Wingo Power

MS4-Multifunctional Smart Base Station

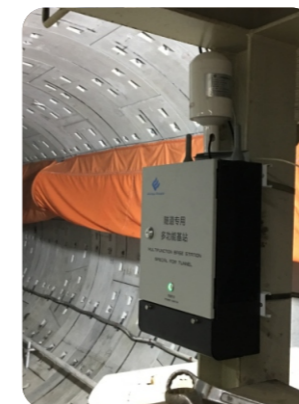## DIGITAL TUNNEL SOLUTIONS

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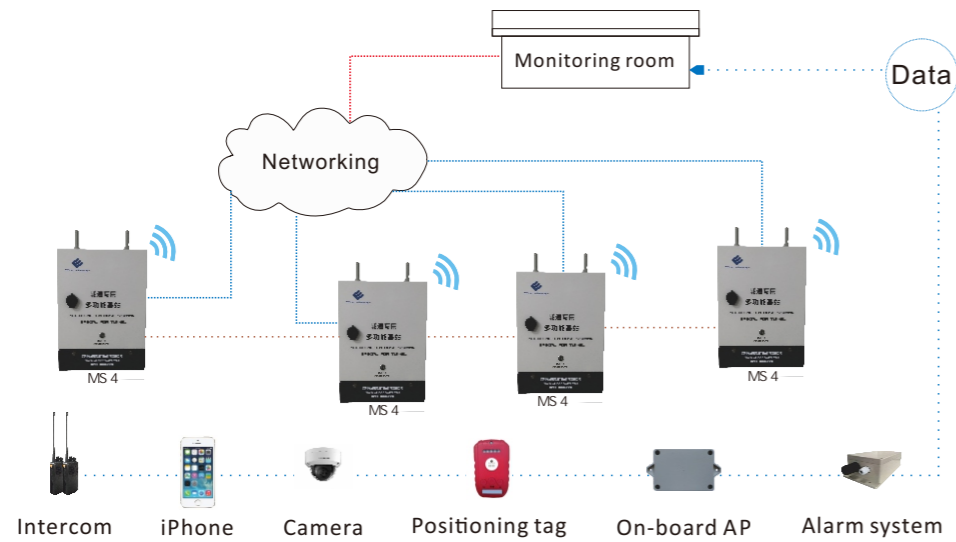**Tel**:+86-755-88359918   **Fax**:+86-755-88359978

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SHENZHEN WINGOPOWER TECHNOLOGY CO., LTD.

MS4

MS4(Multifunctional Smart Base Station) has the functions of communication integrated substation and networking, including personnel/locomotive positioning, mobile communication, sensor data transmission, wireless video surveillance.The star network on the ground and bilinear local network installed in the tunnel, could be wired or wireless to ensure the consistency between the tunnel and the ground. Backbone network in tunnel can provide gigabit data access to ensure HD video transmission without dead angle.

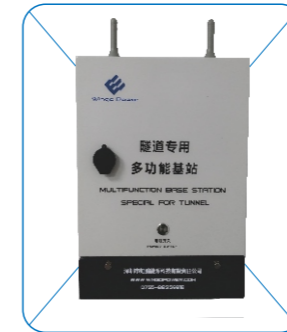Intercom   iPhone   Camera   Positioning tag   On-board AP   Alarm system

One MS4, One Network

- WiFi coverage (Single way>800m) in tunnel is available by installing only one MS4 (multifunctional smart base station).
- MS4 can be Serial connected in wire or wireless in the underground, which enable WIFI full coverage in the whole tunnel.
- Wireless terminals can be switched seamlessly.
- The system is expandable to meet customers' requirement.,e.g. monitoring/alarm system.

Applications

- WIFI Hot Spots
- Intercom(Cluster call)
- Vehicle Positioning
- Personnel Positioning
- Guiding system

- Video Monitoring System
- Vehicle Anti-collision System
- Vehicle Anti-alarm System
- Fire Alarm System
- Other terminals

