

P5300 Portables

800 MHz, 900 MHz

The P5300 portable is a digital two-way radio that

- Provides multi-mode functionality
- Is software-defined for easy upgrades
- Offers optional Radio TextLink text messaging



P5350

P5370

The P5300 portable provides digital voice and Internet Protocol (IP) data for efficient and reliable communications.

Multiple Operating Modes

The P5300 uses a new high-speed digital signal processor and the latest RF components to support multiple applications:

- OpenSky® Digital TDMA Trunking
- Enhanced Digital Access Communications System (EDACS®) Trunking
- Complete Analog Conventional features

Additional modes can be added later with software updates.

Maximum RF Performance

The radio operates in the 800 MHz or 900 MHz band and combines digital and analog operation in one radio. Such versatility maximizes interoperability. The portable complies with TIA-603 to provide the highest RF performance.

Advanced OpenSky Trunking Features

The P5300 supports the full range of OpenSky digital trunking features, including voice group calls, priority scanning, pre-emptive emergency calls, late call entry, and dynamic reconfiguration. It performs autonomous roaming for wide area applications. High-quality voice coding and robust

audio components assure speech clarity even in noisy environments.

OpenSky Data Capability

The P5300 portable can be used in high-performance wireless data systems. For mobile data applications, the P5300 serves as an IP network node, providing end-to-end IP connectivity for an external portable computer connected to the radio's data port. Standard operating features include a 19.2-kbps data airlink rate for 800 MHz and a 9.6-kbps data airlink rate for 900 MHz. Users can talk and send or receive data on the same channel at the same time with just one radio.

Capable EDACS Feature Set

With its software-based design, the P5300 portable is readily configurable and easily expandable with software upgrades to meet customized needs.

- Stores up to 1,024 trunked system/group combinations and 128 conventional channels
- ProFile™ offers easy over-the-air programming for efficient updates
- ProScan™ provides smooth, automatic roaming between sites
- Capable conventional feature set

High Performance in a Durable Package

The sturdy mechanical package of the P5300 provides high performance and reliable service.

- MIL-STD-810F durable – including 1-meter drop per TIA
- Programmable dual-position switch for flexible operation
- Tx/Rx LED and enhanced clarity LCD for more visible signaling (including features such as a battery-level gauge)
- At 13.6 ounces with Lithium-Ion battery, the lightest weight portable offered by M/A-COM
- Illuminated channel indicator for easy channel identification
- Intrinsically safe certification (pending)

Radio TextLink Text Messages

With this option, users may receive, display, and respond to text messages sent from authorized users on the EDACS network. This feature improves real-time communications among first responders while also providing the capability to leave messages with users that are actively engaged in other critical activities.

For More Information

For more information about this or any other Wireless Systems product from Tyco Electronics, call toll free in the U.S. 800-368-3277. From outside the U.S. call 1-434-455-6403.

General Specifications

P5300 Portables are available in 2 models:

P5370: System Model with LCD and DTMF keypad

P5350: Scan Model with LCD and limited keypad

Dimensions (H x W x D):

(Without Knobs and Antenna)

With battery:

5.37 x 2.44 x 1.67 in.
(136.5 x 62.0 x 42.5 mm)

Weight (with Battery):

Li-Ion: 13.6 oz (386g)

NiCd: 17.2 oz (488g)

NiMH: 18.3 oz (579g)

Input Voltage:

7.5 VDC (nominal)

Vibration:

5 G (per U.S. Forest Service)

Shock:

1 meter drop (per TIA-603B)

Battery Life (at 5% Tx, 5% Rx, and 90% standby):

NiCd: 8 hours (1600 mAh)

Li-Ion: 9 hours (2000 mAh)

NiMH: 11 hours (2400 mAh)

Operating Temperature Range:

NiCd: -22 to +140°F
(-30 to +60°C)

Li-Ion: +14 to +122°F
(-10 to +50°C)

NiMH: -4 to +122°F
(-20 to +50°C)

Relative Humidity:

90% @ 122°F (+50°C)

Altitude:

Operational: 15,000 ft (4,572 m)

In Transit: 50,000 ft
(15,240 m)

Color (case):

Black

Options and Accessories

Headset, earpiece, speaker microphones, PC programming software and cables, subminiature surveillance accessories, antennas, cases, straps, belt loops and swivel mounts, desk chargers, wall chargers, and vehicular chargers.

