

The world's thinnest & smallest full power digital portable radio

X1e

Surya X1e Digital Portable Radio complies fully with ETSI open standard, emerges as the world's smallest full power DMR radio. Perfect combination of structural rigidity, versatile functionalities, and refined design; secure communication ensured by AES encryption algorithm & 256 digit dynamic encryption keys; convenient application development facilitated by built-in BT and USB port; and worry-free handling achieved by IP67 protection.

All comes with a surprisingly small size: 18mm (1100mAh Li-ion battery) thin.



X1e

DMR

Innovative Design

① Ease of use

Easy to use with the rugged body as thin as 18mm, professional wireless headsets or collar microphone, palm controller and flexible antenna.

② IP67 compliance

Complies with IP67 requirements, withstanding up to 1m submersion for 30 minutes or more.

③ Rugged & reliable

Complies with MIL-STD-810 C/D/E/F/G standards and passes HALT (Highly Accelerated Life Test).



Surya X1e

Features



Advanced encryption

AES encryption algorithm & 256 digit dynamic encryption keys ensures secure communication.



Supports Hytera BT accessories

The radio supports Hytera BT accessories: EHW02, BT earpiece; POA47, BT Ring PTT.



Open USB interface

Open USB port facilitates secondary and application development.



GPS positioning

The built-in GPS module supports GIS applications.



Dual mode (analog & digital)

Dual modes (analog & digital) operation ensures a smooth analog-to-digital migration.



Versatile voice calls

Versatile voice calls include individual call, group call and all-call.



Vibration

Vibration alerts the reception of voice call and message.



Rich signaling

Supports multiple advanced analog signaling, including HDC1200, DTMF, 2-Tone and 5-Tone, providing more expansion capacity.



Software upgradable

Upgrade software enables new features without buying a new radio; X1e could also be switched into MPT and DMR trunking modes with corresponding license applied in the same hardware.

Work with Surya dispatch system and Portable repeater to achieve flexible networking & dispatching

For mission critical users like special police, anti-drug/anti-smuggling officer, senior guard, senior executives, etc., only a professional terminal is not enough to accomplish tasks and ensure safety. This is where a complete communications solution is demanded.

Surya dispatch system

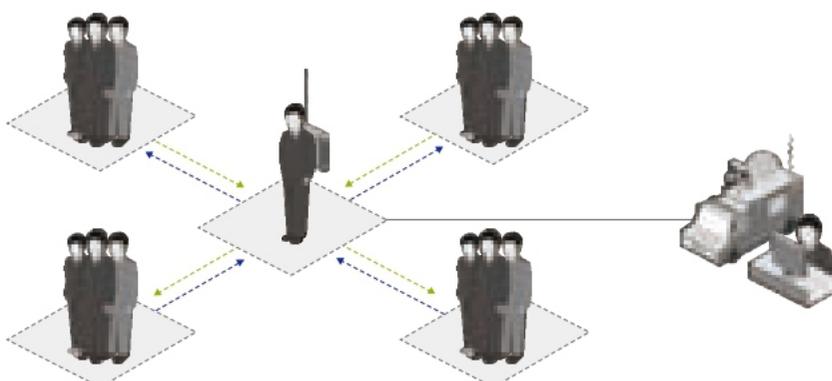
A digital dispatching system developed on the Hytera digital platform in compliance to ETSI DMR open standard, is designed for efficient communication, management and dispatching of professional users.



- **All types of voice calls**
Surya dispatch system supports all types of calls that meet your various dispatching operational needs, include private call, group call, all call. Every Surya dispatch system dispatcher client console is able to dispatch up to 8 voice dispatching channels. Through these dispatching channels, Surya dispatch system could receive all types of calls as well as trigger any type of call through user friendly and easy to operate user interface.
- **Voice recording & playback**
All incoming calls and outgoing calls will be recorded in Surya dispatch system server. This includes all types of DMR voice calls and PSTN interconnected calls. Users can retrieve recorded voice and playing back at any time. All recorded voices are easily can be searched through time, caller ID or callee ID.
- **Radio kill & radio revive**
Surya dispatch system is able to kill a radio unit remotely when the radio unit is under illegal usage or being stolen. The killed radio is able to power on but not able to perform transmitting or receiving. Surya dispatch system is also able to activate a killed radio when necessary.
- **Real-time tracking**
This feature allows Hytera dispatch system to track the location of any radio units in real-time. Users have an option to display the location route on the mapping. On critical missions, the dispatcher can send staff nearby for check and help when the route of a patroller halted.

Portable repeater for flexible networking

Take the portable repeater to extend the coverage area, allow flexible networking and high mobility in tasks, which is especially helpful in tracking, body guarding and mobile dispatching.



Portable repeater



Learn more about Surya dispatch system and the backpack repeater, please visit www.suryatel.com or contact our local dealers and sales representatives.

Versatile accessories for specific tasks



Accessories

Li-ion Battery 1100mAh	BL1103	Wireless Earpiece With Dual-PTT	EHW02
Li-ion Battery 1400mAh	BL1401	BT Ring PTT	POA47
Li-ion Battery 1800mAh	BL1809	Belt Charger	CH04L01
Switching Power(US-standard) 12V 1A	PS1014	Blet Clip	PCN005
MCU Dual Charger	CH10L15	Digital Wireless Covert Earpiece With in-Line Controller (Neckloop Sensor)	EWN07
3-wire Surveillance Earpiece with Transparent Acoustic Tube (Beige)	EAN21	Digital Wireless Covert Earpiece (Flatpack Sensor)	EWN08
Remote C-Earset	EHN21	Detachable Earpiece with Transparent Acoustic Tube	EAN22
Remote Swivel Earset	EHN20	3-wire Dual-PTT Surveillance Earpiece with Transparent Acoustic Tube (Beige)	EAN19
Remote Earbud	ESN14	NiTi Antenna	
Vest	NCN009		

High-capacity Battery & Belt Charger:

BL1809, Li-ion Battery 1800mAh; CH04L01, Belt Charger. For users require long-time operation, a high-capacity battery with belt charger is undoubtedly the best match. The 1800mAh Li-ion battery of X1e enables it to work for up to 15 hours, and the belt charger further extends its operation time with convenient charging.

