NYX Near-LOS Single Band Mesh Bridge Series by LanPro®.

LPNYX_PFD_ENB01W

Applications

- Basic fixed bridge network.
- Data backhaul.
- Public safety.
- Temporary urgent network.
- Fixed bridge and mobile mix application.

The advantages of the NYX Mesh radio

- Stable and reliable network.
- Have the ability of automatic adjustment to choose optimal path.
- Simple network structure.
- Easy to install.
- New nodes to join the network can be discovered automatically.
- Reduce the deployment cost and the operation management work load.

NYX Near-LOS Single Band Mesh Bridge Series by LanPro®.

NYX Near-LOS Single Band Mesh Bridge Series by LanPro® enable our customers to implement the wireless Mesh architecture based on the IEEE 802.11s standard, providing high bandwidth wireless networking over a selected coverage area. Equipments are deployed as network routers. It is built with peer to peer radios that do not need to be wired as conventional AP's in a WLAN. Coverage provided by the Mesh architecture enables uniform wireless signal levels, by dividing long hops into shorter distances. Nodes cooperate by using smart forwarding routing software and perform as signal boosters for coverage. These technologies provide high bandwidth, efficient spectrum utilization and better economics.

The wireless node can self-configure, dispose the network, and the network failures can be repaired automatically so that the overall performance and the usability achieves the optimization. This equipment makes use of advance software to enhance the throughput and low time-out from the centre to the edge of the network. It provides the wireless broadcast access and the high bandwidth audio /data/video service.

This outdoor Mesh bridge provides customers with the greatest flexibility to deploy applications due to customers need and would be easily upgraded or switched to another interface with the lowest cost.

This radio incorporates Time Division Duplex (TDD) technology that can be operated on a single channel. The Ethernet products are primarily designed to provide standard Ethernet interface in a wireless link between distant sites

Available in 300 MHz to 6.0 GHz by customization and in the standard bands 400 MHz, 900 MHz, 2.4 GHz and 5 GHz.

A FEATURES AND BENEFITS

- Effective spectrum utilization
- Technique operating in currently available models in the following bands: 900 MHz, 2.4 MHz and 5 GHz, for customized frequencies in the 300 MHz to 6 GHz band, a longer lead time is needed for evaluation.
- Long range and Near-LOS nodes connection.
- With a data rate up to 5.5 Mbps / 10 Mbps / 20 Mbps (with different software selectable bandwidths of: 5 MHz / 10 MHz / 20 MHz), the system is much faster than an E1/T1 data link. Customer can select the suitable bandwidth via the software.
- All wireless nodes auto-discover and self-configure.
- Self-tuning and self-healing mesh for network optimization.
- High throughput performance and low time-out.
- Supports QoS (WMM) / Multi-BSSID/VLA, the **Wi-Fi Multimedia (WMM)** based on the 802.11e interoperability certification standard by the Wi-Fi Alliance to prioritize the real time voice, video, and data applications.
- Up to 8 sets SSIDs for VLAN application.
- Multiple security settings per VLAN with up to 8 VLANs.
  Security settings for multiple groups; so employees, guests and contractors now easily and securely share the same infrastructure
- VAPs (VLAN) (Virtual Access Point).
  Assign Multi-SSIDs on your radio (one SSID per VAP) to differentiate policies and services among users forming a wide variety of VLANs.
- Transmit Power Control.
  Supports settable transmit power levels to adjust coverage cell size, ranging from full, half(50%), quarter(25%) eighth(12.5%) and minimum.
- Mesh protocol only supports WEP 64 / 128 / 256 bit encryption. Access point mode supports all security protocols: WPA-PSK and WPA2(AES) as well as MAC access control to increase security.
- Provides Web-based configuration utility, user friendly interface.
- Antenna Alignment. The site survey and link test function provides the RSSI (signal strength) info to indicate the status of antenna alignment.
- When using 2.4 or 5 GHz, @200 mW with external Omni antenna version @ 12 dBi, NYX radios deliver Node to Node @ 1.3 km about 20 Mbps capacity (single node to node, is similar with PTP but using Omni antenna in each site)
  Each node @ 1km and under multi-nodes environment delivers 10-20 Mbps capacity.
- IP-68 rated weatherproof housing.

