

P7300 Portable 700/800 MHz

The P7300 portable is a digital two-way radio that provides

- Dual-band TDMA-capable operation
- Multi-Mode functionality
- Digital voice and IP data



The 700/800 MHz dual-band P7300 portable provides versatile and reliable communications to meet a range of user requirements.

Multiple Applications with One Radio

The P7300 uses a new high-speed digital signal processor and the latest RF components to support multiple applications in one package:

- Project 25 Digital Trunking – Phase 1 FDMA now. Phase 2 TDMA trunking via software upgrade once the TIA standard is finalized.
- P25 Digital Conventional
- OpenSky® Digital TDMA Trunking
- ProVoice™ Digital Trunking
- Enhanced Digital Access Communications System (EDACS®) Trunking
- Complete Analog Conventional features

Maximum RF Performance

The radio operates in the 700/800 MHz band and combines digital and analog operation in one radio. Such versatility maximizes interoperability. The portable complies with TIA-603 and TIA-102 standards to provide the highest RF performance.

Advanced Digital Trunking Features

The P7300 supports a wide range of 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.

Mobile Data Capability

The optional data feature allows the P7300 portable to be used in high-performance wireless data systems in all operating modes listed. For mobile data applications, the P7300 serves as an IP network node, providing end-to-end IP connectivity for an external portable computer connected to the radio's data port.

Encrypted Communications

The optional Advanced Encryption Standard (AES) and Data Encryption Standard (DES) are available for maximum security.

Radio TextLink Text Messages

With this option, users may receive, display, and respond to text messages sent from authorized users on the 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.

High Performance in a Rugged Package

The sturdy mechanical package of the P7300 provides high performance and reliable service.

- MIL-STD-810F durable – including 1.5-meter drop to concrete, exceeding TIA-603-C requirement

- Optional immersion – 1 meter for 4 hours per MIL-STD-810F
- 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 15.2 ounces with Lithium-Ion battery, one of the lightest weight portables offered by Harris
- Illuminated channel indicator for easy channel identification
- Factory Mutual Intrinsically Safe certification (optional)

Software-Based Design for Customization

With its software-based design, the P7300 portable is readily configurable and easily expandable with software upgrades to meet customized needs.

- Stores up to 1,024 trunked group combinations and up to 1,024 conventional channels
- Stores 255 individual call numbers and 255 telephone numbers in memory
- ProFile™ offers easy over-the-air programming for efficient updates
- ProScan™ provides smooth, automatic roaming between sites
- Full conventional feature set
- Personality Lock prevents unauthorized users from programming radios or accessing the system

General Specifications

P7300 Portables are available in 2 models:

P7370: System Model with LCD and DTMF keypad

P7350: Scan Model with LCD and limited keypad

Dimensions (H x W x D):

(Without Knobs and Antenna)

With battery:

5.89 x 2.44 x 1.94 in.
(149.5 x 62.0 x 48.5 mm)

Approximate Weight (with Battery):

Li-Ion: 15.2 oz (431g)
NiCd: 18.4 oz (521g)
NiMH: 20.0 oz (567g)

Input Voltage:

7.5 VDC (nominal)

Vibration:

5 G (per U.S. Forest Service)

Shock:

1.5 meter drop to concrete (exceeds TIA-603C)

Immersion*: 1 meter for 4 hours with 49°F (27°C) differential (MIL-STD-810F)

*P7300 immersion model only.

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

NiCd: 8 hours (1600 mAh)
Li-Ion: 9 hours (1900 mAh)
NiMH: 11 hours (2400 mAh)

Operating Temperature Range:

NiCd: -22 to +140°F (-30 to +60°C)
Li-Ion: -4 to +122°F (-10 to +50°C)
NiMH: +14 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, and wall chargers.