Audio Accessories

EWN08, Wireless Earphone; EHW02, BT earpiece; POA47, BT Ring PTT. X1e has a variety of audio accessories for flexible use in actual environments.



Target Customers

Mission critical users:
special police, anti-drug/anti-smuggling officer, senior guard,
senior executives.

Specifications

General	Frequency Range(MHz)	UHF1: 400-470MHz; UHF2:450-520MHz; UHF3: 350-400MHz UHF5: 806-941MHz; VHF: 136-174MHz
	Channel Capacity	32
	Channel Spacing	25/20/12.5KHz
	Operating Voltage	7.4V (rated)
	Battery	1100mAh (Li-Ion)/1400mAh (Li-Ion)/1800mAh (Li-Ion)
	Battery Life (5-5-90 Duty Cycle, High TX Power)	Digital: about 10 Hours (1100mAh Li-Ion battery) Digital: about 12 Hours (1400mAh Li-Ion battery) Digital: about 15 Hours (1800mAh Li-Ion battery)
	Frequency Stability	± 1.5ppm
	Antenna Impedance	50Ω
	Dimensions (HxWxD) (with battery, without antenna)	119.5 X 57 X 18mm (1100mAh Li-Ion battery) 119.5 X 57 X 20mm (1400mAh Li-Ion battery) 119.5 X 57 X 23mm (1800mAh Li-Ion battery)
	Weight	about 220g (1100mAh Li-Ion battery) about 240g (1400mAh Li-Ion battery) about 260g (1800mAh Li-Ion battery)

Receiver	Sensitivity	Analog	0.3μV (12dB SINAD) 0.22μV (Typical) (12dB SINAD) 0.4μV (20dB SINAD)
		Digital	0.3μV /BER5%
	Selectivity TIA-603 ETSI	60dB @ 12.5KHz / 70dB @ 20&25KHz 60dB @ 12.5KHz / 70dB @ 20&25KHz	
		Intermodulation TIA-603 ETSI	
	70dB @ 12.5/20/25KHz 65dB @ 12.5/20/25KHz		
	Spurious Response Rejection TIA-603 ETSI	70dB @ 12.5/20/25KHz 70dB @ 12.5/20/25KHz	
		Hum and Noise	
	40dB @ 12.5KHz 43dB @ 20KHz; 45dB @ 25KHz		
	Rated Audio Distortion	≤ 3%	
	Audio Response	+1 ~ -3dB	
Conducted Spurious Emission	< -57dBm		

*This frequency band is only available for DMR trunking mode.

All specifications are subject to change without notice due to continuous development.

Transmitter	RF Power Output	VHF High Power: 5W VHF Low Power: 1W UHF1/UHF2/UHF3 High Power: 4W, UHF5 High Power: 3W (806-870MHz), 2.5W (896-941MHz) UHF1/UHF2/UHF3/UH5 Low Power: 1W
	FM Modulation	11K0F3E @ 12.5KHz 14K0F3E @ 20KHz 16K0F3E @ 25KHz
	4FSK Digital Modulation	12.5KHz Data Only: 7K60FXD 12.5KHz Data & Voice: 7K60FXW
	Conducted/Radiated Emission	-36dBm<1GHz -30dBm>1GHz
	Modulation Limiting	± 2.5KHz @ 12.5KHz ± 4.0KHz @ 20KHz ± 5.0KHz @ 25KHz
	FM Hum & Noise	40dB @ 12.5KHz 43dB @ 20KHz 45dB @ 25KHz
	Adjacent Channel Power	60dB @ 12.5KHz; 70dB @ 20/25KHz
	Audio Response	+1 ~ -3dB
	Audio Distortion	≤ 3%
	Digital Vocoder Type	AMBE++ or SELP
Digital Protocol	ETSI-TS102 361-1, 2&3	

Environmental Specifications	Operating Temperature	-30°C ~ +60°C
	Storage Temperature	-40°C ~ +85°C
	ESD	IEC 61000-4-2 (level 4) ± 8kV (contact) ± 15kV (air)
	American Military Standard	MIL-STD-810 C/D/E/F/G
	Dust & Water Intrusion	IP67 Standard
	Humidity	Per MIL-STD-810 C/D/E/F/G Standard
Shock & Vibration	Per MIL-STD-810 C/D/E/F/G Standard	

GPS	TTFF(Time To First Fix) Cold Start	<1 minute
	TTFF(Time To First Fix) Hot Start	<10 seconds
	Horizontal Accuracy	<10 metres



SURYA TELECOM PVT. LTD.

An ISO 9001:2008 Certified Company

Corporate Office

SCO 36, Sector 3, Panchkula-134 112, Haryana (INDIA)

Tel : +91-172-2565228, 2565229, Fax : +91 172 2574636

Email: sales@suryatel.com, Website : www.suryatel.com

Delhi Office : SF-202, 5A, Pusa Road, Karol Bagh
New Delhi 110 005, INDIA

Works : Plot No. 20A, Industrial Area, Sector-2

Parwanoo : 173 220, Distt. Solan,
Himachal Pradesh, India