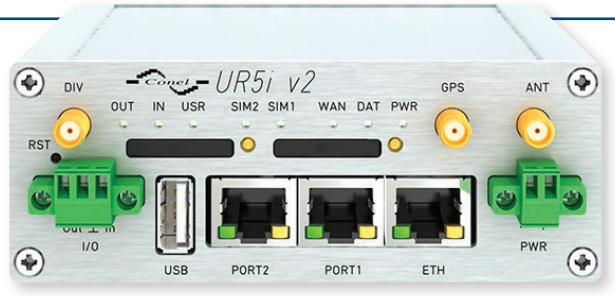
Cellular Routers
3G UMTS/HSPA+
UR5i v2 Series

B+B SmartWorx
Powered by ADVANTECH



PRODUCT FEATURES

- Designed for M2M applications
- WiFi, M-BUS and Modbus TCP / Modbus RTU
- Modular design to fit application requirements
- Single or dual SIM cards for redundant backhaul
- Up to 5.7 Mbps upload to 14.4 Mbps download
- LINUX platform & advanced networking functions
- Advanced security features

3G UMTS/HSPA routers, UR5i v2 series, are used to wirelessly connect various equipment and devices via Ethernet 10/100 to the Internet or intranet. High data transfer speed of up to 14.4 Mbit/s (download) and upload speed up to 5.76 Mbit/s, make it an ideal wireless solution for traffic and security camera systems, individual computers, LAN networks, automatic teller machines (ATM) and other self-service terminals, etc.

Key features
This exceptionally fast 3G UR5i v2 wireless router is equipped with one Ethernet 10/100, one USB Host port, one binary Input/Output (I/O) port and one SIM card. To save and backup communication data, a version with 2 x SIM cards is available. A wide range of user-defined interface options further expands optional Port1 and Port2. (EX: Ethernet port 10/100, serial interface ports RS232/RS485/RS422/M-Bus/WiFi or (I/O - CNT). Port2 may be equipped with serial interfaces RS232/RS485/RS422/M-Bus or (I/O - CNT). Routers are available in either plastic or metal casings. FULL version of the router is equipped with GPS.

Configuration is done via protected password web interface. The 3G UMTS/HSPA+ router supports VPN tunnel creation using IPsec, OpenVPN and L2TP to ensure safe communication. Web interface provides statistics about router activities, 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 ensuring continuous communication include automatic inspection of PPP connection offering an automatic restart feature in case of connection losses, and 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 and, for some applications the option to create several different configurations for one 3G wireless router, profiles (maximum of 4), and the option to switch between them (for example via SMS, binary input status, etc.). Cellular wireless routers can automatically upgrade configuration and firmware from server. This allows mass reconfiguration of multiple routers at one time.

SELECTED APPLICATIONS

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

ORDERING INFORMATION

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

MODEL NUMBER	ETH 10/100	USB	SIM	RS232	RS485/ RS422	M-BUS	I/O	I/O (CNT)	WIFI	GPS
Basic Versions:										
BB-UR5i v2B	1	1	1				1			
BB-UR5i v2B ETH	2	1	1				1			
BB-UR5i v2B RS232	1	1	1	1			1			
BB-UR5i v2B RS485/422	1	1	1		1		1			
BB-UR5i v2B M-Bus	1	1	1			1	1			
BB-UR5i v2B CNT	1	1	1				1	1		
Full Versions:										
BB-UR5i v2F	1	1	2				1			1
BB-UR5i v2F ETH	2	1	2				1			1
BB-UR5i v2F RS232	1	1	2	1			1			1
BB-UR5i v2F RS485/422	1	1	2		1		1			1
BB-UR5i v2F M-Bus	1	1	2			1	1			1
BB-UR5i v2F CNT	1	1	2				1	1		1
BB-UR5i v2F SWITCH	3	1	2				1			1
BB-UR5i v2F WIFI	1	1	2				1		1	1
Add "SL" suffix	Router metal enclosure (example: LR77 v2B SL)									