SPECIFICATIONS

	LP-NYX0404p	LP-NYX0909p	LP-NYX2324p	LP-NYX5058p
RADIO				
Frequency	400 MHz	902 MHz - 928 MHz	2.4GHz	5GHz (5.725~5.845GHz)
Maximum Output Power	37dBm	25dBm	23dBm	23dBm
Sensitivity @ 6Mbps	-92dBm	-92dBm	-92dBm	-92dBm
Note	* RX sensitivity: Packet Error Rate: 10 %			
HARDWARE				
CPU	IXP 422 266MHz	IXP 422 266MHz	IXP 422 266MHz	IXP 422 266MHz
FLASH	8Mbyte	8Mbyte	8Mbyte	8Mbyte
SDRAM	32Mbyte	32Mbyte	32Mbyte	32Mbyte
Power Over Ethernet	Yes	Yes	Yes	Yes
Power Supply	24VDC p=1 (DC +/- 48VDC p=2	24VDC p=1 (DC +/- 48VDC p=2	24VDC p=1 (DC +/- 48VDC p=2	24VDC p=1 (DC +/- 48VDC p=2
	A power adaptor is used to convert the 100~240V to 24VDC for radio, an optional PoE injector can be used to power the +/- 48VDC unit.			
Reset button	Yes	Yes	Yes	Yes
INTERFACES				
RF (connect to antenna)	N-type (Jack)	N-type (Jack)	N-type (Jack)	N-type (Jack)
Ethernet	1 x 10/100Base T IEEE 802.3 RJ-45 with Auto-MDIX	1 x 10/100Base T IEEE 802.3 RJ-45 with Auto-MDIX	1 x 10/100BaseT IEEE 802.3 RJ-45 with Auto-MDIX	1 x 10/100BaseT IEEE 802.3 RJ-45 with Auto-MDIX
ENVIRONMENT				
Operating Temperature	-30 ~ 60 degree C	-30 ~ 60 degree C	-30 ~ 60 degree C	-30 ~ 60 degree C
Storage Temperature	-30 ~ 60 degree C	-30 ~ 60 degree C	-30 ~ 80 degree C	-30 ~ 80 degree C
Storage Humidity	5 ~ 95% RH	5 ~ 95% RH	5 ~ 95% RH	5 ~ 95% RH
FEATURES				
Operation Modes	MESH, 802.11s	MESH, 802.11s	MESH, 802.11s	MESH, 802.11s
Link Test	Yes	Yes	Yes	Yes
WMM (Next Edition)	Yes	Yes	Yes	Yes
Radio Modes	OFDM	OFDM	Standard 802.11b/g Mode	Standard 802.11a Mode
MESH Diagnose	Yes	Yes	Yes	Yes
Channel Bandwidth	20 / 10 / 5 MHz	20 / 10 / 5 MHz	20 / 10 / 5 MHz	20 / 10 / 5 MHz
SECURITY				
User Logon	Yes	Yes	Yes	Yes
WEP Encryption	64, 128, 256 - bit	64, 128, 256 - bit	64, 128, 256-bit	64, 128, 256-bit
WPA (Next Edition)	WPA/WPA2 Enterprise/ WPA-PSK	WPA/WPA2 Enterprise/ WPA-PSK	WPA/WPA2 Enterprise/ WPA-PSK	WPA/WPA2 Enterprise/ WPA-PSK
MANAGEMENT				
Web Base Management	Yes	Yes	Yes	Yes
HTTP F/W Upgrade	Yes	Yes	Yes	Yes
SNMP	Yes, MIB II	Yes, MIB II	Yes, MIB II	Yes, MIB II
Windows Utility	Yes	Yes	Yes	Yes
Save & Load Configurations	Yes	Yes	Yes	Yes
PHYSICAL				
Dimension	259 (L) x 250 (W) x 75 (H); mm	259 (L) x 250 (W) x 75 (H); mm	259 (L) x 250 (W) x 75 (H); mm	259 (L) x 250 (W) x 75 (H); mm
Weight	1.8 Kg	1.8 Kg	1.8 Kg	1.8 Kg
WARRANTY: 1 Year				

