

OSBRIDGE 5GXt

High Capacity Wireless
Point to Point Ethernet Bridge



PRODUCT HIGHLIGHTS AND ADVANTAGES

- Licence Exempt ETSI and FCC 5 GHz Frequency – eliminates regulatory delays.
- 11 (ETSI), 4 (United Kingdom), 5 (USA), 236 (Unregulated Countries – frequency range from 4920 MHz to 6100 MHz) non-overlapping channels allows many units to be deployed in the same area.
- User selectable channel width – 5 MHz, 10 MHz, 20 MHz or 40 MHz for scalable deployment and interference resiliency.
- Operational distance of up to 77 kilometers (High Power Version) or up to 30 kilometers (Regular Power Version).
- Up to 60 MBps Full Duplex TCP/IP speed (or up to 100 MBps Half Duplex TCP/IP speed) and up to 50 thousand packets per second.
- Next day deployment enables rapid service activation and payback.
- Cost effective alternative to leased lines.
- Optimal cost / performance ratio: highly cost efficient solution.
- Dynamic Frequency Selection (DFS) complies with ETSI EN 301 893 and OFCOM regulations to allow co-existence with Radar systems.
- Robust outdoor architecture: ensures unprecedented range and reliability, minimizes RF cable loss connecting to antenna thus providing outstanding performance and communication distance.
- Non-compromising security - over the air 128 bit key AES encryption.
- Compact integrated solution – easy to install and operate.

The OSBRIDGE 5GXt, a member of OSBRIDGE products family, is a High Capacity and High Performance 5GHz outdoor wireless bridge designed to provide secure and reliable point to point operation for Carriers, Internet Service Providers, Enterprises and Government organisations.



The OSBRIDGE 5GXt is capable of supporting up to 108 Mbps over each of its two air interfaces, equivalent to 60 Mbps Full Duplex Net Throughput², or 100 Mbps Half Duplex Net Throughput². The OSBRIDGE 5GXt leverages both robust outdoor technologies and Orthogonal Frequency Division Multiplexing (OFDM) modulation in the same product - with features such as Forward Error Correction coding, used to combat multi-path and noisy environments, the product operates seamlessly and efficiently in challenging environments with stable throughput. The system also features advanced algorithms for automatic selection of modulation schemes to maximize the data rate and improve spectral efficiency using latest technology based on Atheros® AR5006XS Radio Modules. These inherent advantages of the OSBRIDGE 5GXt enable service providers to provide an effective PtP solution to a significantly higher subscriber base that would otherwise be inaccessible.

Using Features such as Packet Aggregation two OSBRIDGE 5GXt devices working as bridge can handle up to 50000 packets per second. Combining high frequency reuse, selectable channel width with advanced interference management and immunity techniques, the OSBRIDGE 5GXt bridges conserve valuable spectrum by allowing service provider to cover an extensive geographical area with a minimum number of channels.

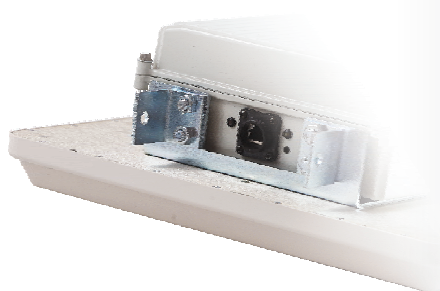
OSBRIDGE 5GXt based on superior Intel® XScale IXP425 533MHz network processor easily outperforms other devices based on alternative chipsets. Intel® IXP425 network processor is a highly integrated, versatile single-chip processor that is used in a variety of products requiring network connectivity and high performance to run their unique software applications. Each processor combines a high-performance Intel XScale® core with additional Network Processor Engines (NPEs) to achieve unmatched packet processing performance.

All OSBRIDGE 5GXt products are robust, IP65 rated, outdoor units, that are built to perform in difficult climatic environments and withstand even the harshest weather conditions. Built in 802.3af compliant Power over Ethernet system allows only one ethernet cable to be used for both data and power transmission for up to 305 feet.



