

OSBRIDGE 5GX_i

Outdoor Wireless 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.
- Over 40 Mbps TCP/IP speed and over 10000 packets per second.
- Next day deployment enables rapid service activation and payback.
- Cost effective alternative to leased lines.
- Outstanding software features: bridging, routing, NAT routing, CPE and PtP Bridge modes, SNMP, web management, advanced QoS, DHCP client/server, firewall, PPPoE client and high grade encryption.
- Backward compatible with other vendors 802.11a compliant devices.
- 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™ 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 5GX_i, a member of OSBRIDGE products family, is a high performance 5GHz outdoor wireless client bridge designed to provide secure and reliable point to multipoint operation for Carriers, Internet Service Providers, Business Enterprises and Government organisations.



The OSBRIDGE 5GX_i is capable of operating as wireless router or multi-mac bridge to OSBRIDGE 5G and standard 802.11a Access Points, supporting over 40 Mbps TCP/IP Net Throughput over its air interface. The OSBRIDGE 5GX_i 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® Radio Modules. These inherent advantages of the OSBRIDGE 5GX_i enable service providers to provide an effective PtMP solution to a significantly higher subscriber base that would otherwise be inaccessible.

Using Features such as Packet Aggregation two OSBRIDGE 5GX_i devices operating as PtP bridges can handle over 10000 packets per second. Combining high frequency reuse, selectable channel width with advanced interference management and immunity techniques, the OSBRIDGE 5GX_i bridges conserve valuable spectrum by allowing service provider to cover an extensive geographical area with a minimum number of channels.

While operating with OSBRIDGE 5G base station the OSBRIDGE 5GX_i device can be configured to utilize proprietary polling protocol that overrides shortages of the standard 802.11a mode. OSBRIDGE proprietary WPM (Wireless Polling MAC) is a full featured TDMA/TDD protocol implementation on top of Atheros® AR5006XS hardware, using Packet Aggregation, Adaptive Polling Algorithm and disabling of the CSMA Backoff Mechanism. WPM also provides link adaptation technology and improves bandwidth, robustness, and overall performance for each subscriber.

OSBRIDGE 5GX_i software features such as bridging, routing, NAT routing, CPE and PtP Bridge modes, SNMP, web management, advanced QoS, DHCP client/server, firewall, PPPoE client, high grade encryption, port forwarding, remote syslog and built in troubleshoot utilities make the OSBRIDGE 5GX_i the most flexible and cost effective broadband wireless CPE platform available today.

All OSBRIDGE 5GX_i products are robust outdoor units, that are built to perform in difficult climatic environments and withstand even the harshest weather conditions. Built in passive Power over Ethernet system allows only one ethernet cable to be used for both data and power transmission for up to 200 feet.

Datasheet

OSBRIDGE 5GX_i



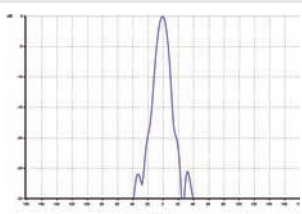
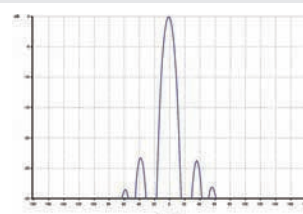
Interface	
Ethernet Interface	100 base-T Ethernet (RJ-45) with PoE
Wired LAN Protocol	IEEE 802.3 (CSMA/CD)
Wireless Interface	OFDM, TDD
Wireless LAN Protocol	IEEE 802.11a, Atheros 802.11a Turbo, WPM (Wireless Polling MAC)

Radio									
Supported Frequencies (User Configurable)	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)							
Modulation Technique	BPSK, QPSK, 16QAM, 64QAM								
Channel Width	User Selectable – 802.11a: 20 MHz, 10 MHz, 5 MHz or 40 MHz (802.11a Turbo)								
Output Power	OSBRIDGE 5GX_i				OSBRIDGE 5GX_i-HP				
	ETSI:	≤ 30 dBm EIRP				≤ 30 dBm EIRP			
	OFCOM:	≤ 33 dBm EIRP				≤ 33 dBm EIRP			
	FCC, Africa:	≤ 46 dBm EIRP				≤ 49 dBm EIRP			
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)	-95 dBm	-98 dBm	-103 dBm	-106 dBm	-110 dBm	-111 dBm	-112 dBm	-114 dBm	

System	
Processor	Atheros AR2313, 180MHz MIPS 4Kc Processor with Embedded Cache
Memory	4MB FLASH, 16MB RAM
RF Module	Atheros AR2313+AR5112

Software	
Operational Modes	Access Point, Access Point Client, Infrastructure Client, PtP Bridge, Polling Client (WPM)
Security	Association Protocol – ESSID/BSSID, WEP 40/128, TKIP, AES
Features	Bridge, Router, NAT Router, PPPoE Client, Port Forwarding, Firewall, QOS, VLAN, DHCP Server
Management	WEB Interface, SNMPv2

Physical	
Dimensions	320 mm X 320 mm X 100 mm
Operating / Storage Temperature	-40°C - +70°C / -40°C - +85°C
Enclosure	IP65 Rated, UV Protected, Outdoor Mountable, Weather Protected
Power Adapter	15V / 1.2A DC, Passive Ethernet (Power over Ethernet Injector included)
LEDs	3 – Power, Ethernet LAN Activity, Wireless Activity
Mounting	Adjustable Pole Mounting

Antenna		
Type	23dBi Flat Panel Antenna	
Built-in Antenna Patterns	E-Plane	H-Plane
		

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

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

Warranty	
	One year, Limited