



E-pole200

DMR Ad-hoc Dual-channel Repeater

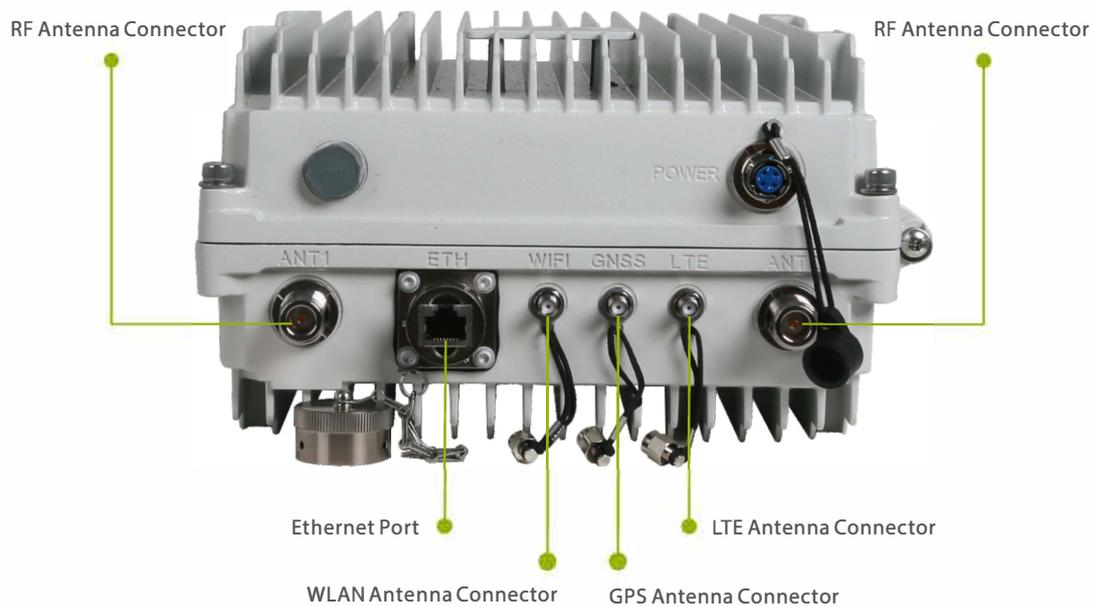
- Dual-channel Voice transit
- Free of any IP link
- Wireless Programming
- 31-node auto-connected Networking
- Location Report
- Visualized Network Management



Overview

Hytera E-pole200 is a DMR ad-hoc dual-channel repeater, which is designed to bring an innovative networking solution for safe and reliable communications in the urban area, forest, and other places where the network is limited.

The repeater adopts wireless interconnection technology to quickly create multi-hop narrowband networks through cascading connection, free of any IP link such as fiber optic and microwave. The repeater can repeat voice services on dual channels at the same time. Moreover, the repeater is flexible to be mounted on the pole or on a wall.



Highlights

► Auto networking

Up to 31 repeaters can interconnect with each other automatically without any IP link such as fiber optic and microwave. In this network, loss of one or more repeaters does not affect the network operation.

► Flexible installation

The all-weather repeater can be mounted on a pole (such as a lamp-post) or on a wall (such as building wall), without relying on pre-existing infrastructure such as equipment room.

► High compatibility

The repeater is compatible with Hytera or third-party DMR Tier 2 radios, as well as Hytera first-generation ad hoc products.

► Multiple choice of power supplies

The repeater can be powered by the battery, solar energy, or trunking base station (-48 V), covering scenarios.

► Extended communications span

The repeater at a high altitude can transmit more than 50 km thanks to the 10-watt transmitting power. With the SIM card installed, the repeater can create networks at longer distance and communicate with the mobile phone.

► **LTE link for remote dispatch**

The repeater can access the command and dispatch system through the public LTE network, not limited to the distance.

► **Visualized network management**

The ad hoc network created by the repeaters can be visualized by the network management system in real time, including the network topologies and electric field strength.

► **Interconnection with multiple systems**

The repeater works with the portable radios to access the digital trunking, digital conventional, analog conventional, and more systems, playing an important role in establishing a united commutation system.

► **IP Multisite Connect**

The repeaters can interconnect with each other to set up multiple inter-frequency or intra-frequency ad hoc networks in a large area.

► **Ad hoc network for on-site dispatch**

The repeater can work with the command and dispatch system, helping the dispatcher view location and status of the radio on the map, receive alarms, and more.

