

# Metrobility® T3 Interface

T3 Copper-to-Fiber Conversion



The Metrobility® T3 interface by Telco Systems provides cost effective high-speed integration and conversion of T3 (44.736Mbps) serial copper telco communication lines to fiber optic links. The T3 interface line card can connect to PBX's, multiplexers, ATM/Frame Relay devices, routers, network servers and video CODECS achieving extended distances, high density, high quality of transmission, and improved security.

Regardless of line codes or framing, the copper data stream is converted to optical signals for greater noise immunity and longer transmission. The T3 interface line card supports remote fiber optic links up to 2km over multimode (1310nm) and 100km over singlemode fiber (1550nm).

The T3 interface card operates seamlessly with low bit delay, and all signal activity is converted ensuring accurate communication within connected segments.

### Unique Remote Test Capability

The T3 Interface Line Cards provide independent copper and fiber loopback modes to isolate problems within a specific segment of the network.

Management options for T3 line cards are accomplished through the Metrobility NetBeacon® ESP or WebBeacon Element Manager, any standard SNMP application, or through terminal console commands (CLI). This ability provides management control over the line card's configuration and immediate notification of a problem to a management station.

GUI-based NetBeacon displays information about port type, transmit code configuration, line length configuration, line status, and loopback status as well as standard information such as serial number, revision level, date installed, etc.

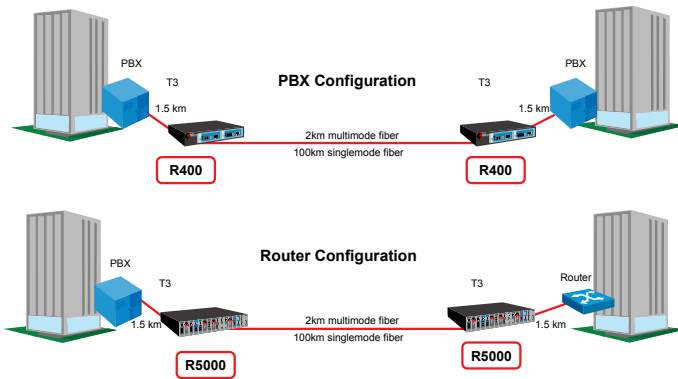
### Flexible Platform Options

The T3 interface line cards are supported in the Metrobility chassis. DC versions of the R5000 and R1000 chassis are NEBS certified. The standalone version is enclosed in a rugged metal fabrication to offer superior reliability for the most demanding environments. Each standalone is equipped with an external, universal AC power supply.

- Copper-to-multimode fiber conversion to 2km, or copper-to singlemode fiber conversion up to 100km
- B3ZS bipolar line code support on the copper interface
- Local and remote loopback monitoring
- No jitter for maximum transmission quality
- Independent clocking on TX and RX ports
- T3 interface line cards are NEBS Level 3 Certified
- Optional management information:
  - Fiber and copper signal status
  - Port operational status
  - Port loopback mode
  - Board serial ID
- ST or SC connectors on the fiber optic ports
- Surge protection for both ports
- Supports all common line codes
- Link and loopback LEDs
- Low power consumption
- High MTBF

# Metrobility T3 Interface

High-speed integration and conversion



## Key Applications

- Extends T3 distances up to 100km without repeaters
- NRZ (non-return to zero) data and clock encoding ensures reliable clock recovery at the remote fiber port
- User selectable line build out for short and long haul connections

## Specifications

### Interfaces

#### Data Rate

- 44.736Mbps (T3)

#### Power Input

- +5.0VDC @ 0.4A, 2W average

#### Network Connections

##### Coaxial Interface

- Connector: BNC receptacle
- Impedance: 75 ohms
- Signal Structure: ANSI T1.404, T1404a (T3)
- Supported Link Length: up to 1,200 ft
- Cable Type: RG-59 coaxial cable

##### Multimode Fiber Interface

- Connector: ST or SC
- Link Length: Up to 2km full duplex;
- Rx Input Sensitivity: -31dbm peak minimum
- Output Power: -20 dbm to -14 dbm (62.5/125  $\mu$ m)
- Wavelength: 1310nm
- Cable Type: 50/125, 62.5/125  $\mu$ m F/O

##### Singlemode Fiber Interface

- Connector: ST or SC
- Wavelength: 1310 nm
- Rx Input Sensitivity: -31 dBm peak min
- Output Power: -15 dBm to -8 dBm (9/125  $\mu$ m)
- Supported Link Length: Up to 15km full duplex
- Cable Type: 8.3/125, 8.7/125, 9/125, 10/125  $\mu$ m F/O

### General

### Environmental

- Operating Temperature: 0°C to 55°C
- Storage Temperature: -30°C to 70°C
- Operating Humidity: 5% - 95% non-condensing

### Physical Specifications

- Weight: 5 oz; 0.14 kg (R115)  
3 lb; 1.36kg (2115)
- Standalone Dimensions: 4.38"L x 3.26"W x 1.71"H  
12.3cm x 8.3cm x 4.3cm

### Standards Compliance

- NEBS Level 3

### Safety and EMC Compliance

- UL; CSA; CB
- EN60950 (safety)
- FCC Part 15 Class A
- EN55022 Class A (emissions)
- EN55024:1998 (immunity)
- IEC 825-1 Classification (eye safety)
- Class 1 Laser Product (eye safety)
- ITU-G.703; G.704; G.706
- ANSI T1.403-1999
- ANSI T1.408

## Ordering Information

Part Number		Description			
Line Card	Standalone	Port 1	Port 2	Port 1	Port 2
R115-23*	2115-23-01	T3 copper	Multimode fiber	1.5km	2km
		Dual BNC	SC		
R115-24*	2115-24-01	T3 copper	Singlemode fiber	1.5km	15km
		Dual BNC	SC		
R115-25*	2115-25-01	T3 copper	Multimode fiber	1.5km	2km
		Dual BNC	ST		
R115-27*	2115-27-01	T3 copper	Singlemode fiber	1.5km	40km
		Dual BNC	SC (LH)		

\* NEBS-certified



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