



TeraBridge 5345 and 5845

### APPLICATIONS

- Point-to-point Wireless Bridge
- Enterprise LAN and PBX extension
- WAN connection redundancy
- ISP remote POP
- ISP direct customer connections using point-to-point
- Multipoint backhaul at DS-3 performance
- Extension of an existing fiber network

# TeraBridge™ 5345 and 5845

## Point to Point Wireless 5 GHz Radios with 45 Mbps Full Duplex Throughput

### Highest Link Reliability

TeraBridge 5345 and 5845 are point-to-point, high capacity, all outdoor radios optimized for backhaul of Ethernet or traditional telecommunications converged voice and data networks. They feature license-free radio operation in the UNII or ISM 5 GHz bands with a choice of either DS3 or 10/100 Base-T digital interfaces. The field-proven TeraBridge series is one of the most reliable license-free wireless solutions available today. Full duplex operation with near-zero latency ensures reliable operation and unlimited consecutive point to point links. With a range of up to 40 miles, the TeraBridge 5845 takes the TeraBridge™ family to unprecedented distances and opens a whole new range of applications.

### Unprecedented Cost Effectiveness

TeraBridge systems enable customers with truly affordable broadband wireless solutions for today's last-mile applications. Since they work in the license-free 5 GHz bands, there are no spectrum licenses to purchase and no expensive trenching required - enabling you to provide connectivity at a price point that won't dramatically impact CapEx and OpEx budgets.

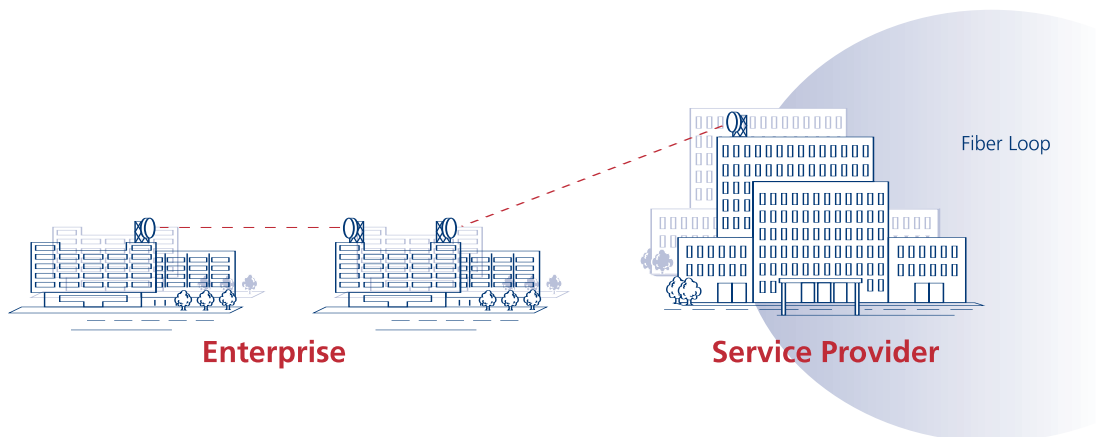
### Superior Design and Performance

TeraBridge 5345 and 5845 are ideal high-capacity solutions for Wireless Internet Service

Provider's Networks, cellular operators needing to upgrade and expand their networks, telecom carriers looking to add capacity to their networks, and for private enterprises wanting to enhance Internet access throughout their networks.

### Key Features

- TeraBridge 5345: 5.3 GHz UNII Band full-duplex Radio for Short - Medium Range Links
- TeraBridge 5845: 5.8 GHz ISM Band full-duplex Radio for Links up to 40 Miles
- Frequency Division Duplexing (FDD) Operation
- Up to three channels per frequency band, software selectable
- Very Low Latency Performance
- 1x Telco-rated DS3 interface, with an additional 1 Mbps full-duplex wayside channel available, or 2x 10/100 Base-T Ethernet interfaces
- 45 Mbps actual payload throughput each way (90 Mbps aggregate)
- SNMP compliant and Web Browser Management for easy and intelligent installation/management
- All-weather outdoor unit with an extended temperature range of -33° to +60° C



