Cellular Routers LTE
LR77 V2 Libratum

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 +75°C
- Metal or plastic casing

Balanced LR77v2 Libratum a LTE 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 LTE 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 LTE 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 LTE wireless router, the so-called profiles (maximum of 4), and the option to switch among them (for example via SMS) 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: Check with your local distributor for availability and options. Contact Advantech B+B SmartWorx distributors.

BB - LR2L710XXX

Accessories		
0	No Accessories (DIN holder included)	
1 (set)	Accessories with EU power supply	
2 (set)	Accessories with UK power supply	
3 (set)	Accessories with Australia power supply	
4 (set)	Accessories with US power supply	

Enclosure	
1	Plastic enclosure
2	Metal enclosure

WiFi	
0	No WiFi
7	WiFi

SPECIFICATIONS

INTERFACES

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

ANTENNA

2(3)× SMA connector, 50 Ohm

CPU & MEMORY

CPU	32b ARM microprocessor, 0.25 DMIPS per MHz
Flash memory	16 MB DDR SDRAM
RAM	64 MB
M-RAM	128 kB

POWER

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

MECHANICAL

Dimensions Plastic box	51 x 87 x 116 mm (DIN 35 mm)
Dimensions Metallic box	42 x 87 x 113 mm (DIN 35 mm)
Protection	IP30
Weight Plastic box	150g
Weight Metallic box	280 g

ENVIRONMENTAL

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

WIFI *optional

Antenna connector	R-SMA – 50 Ohms
Supported WiFi band	2.4 GHz
Standards	802.11b, 802.11g, 802.11n
2.4 GHz supported channels	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
RX Sensitivity	11b, 11 Mbps: typ. -85 dBm 11g, 54 Mbps: typ. -70 dBm (HT20) 11n, MSC7: typ. -66 dBm (HT40) 11n, MSC7: typ. -62 dBm
TX Output Power	11b, 11 Mbps: min. 18, typ. 19, max. 20 dBm 11g, 54 Mbps: min. 14.5, typ. 16, max. 17.5 dBm 802.11n (HT20): min. 13.5, typ. 15, max. 16.5 dBm 802.11n (HT40): min. 13.5, typ. 15, max. 16.5 dBm
Type of device	Access point, station

STANDARDS/REGULATIONS

Telecom/Emission	ETSI EN 301 511 V12.5.1 (2017-03), ETSI EN 300 440 V2.1.1 (2017-03), ETSI EN 301 908-1 V11.1.1 (2016-07), ETSI EN 301 908-2 V11.1.1 (2016-07), ETSI EN 301 908-13 V11.1.1 (2016-07), ETSI EN 300 328 V2.1.1 (2016-11)
EMC	ETSI EN 301 489-1 V2.1.1 (2016-11), Draft ETSI EN 301 489-19 V2.1.0 (2017-03), Draft ETSI EN 301 489-52 V1.1.0 (2016-11), ETSI EN 301 489-17 V3.1.1 (2017-02)
Safety:	EN 60950-1:2006 + A11:2009 + A1:2010 + A12:2011 + A2:2013 + AC:2011, EN 62311:2008
E-Mark – EMC for devices in transportation	E-Mark homologation number: 10R – 04 7950

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 / 1800 / 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 / 1800 / 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 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)

SOFTWARE FEATURES

Linux based, possibility to program your own application

NTP client, NTP Server – time synchronization

SMS communication – AT commands on RS232, Ethernet and I/O

M-RAM memory inside – router statistic´s saving into memory

NETWORKING

DHCP – automatic IP addressing in LAN network

NAT/PAT – IP address and ports translation between inside/outside network

VRRP – virtual backup router function

DynDNS client – access to the router with a dynamic IP address

Dial-in – the ability to communicate over dial CSD call

PPPoE Bridge – PPP frames encapsulation inside ETH frames

VPN TUNNELING

IPsec, OpenVPN, L2TP – secure encrypted tunnels

CONFIGURATION AND DIAGNOSTIC

HTTP server – configuration via web server

Telnet – configuration and access to the file system

SNMP – router diagnostics, communication with I/O and M-Bus

GPRS state signalization by LED

On-line info on GSM signal status (level, cell, neighbors)

SMS info – power on, GPRS connection or disconnection

SMS control – on/off GPRS connection, switch SIM, I/O etc.

Transferred data counting, one more APN as backup

Remote router group configuration change, switching among configuration profiles

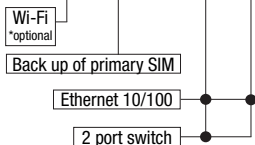SSH – encrypted configuration and access to the file system

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ACCESSORIES

ORDER CODE	DESCRIPTION	INCLUDED IN PACKAGE	INCLUDED IN SET PACKAGE	SOLD SEPARATELY
BB-SBD40	Metal DIN holder for Metal versions of routers v2	✔	✔	✔
BB-CPD2-B	Plastic DIN holder for Plastic versions of routers v2	✔	✔	✔
BB-GA.110.101111	Magnet mount antenna LTE 698MHz to 960MHz, 1575.42MHz, 1710MHz to 2700MHz, 3500MHz, 1M RG174 Cable, SMA(M) Connector Typical 40% Efficiency and 3dBi Peak Gain			✔
BB-TG.10.0113	Antenna LTE/UMTS/GSM, Terminal, SMA-M		2×	✔
BB-AO-ABASE-C16	Magnetic mount base for terminal antenna, 3m cable, SMA connector			✔
BB-AW-A24G-M5SRP	Antenna WiFi stick 5dB, SMA-RP connector		✔	✔
BB-CON-WR2	2-pin Terminal block for Power Supply	✔		✔
BB-RPS-v2-WR2-EU	Power supply with WR connector (2 pins) - 12V/1A - EU plug		✔	✔
BB-RPS-v2-WR2-US	Power supply with WR connector (2 pins) - 12V/1A - US plug		✔	✔
BB-RPS-v2-WR2-UK	Power supply with WR connector (2 pins) - 12V/1A - UK plug		✔	✔
BB-RPS-v2-WR2-AUS	Power supply with WR connector (2 pins) - 12V/1A - AUS plug		✔	✔
BB-KD-ETH	Ethernet cross cable 1.5m		✔	✔
Quick Start Guide		✔	✔	

LR77 v2 LIBRATUM
2× SIM card holder
2× LAN port, Wi-Fi optional

Wi-Fi *optional

Back up of primary SIM

Ethernet 10/100

2 port switch

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