# Lynx.GX® Series

*Cellular Voice and Data Backhaul*

*Lynx.GX IDU and RF Unit*

## High-Capacity Wireless Backhaul

Proxim Wireless offers extremely reliable, secure and easily-deployed solutions for interconnecting corporate and telecommunications networks.
This portfolio includes:

- **GigaLink® –** Alternative to fiber, up to a Gigabit speed
- **Lynx.GX® –** Cellular voice and data backhaul, up to DS3 interface
- **Tsunami.GX® -** Carrier-class IP Ethernet bridge for voice and data backhaul for service providers and enterprise applications
- **TeraBridge™ –** Ethernet backhaul or traditional telecommunications converged voice and data networks
- **QuickBridge® –** Complete "hop-in-a-box" Ethernet bridge for campus and small business networks

**Proxim Wireless** is a global provider in scalable broadband wireless networking. From Wi-Fi to wireless Gigabit Ethernet – our WLAN, mesh, point-to-multipoint and point-to-point products are available through our extensive global channel network.

### *APPLICATIONS*

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

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

Proxim's Lynx.GX® is a high-capacity, full-duplex point-to-point digital radio product line with a unique split-box design supporting T1/E1 capacity. 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

Proxim 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[1]
- Meets or exceeds wired network security
- Proprietary encryption methods ensure secure data transmission

[1]Lynx.GX 4T, 8T and 16T models only.

