SAFEDNS

SAFEDNS MESH

MESH IS A DISTRIBUTED, ROBUST, DECENTRALIZED, SWARM INTELLIGENCE, ASYMMETRIC PEER-TO-PEER NETWORK

The main advantages of MESH networks are fast deployment, high mobility, and low initial investments. The network deployment does not require to lay wires and prepare infrastructure. For example, if a company moves to a new office, it can easily move access points to a new location and deploy a Wi-Fi network there in a few minutes.

MESH technology is actively used not only in office buildings. MESH is ideal for providing public access to the Internet (Hot Spot) in stadiums, parks and other outdoor areas. A good example is the deployment of seamless wireless network coverage for large warehouses.

ADVANTAGES OF SAFEDNS MESH

1

Quick configuration in a few clicks makes it possible to deploy the network not only to wireless network professionals, but also to ordinary advanced users. Basic knowledge of network technologies is enough.

2

The technology of transparent transmission of L2 frames allows to transmit data using LLDP and CDP, as well as any specific Ethernet network protocols through the wireless mesh network.

3

Advanced mechanisms for handling multicast traffic significantly reduce the overall load on the network, making it possible to transmit high-definition video and voice data along with ordinary user traffic.

4

During the deployment and in subsequent operation all traffic passing through the mesh network and the administrative console is encrypted with strong algorithms.

5

The network configuration is updated in a decentralized manner, without the use of the administrative console. If there is no power on one or more devices, the configuration, including black lists of MAC addresses and new access keys, will be updated to the current version using a specific encrypted communication channel.

6

Any mesh segments can be interconnected via intermediate mesh nodes, wired Ethernet channels, as well as through available Wi-Fi access points in any configurations. At the same time, for each connection, the most efficient route will be used (in terms of bandwidth).

FEATURES OF	CISCO	SAFEDNS	MIKROTIK	RUCKUS	UBIQUITY
Full traffic encryption	—	✓	✓	—	—
Full functionality without a controller	—	✓	—	—	✓
Decentralized configuration update	—	✓	—	—	—
Seamless roaming	✓	✓	✓	✓	✓
Mesh segments interconnection via Ethernet	—	✓	—	—	—
VLAN support	✓	✓	✓	✓	—
Channel bonding	—	✓	—	—	—
Multicast traffic optimization	✓	✓	—	✓	—
Transparent transmission of L2 frames	—	✓	—	—	—
Mesh segments interconnection via existing Wi-Fi points	—	✓	—	—	—
Quick setup using the administrative console	—	✓	—	✓	✓

