

IBR 1300 Series Compact Carrier Class Radio & Switch Fast and Economical Urban Connectivity Anywhere

At 1.6 Gbps and 8x10x4 inches, the highly compact IBR 1300 is the fastest, smallest and most versatile 5GHz radio available. The IBR 1300 delivers higher performance by enabling the full radio spectrum to be available at all times to both the transmit and receive channels, while at the same retaining very low latency. This innovative use of FDD (Frequency Division Duplex) transmission dramatically cuts installation time through immediate alignment of the radio link, and further advances Fastback's Extreme Interference Protection (XIP) for more

connections in more locations. In addition, beamforming technology on both transmit and receive channels improves reliability for high density, large scale deployments. And the IBR 1300 is the only radio in its class that can operate using integrated AC power when no other source is available, ideal for small cell deployments in city centers and urban locations using street furniture.

Ease of Deployment Redefined

The discrete form factor and other advances enable the ultimate freedom of location for mounting on any tower, building or street asset anywhere backhaul is required to support carrier grade backhaul service

or enterprise connectivity. During installation, an immediate IBR 1300 link can always be achieved without "swapping ends" and incurring the related cost. This simplifies installation, troubleshooting, configuration and cuts the cost of deployment spares in half. The wide azimuthal and vertical apertures of the IBR make installation and operation simple, with quick and uncomplicated alignment.



Wireless Extension of Existing Network Architecture

- Fiber performance in any line of sight (AnyLOS™)
- Scalable in capacity: 1.6 Gbps at 500m range (NLOS) and 2km range (LOS), 900 Mbps at 3km range (LOS), 300 Mbps at 13km range (LOS)¹
- <400 µsec latency
- Compact design: 200mm width, 260mm height, 90mm depth
- UNI, NTE-Demarc, SLA on a light pole: monitor, manage and deliver an SLA to any location
- Mounts anywhere: light poles, buildings, strand
- Ruggedized, outdoor device: IP66
- Power over Ethernet, or integrated AC power
- Interference Mitigation: Extreme Interference Protection (XIP™) technology
- Auto Alignment: Auto discovery & synchronization via innovative antenna system
- Carrier Ethernet services:
 - *Transport*: full layer 2
 - *SLA assurance*: via full-featured OAM capability
 - *Timing & Synchronization over NLOS link*: Packet-based timing over wireless, distributed 1588v2 transparent clock
 - *Network synchronization*: support in any location
 - *Service uptime*: carrier-grade physical link and network layer redundancy
 - *Security*: service protection and reliability

Intelligent Backhaul Radio™ 1300 Series

Specifications

Specifications	IBR
RADIO	
Speed and Range	Typical: Scalable up to 1.6 Gbps at 500m range (NLOS) and 2km range (LOS), 900 Mbps at 3km range (LOS), 300Mbps at 13km range (LOS) ¹
Latency	Typical: <400µsec
Frequency bands	FDD+ (no A or B side) operation across all 5 GHz UNII bands
Antenna Beamwidth	20 degrees, steerable over 40 degrees
EIRP	FCC: Up to +42 dBm
Adaptive Rate Modulation	Supported via proprietary adaptive algorithms
Interference Mitigation	Supported via proprietary avoidance and cancellation algorithms
Diversity	Supported via proprietary antenna array signal processing
Security	AES-256 OTA Encryption
SWITCH	
Carrier Ethernet Features	Y.1731 and 802.1ag OAM, Q in Q, RFC 2544 reflection, QoS, Broadcast / Unknown / Multicast (BUM) filter, Configurable latency per queue
Interfaces	1 x GbE (Cu), 1 x GbE (SFP or Cu), 1 ALOS radio interface (see above)
QoS	802.1p and DSCP classification, strict priority scheduling, WDRR scheduling
Timing	1588v2 Transparent Clock
Management	HTTPS, ssh, Telnet, SNMP v2c & v3, IPv6, Dying Gasp
Dimensions (W x H x D)	200mm width, 260mm height, 90mm depth
Weight	4 kg
Power Input	IBR-1300: PoE IBR-1301: 90-240 VAC
Temperature	-40C to +60C operating -55C to +85C storage

Certifications	IBR
Radiated	FCC Part 15, IC RSS-247, EN 301 893
Safety	TUV (UL60950-1, UL60950-22), CE Mark EN 60950-1, EN 60950-22, EN 55022, EN 55024, EN 62311
EMC/EMI	FCC Part 15 Class B, EN 301 489
Environmental	IP66

1. Range and throughput performance based on FCC operation

About Fastback Networks

Fastback Networks was founded with a vision to deliver innovative technology for the mobile infrastructure of the future. Fastback solutions enable network operators to expand and enhance services, and private networks to secure, monitor and manage operations via high capacity data connectivity. With insights derived from the collective team's experience building leading edge radio and data networking solutions, Fastback Networks looks at the challenges of 4G/5GLTE deployment with fresh eyes and better ideas, and develops transformational mobile backhaul solutions that enable the acceleration of the mobile future. Fastback Networks is a privately held company funded by Business Growth Fund, Foundation Capital, Granite Ventures, Harmony Partners, Juniper Networks Junos Innovation Fund, and Matrix Partners. More information is available at www.fastbacknetworks.com.



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