

OSBRIDGE

OSBRIDGE 5Gi

High Performance Outdoor Wireless
Point to Point Ethernet Bridge



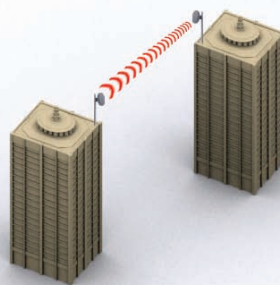
PRODUCT HIGHLIGHTS AND ADVANTAGES

- Licence Exempt ETSI and FCC 5GHz Frequency – eliminates regulatory delays.
- 11 (ETSI), 4 (United Kingdom), 5 (USA), 236 (Unregulated Countries) 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.
- Up to 70 MBps TCP/IP speed using 40MHz channel and up to 35000 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.
- Superior Atheros XR™ AR5006XS powered OFDM radio – enables NLOS (near line of sight) operation in dense urban environments.
- Non-compromising security - over the air 128 bit key AES encryption.
- Compact integrated solution – easy to install and operate.

The OSBRIDGE 5Gi, a member of OSBRIDGE products family, is a 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.

Atheros® AR5006XS Radio Modules. These inherent advantages of the OSBRIDGE 5Gi 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 5Gi devices working as bridges can handle up to 35000 packets per second. Combining high frequency reuse, selectable channel width with advanced interference management and immunity techniques, the OSBRIDGE 5Gi bridges conserve valuable spectrum by allowing service provider to cover an extensive geographical area with a minimum number of channels.



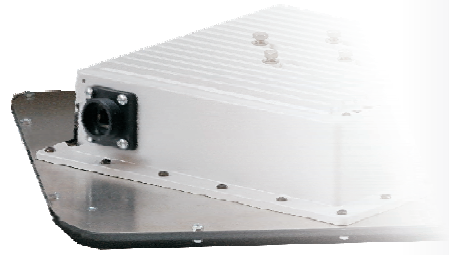
The OSBRIDGE 5Gi is capable of supporting up to 108 Mbps over its air interface, equivalent to 70 Mbps Net Throughput. The OSBRIDGE 5Gi leverages both robust outdoor technologies and Orthogonal Frequency Division Multiplexing (OFDM) modulation in the same product - with features such as Forward Error 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

OSBRIDGE 5Gi based on superior Intel® XScale IXP422 processor easily outperforms other devices based on alternative chipsets. Intel® IXP422 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 5Gi products are robust, IP65 rated, outdoor units, which 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 5Gi



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 <small>(Depending on User configurable Regulatory Domain)</small>	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, 5 MHz or 40 MHz (802.11a Turbo)								
Bit Error Rate (BER)	Better than 10 ⁻⁵								
Output Power		OSBRIDGE 5Gi				OSBRIDGE 5Gi-HP			
	ETSI:	≤ 30 dBm EIRP				≤ 30 dBm EIRP			
	OFCOM:	≤ 33 dBm EIRP				≤ 33 dBm EIRP			
	FCC, Africa:	≤ 40 dBm EIRP				≤ 47 dBm EIRP			
	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)	-95dBm	-98dBm	-103dBm	-106dBm	-110dBm	-111dBm	-112dBm	-114dBm	

System

Processor	Intel XScale IXP422 266 MHz Network Processor
Memory	32MB RAM, 4MB Flash
RF Module	Atheros AR5006XS with XR Technology

Security

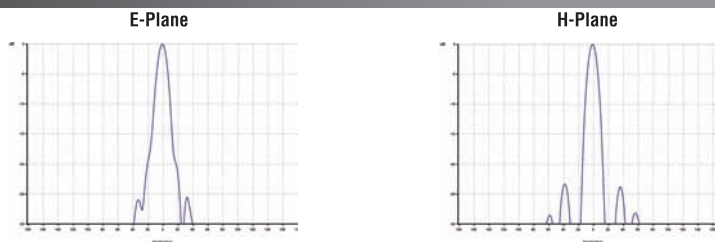
Association Protocol – ESSID, WPA, WPA2, AES with 128 bit key length

Physical

Dimensions	320 mm X 320 mm X 100 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	3 – Power, Ethernet LAN Activity, Wireless Activity
Mounting	Adjustable 60 mm Pole Mounting

Antenna

Built-in Antenna Patterns



Operational Distance

Bit Data Rate	54 Mbps	48 Mbps	36 Mbps	24 Mbps	18 Mbps	12 Mbps	9 Mbps	6 Mbps
OSBRIDGE 5Gi	3200 m.	4300 m.	5900 m.	7200 m.	9100 m.	11200 m.	16000 m.	19500 m.
OSBRIDGE 5Gi-HP	6400 m.	8600 m.	11800 m.	14400 m.	18200 m.	22400 m.	32000 m.	39000 m.

Regulatory Compliance

CE certified, ETSI EN 301 893, FCC Part 15 Compliant

Warranty

One year, Limited

Contact Information:

OSBRIDGE

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