

QUANTAR™

Station/Repeater

ASTRO™
DIGITAL SOLUTIONS

QUANTAR™
Station/Repeater
available in:

- ▶ **Conventional:**
Local and Wide Area
- ▶ **Trunking:**
SmartNet and SmartZone
- ▶ **VHF**
132-174 MHz



QUANTAR 125-25 Watt Station/Repeater

FEATURES

Provides Unmatched Flexibility in a Compact Design

- ▶ The software inherent in the product design allows features and system configurations to be specified through your choice of the appropriate software options
- ▶ Software intensive design allows for system migration and feature upgrades via **FLASHport™**
- ▶ Conventional Project 25 compliant (optional)
- ▶ Trunked Voice CAI compliant (optional)
- ▶ Analog, SECURENET, or ASTRO operation in conventional systems
- ▶ Analog, SECURENET or ASTRO operation in SmartNet or SmartZone trunking systems
- ▶ IntelliRepeater™ operation in trunked QUANTAR eliminates need for a central site controller
- ▶ 125-25 Watt or 25-6 Watt variable power models
- ▶ Standard EIA 19" rack mount configuration
- ▶ Compact dimensions utilize expensive site space efficiently
- ▶ 12.5, 25 or 30 kHz programmable channel spacing

Shortens Installation and Maintenance Time

- ▶ Functionally separate modules: Field Replaceable Units (FRU)
- ▶ Software intensive design speeds upgrades
- ▶ Programming and diagnostic testing performed through a personal computer
- ▶ Lightweight

Contributes to Maximizing System Up-time

- ▶ Reliable solid state performance
- ▶ Continuous duty cycle operation
- ▶ Battery reverting available in event of a site power failure
- ▶ Self-testing eases regular maintenance
- ▶ Switching power supply functions over a wide range of voltages and frequencies

 **MOTOROLA**

GENERAL SPECIFICATIONS

		Model Number: C99ED/001C Factory ID: T5365	
Application	System Family Option	Power/Band Option	RF Power Output
Conventional Analog	X597	X330	25-6 Watts
Secure Transparent	X598	X530	125-25 Watts
Conventional ASTRO	X599		
Conventional ASTRO CAI	X806		
6809 Trunking	X997		
6809 Secure Transparent Trunking	X996		
6809 ASTRO Trunking	X992		
6809 ASTRO CAI Trunking	X900		
SmartZone 6809 ASTRO Trunking	X989		
SmartZone 6809 ASTRO CAI Trunking	X897		
SmartZone IntelliRepeater	X999		
Secure Transparent SmartZone IntelliRepeater	X998		
SmartZone ASTRO IntelliRepeater	X990		
SmartZone ASTRO CAI IntelliRepeater	X898		
No. of Frequencies:	1 Standard on Trunked Stations, 16 Standard on Conventional Stations	Analog Modulation:	FM
Frequency Generation:	Synthesized	Digital Modulation:	C4FM
Analog Channel Spacing:	30 kHz/25 kHz/12.5 kHz	Temperature Range:	-30°C to +60°C
Digital Channel Spacing:	12.5 kHz	Antenna Connectors:	Transmit and Receive, Type "N" Female
Mode of Operation:	Simplex/Semi-duplex/Duplex	Occupied Bandwidth:	99% Power
Input Voltage AC:	90-264 VAC, 47-63 Hz	Operational Battery Revert:	12 VDC (25-6 Watt stations) 24 VDC (125-25 Watt stations)
Optional DC/DC Converter:	Negative or Positive Ground Source: 12 VDC (25-6 Watt stations) 24/48/60 VDC		Output power may be reduced up to 3 dB in battery revert mode to conserve battery life

INPUT POWER IN WATTS (VARIES WITH OPTIONS)

Power Output	Dimensions (H x W x D)	Weight	Operation State	AC Line	Battery Revert		DC/DC Converter (Positive or Negative Ground)			
					12V DC Nominal** (X30 Option)	24V DC Nominal** (X30 Option)	12V DC (X121 Option)	24V DC (X112/X121*** Option)	48V DC (X113 Option)	60V DC (X113 Option)
25 W	8.75 x 19 x 17 in.† (221 x 483 x 432 mm)	55 lbs.† (25 kg)	Standby Transmit	60 125	46 95	N/A N/A	55 145	55*** 145***	55 145	55 145
125 W	8.75 x 19 x 17 in.† (221 x 483 x 432 mm)	55 lbs.† (25 kg)	Standby Transmit	70 460	N/A N/A	55 385	N/A N/A	75 505	65 445	65 445
Alternative Cabinet Enclosure Specifications	12 x 22 x 20 in. (305 x 559 x 508 mm)	30 lbs.* (14 kg)								
	30 x 22 x 20 in. (762 x 559 x 508 mm)	66 lbs.* (30 kg)								
	46 x 22 x 20 in. (1168 x 559 x 508 mm)	75 lbs.* (34 kg)								
	60 x 22 x 20 in. (1524 x 559 x 508 mm)	102 lbs.* (46 kg)								

†Applies to station with option X87 Omit Cabinet without triple circulator option

*Enclosure only

** Output power may be reduced up to 3 dB in battery revert mode to conserve battery life. Full rated RF power is only available for terminal voltages of 13.5 to 15V (12V DC: X30 option) and 27 to 30V (24V DC: X30 option) at the station DC input connector.

*** Transmit and stanby input power in watts applies to 25W output power stations only.

TRANSMITTER

Frequency:	132-154 MHz, 150-174 MHz
Electronic Bandwidth: (Transmit Bandwidth)	Full Sub-band (reduced with the addition of a duplexer option)
Output Impedance:	50 Ohms
Frequency Stability: (for Temperature and Voltage Variation)	1 PPM/External Ref. (Optional)
Intermodulation Attenuation:	50 dB
Maximum Deviation:	
Clear 30/25 kHz:	±5 kHz
SECURENET Coded:	±4 kHz
Clear 12.5 kHz:	±2.5 kHz
ASTRO Conventional 12.5 kHz:	±3.6 kHz
Audio Sensitivity:	-35 dBm to 0 dBm variable
Spurious and Harmonic Emissions Attenuation:	90 dB
Symbol Rate Accuracy:	10 PPM
FM Hum and Noise:	300 to 3000 Hz bandwidth, 60% RSD, 750 μs de-emphasis
30/25 kHz:	50 dB nominal
12.5 kHz:	45 dB nominal
Audio Response (Analog):	+1, -3 dB from 6 dB per octave preemphasis; 300-3000 Hz referenced to 1000 Hz at line input
Audio Distortion (Analog):	≤ 2% 1000 Hz @ 60% RSD
Emission Designators:	25 kHz: 16K0F3E, 16K0F1D, 20K0F1E, 12.5 kHz: 11K0F3E, 8K10F1E, 10K0F1D

FCC TYPE ACCEPTANCE

FCC Designation:	Frequency Range in MHz	Type	Power Output in Watts	Type Acceptance Number
	132-174	Transmitter	125-25	ABZ89FC3773
	132-174	Transmitter	25-6	ABZ89FC3774
	132-174	Receiver	N/A	ABZ89FR3776

Specifications subject to change without notice.



Support Services

Wherever Motorola sells, our product is backed by service. Our products are serviced throughout the world by a wide network of company or authorized independent distributor service organizations.

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MOTOROLA

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