► **Wireless programming**

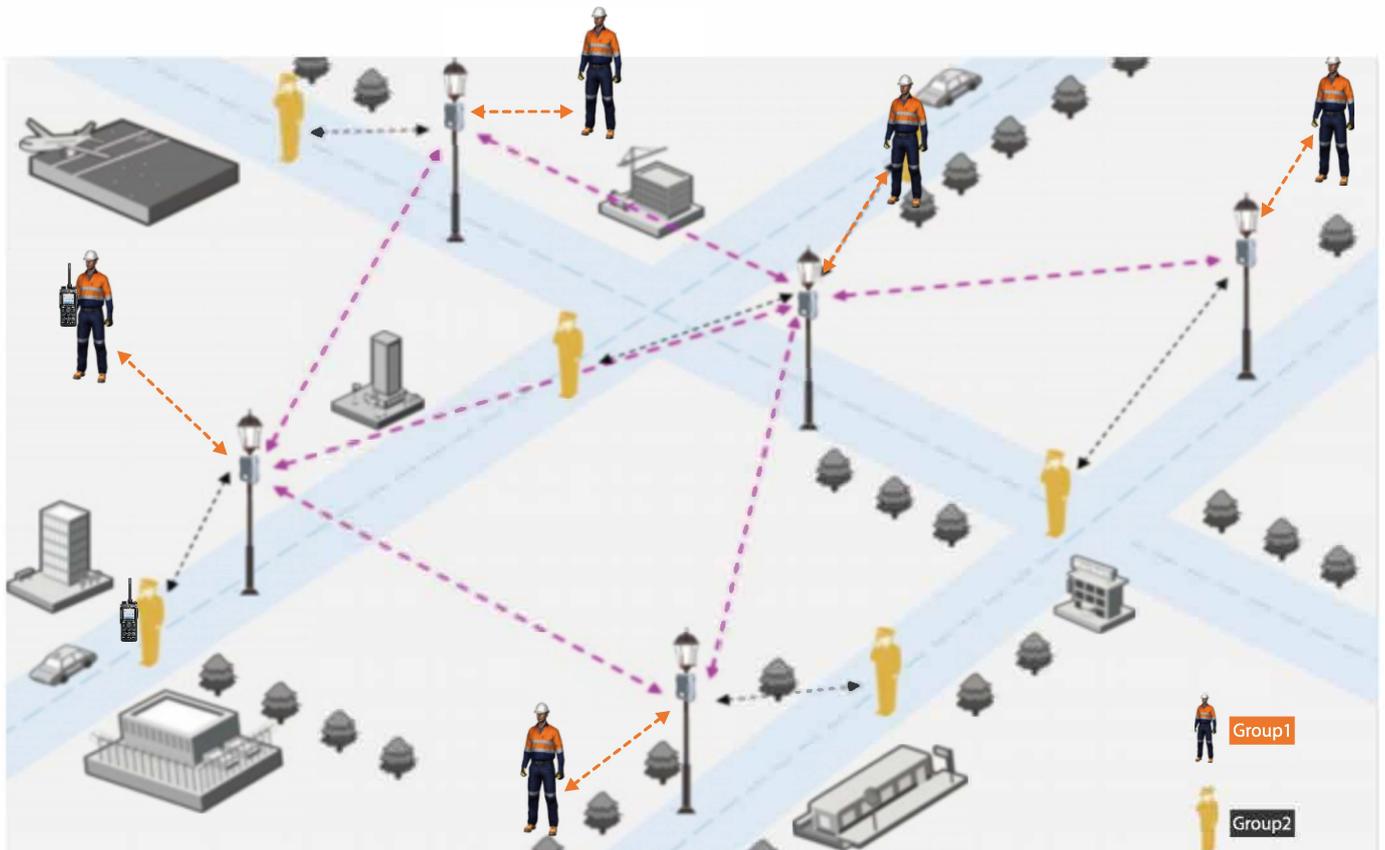
The repeater can be programmed by the network management system over the WLAN. Take the hassle out of programming with a cable, and minimize downtime in the field.

Typical Application Scenarios

City

The Challenge: In the city with complex environments, it is difficult, expensive, and time-consuming to build a wired network from the scratch, which involves tons of work such as construction of overhead lines and underground cables.