Installation

Front view   Wall mounted   Pole mounted
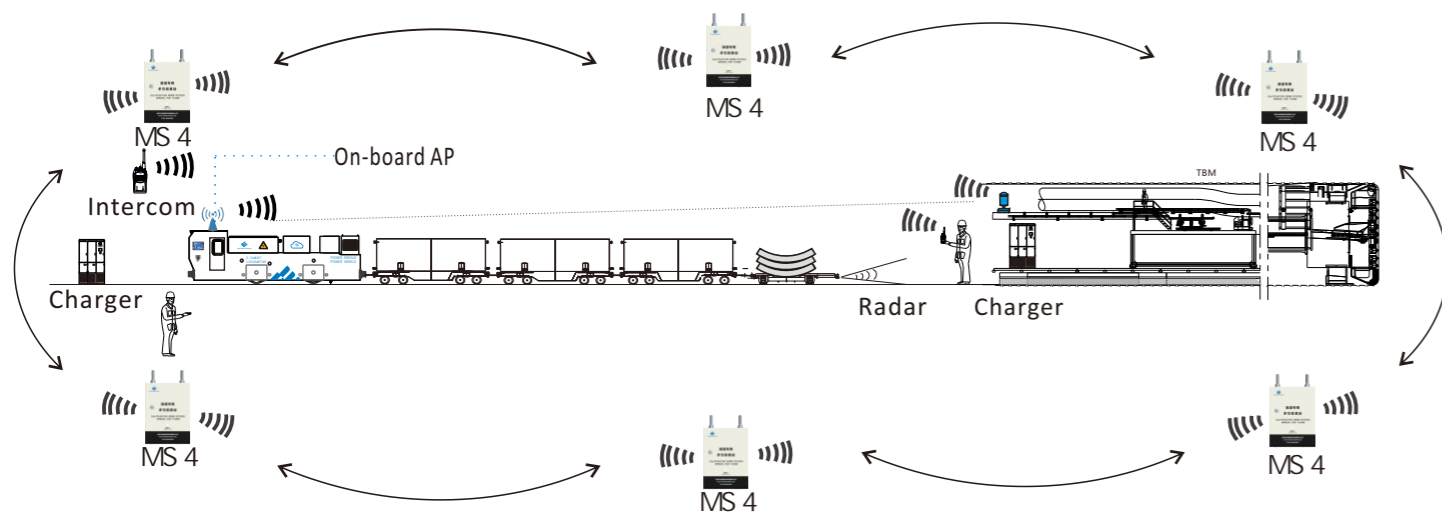
Characteristic

- With fashionable and elegant structure, MS4 is specifically designed for easy installation in tunneling environment.
- Modularization design. MS4 supports four networking modes: MESH, fiber optic, carrier and wireless bridge.
- MS4 provides 2G/3G/4G and WiFi network to meet the latest requirements for open standard, such as IEEE802.11a/b/c/g/n standard.
- Protection level is IP65. MS4 is specifically developed for harsh tunneling environment.
- MS4 supports multi-hop and high network throughput. The multi-hop data can be transmitted between each nodes.
- Network security: It supports wireless link authentication and encryption methods like WEP, WPA, WPA2, WPA-PSK, WPA2-PSK,which enables multiple security policies such as SSID hiding, user isolation, MAC address filtering, anti-ARP attacks and user bandwidth restrictions.

Functions

- MS4 provides WIFI network coverage in the tunnel.
- All the high-speed data is uploaded to the monitoring room through the Ethernet.
- MS4 is able to cope with high-bandwidth applications, real-time personnel positioning (Interval /accurate positioning) ,equipment positioning, video streaming.
- The mobile phone and the intercom can be intercommunicated in the tunnel. MS4 supports intercom to be used between underground and monitoring center without distance limitation.
- All kinds of terminals access to the network through wireless connection, enable personnel positioning, equipment positioning, vehicle anti-collision alarm, anti-slip alarm and so on.

Support:

Diagram

Parameter

Model	MS4
Operation Voltage	85-265VAC/ 47-63HZ
Backup power supply (optional)	Full load >2 hours
Maximum power consumption	35W
Wireless operating frequency	2.394~2.505GHz
Fibre transmission distance	>10km
Wireless communication distance (single base station, single way)	>800m (straight line)
Interface configuration	Optic gigabit port*2
	100M power cable port*3
	100M carrier port*3
	Support 2 wireless bridge access
	Support 1 channel voice broadcast system access
	Support 1 channel positioning beacon access
	Support 2 channels of IPC access
Installation method	Pole mounted / wall mounted / ceiling mounted
Operating temperature	-30℃~85℃
Storage temperature	-40℃~125℃
Working humidity	0~95RH% (no condensation)
Protection level	IP65
Dimensions (mm)	280W*380L*120H
Weight	6.5kg