Intrinsically Safe Options

To be provided upon receipt of Factory Mutual and CSA certifications.

Transmitter

	800	900
Frequency Range (MHz):	806-825, 851-870	896-902, 935-941
Rated RF Power Trunked (W):	0.5-3	0.5-3.0 (896-902 MHz), 0.5-2.5 (935-941 MHz)
Rated RF Power Talkaround (W):	0.5-2.5	0-2.5
Frequency Stability (-30 to +60°C; +25°C Ref) (ppm):	±1.5	±1.5
Frequency Separation (MHz):	19 (full bandwidth)	6 (full bandwidth)
Modulation Deviation (kHz):	±5.0 (±4.0 NPSPAC)	2.5 FM, 2.0 OpenSky Trunking
FM Hum and Noise (Companion Receiver) (dB):	<-40 (non-NPSPAC), <-38 (NPSPAC)	<-37
Spurious and Harmonics (dBm/dBc):	<-13/48	<-20/55
Audio Response (dB):	+1/-3	+1/-3
Audio Distortion:	<3% (1 kHz tone @ 3 kHz deviation (non-NPSPAC)) <3% (1 kHz tone @ 2.4 kHz deviation (NPSPAC))	2.5% (1 kHz tone @ 1.5 kHz deviation)

Receiver

	800	900
Frequency Range (MHz):	851-870*	935-941
Frequency Separation (MHz):	Full bandwidth	6 (full bandwidth)
Channel Spacing (kHz):	25/NPSPAC	12.5
Frequency Stability (-30 to +60°C; +25 Ref) (ppm):	±1.5	±1.5
Sensitivity (12 dB SINAD) (µV/dBm):	0.28/-118.0	0.28/-118.0
Adjacent Channel Rejection (dB):	>70 @ 25 kHz	>64 @ 12.5 kHz
Intermodulation (dB):	>72	>70
Spurious and Image Rejection (dB):	>72	>70
Rated Audio Output (mW):	500	500
Audio Distortion:	<3% @ rated power	<2.5% @ rated power

*The following self-quieting frequency cannot be programmed as a receive frequency: 864.000 MHz.

Environmental Specifications

Standard	Parameter	Methods & Procedures
MIL-STD-810F*	Low Pressure	500.4/1,2
	High Temperature	501.4/1,2
	Low Temperature	502.4/1,2
	Temperature Shock	503.4/1
	Solar Radiation	505.4/2
	Blowing Rain	506.4/1
	Humidity	507.4
	Salt Fog	509.4
	Blowing Dust	510.4/1
	Vibration (Minimum Integrity)	514.5/1, Category 24
	Vibration (Basic Transportation)	514.5/1, Category 4
	Shock (Functional/Basic)	516.5/1
	Shock (Transit Drop)	516.5/4
	IEC 60529	Dust-tight, Water Jets
U.S. Forest Service	Vibration (10-60 Hz)	USDA LMR Standard, Section 2.15
TIA-603-B	Shock (1 meter drop)	Paragraph 3.3.5.3

*Also meets equivalent superseded MIL-STD-810C, -D, and -E.

Digital Operation

Vocoding Method:	Advanced MultiBand Excitation (AMBE [®])
Data Rate (kbps):	19.2 for 800 MHz and 9.6 for 900 MHz
Modulation:	2- or 4-Level GFSK; M4FM

Regulatory Data

Frequency Range (MHz)	RF Output (W)	FCC Type Acceptance Number	Applicable FCC Rules	Industry Canada Certification Number	Applicable Industry Canada Rules
806-869	3	OWDTR-0043-E	Part 90	3636B-0043	RSS-119
896-940	3	OWDTR-0047-E	Part 90	3636B-0047	RSS-119

M/A-COM, Inc., P. O. Box 2000, Lynchburg, Virginia 24501, Phone: 800-368-3277

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