

Liberator V100



High capacity 60GHz band radio powers macro and small cell backhaul and enterprise connectivity

The Liberator V100 is an easy to deploy, cost-effective, wireless Ethernet point-to-point bridge operating in the 60 GHz millimeter wave V band, delivering full-duplex capacity of 100Mbps over distances of up to 1 km. With a minimal 18 x 18 cm form factor, this all-outdoor platform is optimized for invisible street level deployments in challenging high density networks. A high gain antenna with low sidelobes, combined with the option to use multiple channels, ensures excellent interference immunity for colocated radios on a single pole. The antenna beam-width is sufficiently wide to allow for the pole sway, twist and tilt encountered with small cell backhaul links. Combining carrier class performance with advanced features such as adaptive modulation, multi-channel operation, low latency, and AES 256 bit encryption upgrade, the V100 supports a variety of short haul connectivity and backhaul applications.

Backhaul and Short Haul Applications

The Liberator V100 is optimal anywhere that high capacity, short haul point-to-point connectivity is needed, including dense urban networks. Applications include campus connectivity and building to building private links.

Novel & Innovative Technology

A combination of leading-edge technology and superior attention to detail in every element of design and manufacture means that the V100 radio packs huge performance and resilience into a small form factor platform. All housed in a lightweight robust aluminum housing to withstand even harsh weather conditions. The use of frequency division duplexing (FDD) means that the full capacity of the radio is available in both directions simultaneously, rather than being shared.

About V Band

The V band, between 57 and 64 GHz, is available on a licence-exempt basis, enabling backhaul and connectivity links to be rapidly and cost-effectively deployed. In this band, radios can operate without interference issues, even when deployed in close proximity in highly dense networks, due to the oxygen absorption characteristics of this millimeter wave band. Large networks can be deployed and operate at extremely high densities with tens of links on a single rooftop or street.

Form and function combined in powerful, feature-packed device

- Interference-free operation, 60 GHz millimeter wave V band
- Up to 1km range
- Up to 100Mbps full duplex capacity with FDD
- All outdoor unit
- Minimal form factor & integrated antenna
- Robust aluminum housing withstands weather conditions
- 256 bit AES encryption upgrade available for added security
- SyncE synchronization

Specifications

Frequency bands	57-64 GHz band
Modulation	QPSK
Range	Up to 1 km
Ethernet throughput	Full duplex: 100Mbps (QPSK)
Maximum Tx power	+8 dBm
Maximum EIRP	46 dBm
Channel width	100 MHz
Antenna gain	38 dBi
Link adaptation	Adaptive coding and modulation, ATPC
Ultra-fast boot time	10 seconds from power-up to full data transmission
Availability	Up to 99.999% (use Link Availability Calculator)
Mean time between failures (MTBF)	25 years
Wind load	160 km/h (operating) and 200 km/h (survival)
Synchronization	SyncE with patent-pending "Snapback" technology
VLAN for management	IEEE 802.1Q
Quality of service (QoS)	802.1p, 8 queues
Network management	SNMP v1, v2c
Graphical user interface (GUI)	HTTP web browser
Firmware control	Dual firmware banks
Encryption	AES 256 bit upgrade available
Data ports	GigE
Alignment	Voltmeter port, compact alignment scope
Outdoor unit (ODU) terminal size	182 x 182 x 68 mm
Weight	2.5 kg (ODU only)
Power supply	Power Over Ethernet ("Ultra-PoE"/PoE++), consumption 30W
Operating temperature	-40°C to +55°C

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/5G LTE 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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