- **Wireless Network Connection**

Frequency Range: 300 MHz - 6000 MHz.
Throughput: Max 23 Mbps.
Emission Type: OFDM.

Channel Spacing: 5, 10 and 20 MHZ.
Modulation: 64QAM/16QAM/QPSK / BPSK.
Output power: 37 dB (400 MHz), 25 dBm (900 MHz), 23 dBM (2.4/5 GHz) output of other customized frequencies depends on the RF components.
Operating modes: Access Point / Mesh protocol.

Only Mesh protocol can connect to each other. When select Access point mode, it is available for other WiFi radios in CPE mode.

- **Security**

WEP 64/128/152 bits encryption; MAC Address control; WPA-PSK and WPA encryption.

- **Network**

SNMP, TCP/IP, IPX/SPX, NetBEU
SNMP agents: MIB II

- **Network Architecture**

- PtP Connection (point to point)
- PtMP Connection (point to multi-point)

- **Operating System Support**

Supports Windows 98/2000/NT/XP.

- **Manageability**

Management and setup: Web-based configuration.

- **Advance**

Base Station Scanning: RSSI.
WatchDog

- **Certifications**

FCC
EMS (EN301489, IEC 61000-4-5-Surge).

B HOW TO ORDER

Code: LP-NYXF1F2P

***F1*: Start frequency first two digits (I.e.:400 MHz: 04, 5000 MHz: 50)**

***F2:* End frequency (I.e.: 450 MHz: 04, 5400 MHz: 54)**

A: AI= Antenna Integrated **- A=** External Antenna

P:(Power supply), 1=24 VDC (Can be powered from 100-264 VAC with a furnished 100-264 VAC/24 VDC converter), **2=+/-48 VDC** (Can be powered from 110-264 VAC with a PoE injector, this is optional).

LP-NYX0303A1 300 MHz band 33 dBm @ QAM-16 Non-LOS Wireless Mesh Radio, 24 VDC.
LP-NYX0404A1 400 MHz band 33 dBm @ QAM-16 Non-LOS Wireless Mesh Radio, 24 VDC.
LP-NYX0909A1 902 - 928 MHz band 22 dBm @ QAM-16 Non-LOS Wireless Mesh Radio, 24 VDC.
LP-NYX2324A1 2.312 - 2.472 GHz band 22 dBm @ QAM-16 Near-LOS Wireless Mesh Radio, 24 VDC.
LP-NYX5758A1 5725 - 5845 MHz band 22 dBm @ QAM-16 Near-LOS Wireless Mesh Radio, 24 VDC.
LP-NYX0303A2 300 MHz band 33 dBm @ QAM-16 Non-LOS Wireless Mesh Radio, +/-48 VDC.
LP-NYX0404A2 400 MHz band 33 dBm @ QAM-16 Non-LOS Wireless Mesh Radio, +/-48 VDC.
LP-NYX0909A2 902 - 928 MHz band 22 dBm @ QAM-16 Non-LOS Wireless Mesh Radio, +/-48 VDC.
LP-NYX2324A2 2.312 - 2.472 GHz band 22 dBm @ QAM-16 Near-LOS Wireless Mesh Radio, +/-48 VDC.
LP-NYX5758A2 5725 - 5845 MHz band 22 dBm @ QAM-16 Near-LOS Wireless Mesh Radio, +/-48 VDC.

(Note: output power @ QAM-16 in ordering information is not max output power).