Intrinsically Safe Options

Factory Mutual Intrinsically Safe for Class I, II, and III, Division 1, Groups C, D, E, F, and G, Temp T3C, TA=+60°C; Nonincendive for Class I, Division 2, Groups A, B, C, and D, Temp T4, TA=+60°C.

Transmitter

	700/800
Frequency Range (MHz):	764-776, 794-805, 806-825, 851-870
Rated RF Power Trunked (W):	3
Rated RF Power Talkaround (W):	3
Frequency Stability (-30 to +60°C) (ppm):	±1.5
Modulation Deviation (kHz):	2.5, 4, or 5 FM
FM Hum & Noise (Companion Receiver) (dB):	>39 (700 MHz), >43 (NPSPAC), >45 (non-NPSPAC)
Audio Response (dB):	Meets TIA-603-C Section 3.2.6
Spurious and Harmonics (dBm/dBc):	Meets FCC Part 90; emission mask "G" and "H" for 800 MHz
Audio Distortion:	<3% at rated audio @ 1000 Hz, 3 kHz deviation
P25 Modulation Fidelity (%):	<5
P25 Adjacent Channel Power (dBc):	>67 (800 MHz); meets Section 3.2.8.2 of TIA-102.CAAB-B for 700 MHz band

Receiver

	700/800
Frequency Range (MHz):	764-776, 851-870
Channel Spacing (kHz):	12.5, 25, PLL Step
Sensitivity (12 dB SINAD) (µV/dBm):	0.25/-119
P25 Reference Sensitivity (5% BER) (µV/dBm):	0.25/-119
Adjacent Channel Rejection @ 12.5 kHz (dB) per TIA/EIA-603-1:	> 60 (700 MHz)
Adjacent Channel Rejection @ 25 kHz (dB) per TIA/EIA-603-1:	>72 (800 MHz non-NPSPAC)
P25 Adjacent Channel Rejection @ 12.5 kHz (dB):	>60
Offset Channel Selectivity @ NPSPAC (dB):	>20
Intermodulation (dB):	>72
Spurious and Image Rejection (dB):	>72
FM Hum and Noise (dB):	>31 (700 MHz), >35 (NPSPAC), >37 (non-NPSPAC)
Rated Audio Output (mW):	500
Audio Distortion:	<3% @ rated audio output power
Measurements per TIA/EIA-603-C except where noted; "P25" parameters are per TIA-102.CAAB-B	

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
	Immersion**	512.4/1
	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
U.S. Forest Service	Vibration (10-60 Hz)	USDA LMR Standard, Section 2.15
TIA-603C***	Shock (1 meter drop)	Paragraph 3.3.5.3

*Also meets equivalent superseded MIL-STD-810C, -D, and -E.
**P7300 immersion model only. Available option that must be ordered.
***Environmental test certification of 1.5 meter drop shock to concrete using parameters of TIA-603-C 1.0 meter drop shock with additional height.

Digital Operation

	OpenSky	ProVoice	P25
Vocoding Method:	Advanced MultiBand Excitation (AMBE®)	Improved MultiBand Excitation (IMBE™)	Improved MultiBand Excitation (IMBE)
Data Rate (kbps):	19.2	9.6	9.6
Modulation:	4-Level GFSK	GFSK	C4FM

Regulatory Data

Frequency Range (MHz)	RF Output (W)	Frequency Stability (ppm)	FCC Type Acceptance Number	Applicable FCC Rules	Industry Canada Certification Number	Applicable Industry Canada Rules
769-775, 799-805, 806-825, 851-870	3*	1.5	OWDTR-0054-E	90	3636B-0054	RSS-119

* Except for channels identified in FCC §§90.531(b)(3), 90.531(b)(4) as low power (2W maximum ERP).



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These item(s)/technical data have been reviewed in accordance with the international traffic in arms regulations, 22 CFR 120 – 130, and the export administration regulations, 15 CFR 730 – 774, and determined by the Harris export control department to be rated EAR99. General prohibitions apply.

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