



The OLSR¹ Wireless Router 200 is a high-performance outdoor wireless mesh router, integrating the standard OLSR Mesh technology, stemming from military research and validated by the French and US army and NATO.

The OWR 200 is designed to deliver IP access to any site having cost, cabling or time constraints.

Luceor Mesh OLSR technology takes natively into account the handling of mobile equipments (end users or the infrastructure itself) with an optimized handover.

In a typical deployment, one or several OWR 200 can be used as gateways to other networks (wired or not).

Thanks to Mesh, the other nodes connect automatically in wireless, between each other and to the infrastructure, hop by hop in a dynamic, instantaneous and optimized way without any central hierarchy, constituting a netlike structure.



The OWR 200 embarks two radio interfaces, set up either in 2.4 GHz or 5.x GHz, with or without Mesh. In its default configuration, one radio is used to connect the clients' terminals in the classical IEEE 802.11 access point mode while the other radio is used for the Mesh backbone.

The two radio cards can also be used for the mesh backbone increasing the throughput offered to the client terminal.

The resulting mesh networks are self configuring, self healing and self tuned for instant and cost effective wireless communications.

Thus, it significantly reduces (up to 80%) capital expenditure, setting up and operating costs (CAPEX, OPEX).

Moreover, the OWR 200 inherits from OLSR an advanced neighbourhood management and an optimised diffusion in the network. Therefore, OWR 200 uses a very small bandwidth to control the network connectivity.

An efficient and SNMP standard compliant tool (the MeshTool) is developed with the OWR 200 relying on the proactive character of OLSR. It can be useful for an instant discovery and visualization, a support to deployments, management and monitoring of the network. An integrated Web interface also allows the OWR 200 management.

Key features

- Multi hop mesh architecture
- High throughput on license free bands
- Mesh connectivity by the OLSR protocol :
 - Auto-discovery, auto-configuration, self healing, and self tuned
 - Advanced administration and management system
 - Support of mobility
- Connectivity maintained with two radios
- Standard N type connectors for different types of antennas
- Connection to the client in wireless or wired mode (Ethernet)
- Wireless connection in mesh mode or in WiFi mode
- Support of most of the widespread network features e.g. NAT, DHCP, VPN.

1 Optimized Link State Routing - IETF Standard (Internet Engineering Task Force - RFC 3626)

TECHNICAL SPECIFICATIONS

Wireless

- IEEE 802.11 a/b/g
- Frequency bands :
2.412-2.483 GHz/ 5.150-5.320 GHz/
5.500-5.725GHz
- Modulation: 802.11a/g - OFDM (64-QAM, 16-QAM, QPSK, BPSK)
- 802.11b - DSSS (DBPSK, DQPSK, CCK)
- TX Power: adjustable from 0 to 18 dBm (EIRP) at antenna connector
- 4.5 dBi @2.4 GHz - 7 dBi @ 5 GHz
default Omni-directional antennas
- Media Access Protocol: CSMA/CA with ACK
- RX Sensitivity:
 - 802.11b**
-95dB @ 1Mbps, -94dB @
2Mbps, -92dB @ 5.5Mbps, -90dB
@ 11Mbps
 - 802.11g**
-90dB @ 6Mbps, -89dB @
9Mbps, -87 @ 12Mbps, -85dB @
18Mbps, -82dB @ 24Mbps,-79dB
@ 36Mbps, -76dB @ 48Mbps, -
74dB @ 54Mbps
 - 802.11a**
-88dB @ 6Mbps, -87d B@
9Mbps, -85 @ 12Mbps, -83dB @
18Mbps, -80dB @ 24Mbps, -
75dB @ 36Mbps, -73dB @
48Mbps, -71dB @ 54Mbps

Networking/Routing

- RFC 3626/OLSR compliant
- Radio optimized routing
- Autoconf
- Full 802.11a/b/g client compatibility
- NAT support
- Layer 3 support
- DHCP Client, Relay and Server
- Basic multicast
- Client detection
- Open VPN client / server feature

Mobility

- TCP and VPN session persistent roaming

Management

- Embedded web interface
- Secure local and remote configuration via HTTPS

- SNMP v3, v2c and v3
- Luceor MIB
- Simple configuration save and restore
- Remote software update & restart
- Network & client monitoring
- Local Mesh information display
- Syslog client capabilities

Security

- WEP, WPA, WPA-PSK, WPA2, WPA2-PSK
- Full VPN compatibility
- MAC address access control lists
- HTTPS only to on-board management tools
- Packet filtering
- ESSID suppression

Quality of Service

- 802.11e compliant
- IP TOS
- Port based

Hardware specifications

- Auto-sensing 10/100BaseT
- Power input : 220VAC 50-60Hz
- AC power consumption: 7 W
- Optional battery back-up
- Power over Ethernet power sourcing : 9-48 V DC
- N type antenna connectors
- Dimensions w/o mounting brackets or antennas : 21 x 18 x 5,5 cm
- Weight : 1,6 kg

Environmental specifications

- Operating temperature range: 0°C to 70°C
- Storage temperature range: -20°C to 70°C
- Weather rating: IP67
- Wind survivability: >165 mph



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