

# ynx DS3 Digital Microwave Radio



### **High-Capacity Connectivity in a Wireless Solution**

Lynx DS-3 is a License-Exempt digital microwave radio that provides wireless full-duplex DS-3 connectivity for distances exceeding 15 miles (24 km)—at a significantly lower cost than leasing dedicated DS-3 lines.

Using high-quality radios and standard telco interfaces, Lynx DS-3 allows you to quickly add backhaul and backbone connections to your infrastructure. Because it is wireless, Lynx DS-3 offers significant cost savings compared to leased-line connections, and provides a time-to-market advantage where installing new lines is impossible or too costly.

In addition, Lynx DS-3 is license-exempt in most countries, so you can install it when and where you need it, without right-of-way limitations, frequency licensing delays, or waiting for your telecommunications provider to deliver new lines.

### **Extend or Enhance Your Network Virtually Overnight**

Easy installation and hassle-free operation allow you to quickly extend networks and eliminate bandwidth bottlenecks, making Lynx DS-3 solutions ideal for:

- Cellular carriers extending backbone infrastructure and backhauling traffic
- Service providers establishing new Points of Presence in new markets
- Service providers enhancing existing fiber and wire networks
- Organizations or service providers seeking redundancy for mission-critical telco connections

### About the Lynx® Product Family

The Lynx family of digital microwave radios provides a broad range of point-to-point wireless solutions, delivering a proven and cost-effective alternative to wire and fiber for telco connectivity applications.

In addition to Lynx DS-3, the Lynx product line includes:

Lynx.sc, offering up to 2xT1/E1 capacity at distances exceeding 50 miles (80 km).

Lynx.HD, offering up to 8xT1/E1 capacity at distances exceeding 40 miles (64 km).

Lynx OC-3, offering 155 Mbps capacity at distances exceeding 7 miles (11 km).

### PRODUCT HIGHLIGHTS

### Rapid Return on Investment

- Fast payback compared to leasing DS-3 lines or building new wireline infrastructure
- Fast deployment opens up new revenue streams and enables faster customer acquisition

### Fast and Easy to Deploy

- Multiple frequencies provide installation options for easy deployment and flexibility when co-locating radios
- License-exempt frequencies eliminate regulatory delays
- Faster to deploy than waiting for leased DS-3 lines
- Eliminates schedule delays due to fiber right-of-way issues
- Easy integration with new high-speed switches, legacy data, and voice network products

### 99.999% Carrier-Class Reliability

- Meets or exceeds traditional telco wireline standards and requirements
- Transmission rates not affected by weather
- Longer distances and highest reliability due to superior system gain

### **KEY FEATURES**

- DS-3 interface and capacity
- Additional T1 for voice or data
- Frequency Ranges: 5.3 GHz license-exempt; 5.8 GHz license-exempt
- Compliant with industry standards
- Point-to-point communications from less than 1 mile/km to more than 15 miles/24 km
- Wide DC power input (±20 to ±63 V)
- Wide operational temperature
- Built-in loopback, far-end monitoring, and private telephone network orderwire
- 2-year warranty

## Lynx DS3



### **Product Specifications**

PRODUCT	MODEL NUMBER	TYPE	FREQUENCY BAND	DIGITAL CAPACITY (FULL DUPLEX)	CHANNEL PLANS	THRESHOLD (BER=1X10°)	OUTPUT POWER (MINIMUM)	SYSTEM GAIN	DISTANCE (MILES/KM)
Lynx DS-3	27710-91	Single-band	5725-5825 MHz	44.736 Mbps	А	-78 dBm	+17 dBm	96 dB	>15/25
Lynx DS-3	27750-91	Single-band	5250-5350 MHz	44.736 Mbps	Α	-78 dBm	+15 dBm	93 dB	>5/8

### System

Antenna Connector N-Type female

Full Output Power  $\geq +17 \text{ dBm } (5.8 \text{ GHz})$ 

+15 dBm (5.3 GHz model only)

RF Attenuation Range 16 dB, minimum

Maximum Receive Level -10 dBm, error-free

Transmission Delay Radio Only

 $\begin{array}{lll} \textbf{Radio Only} & 250 \ \mu \text{s, maximum} \\ \textbf{10-mile path} & 300 \ \mu \text{s, maximum} \\ \textbf{30-mile path} & 400 \ \mu \text{s, maximum} \\ \end{array}$ 

Regulatory Compliance FCC part 15.407 (U-NII), Class B

IC RSS210 (LE-LAN)
DSX-3: ANSI-T1-102-1987
DS-1: CCITT G.823, AT&T Pub
62411, Bellcore RT-TSY-000499

### Digital Line Interfaces

DSX-3

**Connectors** BNC female, 75 Ohm

**Local** or remote, external or

internal signal source

 Line Code
 B3ZS

 Wayside T1
 DSX-1

Connector

Line Code

B8ZS or AMI, selectable

Line Build Out

0-660 feet, selectable

Blue Code

AIS (Alarm Indication Signal)

Far-end Loopback

Local or remote control, external

signal source

### **Auxiliary Connections**

Orderwire Handset 2-wire, RJ-11

**VF Orderwire Bridge** 600 ohm balanced, 4-wire, 0 dBm, DB25

Diagnostics Port RS-232/RS-422 (craft/TBOS), DB9

Aux. Data PortRS-232/RS-422,(Clear Service Channel)19.2K baud, DB9

Alarm Port 2 ea. Form C, 6 TTL, DB25

Test Points Output power, near- and far-end RSL

### Power/Environment

DC Power±20 to ±63 Volts, <45 Watts</th>Optional AC Adapter100-250 Volts, 50-60 HzPower Connector6-pin barrier strip, plug-in

Operational Temperature -30° to +65° C

**Humidity** 0 to 95%, non-condensing **Altitude** 15,000 feet/5000 meters, max

**Physical** 

**Size (WxHxD)** 17.2 x 3.5 x 14.5 inches

43.7 x 8.9 x 36.8 cm

Weight 11 lbs/5 kg

### Mounting (Installation)

**EIA Rack Mount** 19 inch, 2-unit height

(mounting brackets supplied)

### Frequency Channel Plan (MHz)



ngle-band A1 A2

5275 5325