Datasheet

OSBRIDGE 5GXt



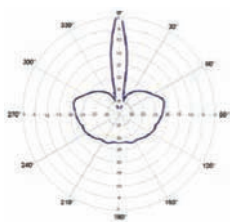
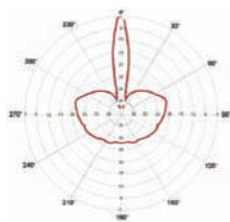
Interface	
Ethernet Interface	100 Base-T Ethernet (RJ-45) with POE
Wired LAN Protocol	IEEE 802.3 (CSMA/CD)
Wireless Interface	OFDM, TDD
Wireless LAN Protocol	IEEE 802.11a, Atheros 802.11a Turbo

Radio									
Modulation Technique		BPSK, QPSK, 16QAM, 64QAM							
Supported Frequencies (User Selectable)		Europe (ETSI):		5500-5700 MHz (11 channels) with DFS (Dynamic Frequency Selection)					
		USA (FCC):		5745-5825 MHz (5 channels)					
		UK (OFCOM FWA):		5735-5835 MHz (4 channels) with DFS (Dynamic Frequency Selection)					
		Africa&Asia (OTHER):		4920-6100 MHz (236 channels, 5MHz step)					
Channel Width		User Selectable – 802.11a: 20 MHz, 10 MHz or 5 MHz, 802.11a Turbo: 40 MHz							
Bit Error Rate (BER)		Better than 10 ⁻⁵							
Output Power		OSBRIDGE 5GXt				OSBRIDGE 5GXt-HP			
		ETSI:		≤ 30 dBm EIRP		≤ 30 dBm EIRP			
		OFCOM:		≤ 33 dBm EIRP		≤ 33 dBm EIRP			
		FCC, Africa:		≤ 42 dBm EIRP		≤ 49 dBm EIRP			
Transmit Power		User Selectable: Default, Half (-3 dBm), Quarter (-6 dBm), Eight (-9 dBm)							
Bit Data Rate		54 Mbps	48 Mbps	36 Mbps	24 Mbps	18 Mbps	12 Mbps	9 Mbps	6 Mbps
Receive Threshold (including built-in antenna)		-97 dBm	-100 dBm	-105 dBm	-108 dBm	-112 dBm	-113 dBm	-115 dBm	-116 dBm

System	
Processor	Intel XScale IXP425 533 MHz Network Processor
Memory	64 MB RAM, 4 MB Flash
RF Modules	OSBRIDGE 5GXt Atheros AR5006 with XR Technology
	OSBRIDGE 5GXt-HP Atheros AR5006 with XR Technology

Security	
Association Protocol – ESSID, AES with 128bit key length	

Physical	
Dimensions	370 mm X 370 mm X 140 mm
Operating / Storage Temperature	-40°C - +70°C / -40°C - +85°C
Enclosure	AL IP65 Rated, Outdoor Mountable, Weather Protected
Antenna Radome	Plastic, UV Protected
Power Adapter	48V/0.4A DC, 802.3af Active Ethernet (Power over Ethernet injector included)
LEDs	2 – Power, Ethernet LAN Activity
Mounting	Adjustable 100 mm Mast Mounting with Horizontal and Vertical alignment

Antenna	
Built in – 25 dBi Dual Polarized Panel Antenna	
E-Plane	H-Plane
	

Operational Distance								
Bit Data Rate (Mbps)	54	48	36	24	18	12	9	6
OSBRIDGE 5GXt Distance (meters) ¹⁾	4600	6300	8900	11000	14000	17400	25100	30700
OSBRIDGE 5GXt-HP Distance (meters) ¹⁾	11800	16100	22200	27800	35320	43800	63000	77400

Regulatory Compliance	
CE mark, ETSI EN 301 893, FCC Part 15 Compliant	

Warranty	
One year, Limited	

1) Distance may vary depending on several factors including, but not limited to, interference, obstacles and fresnel zone clearance.

2) Actual throughput may vary depending on several factors including, but not limited to, signal strength, interference, obstacles and fresnel zone clearance.

Contact Information:

OSBRIDGE