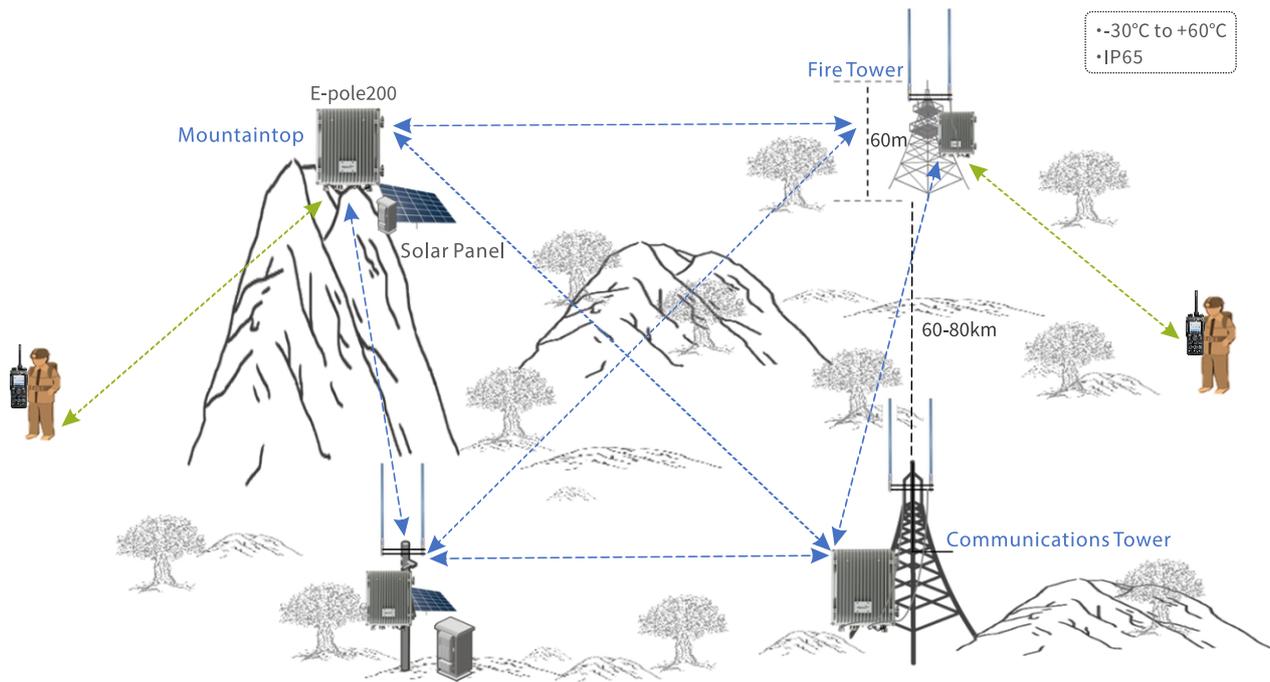
The Solution: The E-pole200 is self-organizing to quickly establish wireless communication network after power-on, without the need of extra infrastructure, manual debugging, and more. This makes network deployment, overhaul, and maintenance easier and faster. Only three or four repeaters are needed to form a network which covers the entire urban area and supports two group calls.



Forests

The Challenge: In the forest, physical barriers such as hills and mountains present tremendous troubles to build and maintain a wired network. Moreover, the wired network is vulnerable and less resilient in the face of wildfires threat.

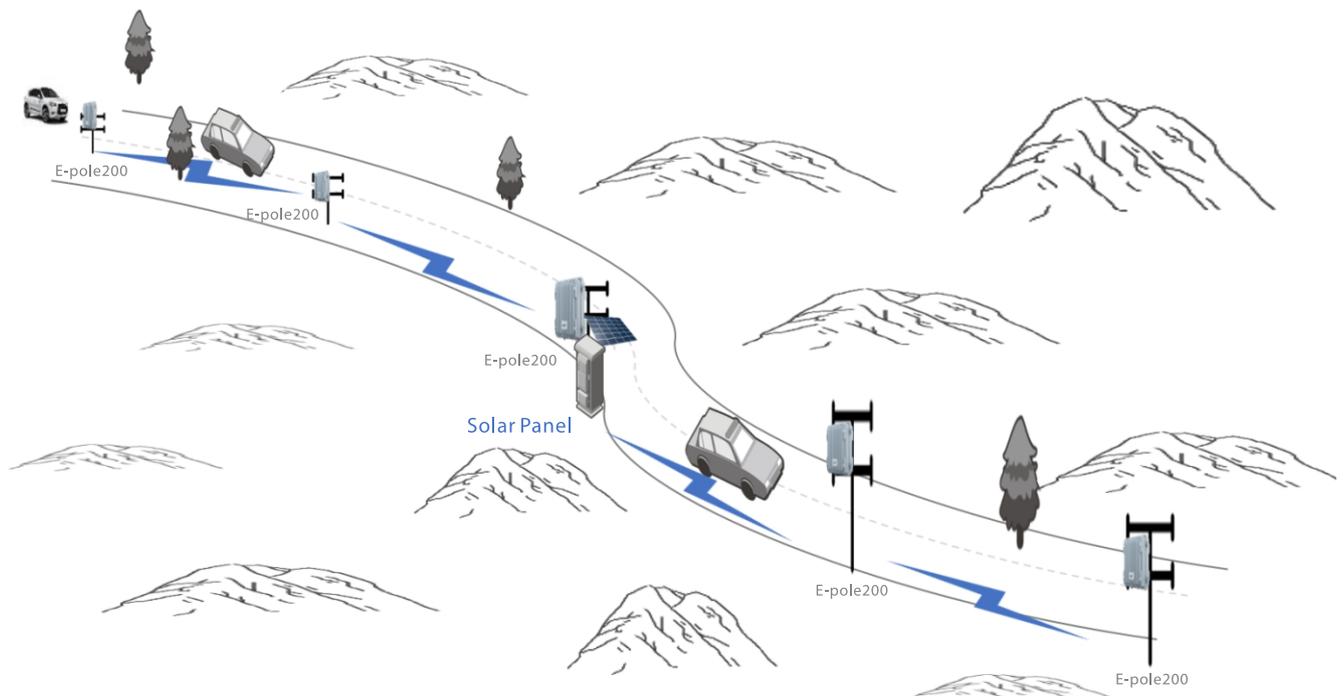
The Solution: The E-pole200 has extremely strong network self-organization capabilities, free of other infrastructure in all weathers and all terrains. The network is always stable even when a node fails, and the faulty node can be quickly replaced with a normal one seamlessly.