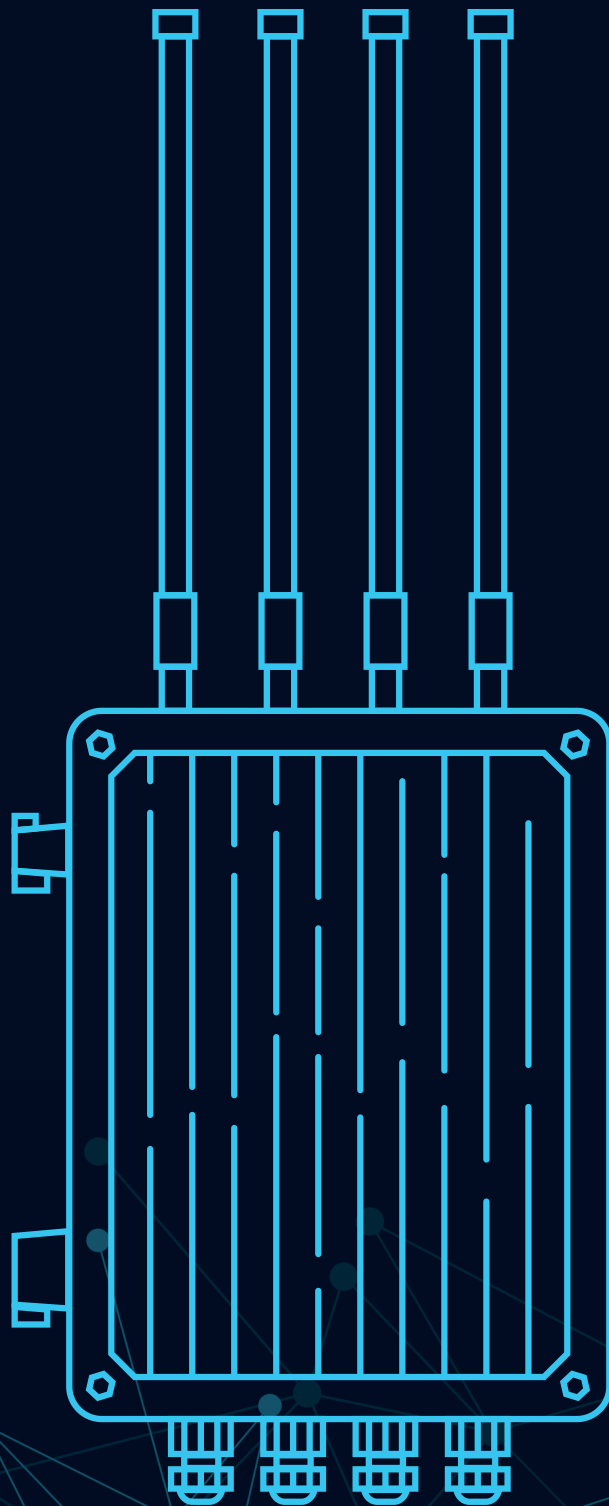# M-5000

Device for providing communication between large objects (incl. mobile objects). For those who require high bandwidth.

Supported frequency bands	2.4 GHz, 5.1 GHz, 5.8 GHz Simultaneously
Supported standards	802.11b/g/n/ac
Bandwidth in access point mode	Up to 2100 Mbps
Bandwidth in MESH mode	Up to 1 Gbps
Antennas	Omnidirectional 10dBi x 4
Power	802.3at PoE 12-48V, DC input 12-48V, AC/DC input 90-260V.
Ports	Ethernet 10/100/1000 x4, Type N x4, DC input, AC 3 pin input, Console, hardware reset button
Provisioning	Failsafe, Protected against tripping / power failure
Platform features	- PoE pass through for all Ethernet interfaces - Ability to work from solar panel (optionally) - Embedded UPS for 24h work (optionally) - Up to 16 SSID per radio - Allocation of individual VLANs per SSID - Allocation of individual VLANs per STA (Dynamic, without RADIUS server) - Seamless roaming - Dynamic PSK without RADUIS server - MAC filtering without RADUIS server - Decentralized configuration update - Automatic load balancing over multiple gateways
Waterproofing	IP67
Operating temperature range	-45C to +70C
Lightning protection	Built-in
Unit weight	3 kg

RECOMMENDATIONS FOR USE:

- MPPs, mines, metro, industrial facilities
- Hotels, parks, beaches
- Urban infrastructure
- Cottage villages
- Objects distant from each other (500 m to 10 km)

MS-5000

Device for providing communication between large objects with built-in sector antenna. For those who require high bandwidth.

Supported frequency bands	2.4 GHz, 5.1 GHz, 5.8 GHz Simultaneously
Supported standards	802.11b/g/n/ac
Bandwidth in access point mode	Up to 2100 Mbps
Bandwidth in MESH mode	Up to 1 Gbps
Antennas	18dBi 5Ghz panel antenna, vertical and horizontal polarization, Omnidirectional 10dBi x 4
Power	802.3at PoE 12-48V, DC input 12-48V, AC/DC input 90-260V
Ports	Ethernet 10/100/1000 x4, Type N x4, DC input, AC 3 pin input, Console, hardware reset button
Provisioning	Failsafe, Protected against tripping / power failure
Platform features	• PoE pass through for all Ethernet interfaces • Ability to work from solar panel (optionally) • Embedded UPS for 24h work (optionally) • Up to 16 SSID per radio • Allocation of individual VLANs per SSID • Allocation of individual VLANs per STA (Dynamic, without RADIUS server) • Seamless roaming • Dynamic PSK without RADUIS server • MAC filtering without RADUIS server • Decentralized configuration update • Automatic load balancing over multiple gateways
Waterproofing	IP67
Operating temperature range	-45C to +70C
Lightning protection	Built-in
Unit weight	3 kg
Unit dimensions	410 mm x 20.5 mm x 105 mm

RECOMMENDATIONS FOR USE:

