



## 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 regulationsto allow co-existence with Radar systems.
- Robust outdoor architecture: ensures un-precedented range and reliability, minimizes RF cable loss connecting to antenna thus providig outstanding performance and communication distance
- Superior Atheros XR™ powered OFDM radio - enables NLOS (near line of sight) operation in dense urban environ-ments.
- Non-compromising security - over the air 128 bit keyAES encryption.
- Compact integrated solution - easy to install and operate.

# AirJet 5-23

## Outdoor Wireless Ethernet Bridge



The **NETBRIDGE AirJet 5-23**, a member of NETBRIDGE 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 **NETBRIDGE AirJet 5-23** is capable of operating as wireless router or multi-mac bridge to NETBRIDGE 5G and standard 802.11a Access Points, supporting over 40 Mbps TCP/IP Net Throughput over its air interface. The **NETBRIDGE AirJet 5-23** 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 **NETBRIDGE AirJet 5-23** enable service providers to provide an effective PtMP solution to a significantly higher subscriber base that would otherwise be inaccessible.

Using Features such as PacketAggregation two **NETBRIDGE AirJet 5-23** 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 **NETBRIDGE AirJet 5-23** bridges conserve valuable spectrum by allowing service provider to cover an extensive geographical area with a minimum number of channels.

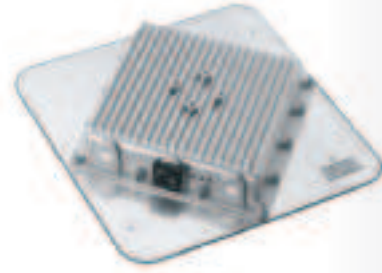
While operating with NETBRIDGE 5G base station the **NETBRIDGE AirJet 5-23** device can be configured to utilize proprietary polling protocol that overrides shortages of the standard 802.11a mode. NETBRIDGE proprietary WPM (Wireless Polling MAC) is a full featured TDMA/TDD protocol implementation on top of Atheros®AR5006XS hardware, using PacketAggregation, Adaptive Polling Algorithm and disabling of the CSMA Backoff Mechanism. WPM also provides link adaptation technology and improves bandwidth, robustness, and overall performance foreach subscriber.

**NETBRIDGE AirJet 5-23** 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 **NETBRIDGE AirJet 5-23** the most flexible and cost effective broadband wireless CPE platform available today.

All **NETBRIDGE AirJet 5-23** products are robust outdoor units, that are built to perform in difficult climatic environments and withstim« — 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

## AirJet 5-23



### Interface

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

### Radio

<b>Supported Frequencies</b>	Europe (ETSI): 5500-5700 MHz (11 channels) with DFS (Dynamic Frequency Selection), (Depending on User configurable Regulatory Domain)	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)						
<b>Modulation Technique</b>	BPSK, QPSK, 16QAM, 64QAM							
<b>Channel Width</b>	User Selectable - 802.11a: 20 MHz, 10 MHz, 5 MHz or 40 MHz (802.11a Turbo)							
<b>Output Power</b>	<b>NETBRIDGE AIRJET 5-23</b>							
	ETSI:	≤ 30 dBm EIRP						
	OFCOM:	≤ 33 dBm EIRP						
	FCC, Africa:	≤ 49 dBm EIRP						
<b>Bit Data Rate</b>	54 Mbps	48 Mbps	36 Mbps	24 Mbps	18 Mbps	12 Mbps	9 Mbps	6 Mbps
<b>Receive Threshold</b> (including built-in antenna)	-95 dBm	-98 dBm	-103 dBm	-106 dBm	-110 dBm	-111 dBm	-112 dBm	-114 dBm

### System

<b>Processor</b>	Atheros AR2313, 180MHz MIPS 4Kc Processor with Embedded Cache 4MB FLASH, 16MB RAM Atheros AR2313+AR5112
<b>Memory</b>	4 MN FLASH, 16 MB RAM
<b>RF Module</b>	Atheros AR2313+AR5112

### Software

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

### Physical

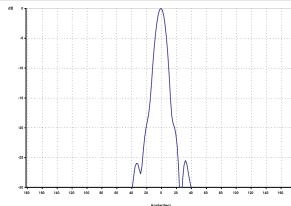
<b>Dimensions</b>	320 mm X 320 mm X 100 mm
<b>Operating / Storage Temperature</b>	-40°C - +70°C / -40°C - +85°C
<b>Enclosure</b>	IP65 Rated, UV Protected, Outdoor Mountable, Weather Protected
<b>Power Adapter</b>	15V / 1.2A DC, Passive Ethernet (Power over Ethernet Injector included)
<b>LEDs</b>	3 -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

### Antenna

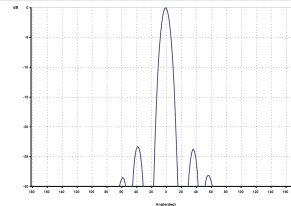
Type 23 dBi Flat Panel Antenna

Built-in Antenna Patterns

E-Plane



H-Plane



### Operational Distance

<b>Bit Data Rate</b>	54 Mbps	48 Mbps	36 Mbps	24 Mbps	18 Mbps	12 Mbps	9 Mbps	6 Mbps
<b>NETBRIDGE AIRJET 5-23</b>	6400 m	8600 m	11800 m	14400 m	18200 m	22400 m	32000 m	39000 m

### Regulatory Compliance

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

### Warranty

One year, Limited

## Contact Information:

