Bigleaf Router Datasheet

Bigleaf Cloud-first SD-WAN is the next generation of internet optimization – based on the natural redundancy found in leaf veins. The Bigleaf platform is distributed across the Bigleaf CPE router, and Bigleaf Gateway Clusters in the core of the internet, providing end-to-end visibility and control.

This datasheet provides information about the Bigleaf routers and the cellular router (Teltonika) used with Bigleaf Wireless Connect.

Bigleaf Router Features

Same-IP Failover

Border Gateway Protocol (BGP)-like dedicated public IP address block(s) provided from the Bigleaf router LAN interface provides seamless failover of inbound and outbound traffic.

- All application sessions maintained through consistent IP addressing and fast failover.
- Physical redundancy across geographically diverse Bigleaf Gateway Cluster datacenters, maintaining consistent IP addressing.

Intelligent Load Balancing

Bigleaf enables you to configure how network traffic is routed to WAN circuits, called Load Balancing. You can let Bigleaf decide how traffic is routed among your circuits, or you can decide whether to allow traffic to access a circuit in only specific cases.

- 10x per second asymmetric/unidirectional ISP circuit health monitoring.
- Automatic session-based load balancing for optimal circuit usage efficiency and application health, based on four application algorithms:
  - Real Time
  - Interactive
  - Bulk Data
  - High-Load Bulk Data (download only)

- Mid-session Same-IP re-routing for all applications based on real time path health and application need.

- Sensitivity down to 0.3% packet loss, 15ms latency increase, and 20ms jitter.

- Automatic traffic identification works without configuration for almost all customer use cases. Custom configurations are available as needed.

- Advanced configuration options that enable granular selection of load balancing, backup only, or blocking, based on traffic class.

Dynamic QoS

Bigleaf's dynamic Quality of Service (QoS) system provides effective and automatic prioritization for traffic traversing the public internet.

- Application traffic is automatically identified and grouped into six classes:

- VoIP

- Realtime

- Urgent

- Interactive

- Bulk Data

- Other

- Algorithmic identification of ISP circuit clean capacity in real time for true internet wide QoS.

- Dedicated Gateway Cluster routing of all customer traffic for 100% control of prioritization, even with bursty download TCP or large UDP flows.

- Automatic traffic classification works without configuration for almost all customer use cases. Custom rules are available as needed.

Plug and Play Install

Bigleaf routers arrive pre-configured and tested for a seamless, zero configuration installation experience.

- Simple IP address swap on the existing firewall WAN interface completes the install and doesn't require breaching the existing LAN security perimeter.

- Bigleaf support is available 24/7/365 to assist as needed.

Centralized Visibility and Reporting

Bigleaf Cloud Connect provides centralized visibility and alerting. Detailed data is provided on ISP circuit quality, bandwidth utilization, and more. Email alerts provide real time notification of up/down status and health issues.

Bigleaf Router Hardware

BLR-108
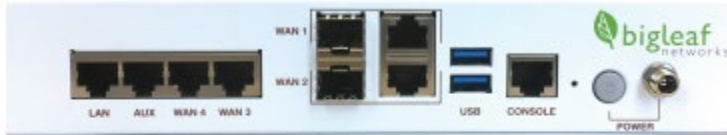
BLR-112

Bigleaf Router Specifications

	BLR-108	BLR-112
GENERAL		
Throughput[1]	500 Mbps /500 Mbps	Up to 3 Gbps/ 3 Gbps
MTU[2]	1420 bytes	
ISP WAN ports	4 x GbE RJ45	4 x GbE RJ45 or 4 x10 GbE SFP+[3]
LAN ports to Customer Firewall	1 x GbE RJ45	1 x GbE RJ45 or 1 x 10GbE SFP+
Multi-Use Fiber ports	2 x SFP/RJ45	4 x SFP+
CPU Platform	Intel Atom	Intel Core
HARDWARE REDUNDANCY		
Next Business Day Hardware Replacement	Yes	Yes
Standard HA (2 x routers)	Upgrade Option	
PHYSICAL		
Mounting Options	1U (each)	1U (each)
Dimensions (W x D x H)	9.1" x 6.8" x 1.65	17" x 11.8" x 1.75"
Power Draw	40W	150W
Fanless	Yes	No
Operating Environment	0 - 40° C temperature, 10-90% humidity	
Compliance	FCC, CE, UL	
MTBF (Hours)	178,128 @ 40C	178,128 @ 40C

1. Typical internet usage patterns and packet sizes.
2. Bigleaf system will set TCP MSS appropriately and transparently fragment UDP, IPSEC, and other non-TCP packets, so no user equipment changes are generally needed. Stated size is for Bigleaf standard unencrypted tunnels.
3. 4x10 GBE SFP+ ports are available with the expansion card for the BLR-112.