## TeraBridge 5345 and 5845 Specifications

GENERAL		
Frequency Bands	5345: UNII: 5.250-5.350 GHz per FCC CFR47, Part 15.407 5845: ISM: 5.725-5.825 GHz per FCC CFR47, Part 15.247	
Frequency Range	Full Duplex in the 5,250-5,350 MHz (5345) or 5,725-5,825 MHz (5845)	
Capacity Options	<ul style="list-style-type: none"> <li>1x Telco-rated DS-3 interface (DSX-3, per Bellcore GR-499-CORE), with an additional 1 Mbps full-duplex wayside channel available</li> <li>1x 10/100 Base-T Ethernet (per IEEE 802.3), switched, auto-negotiate</li> <li>1x 10/100 Base-T Ethernet (per IEEE 802.3), switched, auto-negotiate or user-selectable speed and duplexity</li> </ul>	
Channel Bandwidth	16 MHz	
Channel Center Frequencies (5345)	Channel 1 Tx-5.262 GHz / Rx-5.322 GHz Channel 2 Tx-5.270 GHz / Rx-5.330 GHz Channel 3 Tx-5.278 GHz / Rx-5.338 GHz	
Channel Center Frequencies (5845)	Channel 1 Tx-5.737 GHz / Rx-5.797 GHz Channel 2 Tx-5.745 GHz / Rx-5.805 GHz Channel 3 Tx-5.753 GHz / Rx-5.813 GHz	
DIGITAL INTERFACE - DS-3 VERSION		
Type	1 x DS3 per GR-499-CORE and 2 x 10/100 Base-T Ethernet per IEEE 802.3	
Over-the-air Data Rate	44.736 Mbps Full-Duplex, and 1 Mbps Full-Duplex wayside channel for Ethernet traffic	
Line Code	B3ZS, all DS3 applications supported	
Interface	75 ohms unbalanced Coaxial Connections	
Connectors	TNC (75 ohms)	
DIGITAL INTERFACE - ETHERNET VERSION		
Type	2 x 10/100 Base-T Ethernet per IEEE 802.3	
Over-the-air Data Rate	45 Mbps, Full Duplex	
Max Distance Cable Length	300 feet (100 meters)	
TRANSMITTER		
Frequency Range (Synthesized)	5345: UNII Band: 5,250-5,350 MHz 5845: ISM Band: 5,725-5,825 MHz	
Output Power (Configurable)	5345: -1 dBm (MAX) <sup>1</sup> 5845: +16 dBm (MAX)	
Transmit Attenuation	1 - 30 dB adjustable below maximum power	
Frequency Stability	+/- 5 ppm	
Modulation	16 QAM	
RECEIVER		
Type	Double Heterodyne	
BER/Sensitivity	10 <sup>-6</sup> -78 dBm or better, including Forward Error Correction (FEC)	
Maximum RF Input Level	-35 dBm	
Unfaded BER	Typically better than 10 <sup>-10</sup>	
Frequency Stability	+/- 5 ppm	
Adjacent Channel Rejection	>= 40 dB (RF bandwidth of <= 16 MHz)	
ANTENNAS		
	FORWARD GAIN	FRONT/BACK RATIO
External Flat Panel 1 ft (0.30 m)	23 dBi	
External Parabolic 1 ft (0.30 m)	22 dBi	30 dB
2 ft (0.61 m)	28 dBi	36 dB
4 ft (1.22 m)	34.6 dBi	42 dB
External Antenna Connector	50 Ohm, N-Type Female	

