
450-512 MHz, Low Profile



700-800 MHZ ANTENNAS



**HAF4013**  
762-870 MHz 3dB Gain Low Profile



**HAF4014**  
762-870 MHz 3dB Gain Elevated Feed



**HAF4016**  
762-870 MHz 1/4 Wave Through-hole Mount



**HAF4017**  
762-870 MHz 3dB Gain Collinear Through-hole Mount



MOTORCYCLE MOUNT ANTENNAS

**RAD4002ARB**  
VHF, 136-144 MHz 1/4 Wave  
**RAD4003ARB**  
VHF, 144-150.8 MHz 1/4 Wave



**RAD4004ARB**  
VHF, 150.8-162 MHz 1/4 Wave  
**RAD4005ARB**  
VHF, 162-174 MHz 1/4 Wave

**HAF4015**  
700/800 MHz, 762-870 MHz 3dB Gain



**HAF4018**  
700/800 MHz, 762-870 MHz Low Profile



GPS ANTENNAS

A separate GPS antenna is required in addition to the mobile RF antenna if GPS capability is required.



**HAG4000**  
GPS Roof Mount Antenna



**HAG4001**  
GPS Motorcycle Antenna



**PMAN4001**  
GPS Glass Mount Antenna

# APX MOBILE RADIOS. SAFETY REDEFINED.



## **MOTOROLASOLUTIONS.COM/APX**

### **WHEN YOU NEED SUPPORT, WE ARE THERE**

We have teams of dedicated people ready to serve you, from designing a system to installing and servicing equipment to monitoring your system 24/7. Our System Support Center monitors over 500 systems and 4,000 sites, providing customers with real-time information. When questions come up, we answer them quickly – 85% are closed the same day.

### **TECHNOLOGY THAT'S SECOND NATURE™**

APX P25 two-way radios are part of the Next Generation Public Safety Mission Critical Portfolio of products that offer seamless connectivity between first responders. Motorola puts real-time information in the hands of public safety personnel to provide better information that enables better decisions for better outcomes. It's Technology That's Second Nature™.

Motorola Solutions, Inc.  
1301 East Algonquin Road Schaumburg, Illinois 60196, U.S.A.  
800-367-2346 [motorolasolutions.com](http://motorolasolutions.com)

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RC-3-1011B



# MANAGED AND SUPPORT SERVICES FOR APX TWO-WAY RADIOS

For public safety agencies tasked with mission-critical communications, assuring peak radio performance is critical. Efficient and cost-effective management of an ever-evolving radio technology ecosystem is complex, requiring the right set of expertise and tool sets.

## YOUR NEEDS

Maintaining and supporting a large inventory of two-way radios can be complex, expensive and time-consuming. Today radio managers need the right set of people expertise, processes and tools to manage increasing programming complexities, fleet performance issues, budget and IT skill constraints.

As technology evolves, hardware repair and technical support capabilities are some of the critical service capabilities that are needed for your mission-critical communication systems to work optimally. Maintaining and programming radios is vital to keep your radio fleet current and secure. Without streamlined processes and tools you can spend countless hours managing radio configuration files, making firmware updates and going through distributed radio fleet databases.

Having a well-defined approach to tracking, managing and updating all the connected radios, together with applying the latest functionality and security features can help optimize fleet performance.

## INCREASING COMPLEXITY

**59%**

Of radio managers cite increased programming complexities as a major challenge.<sup>1</sup>

## PERFORMANCE ISSUES

**70%**

Of radio managers wait until something breaks to perform maintenance.<sup>2</sup>

## CHALLENGED RESOURCES

**55%**

Of public-safety organizations cite maintaining in-house talent as a challenge for radio management.<sup>3</sup>





## THE SOLUTION: SERVICE CAPABILITIES

You can rely on us to help you maximize the value of your radio investments with the right level of services designed specifically for your needs. We bring a range of service capabilities that you can choose through our Essential, Advanced and Premier service packages.

### KEY SERVICE FEATURES

#### TECHNICAL SUPPORT

Our experienced technologists are available to help isolate and resolve any issues you may have with your radios. With an extensive knowledge base, trained and certified technical engineers and leading standards for escalation procedures, this team can troubleshoot and provide prompt resolution to your technical device issues. Motorola Solutions understands the importance of maintaining the radio fleet to its optimal performance. That's why we apply leading industry standards to record, monitor, escalate and report technical service calls from our customers.

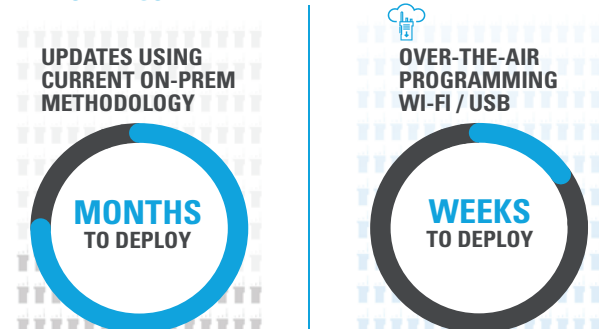
#### HARDWARE REPAIR

With state-of-the-art diagnostic equipment, repair tools and replacement parts, your radio fleet components are protected in the event of an unexpected failure and are back in operation as soon as possible. When serviced, all device components are returned to you with original factory specifications and updated with the latest firmware. Plus, our service centers are certified to comply with ISO 9001, ensuring the highest quality repairs.

