

## 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
- P25 Phase 2 upgrade capability



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 in the future.
- 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

- Resilient – Transit drop shock per MIL-STD-810F followed by 1-meter immersion 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: 15.20 oz (431g)  
Li-Polymer: 15.70 oz (445g)  
NiCd: 18.40 oz (522g)  
NiMH: 20.00 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 (per MIL-STD-810F)  
- IP67 and IP68 rated  
- 2 meters for 4 hours

\*P7300 immersion model only.

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

NiCd: 8 hours (1600 mAh)  
Li-Ion: 9 hours (2000 mAh)  
Li-Polymer: 16 hours (3600 mAh)  
NiMH: 11 hours (2400 mAh)

#### Operating Temperature Range:

NiCd: -22 to +140°F  
(-30 to +60°C)  
Li-Ion: +14 to +140°F  
(-10 to +60°C)  
Li-Polymer: -4 to +140°F  
(-20 to +60°C)  
NiMH: -4 to +140°F  
(-20 to +60°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 micro-phones, 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	
IEC 60529**	Immersion	IP67 & IP68
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:	AMBE+2™ Half Rate & Enhanced Half Rate	AMBE+2 Enhanced Full Rate	AMBE+2 Enhanced Full Rate & Enhanced Half Rate
Signaling Rate (kbps):	19.2 & 9.6	9.6	9.6
Modulation:	4-Level GFSK* & M4FM	GFSK	WCQPSK & 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).