- MPPs, mines, metro, industrial facilities
- Hotels, parks, beaches
- Urban infrastructure
- Cottage villages
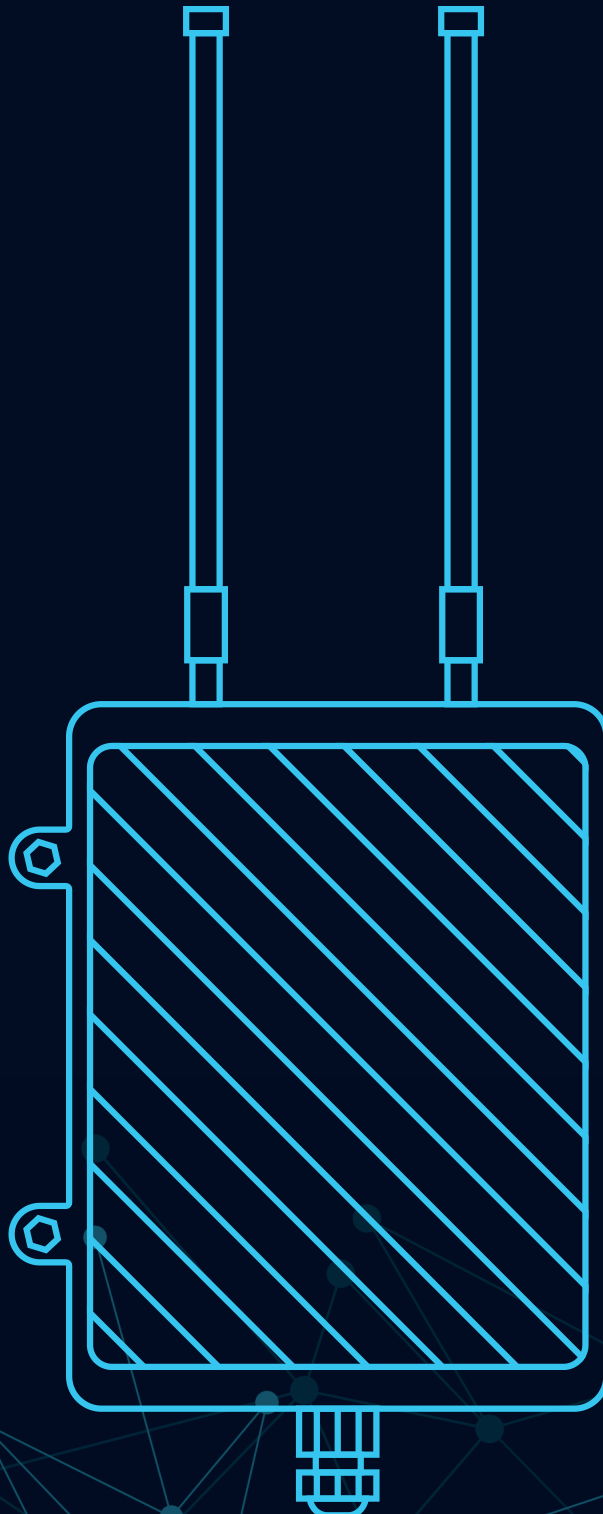- Objects distant from each other (500 m to 20 km)

M-2000

For those who do not require average bandwidth

Supported bands	2.4 GHz
Supported standards	802.11b/g/n/ac
Bandwidth in access point mode	Up to 300 Mbps
Bandwidth in MESH mode	Up to 150 Mbps
Antennas	Omnidirectional 10dBi x 2
Power	802.3at PoE 12-48V
Ports	Ports Ethernet 10/100/1000 x1, Type N x2, hardware reset button
Provisioning	Available
Platform features	• Up to 16 SSID • Allocation of individual VLANs per SSID • Allocation of individual VLANs per STA (Dynamic, without RADIUS server) • Seamless roaming • Dynamic PSK without RADUIS server • MAC filtering without RADUIS server • Decentralized configuration update • Automatic load balancing over multiple gateways • Per-AP and Per-Application/Protocol • Application firewalll
Waterproofing	IP67
Operating temperature range	-45C to +70C
Lightning protection	Built-in
Unit weight	3 kg

RECOMMENDATIONS FOR USE:

- MPPs, mines, metro, industrial facilities

- Hotels, parks, beaches

- Urban infrastructure

- Cottage villages

- Objects distant from each other (500 m to 2 km)

C-5000

Device for communication within buildings (warehouses, shopping center, parking lot). Recommended for use in environments where laying ethernet cables to each device is impossible or difficult, but seamless high-speed WiFi coverage is needed.

