

EDACS®

EDACS 500M 800 MHz, 900 MHz

The EDACS 500M is a full-featured, high-performance mobile that meets the demands of trunked radio customers. Today's communications customers require a radio that delivers reliable service and offers useful features. The EDACS 500M is the perfect solution.

Product Overview

The EDACS 500M is a cost-effective, feature-rich mobile radio designed to deliver high-quality performance. This rugged radio is available in 800 MHz with 25 kHz and 12.5 kHz (NPSPAC) channel spacings, and in 900 MHz with 12.5 kHz channel spacing.

High-Visibility Display

The EDACS 500M is equipped with an 8-character alphanumeric liquid crystal display (LCD). The display is designed to maximize available space and make the radio easy to read and use. Backlighting helps maintain visibility in low-light environments.

Meets the Standards

The EDACS 500M is a durable radio that meets MIL-STD-810E, TIA-603, and FCC and Industry Canada criteria for North America.

PC Programmable

Programmable options provide versatility, simplified setup, and easy field upgrades. Changing personalities is as simple as connecting to a personal computer. Programmable options include Channel Guard (CTCSS), alert tone, EDACS scan, Dual-tone Multifrequency (DTMF), and Power-Up.

Optional Features

The EDACS 500M can be upgraded with the following options:

- Emergency
- Dynamic Regroup
- Priority System Scan
- 800 Systems/Groups
- Mobile Data
- Status Message
- ProScan™
- ProFile™ (New feature)

For More Information

For more information about this or any other M/A-COM Wireless Systems product, call 1-800-431-2345. From outside the U.S. call +1-434-455-9489.

M/A-COM logo

General Specifications

Dimensions (H x W x D):

8.25" x 6.87" x 2.00 in.
(21.0 x 17.5 x 5.0 cm)

*9.56 in. (24.3 cm) with knob and antenna connector

Weight:

Radio Unit Only: 5.06 lb (2.3 kg)

Input Voltage:

13.6 ± 15% VDC negative ground

Shock:

20 g (per TIA-603)

Color (case): Black

Operating Temperature Range:

-22 to +140°F (-30 to +60°C)

Relative Humidity:

95% RH @ 122°F (50°C)

Altitude:

Operational: 15,000 ft (5 km)

System Voltage: 13.6 ± 15% VDC

Duty Cycle: Intermittent, 20% TX (TIA-603)

Programming: PC, IBM® or IBM Compatible
(Windows® 95, Windows NT®)

Current Drain (A):

Standby: 0.80
Receive: 2.2 (10W audio)
Transmit: 15.0 (high power)

Display:

8-character LCD (alphanumeric)

Channel Resolution:

Multiples of 12.5 or 25 kHz

Mounting:

Hardware and cables supplied for front mounting of radio unit and microphone. Trunk mounting optional.

Construction:

Die-cast aluminum frame, top and bottom covers, fiberglass/epoxy printed circuit boards.

Approvals:

MIL-STD 810E, FCC, Industry Canada

Signaling:

Trunked EDACS
Conventional
Channel Guard Encode/Decode with Squelch Tail Eliminator (STE)

Options and Accessories

DTMF microphone (overdial only)

Transmitter

	800	900
Frequency Range (MHz):	806-825, 851-870	896-902, 935-941
Rated Power Output (W):		6-25 (adjustable)
Frequency Stability (ppm) (-30 to +60°C; +25 Ref):		±1.5
Modulation Deviation (kHz):	≤ ±5 kHz wideband ≤ ±4 kHz NPSPAC	≤ ±2.5 kHz narrowband
FM Hum and Noise (dB):	>45	>39
Audio Response:	Within +1/-3 dB of a 6 dB/octave pre-emphasis from 300-3000 Hz wideband 300-2550 Hz narrowband	
Conducted Spurious and Harmonic (dBm):	<-20	
Frequency Separation (MHz):	full band	full band
RF Output Impedance (ohm):	50	50
Audio Distortion:	<3% at rated audio @ 1000 Hz, 3 kHz deviation (wideband) <3% at rated audio @ 1000 Hz, 1.5 kHz deviation (narrowband)	

Receiver

	800	900
Frequency Range (MHz):	851-870	935-941
Channel Spacing (kHz):	12.5 (NPSPAC), 25	12.5
Sensitivity (12 dB SINAD) (µV):	0.35 wideband and narrowband	
Programmable Squelch (dB SINAD):	<8	
Selectivity (EIA 2-Signal) wideband/narrowband (dB):	>70 (20 NPSPAC)	>60
Intermodulation (dB):	>70	
Spurious and Image Rejection (dB):	>70	
Frequency Separation:	Full band	
Rated Audio Output:	10W <10% distortion external speaker (4Ω) 4W <10% distortion internal speaker (8Ω)	
Audio Response:	Within +1/-3 dB of a 6 dB/octave de-emphasis from 300-3000 Hz	
Hum and Noise (dB):	>45	>39
Accep. Frequency Displacement (kHz):	>40% RSD	
RF Input Impedance (ohm):	50	

Environmental Specifications

Standard	Parameter	Methods & Procedures
U.S. MIL-STD-810E	Low Pressure	500.3/1,2
	High Temperature	501.3/1,2
	Low Temperature	502.3/1
	Temperature Shock	503.3/1
	Solar Radiation	505.3/1
	Blowing Rain	506.3/2
	Humidity	507.3/2
	Salt Fog	509.3/1
	Blowing Dust	510.3/1
	Vibration	514.4/1, Category 10
	Shock	516.4/1
	Transit Drop	516.4/4
	Crash Hazard	516.4/5

Regulatory Data

Frequency Range (MHz)	RF Power (Adjustable) (W)	Frequency Stability (ppm)	FCC Type Acceptance Number	Applicable FCC Rules	Industry Canada Certification Number	Applicable Industry Canada Rules
806-825, 851-870	6-25	±1.5	AXATR-390-A2	15, 22, 90	3636-195-644A	TR-390
896-902, 935-941	6-25	±1.5	AXATR-392-A2	15, 22, 90	3636-195-617A	TR-391

M/A-COM Wireless Systems

P. O. Box 2000
Lynchburg, Virginia 24501
Phone: 1-800-431-2345
+1-434-455-9489
www.macom-wireless.com

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