Data Sheet

APX® All-Band Consolette

Racing to an emergency or repairing a power outage, every moment matters as you mount a response. The right control station can make all the difference in making sure communications are clear, continuous and coordinated – across multiple users, agencies and miles.

MOTOROLA SOLUTIONS

The APX All-Band Consolette is the ideal complement to your dispatch console. It's the low cost, mid-power wireless control station for an ASTRO® 25 system. You can use it as an emergency backup station when infrastructure is off-line, or for wireless access to different system types for increased interoperability between agencies.

Connect with confidence

Designed around proven APX technology, the Consolette combines forward-thinking technology with time-tested functionality. Project 25 Phase 2 technology delivers twice the voice capacity so you can add more users without adding more frequencies or infrastructure. Talk with confidence to a squad car or desk station, a job site across town or an incident in the next county.

And with Wi-Fi, the Consolette keeps your team in touch and within reach of over-the-air updates. Receive new codeplugs, firmware updates and software features at the speed of Wi-Fi—without interruptions to voice communication.

Migrate at your own pace

The APX All-Band Consolette is backwards and forwards compatible, developed to meet current P25 standards and future-ready to support new technology and data applications. Now you can achieve your interoperability objectives—whether upgrading an existing system or designing a new one—based on your dollars and deadlines.

Built for the toughest tasks

Innovative design and skillful engineering make the APX All-Band Consolette a tireless performer. The robust metal housing assures extra durability, but allows for easy servicing and programming without removing the lid. An integrated front panel numeric keypad gives you fast access to radio controls. And it meets stringent FCC and UL certifications for exceptional safety.

Robust and mission-ready

When you lose power, count on the automatic battery revert feature to keep your people connected. All you need is a DC source, such as a marine battery, and the Consolette will switch over automatically to keep communications strong.

Rich in features, the APX All-Band Consolette gives you the largest number of interface connections to a wide variety of consoles and desk sets, and easy access to contact information with one unified call list. What's more, an ACIM wireless interface provides back-up dispatch if your console's link to the ASTRO 25 trunked system is ever lost.

Standard features

Available in 700/800 MHz, VHF or UHF (R1/R2) bands

Optional multi-band operation

2000 Channels

Trunking Standards supported:

- Clear or digitally encrypted ASTRO® 25 Trunked Operation
- Capable of SmartZone®, SmartZone Omnilink, SmartNet®

Analog MDC-1200 and Digital APCO P25

Conventional System Configurations

Narrow and wide bandwidth digital receiver (6.25 kHz equivalent/12.5 kHz/30 kHz/25 kHz)*

Embedded digital signaling (ASTRO and ASTRO 25)

Integrated Encryption Hardware

Seamless Wideband Scan

Intelligent Priority Scan

Intelligent Lighting

Interfaces supported:

- Recorder
- Wireline
- Vehicle Interface Port
- Crosspatch
- Headsets (2)**

110/220 VAC operation with battery revert capability

VU Meter and Clock

Expansion Slot Standard

2 configurations available:

- Full featured front panel
- Limited front panel

Radio Profiles

Unified Call List

Tone remote control

Tactical Inhibit

Instant Recall

ACIM/CCGW interface including:

- ID decode
- Call alert encode

* Per the FCC Narrowbanding rules, new products submitted for FCC certification after January 1, 2011 are restricted from being granted certification at 25KHz for United States – State & Local Markets only.

** Available on full featured models only.

Auxiliary display features

LCD display

3 soft menu buttons to activate or control the following Consolette features:

- Clock
- Volume Units Meter (VU)
- Crosspatch Linking
- Auxiliary Controls/VIP Activation
- Over-the-air Audible TX Alert Tones

Optional features

Enhanced Encryption Software Options

Programming over Project 25 (POP25)

Text Messaging

Over the Air Rekeying (OTAR)

SmartConnect[1]

Wi-Fi connectivity

Hardwired ethernet connection

Extended Dispatch Operation including:

- Emergency Alarm ACK Encode
- Radio Inhibit/Uninhibit Encode
- Radio Monitor Encode
- Radio Check Encode
- Status Query Encode
- Status Query Response Decode
- Status Update Decode
- Message Update Decode

E5 control head features

Bright color display

- Easy to read 3 line display in various lighting conditions - day or night
- Large tactile knobs and navigation buttons
- 5 programmable menu soft keys and 1 programmable button

[1] SmartConnect available via WiFi or hardwired ethernet.

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.

DIMENSIONS	
W x D x H	Limited Front Panel Configuration 16” x 18” x 4.2” (406 x 457 x 107mm)
	Full Featured Front Panel Configuration 16” x 18.75” x 4.2” (406 x 476 x 107mm)
Weight	Limited Front Panel Configuration 18.9 lbs (8.6 kg)
	Full Featured Front Panel Configuration 19.9 lbs (9.0 kg)