| | LYNX.GX 4T, 8T, 16T | | | LYNX.GX 4E, 8E | |
|---|---|---|---|---|---|
| **PRODUCT MODEL** | | | | | |
| LOW BAND RADIO | Lynx.GX 4T, 5.8 GHz ISM System, A1 (Part# 62291)<br>Lynx.GX 8T, 5.8 GHz ISM System, A1 (Part# 62139)<br>Lynx.GX 16T, 5.8 GHz ISM System, A1 (Part# 62284) | | | Lynx.GX 4E, 5.8 GHz ISM System, RJ48C, A1 (Part# 62294)<br>Lynx.GX 4E Unbalanced BNC 5.8 GHz ISM System, A1 (Part# 64749)<br>Lynx.GX 8E, 5.8 GHz ISM System, A1 (Part# 62144) | |
| HIGH BAND RADIO | Lynx.GX 4T, 5.8 GHz ISM System, A2 (Part# 62292)<br>Lynx.GX 8T, 5.8 GHz ISM System, A2 (Part# 62142)<br>Lynx.GX 16T, 5.8 GHz ISM System, A2 (Part# 62286) | | | Lynx.GX 4E, 5.8 GHz ISM System, RJ48C, A2 (Part# 62295)<br>Lynx.GX 4E Unbalanced BNC 5.8 GHz ISM System, A2 (Part# 64751)<br>Lynx.GX 8E, 5.8 GHz ISM System, A2 (Part# 62145) | |
| **SYSTEM SPECS** | **4T** | **8T** | **16T** | **4E** | **8E** |
| FREQUENCY | 5,725 - 5,850 MHz | 5,725 - 5,850 MHz | 5,725 - 5,850 MHz | 5,725 - 5,850 MHz | 5,725 - 5,850 MHz |
| DIGITAL CAPACITY | 4xT1 (4x1.544 Mbps) | 8xT1 (8x1.544 Mbps) | 16xT1 (16x1.544 Mbps) | 4xE1 (4x1.544 Mbps) | 8xE1 (8x1.544 Mbps) |
| CHANNEL PAIRS | 3 (A, B, C) | 2 (A, B) | 1 (A) | 3 (A, B, C) | 1 (A) |
| SELECTABLE FREQUENCY CHANNEL PAIRS | A1: 5731.5 MHz; A2: 5816.5 MHz<br>B1: 5745 MHz; B2: 5830 MHz<br>C1: 5758.5 MHz; C2: 5843.5 MHz | A1: 5734 MHz; A2: 5819 MHz<br>B1: 5756 MHz; B2: 5841 MHz | A1: 5745 MHz, A2: 5830 MHz | A1: 5731.5 MHz; A2: 5816.5 MHz<br>B1: 5745 MHz; B2: 5830 MHz<br>C1: 5758.5 MHz; C2: 5843.5 MHz | A1: 5740 MHz; A2: 5830 MHz |
| FCC EMISSION DESIGNATOR | 9M6G7D | 13M4G7D | 28M1G7D | N/A | N/A |
| THRESHOLD (BER+1X10$^{-6}$) | ≤-88 dBm | ≤-86 dBm | ≤-83 dBm | ≤-88 dBm | ≤-85 dBm |
| OUTPUT POWER[2] | ≥+23.5 dBm | ≥+23.5 dBm | ≥+23.5 dBm | ≥+23.5 dBm | ≥+23.5 dBm |
| SYSTEM GAIN | 111.5 dB, 114 dB typical | 109.5 dB, 112 dB typical | 106.5 dB, 109 dB typical | 111.5 dB, 114 dB typical | 108.5 dB, 112 dB typical |
| RANGE[3] | 36m (58.1km) | 32.8m (52.9km) | 27.6m (44.5km) | 36m (58.1km) | 32.8m (52.9km) |
| CONFIGURATION | Split-Box design: IDU, RF Unit | | | Split-Box design: IDU, RF Unit | |
| MODULATION | DSSS; QPSK | | | DSSS; QPSK | |
| MAX RECEIVE SIGNAL | -20 dBm error free; 0 dBm no damage | | | -20 dBm error free; 0 dBm no damage | |
| **DIGITAL LINE INTERFACES** | DSX-1 (4, 8, 16 each), software selectable RJ-48C modular jack | | | CEPT-1 (4 or 8 each), software selectable RJ-48C modular jack | |
| **COMPLIANCE** | | | | | |
| REGULATORY | FCC Part 15.247; IC RS210 | | | CEPT-1:ITU-TG703 | |
| FCC ID | HZB-S58-GX-1 | | | HZB-S58-GX-1 | |
| INDUSTRY CANADA ID | 1856A-U5358-GX-1 | | | N/A | |
| RELIABILITY[4] | NEBS Level 3 Ready | | | N/A | |
| **MANAGEMENT** | | | | | |
| NETWORK MGMT | SNMP v2c (MIBII, Proxim enterprise MIBs), embedded HTML server, Telnet, VT-100 terminal | | | SNMP v2c (MIBII, Proxim enterprise MIBs), embedded HTML server, Telnet, VT-100 terminal | |
| FAR END MGMT | Via NMS (embedded router, gateway address, subnet mask), front panel display | | | Via NMS (embedded router, gateway address, subnet mask), front panel display | |
| **POWER/ENVIRONMENT** | | | | | |
| INPUT VOLTAGE RANGE | -20 to -60 VDC or +20 to +60 VDC | | | -20 to -60 VDC or +20 to +60 VDC | |
| POWER CONSUMPTION | <70 Watts | | | <70 Watts | |
| POWER CONNECTOR | 3-pin terminal block | | | 3-pin terminal block | |
| OPERATING TEMP | IDU: 0°C to 50°C; RF UNIT: -30°C to 55°C | | | IDU: 0°C to 50°C; RF UNIT: -30°C to 55°C | |
| HUMIDITY | IDU: 95%, non-condensing; RF UNIT: 100%, non-condensing | | | IDU: 95%, non-condensing; RF UNIT: 100%, non-condensing | |
| ALTITUDE | Up to 15,000 ft (5,000m) | | | Up to 15,000 ft (5,000m) | |
| WIND LOADING | Up to 110 mph (177 kph) | | | Up to 110 mph (177 kph) | |
| **MECHANICAL** | | | | | |
| RF UNIT | | | | | |
| ANTENNA PORT<br>IDU PORT<br>CABLE TO IDU | Type-N Female (outdoor RF cable not included)<br>TNC Female<br>LMR-240 or equiv. <100m; LMR-400 or equiv. <200m; LMR-600 or equiv. <300m | | | Type-N Female (outdoor RF cable not included)<br>TNC Female<br>LMR-240 or equiv. <100m; LMR-400 or equiv. <200m; LMR-600 or equiv. <300m | |
| MOUNTING | | | | | |
| IDU<br>RF UNIT | EIA rackmount, 19" or 23", 1RU<br>EIA rackmount, 19" or 23", 1RU or outdoor pole mount bracket (optional) | | | EIA rackmount, 19" or 23", 1RU<br>EIA rackmount, 19" or 23", 1RU or outdoor pole mount bracket (optional) | |
| **PHYSICAL SPECS** | | | | | |
| DIMENSIONS | IDU: 17.2 x 10.9 x 1.72 in (43.6 x 27.6 x 4.4 cm)<br>RF Unit:14.1 x 10.9 x 1.72 in (35.8 x 27.6 x 4.4 cm) | | | IDU: 17.2 x 10.9 x 1.72 in (43.6 x 27.6 x 4.4 cm)<br>RF Unit:14.1 x 10.9 x 1.72 in (35.8 x 27.6 x 4.4 cm) | |
| WEIGHTS | IDU: 6.5 lbs (2.9 kg); RF Unit: 12 lbs (5.4 kg) | | | IDU: 6.5 lbs (2.9 kg); RF Unit: 12 lbs (5.4 kg) | |
| **MTBF & WARRANTY** | >100,000 Hours; 2 year parts and labor | | | >100,000 Hours; 2 year parts and labor | |
| **PACKAGE CONTENTS**[4] | Lynx.GX 4T, 8T or 16T IDU (Qty 1), Lynx.GX Low Band or High Band RF Unit (Qty 1), GX IDU installation kit- includes IDU rack mount kit (Qty 1), GX RFU Installation Kit – includes RFU rack mount kit (Qty 1), CD-Rom with Documentation and Software (Qty 1), GX Quick Install Guide (Qty 1) | | | Lynx.GX 4E or 8E IDU (Qty 1), Lynx.GX Low Band or High Band RF Unit (Qty 1), GX IDU installation kit- includes IDU rack mount kit (Qty 1), GX RFU Installation Kit – includes RFU rack mount kit (Qty 1), CD-Rom with Documentation and Software (Qty 1), GX Quick Install Guide (Qty 1) | |
| **OPTIONAL ACCESSORIES** | Optional RF Unit Outdoor Mounting Kit (Part# ACC-GX-RF-2)<br>Optional AC Power Adapter 110/220 VAC, with connector (Part# 62427) | | | Optional RF Unit Outdoor Mounting Kit (Part# ACC-GX-RF-2)<br>Optional AC Power Adapter 110/220 VAC, with connector (Part# 62427) | |
| **RELATED PRODUCTS** | Tsunami MP.11 Series for point to multipoint broadband wireless access, ServPack for 24x7 Enhanced Service and Support (US/CAN Only) | | | Tsunami MP.11 Series for point to multipoint broadband wireless access, ServPack for 24x7 Enhanced Service and Support (US/CAN Only) | |

[2] Output Power is specified at zero attenuation.
[3] RF Unit installed outdoors with 6 ft parabolic antenna, 99.995% one-way RF LInk availability average climate/terrain, no multipath reflection. Assumes FCC Regulations for EIRP.
[4] Complete link requires purchase of one Hi Band GX kit and Low Band GX Kit.

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