



# Lynx 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 ( $\pm 20$  to  $\pm 63$  V)
- Wide operational temperature
- Built-in loopback, far-end monitoring, and private telephone network orderwire
- 2-year warranty

## Product Specifications

PRODUCT	MODEL NUMBER	TYPE	FREQUENCY BAND	DIGITAL CAPACITY (FULL DUPLEX)	CHANNEL PLANS	THRESHOLD (BER=1X10 <sup>-6</sup> )	OUTPUT POWER (MINIMUM)	SYSTEM GAIN	DISTANCE (MILES/KM)
Lynx DS-3	27710-91	Single-band	5725-5825 MHz	44.736 Mbps	A	-78 dBm	+17 dBm	96 dB	>15/25
Lynx DS-3	27750-91	Single-band	5250-5350 MHz	44.736 Mbps	A	-78 dBm	+15 dBm	93 dB	>5/8

### System

<b>Antenna Connector</b>	N-Type female
<b>Full Output Power</b>	≥ +17 dBm (5.8 GHz) +15 dBm (5.3 GHz model only)
<b>RF Attenuation Range</b>	16 dB, minimum
<b>Maximum Receive Level</b>	-10 dBm, error-free
<b>Transmission Delay</b>	
Radio Only	250 μs, maximum
10-mile path	300 μs, maximum
30-mile path	400 μs, maximum
<b>Regulatory Compliance</b>	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

<b>DS-3</b>	DSX-3
<b>Connectors</b>	BNC female, 75 Ohm
<b>Loopback</b>	Local or remote, external or internal signal source
<b>Line Code</b>	B3ZS
<b>Wayside T1</b>	DSX-1
<b>Connector</b>	RJ-48C, DB-9 female
<b>Line Code</b>	B8ZS or AMI, selectable
<b>Line Build Out</b>	0-660 feet, selectable
<b>Blue Code</b>	AIS (Alarm Indication Signal)
<b>Far-end Loopback</b>	Local or remote control, external signal source

### Auxiliary Connections

<b>Orderwire Handset</b>	2-wire, RJ-11
<b>VF Orderwire Bridge</b>	600 ohm balanced, 4-wire, 0 dBm, DB25
<b>Diagnostics Port</b>	RS-232/RS-422 (craft/TBOS), DB9
<b>Aux. Data Port (Clear Service Channel)</b>	RS-232/RS-422, 19.2K baud, DB9
<b>Alarm Port</b>	2 ea. Form C, 6 TTL, DB25
<b>Test Points</b>	Output power, near- and far-end RSL

### Power/Environment

<b>DC Power</b>	±20 to ±63 Volts, <45 Watts
<b>Optional AC Adapter</b>	100-250 Volts, 50-60 Hz
<b>Power Connector</b>	6-pin barrier strip, plug-in
<b>Operational Temperature</b>	-30° to +65° C
<b>Humidity</b>	0 to 95%, non-condensing
<b>Altitude</b>	15,000 feet/5000 meters, max

### Physical

<b>Size (WxHxD)</b>	17.2 x 3.5 x 14.5 inches 43.7 x 8.9 x 36.8 cm
<b>Weight</b>	11 lbs/5 kg

### Mounting (Installation)

<b>EIA Rack Mount</b>	19 inch, 2-unit height (mounting brackets supplied)
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### Frequency Channel Plan (MHz)