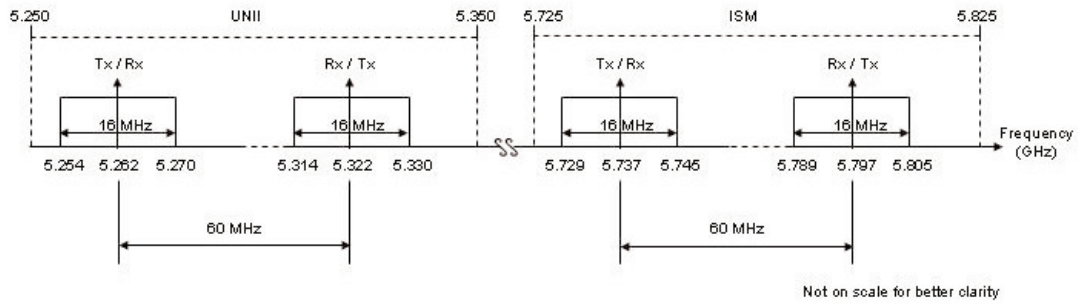
<sup>1</sup> For systems deployed outside the United States, i.e., not constrained by FCC rules and regulations, the maximum output power of a TeraBridge 5345 can be set to +10 dBm. However, customers must comply at all times with their local rules and regulations set by the regulatory boards of their respective countries in regards to the maximum allowed transmit power coming out of an intentional RF emitter device such as the TeraBridge.

## TeraBridge 5345 and 5845 Specifications (cont'd)

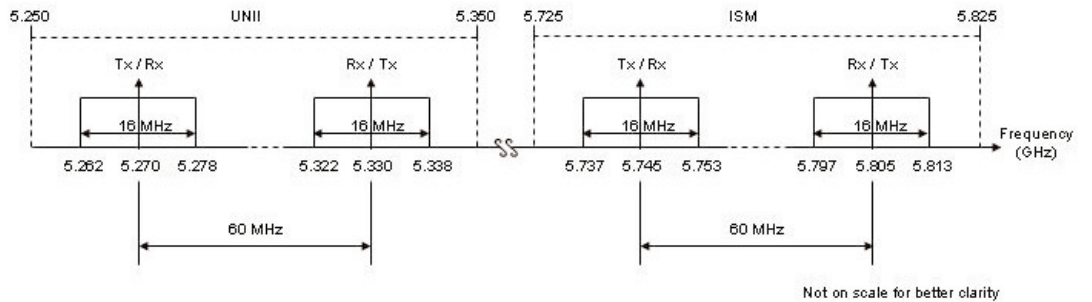
NETWORK MANAGEMENT		
SNMP	MIB-II Support and Private Functions	
EMS/NMS Support	Standard SNMP-based EMS, NMS, or Web Browser User Interface	
Craft Interface	RS-232 CLI	
STATUS INDICATORS AND DIAGNOSTICS		
External LED Indicators	Power/Local Alarm, RF Link, DS3 Input, Ethernet Link x 2	
Alarms	DS3 LOS, AIS, Radio TX, Radio RX, BER Threshold	
Status	NMS IP Addresses, BER, TX Power, Receive Signal Level, Loopback Test Status, DS3 Input, Ethernet Input	
Configuration Commands	NMS IP Address, TX Power, TX Mute, Frequency, RSL, BER Alarm, Loopback Tests	
Diagnostic Testing Features	Radio/Local/Remote Loopback, Pseudo AIS	
Performance Monitoring	Receive Signal Strength Indicator (RSSI)	
POWER		
Input Voltage Range	+/- 48 VDC (+/- 21-60 VDC), 100-240 VAC (external power supply)	
Power Consumption	30 Watts maximum	
ENVIRONMENTAL		
Temperature Range	-27° to +140° F ( -33° to +60° C)	
Altitude	15,000 ft (4,500 meters)	
Humidity	Outdoor, all-weather enclosure	
MECHANICAL		
Dimensions (H x W x D)	12.0 x 12.0 x 4.0 in. (305 mm x 305 mm x 98 mm)	
Weight	11 lbs (5.0 kg)	
FCC INFORMATION (US ONLY)		
	5345	5845
	OEWCX-DS3-53G	OEWCX-DS3-58G
	FCC Part 15.407	FCC Part 15.247
	Subpart E	Subpart C
	(UNII certification)	(ISM certification)

## TeraBridge 5345 and 5845 Spectrum Utilization

**Channel 1 Low / High Bands**



**Channel 2 Low / High Bands**



**Channel 3 Low / High Bands**

