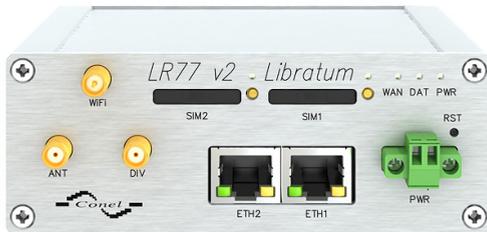# Cellular Router
UMTS & GPRS/EDGE
LR77 V2 Libratum Balanced Router

PRODUCT FEATURES

- 2-port Ethernet switch
- 2 independent LAN
- Models with Wi-Fi option: AP or client mode
- Dual-SIM fail over
- Antenna Rx Diversity
- Operating temperature up to +5°C
- Metal or plastic casing

Balanced LR77v2 Libratum a UMTS non-modular wireless router features high speed data rates 100 Mbps, two Ethernet 10/100 ports and dual-SIM failover capability for mission critical applications. This router is particularly suited to the demands of the "Transaction Management" industry such as point-of-sale terminals, remote ATMs and vending terminals as well as a huge variety of intelligent remote monitoring and control applications in the Transport, Energy and Security sectors.

Key Features

This exceptionally fast UMTS LR77v2 Libratum wireless router is equipped with two Ethernet 10/100 ports and two SIM cards for backup communication in mobile operator networks and provide failover to each other. WiFi models are available.

Configuration is done via a web interface protected by password. The 4G UMTS router supports creation of VPN tunnels using IPsec, OpenVPN and L2TP to assure safe communication. Web interface provides detail statistics about router activity, signal strength, detailed log, etc. Cellular router supports functions: DHCP, NAT, NAT-T, DynDNS, NTP, VRRP, control by SMS and many other functions.

Other diagnostic functions for continuous communication include automatic inspection of PPP connection offering an automatic restart feature - in case of connection losses, or hardware watchdog which monitors the status of the router. With the help of a start up script window you may insert Linux scripts for various actions.

For some applications the key option is to create several different configurations for one UMTS wireless router, the so-called profiles (maximum of 4), and the option to switch among them (for example via SMS, binary input status, etc.) is essential. Cellular wireless routers may automatically upgrade configuration and firmware from server. This allows mass reconfiguration of many routers in one time.

SELECTED APPLICATIONS

Transportation and security
IT and communication
Self-service terminals
Energy and power industry
Meteorology, alarm and warning systems

ORDERING INFORMATION

Note: For more configuration information, contact Advantech B+B SmartWorx or your local distributor. A specification configurator is available online.

MODEL NUMBER	ETH 10/100	SIM	I/O	WIFI	PLASTIC CASE	METAL CASE
LR77 v2 Libratum set	2	2	1		X	
LR77 v2 Libratum WiFi set	2	2	1	1	X	
LR77 v2 Libratum SL set	2	2	1			X
LR77 v2 Libratum WiFi SL set	2	2	1	1		X

Europe, Middle East, Africa, Asia, South America, Latin America.
Check with your local distributor for availability and options.

ACCESSORIES

MDR-40-24	24VDC, 20W, 1 A power supply
C5UMB3FBG	Category 5E UTP 1 m (3 ft)- Beige
C5UMB10FBL	Category 5E 3m (10 ft) - Blue

R-*SEE*NET™

Router Management Software consisting of two parts:
R-SeeNet Server application can be programmed to automatically send SNMP queries (Simple Network Management Protocol) to each router defined in the network. The application retrieves status information from the routers and records it in the SQL database.
R-SeeNet PHP is a web-based application that accesses the SQL database and provides the network administrator detailed information on individual routers and network health.

SMART*CLUSTER*™

SmartCLUSTER is an OpenVPN server for creating safe private network communication systems via the internet. Configure multiple routers/LANs via the same VPN tunnel. Create router configuration files and secure OpenVPN tunnel certificates. Monitor connection status.

All product specifications are subject to change without notice.
LR77 v2 Libratum Balanced Routers_2016ds

Cellular Router
UMTS & GPRS/EDGE

LR77 V2 Libratum Balanced Router

SPECIFICATIONS

INTERFACES

Ethernet 2x	10/100 Mbits, independent or bridged
SIM	2 mini SIMs (2FF)

ANTENNA

SMA connector, 50 Ohm	

PARAMETERS - LTE MODULE

LTE	Bit rate 100 Mbps (download) / 50 Mbps (upload) 3GPP rel. 8 standard Supported bandwidths: 5 MHz, 10 MHz, 20 MHz Supported frequencies: 800 / 900 / 1800 / 2100 / 2600 MHz
HSPA+	Bit rate 42 Mbps (DL) / 5,76 Mbps (UL) 3GPP rel. 7 standard UE CAT. 1 to 6, 8, 10, 12, 14 3GPP data compression Supported frequencies: 900 / 2100 MHz
UMTS	PS bit rate 384 kbps (DL) / 384 kbps (UL) CS bit rate 64 kbps (DL) / 64 kbps (UL) W-CDMA FDD standard Supported frequencies: 900 / 2100 MHz
GPRS/EDGE	Bit rate 237 kbps (DL) / 59,2 kbps (UL) GPRS multislot class 10, CS 1 to 4 EDGE multislot class 12, CS 1 to 4, MCS 1 to 9 Supported frequencies: 900 / 1800 / 1900 MHz
GPRS/EDGE - Supported Power Classes	EGSM 900: Class 4 (33 dBm) GSM 1800/1900: Class 1 (30 dBm) EDGE 900: Class E2 (27 dBm) EDGE 1800/1900: Class E2 (26 dBm)

32B ARM MICROPROCESSOR

Memory	512 Mb DDR SDRAM 128 Mb FLASH 1 Mb MRAM
Interface	Serial interface RS232 Ethernet interface 10/100 Mbit/s USB 2.0 interface

POWER

Source	9 - 36 VDC
Consumption	2.3W reception 3.5W (GPRS transmission) 5.5W (LTE transmission)

MECHANICAL

Dimensions	Plastic version - 51 x 87 x 116 mm Metallic (-SL) version - 42 x 87 x 113 mm
Protection	IP20
Weight	Plastic: 150 g Metallic (-SL): 280 g

ENVIRONMENTAL

Operating Temperature	-40° to +75°C
Storage Temperature	-40° to +85°C
Humidity	0 to 95%, non-condensing

STANDARDS/REGULATIONS

	ISO9001, CE, PCT, RoHS
Telecom/Emission	ETSI EN 301 511 v9.0.2, ETSI EN 301 908-1 v5.2.1, ETSI EN 301 908-2 v5.2.1, ETSI EN 301 908-13 v5.2.1
EMC	ETSI EN 301 489-1 v1.9.2
Safety:	EN 60950-1:2006 + A11:2009 + A1:2010 + A12:2011 + A2:2013, EN 62311:2008
E8 - EMC for Devices for Transportation	E8 homologation number: 10R – 04 7950