Cellular Router Features (Teltonika)

Bigleaf Wireless Connect includes a Teltonika RUTM50 device that connects to your Bigleaf router. This device supports both 5G and 4G LTE and offers an additional wireless circuit to ensure uninterrupted access and optimal performance of your cloud-based mission-critical tools and resources.
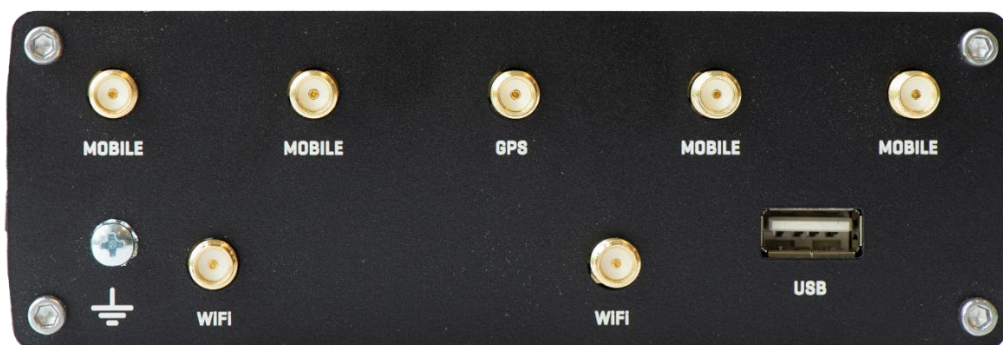
The Teltonika device shipped from Bigleaf includes the following accessories:

- Power cable and power supply
- 4 Mobile antennas
- Ethernet cable

The images below show the ports and connectors on the Teltonika device.
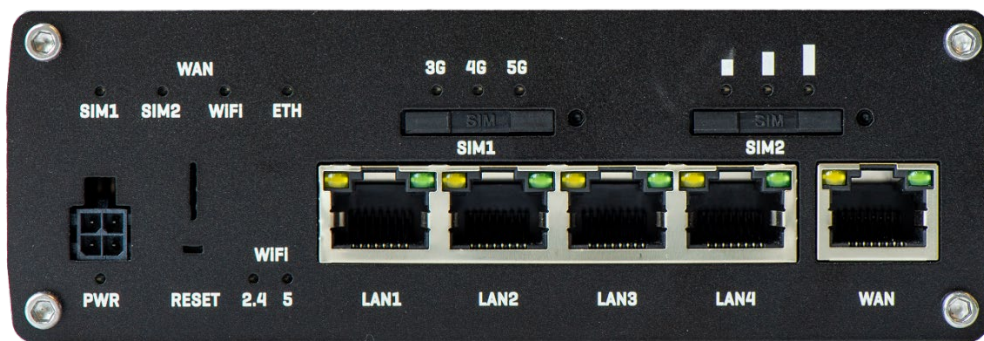
Front

Back

Teltonika RUTM50 Router Specifications

Item	Description
Mobile	5G Sub-6 GHz SA, NSA 2.4, 3.4Gbps DL (4x4 MIMO) 900, 550Mbps UL (2x2 MIMO); 4G (LTE): DL Cat 19 1.6Gbps (4x4 MIMO), UL Cat 18 200Mbps*
Antenna	4 x SMA for Mobile
SIM	2 SIM cards (AT&T | VZW)**
LAN	4 x ETH ports, 10/100/1000 Mbps
Power	4-pin industrial DC power socket Idle: <5 W, Max: <18 W
Dimensions	132 x 44.2 x 95.1 mm

* Theoretical download limit per specifications

** Only one SIM is provisioned and operational

Router placement and signal strength

The number of illuminated signal strength LEDs indicates how strong your signal is. If all of the signal strength LEDs are illuminated, you have a strong signal. If there are one or two illuminated, you can try these options to increase signal strength:

- Move the device closer to a window or area with better line of sight to the outdoors.
- Place the device in an elevated position; the top of a rack, shelf, or cabinet.
- Purchase a longer Ethernet cable to move the device to a different location. Keep in mind that Ethernet cable signal strength deteriorates after 328 feet.
- Keep the device away from solid or concrete walls, metal bookcases, and other items that can block a signal.