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Supported bands	2.4 GHz, 5.1 GHz, 5.8 GHz
Supported standards	802.11b/g/n/ac
Channel capacity in access point mode	Up to 1200 Mbps
Channel capacity in access MESH mode	Up to 500 Mbps
Antennas	6dBi omnidirectional x 4
Power	802.3at 48V PoE
Ports	Ethernet 10/100/1000 x 2, USB 3.0, hardware reset button
Provisioning	Failsafe, protected against tripping/power failure
Platform features	- Up to 16 SSID per band - Allocation of Individual VLANs per SSID - Allocation of Individual VLANs per STA(Dynamic, without RADIUS server) - Seamless roaming - Dynamic PSK without radius server - MAC filtering without radius server - Decentralized configuration update - Automatic load balancing over multiple gateways
Waterproofing	IP45/54
Operating temperature range	-20° C to + 45° C
Weight 1 kg	0.5 kg

RECOMMENDATIONS FOR USE:

- Vacation settlements/parks
- Hotels/shopping centers
- Warehouses
- Parking lot
- Subway/Train
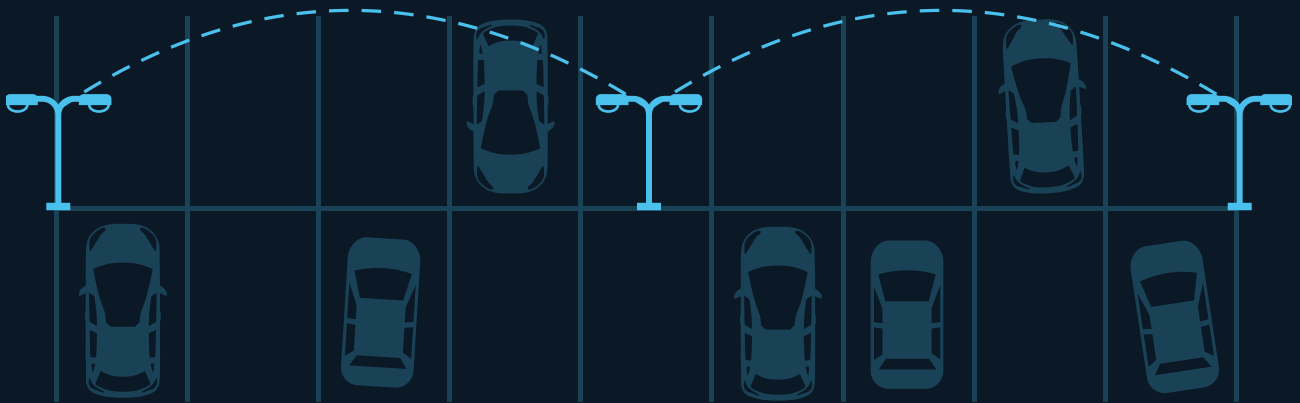
RECOMMENDATIONS FOR USE