#### BATCH PROGRAMMING WITH DATABASE HOSTING

Radio management allows you to manage and program multiple radios at a time. Database hosting enables radio codeplugs to be stored in a central database server allowing for remote configuration of data and remote programming of radios. Centralized database allows efficient organization of codeplugs and makes it a one-stop shop for edits or changes to specific devices. A single codeplug can be used as a template, which can then be shared across multiple radios. Template edits may then be easily applied to all affected radios. Changes to a template or to an individual radio's parameters can be scheduled as a programming job. With batch programming, programming jobs may be scheduled through an Over-The-Air-Programming (OTAP) connection, or USB or via Wi-Fi connection. Batch programming allows for simultaneous programming and software upgrading of up to 16 radios.

#### TIME SAVINGS



#### FULL SERVICE PROGRAMMING

With end-to-end device programming and provisioning services, we ensure all your two-way radio communication needs are met. These services include programming and provisioning, on-site set up and training, database hosting and access to a management portal that helps you maintain visibility into your devices. Device programming allows us to push specific information and features from the customer codeplug template to the radio itself. Provisioning is a way to add unique device identifiers to the devices, so the network is aware of the device and its feature set. This service is designed to reduce risks, optimize costs and provide end users a better experience with up-to-date and fully operational devices.

#### ACCIDENTAL DAMAGE

While our two-way radios are built for superior performance, accidents happen. If required, we offer extended accidental damage coverage and support that includes repair and restoration of the device back to original factory specifications and a quick turnaround of the device back to you.

#### PREVENTIVE MAINTENANCE

With preventive maintenance on your radio components we can help extend the life of your devices. From physical inspection and cleaning of radios to component alignment, we ensure that the device components remain in top condition with the latest firmware and updates. Our certified technicians conduct annual maintenance checks to help extend the useful life of your radios, reducing repair and replacement costs.

#### ON-SITE SETUP AND DEVICE MANAGEMENT TRAINING

With on-site setup and device management training, our technical teams can help your organization set-up provisioning and programming processes to make you more effective in managing your fleet of devices. We will train your staff on the radio management and radio commissioning in the management database, enabling your team to configure radio channels, set up talkgroups, provide site access and establish user IDs.

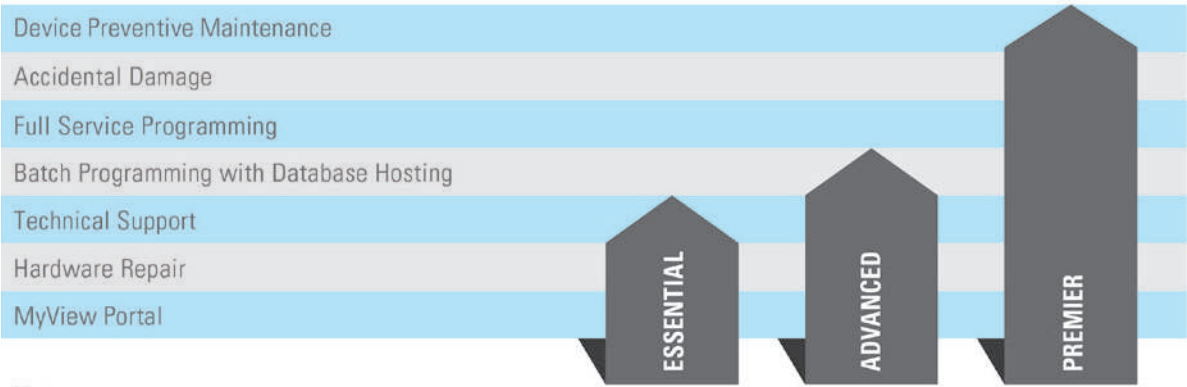
#### MYVIEW PORTAL

MyView is a web-based platform that gives you a transparent, single source view of fleet status and service delivery information to help make smarter, faster and more proactive decisions. With MyView portal you can view your radio data, service case history, firmware and software status information to ensure smooth running of your radios.

# CHOOSE THE RIGHT LEVEL OF MANAGED AND SUPPORT SERVICES

With Essential services, we offer the tools and the expert support needed to efficiently manage your radio fleet. With Advanced services, batch programming enables you to manage and program your radio fleet efficiently, saving you precious time for efficient radio fleet management. With Premier services, you transfer your APX two-way radio operations, including full service programming, to our managed services professionals, allowing your team to focus on its primary responsibilities.

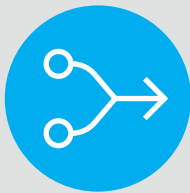
## SERVICES AT - A - GLANCE



Note:

- Device management training and on-site setup can be offered as add-on services with Advanced package.
- Accidental damage can be offered as an add-on service with Essential and Advanced packages.

## WE DELIVER ON RESULTS THAT MATTER



### Reduced Management Complexity

Drive efficiency of maintaining your device fleet while addressing technology evolution, time and cost savings.



### Optimized Fleet Performance

Superior first responder experience with ongoing software and security updates for fully operational radios.



### Optimized Costs

Subscription service that helps with a more predictable opex model, help save staff hours for cost optimization.

## MOTOROLA SOLUTIONS YOUR TRUSTED PARTNER

We believe that our set of highly knowledgeable people with industry certifications and mission-critical expertise, industry-leading ITIL process for centralized service delivery and governance, and state-of-the-art tools allow us to provide superior Device Services that address your needs today and in the future.



For more information, please visit  
[www.motorolasolutions.com/apx](https://www.motorolasolutions.com/apx)

**Resources**

1, 2, 3 <https://www.motorolasolutions.com/content/static/flipbook/mobile/index.html#p=1>



**MOTOROLA SOLUTIONS**

Motorola Solutions, Inc. 500 West Monroe Street, Chicago, IL 60661 U.S.A. [motorolasolutions.com](https://www.motorolasolutions.com)

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