Highway

The Challenge: In remote area, there is limited infrastructure or even no infrastructure along the highway. This makes road maintenance workers or traffic officers difficult to communicate with teammates for collaboration in their daily job.

The Solution: The E-pole200 can be deployed to create ad hoc networks along the highway with complex terrain. Plus, such network is easy to expand. All is flexible.



Specifications

General	
Standard	DMR conventional
Network capacity	31 nodes
Input voltage	48V DC
Frequency range	350–400 MHz 400–470 MHz
Vocoder	AMBE+2™/NVOC
Channel spacing	12.5 kHz
Standby current	< 1A
Frequency stability	±0.5ppm
Antenna impedance	50Ω
Dimensions (H x W x D)	330.9 mm x 238.0 mm x 138.2 mm
Weight	5.2kg

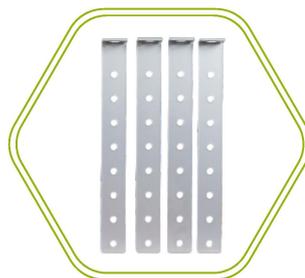
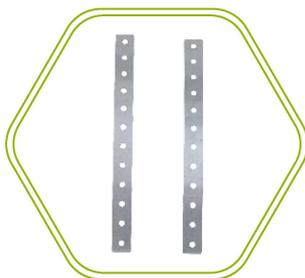
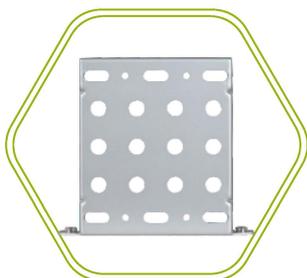
Receiver	
Static sensitivity	-122dBm@5%BER
Adjacent channel selectivity	ETSI:60dB@12.5kHz 70dB@25kHz
Intermodulation response rejection	≥70dB
Spurious Response Rejection	≥70dB
Blocking	84dB
Conducted spurious emission (antenna connector, idle mode)	9 kHz to 1 GHz ≤ -57 dBm 1 GHz to 12.75 GHz ≤ -47 dBm

Transmitter	
Output power	1 W/5 W/10 W per channel, 20W in total
Transmitting current	1W:1.5A 5W:2A 10W:2.5A
Adjacent channel power	60dB@12.5kHz 70dB@25kHz

Environment	
Operating temperature	-30°C to 60°C
Storage temperature	-40°C to 85°C
Shock, vibration, and humidity	MIL-STD-810 C/D/E/F/G
Waterproof and dustproof	IP 65
Electrostatic Discharge (ESD)	IEC 61000-4-2 (Level 4) ±8 kV (contact) ±15 kV (air)
GPS	Accuracy specs are for long-term tracking (95th percentile values > 5 satellites visible at nominal -130 dBm signal strength) TTFF cold start: < 1 min (first time) TTFF hot start: < 1s (first time) Horizontal accuracy: < 10 m

Standard Accessories

Mount Kit



Power Cord



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