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Simoco Xd 700 Series Simoco Xd SDP750 DMR Portable Radio

The Simoco Xd SDP750 is a digital portable radio capable of operating across multiple modes, including analog conventional, digital conventional (DMR Tier II) and digital trunking (DMR Tier III).

Best in class sensitivity ensures crystal-clear communications in fringe areas and harsh environments while a compact form factor means the radio is suitable for a wide range of users.

The SDP750 offers a rich feature set including full duplex calling, allowing for enhanced communications between office and field staff. Additional features include GPS, long battery life and Bluetooth to allow for the connection of additional wireless accessories.

The radio's ability to allow the user to operate across a variety of network signature modes means it is not only a safe and future-proof investment, but also provides a cost effective and flexible migration path for organizations managing the transition from analog to DMR digital.

Features

- ▶ **Three operating modes - analog conventional, digital conventional (DMR Tier II), and digital trunking (DMR Tier III)**
- ▶ **Available in VHF and UHF frequency bands**
- ▶ **AES encryption 256 bit**
- ▶ **Exceptional RF performance – exceeds ETSI and TIA-603 specifications**
- ▶ **Full duplex calls**
- ▶ **Fully compliant with ETSI DMR standards**
- ▶ **MIL-STD-810 & IP67**
- ▶ **Market-leading 1.8W audio output**
- ▶ **-121dBm digital sensitivity (typical) – increase coverage area and improve audio quality**
- ▶ **Group, emergency, broadcast and all-calls**
- ▶ **Supports man-down and lone worker alerts**
- ▶ **Supplementary services support**
- ▶ **Authentication**
- ▶ **GPS**
- ▶ **Bluetooth connectivity supports wireless accessories**
- ▶ **Advanced noise reduction software for clear comms under high ambient noise conditions**
- ▶ **Vibration alert**



General Specification

Frequency Bands	VHF:136–174MHz UHF:400–470MHz UHF: 450–520MHz*
Channel Capacity	256
Channel Bandwidth	12.5/25kHz
Dimensions (H x W x D)	125x54x35mm
Weight	320g (Standard battery and antenna)
Operating Voltage	DC 7.3V ± 15%
Battery	Standard: 2400mAh (Li-Ion) Option: 3400mAh (Li-Ion)
Battery (5–5–90 duty cycle, High TX Power)	Analog: 12 Hours Digital: 14 Hours
Model Variant	SDP750 without GPS & Man Down SDP750 with GPS & Man Down SDP750 with GPS, Man Down, Full Duplex & Bluetooth

Receiver

Digital Sensitivity	Typical: -121dBm / BER 5% Typical: -118dBm / BER 1%
Analog Sensitivity	Typical: -121dBm / 12dB SINAD
Intermodulation	>70dB (TIA603) >65dB (ETSI)
Blocking	84dB (TIA603 & ETSI)
Spurious Response Rejection	>70dB (TIA603 & ETSI)
Adjacent Channel Selectivity	70dB@25 kHz (TIA603 & ETSI) 60dB@12.5 kHz (TIA603 & ETSI)
Conducted Spurious Emission	-57dBm (<1GHz) -47dBm (>1GHz)
Rated Audio Power Output	1.8W
Rated Audio Distortion	3% Analog 5% Digital
Hum and Noise	49dB @ 25kHz 43dB @ 12.5kHz 55dB @ Digital
Audio Response	+1 ~ -3dB
Digital Vocoder Type	AMBE+2
Digital Protocol	ETSI TS 102 361-1, -2, -3, -4

Transmitter

Frequency Stability	0.5ppm
RF Power Output	VHF: High: Up to 5W Low: Up to 1.25W UHF: High: Up to 4.5W Low: Up to 1.25W
Digital Modulation	7K60FXD (Data Only) 7K60FXE (Data and Voice)
Analog Modulation	16K0F3E @ 25kHz 11K0F3E @ 12.5kHz
Adjacent Channel Power	70dB @ 25kHz 60dB @ 12.5 kHz
Conducted and Radiated Emission	-36dBm (<1GHz) -30dBm (>1GHz)
Transmission Deviation limits	5kHz @ 25kHz 2.5kHz @ 12.5kHz
Audio Distortion	3% Analog 5% Digital
Hum and Noise	49dB @ 25kHz 43dB @ 12.5kHz 55dB @ Digital
Audio Response	+1 ~ -3dB

Reliability

Operating Temperature	-30 – +60°C
Storage Temperature	-40 – +85°C
Dust & Water Intrusion	IP67 (IEC60529)
Environmental Standards	MIL-STD-810 C/D/E/F/G
ESD	IEC 61000-4-2 (level 4) ±8kV (Contact), ±15kV (Air)

GPS

TIFF Cold Start	<120s
TIFF Hot Start	<10s
Horizontal Positioning Accuracy	<10s
Acquisition Sensitivity	<-140dBm
Tracking Sensitivity	<-152dBm

Standard Accessories



Standard 2400 mAh Li-ion battery
7A0BAL1SZXC



SDP700 Series single way charger
including power lead 7A0BC00SZC1-B1



SDP700 Series belt clip
7A0BB000Z00



SDP700 Series wrist wrap
7A0LY000Z00

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Specifications based on standard operating conditions. Not all frequency bands are permissible for every market area. See Simoco Product Catalogue for a full list of specifications. All specifications are subject to change without prior notice. Simoco does not accept liability for any error or omission in this document.

*For summer 2017 release