Lynx.GX 4T, 8T, 16T
Wireless Point-to-Point Digital Radios

APPLICATIONS

- Cellular voice backhaul
- Backbone connection
- High-capacity voice network redundancy

New Manageability and Installation Flexibility Lowers Total Cost of Ownership (TCO)

Lynx®.GX is a high-capacity, full-duplex point-to-point digital radio product line with a unique split-box design. This new generation of products, designed for maximum installation flexibility, provides unprecedented system gain and carrier-class operational features for cellular backhaul, enterprise voice applications and voice network redundancy.

- Adapts to individual maintenance, system performance, and budget requirements to fit a variety of specific operator needs
- Simplifies future upgrades by requiring only Indoor Unit (IDU) replacement as capacity requirements grow
- Two-piece split-box assembly, consisting of an Indoor Unit (IDU) and an RF Unit, provides installation flexibility
- Indoor-only installation facilitates quick maintenance and easier upgrades
- Indoor/outdoor installation improves system gain, lowers tower leasing costs and reduces total cost of ownership

Easily Manage and Troubleshoot Your Wireless Network

Lynx.GX radios offer sophisticated, preventative management tools to simplify network maintenance and eliminate downtime. Advanced diagnostic tools identify and isolate potential issues before they impact the network.

- Standards-based SNMP management and web-based GUI simplifies remote management and integrates easily into existing software platforms
- Built-in spectrum analyzer and an alarm log facilitate RF planning and post-deployment tuning

Cost-Effectively Prepare For Future Growth

The range of Lynx products gives operators the choice of capacity they need, allowing them to grow to support higher-bandwidth cellular backhaul applications.

- Extra capacity for bandwidth-intensive applications such as multimedia services, photo sharing, text messaging and handset Internet access
- Superior system gain ensures consistent, carrier-class transmission of growing network traffic
- No expensive recurring leased line costs
- Wayside Ethernet Channel enables far-end management of both Proxim and Non-Proxim equipment

Deploy in Days

Because Lynx radios operate in license-exempt ISM frequency bands, they can be deployed quickly – eliminating the long lead times associated with leasing lines or trenching new fiber optic cable.

- Rapid deployment and flexible re-deployment
- Mobile operators minimize costly network downtime
- License-exempt frequencies accelerate time-to-revenue by avoiding lengthy and costly licensing procedures

Reliable and Secure

Lynx radios offer the highest security and reliability available in networking today.

- True Carrier-Class reliability
  - Over 99.999% reliable RF transmission
  - NEBS Level 3 ready for Central Office deployment
- Meets or exceeds wired network security
- Proprietary encryption methods ensure secure data transmission

Cell Site

Cell Site & Drop Site

Switch Office or Closest Access Point
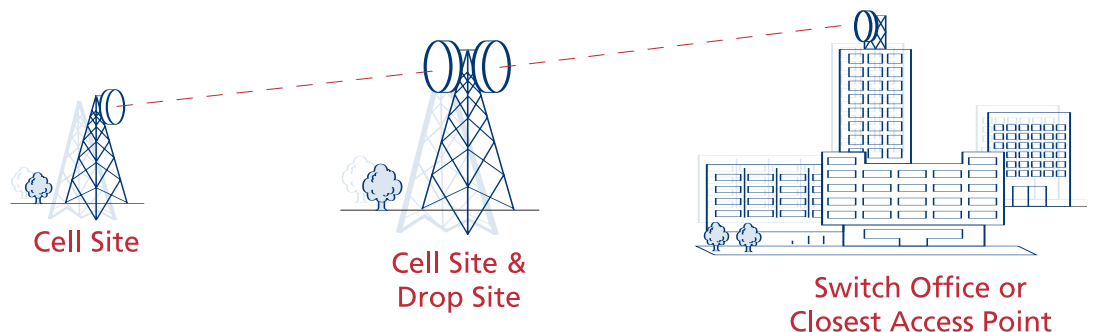
Lynx.GX 4T, 8T, 16T Specifications

PRODUCT	FREQUENCY BAND	DIGITAL CAPACITY	CHANNEL PAIRS	THRESHOLD (BER=1X10^{-6})	OUTPUT POWER[1]	SYSTEM GAIN	DISTANCE (MILES/KM)[4]
Lynx.GX 4xT1		4xT1 (4x1.544 Mbps)	3 (A, B, C)	≤-88 dBm		111.5 dB, 114 dB typ.	>36/58.1
Lynx.GX 8xT1	5725-5850 MHz	8xT1 (8x1.544 Mbps)	2 (A, B)	≤-86 dBm	≥+23.5 dBm	109.5 dB, 112 dB typ.	>32.8/52.9
Lynx.GX 16xT1		16xT1 (16x1.544 Mbps)	1 (A)	≤-83 dBm		106.5 dB, 109 dB typ.	>27.6/44.5

SYSTEM

Configuration	Split-box: IDU, RF Unit
Modulation	DSSS; QPSK
Frequency Stability	±10 ppm
RF Attenuation Range	≥20 dB
Maximum Receive Signal	-20 dBm error free; 0 dBm no damage
Error Floor	<10^{-11}
Latency (T1)[2], one-way	325 μsec ±10%
Error Correction	Reed-Solomon
Security	12 character Link ID (48 bits)
Regulatory Compliance	FCC Part 15.247; IC RS210
S58 FCC ID	HZB-S58-GX1
FCC Emmisions Designator	9M6G7D (4T);13M4G7D (8T); 28M1G7D (16T)
Industry Canada ID	1856A-U5358GX1
Reliability	NEBS Level 3 Ready

DIGITAL LINE INTERFACES

DSX-1 (4, 8 or 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[3]

AUXILIARY INTERFACES

Orderwire (DTMF)	RJ-11, 100 addresses
VF	8 pin modular jack, 4-wire 0dBm @ 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, enterprise MIBs), embedded HTML server, Telnet, VT-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

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
MTBF	>100,000 hours (each IDU and RF Unit)

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	Type-N female (outdoor RF cable not provided)
IDU Port	TNC female
Cable to IDU	LMR-240 or equiv. <100m; LMR-400 or equiv. <200m; LMR-600 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

5.8 GHz, 4xT1 — A1 A2 B1 B2 C1 C2
5731.5 5816.5 5745 5830 5758.5 5843.5

5.8 GHz, 8xT1 — A1 A2 B1 B2
5734 5819 5756 5841

5.8 GHz, 16xT1 — A1 A2
5745 5830

ORDERING INFORMATION

62291	Lynx.GX 4T, Low Band Terminal, 301-51850-10L0
62292	Lynx.GX 4T, High Band Terminal, 301-51850-10H0
62139	Lynx.GX 8T, Low Band Terminal, 301-51145-10L0
62142	Lynx.GX 8T, High Band Terminal, 301-51145-10H0
62284	Lynx.GX 16T, Low Band Terminal, 301-52290-10L0
62286	Lynx.GX 16T, High Band Terminal, 301-52290-10H0
ACC-GX-RF-2	Optional RF Unit Outdoor Mounting Kit
201-31075-1	Optional AC Adapter 110/220 VAC with cable and connector
Call for details	ServPak 24x7 Enhanced Service and Support contracts (1yr-3yr)

SHIPPING CONFIGURATION

Lynx.GX 4T, 8T, or 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

[1] Output power is specified at zero attenuation
[2] Does not include air latency of approximately 5.4 μsec/mile
[3] ITU-T G.823, GR-499-CORE
[4] RF Unit installed outdoors with 8ft. parabolic antenna, 99.999% one-way availability, average climate/terrain, no multipath reflection.

P O X I M
WIRELESS NETWORKS