LH-5x-270-LT

Powerful, Flexible, Easy to Use Backhaul Radio

The LH-5x-270-LT is a powerful and affordable unlicensed band digital microwave Ethernet bridge. The 270-LT provides up to 270 Mb/s OTA and up to 150 Mb/s aggregate TCP/IP throughput all with a simple and intuitive GUI, quick installation via built-in tools and an unmatched set of features for its price range.

Powerful and Flexible Throughput

- Up to 270 Mb/s (135 Mb/s x 2 tx chains MIMO) over-the-air rate and up to 150 Mb/s aggregate TCP/IP throughput
- RF bandwidth adjustable (5/10/20/40 MHz)
- Range of 30+ miles (48 km)

Simple GUI for Fast Deployment, Easy Monitoring and Control

- Uncomplicated GUI MAC address, encryption and SSID setup process
- Real-time access to graphical monitoring and event logging
- Simple Antenna Alignment Tool
- Multiple GUI interface languages supported
- Remote status and control from anywhere with built-in web server
- Ping Tool for continuous uptime monitoring with reboot ability
- Simple Network Monitor Protocol supported (SNMP v1)

Low Power Use for Remote Applications

- Power consumption 6 to 8 watts
- Easily solar powered using 12 to 24 volt power supply

Built Rugged for Extreme Weather and Industrial Applications

- IP67 rated ODU with highest level lightning protection
- Optional extended temperature range from -40ºC to +60ºC
- Hazardous location and explosion proof enclosures are also available

Security and Encryption

- WPA or WPA2 security with AES or TKIP encryption

US/International Frequency Plans

- This model's standard frequencies are 5.1-5.2 GHz and 5.7-5.8 GHz.
- LongHaul™ radios are available in a wide range of US licensed and unlicensed frequencies, including 4.9 GHz. International frequencies are also available.

Tower Top Unit with Integrated Antenna

Applications

- WISP Networks
- Security Video Surveillance
- WiMax Backhaul
- VoIP PBX Links
- Cellular Backhaul
- Remote Equipment Monitoring
- Disaster Restoration
- Temporary Communications
- Rural Broadband
- Smart Grid
- Streaming Media
- UDP Intensive Applications
- SCADA Polling

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LH-5x-270-LT

USER DATA THROUGHPUT

Data Throughput (IP Mode)	Over the Air Data Rate up to 270 Mb/s (135 Mb/s x2 MIMO)
	92 Mb/s asymmetric,75 Mb/s symmetric TCP/IP throughput in CSMA (802.11a/n)

RF PERFORMANCE

Frequency Bands Supported	5.1-5.2 GHz, 5.7-5.8 GHz
RF Channel Width	5/10/20/40 MHz
Modulation	OFDM: BPSK, QPSK, 16-QAM, 64-QAM
Tx Power (40 MHz Bandwidth)	30-120 Mb/s 27 dBm, 180 Mb/s 26 dBm, 240 Mb/s 24 dBm, 370 Mb/s 22 dBm, 300 Mb/s 21 dBm
Receiver Sensitivity (40 MHz)	300 Mb/s - 75 dBm, 270 Mb/s - 78 dBm, 240 Mb/s - 79 dBm, 180 Mb/s - 84 dBm, 120 Mb/s - 87 dBm, 90 Mb/s - 90 dBm, 60 Mb/s - 93 dBm, 30 Mb/s - 95 dBm
Duplexing	TDD (Time Division Duplexing)
End-to-End Latency	(CSMA) per IEEE 802.3 + propagation
Range	30+ miles without repeaters (48 km)

PHYSICAL/MECHANICAL

Outdoor Unit Description	ODU POE injector connects via outdoor CAT-5e cable
	(300 ft max length) to the Outdoor radio unit having either integrated antenna or N connector.
LH-270-LT-5x-ODU	5.x GHz outdoor unit with 2 N-type connectors
LH-270-LT-5x-IA	5.x GHz outdoor unit with an integrated dual pole antenna

POWER SUPPLY

Voltage	100-240 VAC, -24 VDC or -48 VDC optional
Power Consumption	6 - 8 watts typical, ODU with IDU-E

ENVIRONMENTAL

ODU - Ingress Protection	IP67 (dust tight, 1 m water immersion)
Outdoor Unit Temperature	-40˚C to 60˚C
Outdoor Unit Humidity	Up to 100% humidity (non-condensing)
Indoor Unit Temperature	-20˚C to 45˚C
Indoor Unit Humidity	Up to 90% humidity (non-condensing)
Safety	UL 60950, CAN-CSA C22.2 60950, EN 60950, IEC 60950
EMC	FCC 47CFR class B part 15, subpart B, CAN/CSA-CEI/IEC CISPR 22-02, EN300 386, EN301 489,EN55022, EN61000, EN55024, AS/NZS CISPR 22
Environmental	IEC 60721 class 4M5 IP67

ETHERNET INTERFACE

Type	10/100 BaseT with Auto-negotiation
Number of Ethernet Ports	1 data port
Framing/Coding	IEEE 802.3/U
Bridging	Self-learning up to 2047 MAC addresses
Connector	RJ-45
QoS Services	WME - Prioritizes traffic according to voice, video, best effort and background
Compatibility	IPv4

NETWORK MANAGEMENT INTERFACE

User Interface	Browser based access via Ethernet port
Setup and Alignment	LED bar graph, Audio tone varies with signal strength
Protocol	HTTP or HTTPS
Upgrade Capabilities	Local and remote software upgrades, upload and download of configurations.
Telemetry Alerts Mechanism	SNMP v1
Diagnostics	Event Logging
Traffic Shaping	Burst and Limit Bandwidth Settings
Management Port	DHCP based or IP based
Configuration Management Sys.	Built-in w/full history

DIMENSIONS AND WEIGHTS

ODU Dimensions (HxWxD)	15.5" x 15" x 4"
ODU Weight	4 lb 8.5 oz
IDU Dimensions	1.75" (1 EIA unit) x 19" x 6"
IDU Weight	1 lb 1.6 oz

SECURITY

Security Mechanism	WEP, WPA, WPA2
Encryption	WPA-TKIP, WPA-AES, WPA2, WPA2-TKIP, WPA2-AES
Rate	64 or 128 bit encoding

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