

NCL1900

NLOS 900 MHz Wireless Bridge/Router

The NCL1900 sets the standard for performance, robustness and dependability in wireless broadband communication. The NCL1900 is the first wireless bridge/router to enable true NLOS (non-line-of-sight) connections for enterprise applications using the license-exempt 900 MHz spectrum. The NCL1900 delivers fast, reliable broadband connections for LAN-to-LAN and LAN-to-Internet applications.

Using Direct Sequence Spread Spectrum modulation in the license-exempt 900 MHz ISM band, the NCL1900 can be deployed quickly and easily without applying for regulatory approvals and without incurring any licensing or service charges. The NCL1900 is designed to be deployed as a base station and can support up to 20 subscriber sites with EUM3004 wireless modems and indoor (or outdoor) antennas.

Key Features

- Over-the-air data rate of 2.75 Mbps with access speeds up to 2.0 Mbps.
- True NLOS capability with the EUM3004 user-installed wireless modem and indoor antenna.
- NLOS range of up to 2 miles (3.2 Km) with indoor subscriber antenna and up to 8 miles (13 Km) with outdoor subscriber antenna.
- Dynamic Polling MAC software provides dynamic bandwidth management to maximize system capacity and performance in point-to-multipoint topologies.
- Eliminates the frequent packet collisions inherent with CSMA/CA and alleviates the "hidden node" and "near-far" problems associated with other non-polling systems.
- Integrated Grade of Service (GoS) controls allow the network operator to define and assign up to 4 GoS levels.
- Operates in the 902 to 928 MHz license-exempt ISM frequency band.
- Supports point-to-point or point-to-multipoint topologies with up to 20 remote subscribers.
- Includes remote systems configuration and diagnostics plus full SNMP management.
- Switched or routed mode.
- RADIUS and PPPoE compatible.
- Maximum transmit power of +26 dBm with receive sensitivity of -86 dBm.



Radio Specifications

Frequency	902 to 928 MHz
Radio Type	DSSS
NCL Capacity	Up to 20 subscribers
Modulation	CCK
Output Power	+26 to +15 dBm software selectable
Rx Threshold	-86 dBm (BER < 10 ⁻⁵)
Channel Bandwidth	5.5 MHz
Orthogonal Channels	4
Center Freq Spacing	0.2 MHz Increments

Technical Specifications

Ethernet	10 Mbps RJ45 HDX
Power Input	90 – 260 VAC, 50/60 Hz
Power Output	4.2 VDC, 2 Amp max (NCL) 7.5 VDC, 2 Amp max (EUM)
Power Consumption	15 Watts (typical)
NCL Temperature	0° to 50° Celsius (operating)
EUM Temperature	0° to 40° Celsius (operating)
Humidity	10% to 80% (non-condensing)

Approvals

FCC Class A, CFR 47 Part 15
 Industry Canada RSS-102 and RSS-210
 UL and CSA Safety

Specifications subject to change without notice.

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