



# Lynx<sup>®</sup>.GX 16T

## Wireless Point-to-Point Radio



### Applications

- Cellular voice backhaul
- Backbone connection

### Features and Benefits

- Exceptional system gain and RF performance provide long distance, highly robust links
- True Carrier-Class reliability
  - Over 99.999% reliable transmission
  - NEBS Level 3 Compliant
- Total installation flexibility
  - Mount the RF Unit outdoors to maximize distance or minimize costs by reducing tower rental fees, and by using smaller less expensive antennas and cable
  - Mount the radio completely indoors to allow for easy equipment access
- Spectrum Analyzer facilitates RF planning
- SNMP Network Management System (NMS) and web-based GUI simplifies remote management
- Wayside Ethernet Channel enables far-end management of both Proxim and Non-Proxim equipment
- Eliminates expensive recurring leased line costs
- License-exempt frequencies accelerate time-to-revenue by avoiding lengthy and costly licensing procedures
- Proprietary encryption methods ensure secure data transmission

### Industry's first unlicensed 16xT1 split-design radio

Proxim's Lynx.GX 16T is a high-capacity full-duplex point-to-point microwave radio solution that provides unprecedented system gain and installation flexibility for cellular backhaul, enterprise voice and network redundancy applications. Offering 16xT1 capacity and a unique split-box design, Lynx.GX 16T enables mobile operators to easily stay ahead of rapid subscriber growth while significantly saving on operating costs.

### Prepare for future growth

Doubling the capacity of current license-exempt multi-DS1 products, Lynx.GX 16T offers mobile operators the capacity they need to support the ever-increasing density of users and higher-bandwidth cellular applications, such as photograph sharing, short text messaging, Internet access and multimedia services. Superior system gain ensures consistent, carrier-class transmission of growing voice traffic.

### Deploy in days

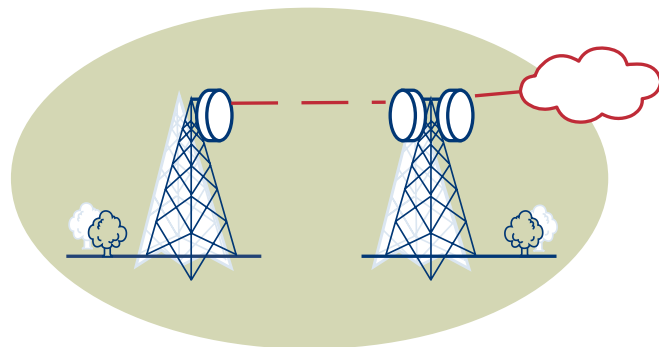
Because Lynx.GX 16T operates in the license-exempt 5.8 GHz ISM frequency band, it can be deployed in days - eliminating the long lead times associated with leasing lines or trenching new fiber optic cable. Rapid deployment means business continuity is maintained, and mobile operators don't have to worry about downtime. Since it's wireless, the Lynx.GX 16T can be easily redeployed as needed.

### Choose your ideal installation

Lynx.GX 16T is uniquely designed as a two-piece split-box assembly, consisting of an Indoor Unit (IDU) and an RF Unit. Based on your specific maintenance, system performance and budget requirements, you can choose to install the RF Unit indoors for maximum convenience or outdoors for stronger signal strength. The platform simplifies future upgrades by requiring only Indoor Unit (IDU) replacement.

### Easily manage and trouble-shoot your network

The Lynx.GX 16T offers sophisticated, standards-based management tools for easy integration into existing network management platforms. It also delivers advanced diagnostic tools, such as a built-in spectrum analyzer and an alarm log, to help identify and isolate issues before they occur.



Voice and Data Backhaul

# Lynx®.GX 16T Specifications

FREQUENCY	DIGITAL CAPACITY	CHANNEL PAIRS	FCC EMISSION DESIGNATOR	THRESHOLD (BER=1X10 <sup>-6</sup> )	OUTPUT POWER	SYSTEM GAIN	DISTANCE (MILES/KM)
5725-5850 MHz	16 x T1 (16x1.544 Mbps)	1	28M1G7D	≤-83 dBm	≥+23 dBm <sup>1</sup>	≥106 dB, 109 dB typ.	0 to >33/54 <sup>4</sup>

