

OSBRIDGE 5XLi

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.
- Up to 25 MBps TCP/IP speed and up to 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™ 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 5XLi, 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 5XLi is capable of operating as wireless router or multi-mac bridge to OSBRIDGE 5G and standard 802.11a Access Points, supporting up to 25 Mbps Net Throughput over its air interface. The OSBRIDGE 5XLi 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 5XLi 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 5XLi devices operating as PtP bridges can handle up to 10000 packets per second. Combining high frequency reuse, selectable channel width with advanced interference management and immunity techniques, the OSBRIDGE 5XLi 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 5XLi 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 provides link adaptation technology and improves bandwidth, robustness, and overall performance for each subscriber.

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 5XLi the most flexible and cost effective broadband wireless CPE platform available today.

All OSBRIDGE 5XLi 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 (60 meters).

Datasheet

OSBRIDGE 5XLi



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 or 5 MHz, 802.11a Turbo: 40 MHz
Bit Error Rate (BER)	Better than 10 ⁻⁵
Output Power	30 dBm EIRP, Four User Selectable Power Levels (full, half, quarter, eight)
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)	-88 dBm -91 dBm -96 dBm -99 dBm -103 dBm -104 dBm -105 dBm -107 dBm

System

Processor	ADM5120 175MHz MIPS 4Kc Processor with Embedded Cache
Memory	2MB NOR FLASH, 16MB SDRAM
RF Module	Atheros AR5006 with XR Technology

Software

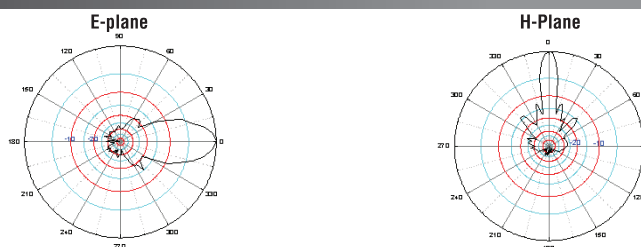
Operational Modes	Access Point Client, Infrastructure Client, PtP Bridge, WPM Client
Security	Association Protocol – ESSID/BSSID, WEP 40/128, WPA, WPA2, AES
Features	Bridge, Router, NAT Router, PPPoE Client, Port Forwarding, Firewall, QOS, DHCP Server
Management	WEB Interface, SNMPv2, CLI

Physical

Dimensions	180 mm X 250 mm X 125 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

Built-in 16 dBi Antenna Patterns



Operational Distance

Bit Data Rate	54 Mbps	48 Mbps	36 Mbps	24 Mbps	18 Mbps	12 Mbps	9 Mbps	6 Mbps
Distance	2700 m.	3000 m.	3300 m.	3700 m.	4100 m.	4500 m.	5100 m.	6000 m.

Regulatory Compliance

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

Warranty

One year, Limited

Contact Information:

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