

X1p

DMR handheld radio



Elegant design

The X1p from Hytera combines compact design with extensive DMR functionality, integrated in a chassis that is only 23 mm thick. With its small dimensions, this handheld radio is perfectly suited for concealed carry. Despite its compact design, the X1p has a full keypad and four programmable keys.

Dustproof and waterproof

The X1p is reliable even in harsh operating conditions. It is waterproof and dustproof in accordance with degree of protection IP67, which means it is capable of withstanding a water depth of one meter for at least half an hour.

Different digital and analog operating modes

The X1p was developed in compliance with the ETSI Digital Mobile Radio (DMR) standard. It supports both conventional DMR operation (DMR Tier II), DMR trunking (DMR Tier III) and operation in simulcast. The X1p can also be operated in analog mode. Along with conventional analog radio it also supports analog trunking as per MPT 1327.

Technical data X1p

General data	
Frequency range	VHF: 136 – 174 MHz UHF: 400 – 470 MHz
Supported operating modes	<ul style="list-style-type: none"> ▪ DMR Tier II (conventional DMR) ▪ Simulcast ▪ XPT Digital Trunking ▪ DMR Tier III (DMR trunked radio) ▪ Analog, MPT 1327 DMR Tier II according to ETSI TS 102 361-1/2/3 DMR Tier III according to ETSI TS 102 361-1/2/3/4
Number of channels	1024
Number of zones	64
Channel spacing	12.5 / 20 / 25 kHz (analog) 12.5 kHz (digital)
Operating voltage	7.4 V (nominal)
Standard battery	1400 mAh (lithium-ion battery)
Battery service life (5-5-90 duty cycle, high transmitting power, standard battery)	approx. 10 h (analog) approx. 12 h (digital)
Frequency stability	± 1.5 ppm
Antenna impedance	50 Ω
Dimensions (H × B × T, with battery, without antenna)	119,5 × 57 × 21 mm (1100-mAh battery) 119,5 × 57 × 23 mm (1400-mAh battery) 119,5 × 57 × 26 mm (1800-mAh battery)
Weight (with antenna and battery)	approx. 240 g (1100-mAh battery) approx. 260 g (1400-mAh battery) approx. 280 g (1800-mAh battery)
LCD Display	160 x 128 pixels, 65,536 colours, 1.8 inches, 4 lines

Environmental conditions	
Operating temperature range	-30 °C to +60 °C
Storage temperature range	-40 °C to +85 °C
ESD	IEC 61000-4-2 (Level 4), ± 8 kV (contact), ± 15 kV (air)
Protection against dust and moisture	IP67
Shock and vibration resistance	MIL-STD-810 C / D / E / F / G
Relative humidity	MIL-STD-810 C / D / E / F / G

GPS	
Time to first fix (TTFF)	< 1 minute (cold start) < 10 seconds (warm start)
Horizontal accuracy	< 10 meter

Transmitter	
Transmitting power	VHF: 1 / 5 W UHF: 1 / 4 W
Modulation	11 K0F3E at 12.5 kHz 14 K0F3E at 20 kHz 16 K0F3E at 25 kHz
4FSK digital modulation	12.5 kHz (data only): 7K60FXD 12.5 kHz (data and voice): 7K60FXW
Interfering signals and harmonics	- 36 dBm (< 1 GHz) - 30 dBm (> 1 GHz)
Modulation limiting	±2.5 kHz at 12.5 kHz ±4.0 kHz at 20 kHz ±5.0 kHz at 25 kHz
Noise cancellation	40 dB at 12.5 kHz 43 dB at 20 kHz 45 dB at 25 kHz
Adjacent channel selectivity	60 dB at 12.5 kHz 70 dB at 20 / 25 kHz
Audio sensitivity	+ 1 dB to - 3 dB
Nominal audio distortion	≤ 3 %
Digital vocoder type	AMBE +2™

Receiver	
Sensitivity (analog)	0.3 µV (12 dB SINAD) 0.22 µV (typical) (12 dB SINAD) 0.4 µV (20 dB SINAD)
Sensitivity (digital)	0.3 µV / BER 5 %
Adjacent channel selectivity TIA-603	60 dB at 12.5 kHz / 70 dB at 20 / 25 kHz
ETSI	60 dB at 12.5 kHz / 70 dB at 20 / 25 kHz
Intermodulation TIA-603	70 dB at 12.5 / 20 / 25 kHz
ETSI	65 dB at 12.5 / 20 / 25 kHz
Spurious response rejection TIA-603	70 dB at 12.5 / 20 / 25 kHz
ETSI	70 dB at 12.5 / 20 / 25 kHz
Signal-noise ratio (S/N)	40 dB at 12.5 kHz 43 dB at 20 kHz 45 dB at 25 kHz
Nominal audio power output	0.5 W
Nominal audio distortion	≤ 3 %
Audio sensitivity	+ 1 dB to - 3 dB
Conducted spurious emission	< - 57 dBm

All technical information was determined at the factory and in accordance with the corresponding standards. Subject to change on the basis of continuous development.



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