TRANSMITTER - TYPICAL PERFORMANCE SPECIFICATIONS					
	700 MHZ	800 MHZ	VHF	UHF RANGE 1	UHF RANGE 2
Frequency Range/ Bandsplits	764-776 MHz, 794-806 MHz	806-825 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
Rated RF Output Power[1] (Adjustable)	1-30 Watts	1-35 Watts	1-50 Watts	1-40 Watts (380-470 MHz)	1-45 Watts (450-485 MHz) 1-40 Watts (485-512 MHz) 1-25 Watts (512-520 MHz)
Frequency Stability[2] (–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[1]	±5/±2.5 kHz	±5/±4 kHz (NPSPAC) /±2.5 kHz	±5/±2.5 kHz	±5/±2.5 kHz	±5/±2.5 kHz
Modulation Fidelity (C4FM) 12.5kHz Digital Channel	1.10%	1.10%	1.10%	1.10%	1.10%
Emissions[2]	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[2]	+1, –3 dB (EIA)	+1, –3 dB (EIA)	+1, –3 dB (EIA)	+1, –3 dB (EIA)	+1, –3 dB (EIA)
FM Hum & Noise[1] 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[1] 20 & 25 kHz 12.5 kHz	0.50 % 0.50 %	0.50 % 0.50 %	0.50 % 0.50 %	0.50 % 0.50 %	0.50 % 0.50 %

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 (Speaker) at 3% distortion		2.5 W (20 Ω internal) 7.5 W (7.5 Ω) 15 W (2.3 Ω)		2.5 W (20 Ω internal) 7.5 W (7.5 Ω) 15 W (2.3 Ω)	2.5 W (20 Ω internal) 7.5 W (7.5 Ω) 15 W (2.3 Ω)		2.5 W (20 Ω internal) 7.5 W (7.5 Ω) 15 W (2.3 Ω)		2.5 W (20 Ω internal) 7.5 W (7.5 Ω) 15 W (2.3 Ω)	
Frequency Stability[2] (–30°C to +85°C; +25°C Ref.)		±0.8 PPM		±0.8 PPM	±0.8 PPM		±0.8 PPM		±0.8 PPM	
					Pre-Amp	Standard	Pre-Amp	Standard	Pre-Amp	Standard
Analog Sensitivity[2]	12 dB SINAD	-121 dBm	-120 dBm	-121 dBm	-123 dBm	-119 dBm	-123 dBm	-119 dBm	-123 dBm	-119 dBm
Digital Sensitivity	5% BER	-121.5 dBm	-120 dBm	-121.5 dBm	-123 dBm	-119 dBm	-123 dBm	-119 dBm	-123 dBm	-119 dBm
Intermodulation	25 kHz	85 dB		85 dB	84 dB	86 dB	82 dB	86 dB	82 dB	86 dB
	12.5 kHz	85 dB		85 dB	85 dB	86 dB	83 dB	86 dB	83 dB	86 dB
Spurious Rejection		100 dB		100 dB	90 dB		90 dB		90 dB	
Audio Response[2]		+1, –3 dB (EIA)		+1, –3 dB (EIA)	+1, –3 dB (EIA)		+1, –3 dB (EIA)		+1, –3 dB (EIA)	
Audio Distortion at rated[1]		1.20 %		1.20 %	1.20 %		1.20 %		1.20 %	
Selectivity[1]	25 kHz	82.5 dB		82.5 dB	87 dB		82 dB		82 dB	
	12.5 kHz	72 dB		72 dB	76 dB		76 dB		76dB	
	30 kHz	—		—	90 dB		—		—	

POWER AND BATTERY DRAIN

Model Type	136-174 MHz, 380-470 MHz, 450-520 MHz, 764-870 MHz		
Minimum RF Power Output	1-35W (764-870 MHz), 1-50W (136-174MHz), 1-40W (380-470 MHz), 1-45W (450-485 MHz), 1-40W (485-512 MHz), 1-25 (512-520 MHz)		
AC Operation	110 to 220VAC 50-60Hz		
AC Current	110VAC: 0.85A (Idle/Rx) 1.7A (Tx) 220VAC: 0.42A (Idle/Rx) 0.85A (Tx)		
AC Surge Spec	EN6100-4-5 Level 5		
DC 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 W) 380-470 MHz (1-40 W) 450-520 MHz (1-45 W) 764-870 MHz (1-35 W)	15A (50W) 15A (40W) 13A (45W) 13A (50W)	8A (15W) 8A (15W) 8A (15W) 8A (15W)

[2] Measured in the analog mode per TIA/EIA 603 under nominal conditions.

Specifications subject to change without notice. All specifications shown are typical.

Radio meets applicable regulatory requirements.

The All Band Consolette is J/F 12 11207 and SPS 22237 certified.

ENCRYPTION	
Supported Encryption Algorithms	ADP, 256-bit 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 140-3 Level 3 FIPS 197
WIRELESS CONNECTIVITY	
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

ENVIRONMENTAL SPECIFICATIONS	
Operating Temperature	-30°C / +60°C
Storage Temperature	-40°C / +85°C
Humidity	95% relative humidity
ESD	IEC 61000-4-2
Duty Cycle	EIA/TIA Intermittent Duty Cycle

FCC/IC TYPE ACCEPTANCE ID	
FCC/IC ID	**BAND AND POWER LEVEL**
FCC ID: AZ492FT7180	764-776 MHz (10-30 W)
IC ID: 109U-92FT7180	794-806 MHz (10-30 W)
	806-824 MHz (10-35 W)
	851-870 MHz (10-35 W)
	136-174 MHz (10-50 W and 25-110 W)
	380-470 MHz (10-40 W and 25-110 W)
	450-485 MHz (10-45 W)
	485-512 MHz (10-40 W)
	512-520 MHz (10-25 W)

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Motorola Solutions, Inc. 500 West Monroe Street, Chicago, IL 60661 U.S.A. **motorolasolutions.com**