

Data Sheet

Mag One X8d

Designed for dynamic
business operations

Connect your team with the Mag One X8d
to help ensure smoother operations and
clear communication across your entire site.





Built to conquer the workday

The Mag One X8d serves as a robust and high-performing communication tool for your professional teams.

Whether managing retail settings, organising large-scale events, or overseeing campus activities, the X8d ensures your personnel maintain clear, dependable connectivity, critical when every moment counts.

Designed for a connected workforce, the X8d offers enhanced range performance for clear communication across broad areas.

With an IP55 rating, it's built to withstand the demands of an active workday, and supports up to 64 channels for flexible communication.

→ Take control

Providing up to 23 hours of talk time, the X8d is engineered to last beyond a typical work shift. Additionally, its USB-C port allows for convenient charging using a standard USB charger.

→ Listen up

With its 3 Watt maximum audio power output, the X8d delivers exceptionally loud and clear audio, ensuring messages cut through noisy environments.

GENERAL

Analogue and digital

DMR Standards compliant

Up to 64 channels

USB-C (charging and programming)

2 programmable buttons

Voice announcements

Preset channel announcements

Priority scan

Nuisance Channel Delete

Voice Operated Transmission (VOX)

IP55 dust and water ingress protection

AUDIO

Enhanced audio power

Basic noise reduction (transmit)

SAFETY & SECURITY

Radio disable / enable

Analogue scrambling

DIGITAL SYSTEMS

Dual Capacity Direct Mode



Specifications

GENERAL SPECIFICATIONS

Band	VHF	UHF
Frequency	136 - 174 MHz	400 - 470 MHz
Typical RF output		
High power	5 W	4 W
Low power	1 W	1 W
Channel capacity	Up to 64 channels	
Channel spacing	12.5 / 25.0 kHz	
Dimensions ¹ (H x W x D) with battery	120 x 55 x 33.5 mm	
Weight with battery, antenna, belt clip	300 g	
Power supply (nominal)	7.2 V	
Battery life ² (analogue / digital)	16 hours / 23 hours	
Battery Capacity	Lithium Ion 2200 mAh (typical)	

RECEIVER SPECIFICATIONS

Analogue sensitivity (12dB SINAD)	0.18 μ V (typical)
Digital sensitivity (5% BER)	0.18 μ V (typical)
Conducted / radiated spurious emissions (TIA603E/ANSI C63.4)	< -57 dBm for < 1 GHz, < -47 dBm for > 1 GHz
Intermodulation (TIA603E)	> 65 dB
Adjacent channel selectivity (TIA603A)-1T	> 60 dB @ 12.5 kHz, > 70 dB @ 25 kHz
Spurious Rejection (TIA603E)	> 70 dB
Frequency stability	$\pm$ 1.5 ppm

TRANSMITTER SPECIFICATIONS

4FSK digital modulation	12.5 kHz Data: 7K60F1D and 7K60FXD 12.5 kHz Voice: 7K60F1E and 7K60FXE Combination: 7K60F1W
Digital protocol	ETSI TS 102 361-1, -2, -3 DMR Tier II
FM Modulation	12.5 kHz: 11K0F3E 25 kHz : 16K0F3E
Conducted / radiated spurious emissions (TIA603E/ANSI C63.26)	< -36 dBm for < 1 GHz, < -30 dBm for > 1 GHz
Adjacent channel power	> 60 dB @ 12.5 kHz, > 70 dB @ 25 kHz
Frequency stability	$\pm$ 1.5 ppm
Modulation limiting (TIA603E/ANSI C63.26)	$\pm$ 2.5 kHz @ 12.5 kHz, $\pm$ 5.0 kHz @ 25 kHz

ENVIRONMENTAL SPECIFICATIONS

Operating temperature ³	-30 °C to 60 °C
Storage temperature	-40 °C to 85 °C
Thermal shock	Per MIL-STD 810C, D, E, F, G, H
Humidity	Per MIL-STD 810C, D, E, F, G, H
Electrostatic discharge	IEC 61000-4-2 Level 4
Dust and water intrusion	IEC60529 IP55
Salt fog	Per MIL-STD 810C, D, E, F, G, H

AUDIO SPECIFICATIONS

Audio output power (rated / max)	1 W / 3 W
Audio distortion at rated power	3% (typical)
Hum and noise	-40 dB @ 12.5 kHz / -45 dB @ 25 kHz



¹ Dimensions at grip area.

² Typical battery life, 5/5/90 profile at maximum transmitter power. Actual observed runtimes may vary.

³ Temperature listed is for radio specification. Li-Ion battery discharge: -20 °C to 60 °C.

MILITARY STANDARDS (MIL-STD 810)												
	MIL-STD 810C		MIL-STD 810D		MIL-STD 810E		MIL-STD 810F		MIL-STD 810G		MIL-STD 810H	
	Method	Procedure	Method	Procedure	Method	Procedure	Method	Procedure	Method	Procedure	Method	Procedure
Low Pressure	500.1	I	500.2	II	500.3	II	500.4	II	500.6	II	500.6	II
High Temperature	501.1	I, II	501.2	I/A1, II/A1	501.3	I/A1, II/A1	501.4	I/HOT, II/HOT	501.5	I/A1, II/A2	501.7	I/A1, II/A1
Low Temperature	502.1	I	502.2	I, II	502.3	I, II	502.4	I, II	502.5	I, II	502.7	I, II
Temperature Shock	503.1	I	503.2	A1/C3	503.3	A1/C3	503.4	I	503.5	I/C	503.7	I/C
Solar Radiation	505.1	II	505.2	I/A1	505.3	I/A1	505.4	I/A1	505.5	I/A1	505.7	I/A1
Rain	506.1	I, II	506.2	I, II	506.3	I, II	506.4	I, III	506.5	I, III	506.6	I, III
Humidity	507.1	II	507.2	II	507.3	II	507.4	—	507.5	II/ Aggravated	507.6	II/ Aggravated
Salt Fog	509.1	I	509.2	I	509.3	I	509.4	—	509.5	—	509.7	—
Blowing Dust & Sand	510.1	I/-	510.2	I, II	510.3	I, II	510.4	I, II	510.6	I, II	510.7	I, II
Vibration	514.2	VIII/F, W	514.3	I/10, II/3	514.4	I/10, II/3	514.5	I/24, II/5	514.6	I/24, II/5	514.8	I/24, II/5
Shock	516.2	I, II	516.3	I, IV	516.4	I, IV	516.5	I, IV	516.7	I, IV	516.8	I, IV

To learn more, visit:
www.motorolasolutions.com/x8d



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