SYSTEM	
Configuration	Split-box: IDU, RF Unit
Modulation	DSSS; QPSK
Frequency Stability	±10 ppm
RF Attenuation Range <sup>1</sup>	≥20 dB
Maximum Receive Signal	-20 dBm error free; 0 dBm no damage
Error Floor	<10 <sup>-11</sup>
Latency (T1) <sup>2</sup> , one-way	325 µsec ±10%
Error Correction	Reed-Solomon
Security	12 character Link ID (48 bits)
Regulatory Compliance	FCC Part 15.247; IC RS210
FCC ID	HZB-US5358-GX1
Industry Canada ID	1856A-U5358GX1
Reliability	NEBS Level 3 Compliant

DIGITAL LINE INTERFACES	
DSX-1 (16 each)	
Connector	RJ-48C modular jack
Line Code	AMI or B8ZS, selectable
Line Buildout	0-655 ft. selectable
Loopback	Local, Far End, Internal Signal
Compliance	ANSI-1987-102-T1 <sup>3</sup>

AUXILIARY INTERFACES	
Orderwire (DTMF)	RJ-11, 100 addresses
VF	8 pin modular jack, 4-wire OdBm @ 600 ohm, balanced
Aux Data (serial)	8 pin modular jack, EIA-561 ≤19.2kbps, selectable, DCE

FAULT AND CONFIGURATION MANAGEMENT	
Network Management	SNMP v2c (MIB II, Proxim enterprise MIBs), embedded HTML server, Telnet, VF-100 terminal
Far End Management	Via NMS (embedded router, gateway address, subnet mask), front panel display

Interfaces	
NMS 1	10/100BaseT, RJ-45, auto-sense
NMS 2	10/100BaseT, RJ-45, auto-sense
Configuration (serial)	EIA-574, 9600bps, 9-pin Sub-D, DTE

External Alarm Interface	
Connector	9-pin Sub-D female
Outputs	2 Form C Relays (Major, Minor)
Inputs	2 TTL with internal pull-ups

<sup>1</sup> Output power is specified at zero attenuation

<sup>2</sup> Does not include air latency of approximately 5.4 µsec/mile

<sup>3</sup> ITU-T G.823, GR-499-CORE

<sup>4</sup> RF Unit installed outdoors with 8ft. parabolic antenna, 99.999% one-way availability, average climate/terrain, no multipath reflection.

POWER/ENVIRONMENT	
Input Voltage Range	-20 to -60 Vdc or +20 to +60 Vdc
Power Consumption	<70 Watts
Power Connector	3-pin terminal block
Operating Temperature	
IDU	0°C to +50°C
RF Unit	-30°C to +55°C
Humidity	
IDU	95%, non-condensing
RF Unit	100%, condensing
Altitude	up to 15,000 ft/5000 m
Wind Loading (RF unit)	up to 110 mph/96 kts

PHYSICAL DIMENSIONS		
	IDU	RF Unit
Size (in/cm)	17.2 X 10.9 X 1.72/ 43.6 X 27.6 X 4.4	14.1 X 10.9 X 1.72/ 35.8 X 27.6 X 4.4
Weight (lbs/kg)	6.5/2.9	12.0/5.4

MECHANICAL	
RF Unit	
Antenna Port (outdoor RF cable not provided)	Type-N female
IDU Port	TNC female
Cable to IDU	LMR-240 or equiv. <100m; LMR-400 or equiv. <300m

Mounting	
IDU	EIA rackmount, 19" or 23", 1RU
RF Unit	EIA rackmount, 19" or 23", 1RU, or outdoor pole mount bracket (optional)

SELECTABLE FREQUENCY CHANNEL PAIR	
A Channel Plan	5745/5830 MHz

ORDERING INFORMATION	
301-52290-10L0	Low Band (A1) Terminal
301-52290-10H0	High Band (A2) Terminal
ACC-GX-RF-2	Optional RF Unit Outdoor Mounting Kit
201-31075-1	Optional AC Adapter 110/220 VAC with cable and connector

SHIPPING CONFIGURATION	
Lynx.GX 16T IDU (Indoor Unit)	
Lynx.GX Low Band or High Band RF Unit	
ACC-GX-IF-1 IDU Mounting Kit	
ACC-GX-RF-1 RF Unit Indoor Mounting Kit (includes 12" IDU to RFU cable)	
Quick Install Guide	
CD-User Documentation	

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