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

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SPECIFICATIONS

FIXED INTERFACES	
Standard Ports	
Ethernet	10/100 Mbits, independent or bridged
SIM	SIM Card
I/O	Binary input/output
USB	USB 2.0 Host, Type A
OPTIONAL INTERFACES	
Port 1	Ethernet (10/100Mbps), RS232, RS422/485, M-Bus I/O Input/Output, Ethernet Switch (with port 2)
Port 2	RS232, RS422/485, M-Bus, WM-Bus, SDH, WiFi Ethernet Switch (with port 1)
Optional	2nd SIM card holder ("F" router versions)
ANTENNA CONNECTORS	
3x SMA – 50 Ohm	
POWER	
Source	9 - 36 VDC
Consumption	Idle - 2.3 W GPRS - to 3.5 W (GPRS transmission) LTE - to 5.5 W (LTE transmission)
MECHANICAL	
Dimension	Plastic version - 51 x 87 x 116mm Metallic (-SL) version - 42 x 87 x 113mm
Protection	IP30
Weight	Plastic: 150 g Metallic (-SL): 280 g
ENVIRONMENTAL	
Operating Temperature	-40 to +75°C
Storage Temperature	-40° to +85°C
Humidity	Operating - 0 to 95% relative humidity non condensing Storage - 0 to 95% relative humidity non condensing

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

STANDARDS/REGULATION	
Telecom and Emission	ETSI EN 301 511 v9.0.2, ETSI EN 301 908-1 v6.2.1, ETSI EN 301 908-2 v5.4.1, ETSI EN 300 440-2 v1.4.1
EMC	ETSI EN 301 489-1 v1.9.2, ETSI EN 301 489-3 v1.6.1, ETSI EN 301 489-24 v1.5.1
Safety	EN 60950-1:2006 + A11:2009 + A1:2010 + A12:2011 + A2:2013
E8	E8 homologation number: 10R – 04 7054

ACCESSORIES

BB-SBD40	Metal DIN holder for Metal versions of routers v2
BB-CPD2-G	Plastic DIN holder
BB-AO-AGSM-TG09	Antenna GSM/UMTS stick 2dB - Penta-band, SMA-M connector
BB-AO-AUMTS-M3S	Antenna GSM/UMTS magnetic 3dB - Quad-band, 3m cable, SMA-M connector
BB-AO-AGSM-MG9S	Antenna GSM/UMTS magnetic 9dB - Quad-band, 3,5m cable, SMA-M connector
BB-AW-A24G-M5SRP	Antenna WiFi stick 5dB, SMA-RP connector
BB-AP-AGNSS-SMA	Antenna GPS/GLONASS, active (3V), magnetic, 33 - 34dB, 3m cable + SMA connector
BB-KD-ETH	Ethernet cross cable 1,5m
BB-CON-WR3	3-pin terminal block for IO
BB-CON-WR2	2-pin Terminal block for Power Supply
BB-RPS-v2-WR2-X	Power supply with WR connector (2 pins) - 12V/1A X = EU - EU plug X = US - US plug X = UK - UK plug X = US - AUS plug
BB-KN-WR2-3	Power supply cable 2-wire, 3m

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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

GPS SPECIFICATIONS *GPS is not available when the router is equipped with the LTE module 450 MHz!	
Antenna	50 Ohms – active
Protocols	NMEA 0183 v3.0
Frequency	1575.42MHz
Sensitivity	Tracking: -161dBm Acquisition (Assisted): -158dBm Acquisition (Standalone): -145dBm
Acquisition time	Hot start: 1 s Warm start: 29 s Cold start: 32 s
Accuracy	Horizontal: < 2m (50 %); < 5m (90 %) Altitude: < 4m (50 %); < 8m (90 %) Velocity: < 0.2 m/s

32B ARM MICROPROCESSOR	
Memory	512 Mb DDR SDRAM 128 Mb FLASH 1 Mb MRAM

I/O PORT	
Binary input	Reed contact with trigger level 1.3 up to 1.4 V
Binary output	100 mA/ max. 30 V

PARAMETERS - HSPA+ module	
HSPA+	Bit rate 14,4 Mbps (DL) / 5,76 Mbps (UL) 3GPP rel. 6/7 standard Data compress 3GPP
UMTS	Bit rate 384 kbps (DL) / 384 kbps (UL) 3GPP rel. 4 standard
GPRS/EDGE	EDGE bit rate 237 kbps (DL) / 237 kbps (UL) GPRS bit rate 85,6 kbps (DL) / 85,6 kbps (UL) Multislot class 12, CS 1 to 4, 3GPP rel. 99/4 standard
Support channels	GSM/GPRS/EDGE: Quad band, 850/900/1800/1900 MHz UMTS/HSDPA/HSUPA/HSPA+: Five band, 800/850/900/1900/2100 MHz

R-SEENET™

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.

SMARTWORX HUB™

SmartWorx HUB takes management of your devices to new levels of flexibility and efficiency. Giving you a complete view of your installed device population, SmartWorx Hub delivers invaluable configuration, diagnostic and management facilities directly to your desktop, wherever you are.

Manage a single device or your entire device population at the same time. Whether you need to modify configuration parameters, download or upgrade installed firmware and applications or view detailed information regarding network statistics, you can do it all from any location.