Vacation settlements/parks
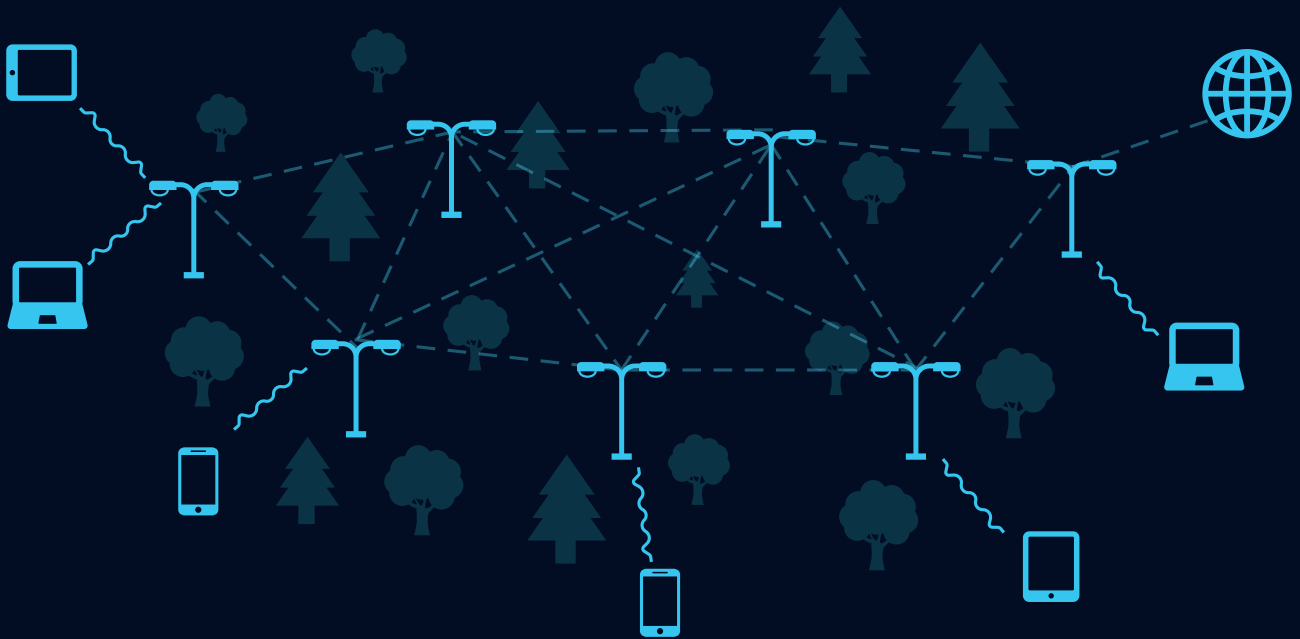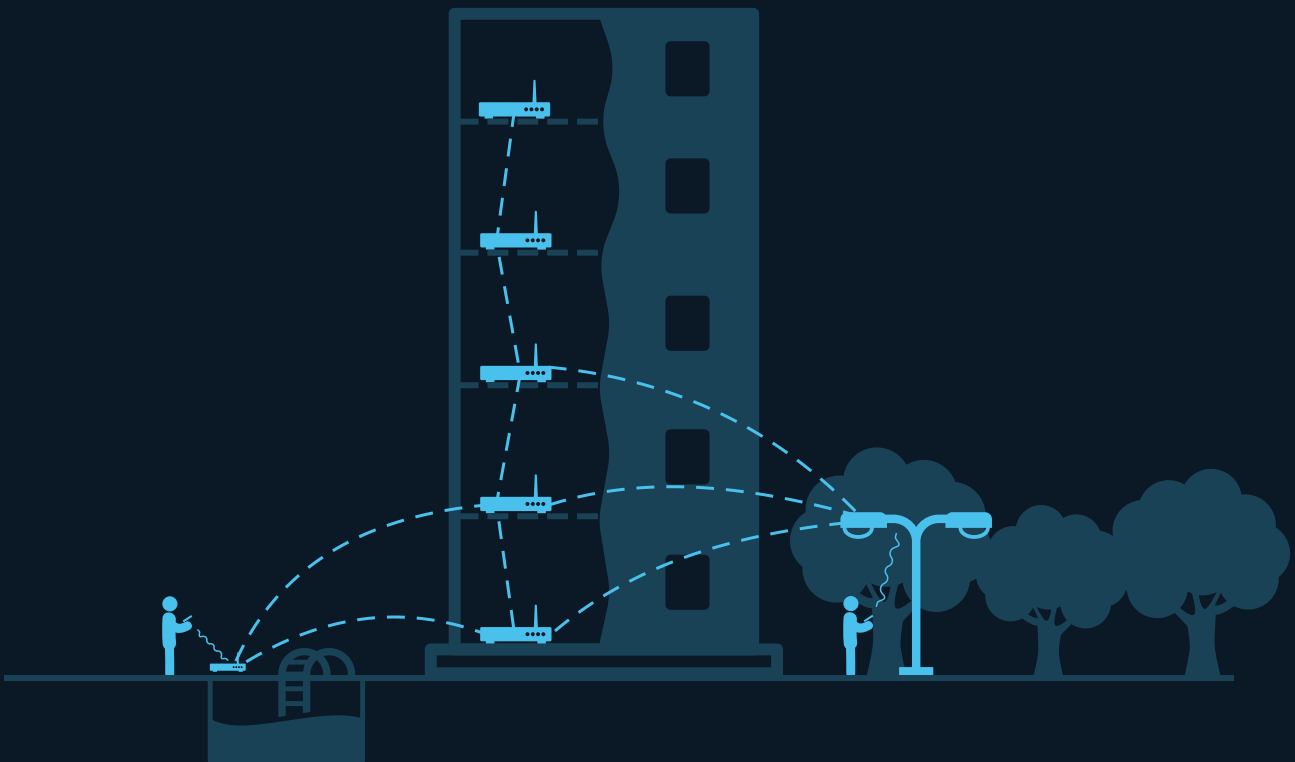
Warehouses

Parking lot

Subway/Train

Hotels/shopping centers

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