

Cellular Routers 3G UMTS/HSPA+

UR5i v2 Series



SPECIFICATIONS

FIXED INTERFACES - BASIC VERSION

1× Ethernet	10/100 Mbps, independent or bridged
1× SIM	SIM Card
1× I/O	Binary input/output
1× USB	USB 2.0 Host, Type A

OPTIONAL INTERFACES

1× PORT 1	Ethernet (10/100Mbps), RS232, RS422/485, M-BUS I/O Input/Output, Ethernet Switch (with PORT 2)
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ANTENNA CONNECTORS

2x SMA – 50 Ohm

FIXED INTERFACES - FULL VERSION

1× Ethernet	10/100 Mbps, independent or bridged
2× SIM	SIM Card
1× I/O	Binary input/output
1× USB	USB 2.0 Host, Type A

OPTIONAL INTERFACES

1× PORT 1	Ethernet (10/100Mbps), RS232, RS422/485, M-BUS I/O Input/Output, Ethernet Switch (with PORT 2)
1× PORT 2	RS232, RS422/485, M-BUS, WMBUS, WiFi Ethernet Switch (with PORT 1)
1× Optional	2nd SIM card holder ("F" router versions)

ANTENNA CONNECTORS

3× SMA – 50 Ohm

POWER

Source	9 - 36 VDC
Consumption	Idle - 2.6 W GPRS - to 3.5 W (GPRS transmission) UMTS - to 5.5 W (LTE transmission)

MECHANICAL

Dimension Plastic Version	51 x 87 x 116mm
Dimension Metallic Version	42 x 87 x 113mm
Protection	IP30
Weight Plastic Version	150g
Weight Metallic Version	280g

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

WIFI *optional ("F" router versions)

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 Hot start: 1 s Warm start: 29 s Cold start: 32 s
Acquisition time	Horizontal: < 2m (50 %); < 5m (90 %) Altitude: < 4m (50 %); < 8m (90 %) Velocity: < 0.2 m/s
Accuracy	

CPU & MEMORY

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

I/O PORT (CNT)

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

STANDARDS/REGULATION

Telecom and Emission	ETSI EN 301 511 V12.5.1, ETSI EN 300 440 V2.1.1, ETSI EN 301 908-1 V11.1.1, ETSI EN 301 908-2 V11.1.1, ETSI EN 300 328 V2.1.1, ETSI EN 300 220-2 V3.1.1
EMC	ETSI EN 301 489-1 V2.1.1, ETSI EN 301 489-3 V2.1.1, Draft ETSI EN 301 489-52 V1.1.0, ETSI EN 301 489-17 V3.1.1
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 7054

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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
- DMZ - via iptables

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

BASIC VERSION

1× SIM card holder, 1× optional port (PORT1)

FULL VERSION

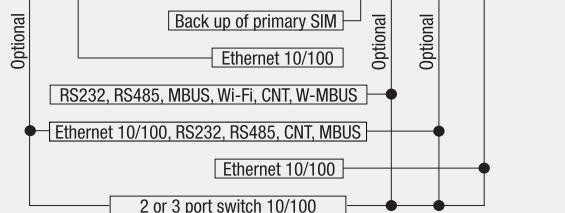
2× SIM card holder, 2× optional port (PORT1,2)



PLASTIC VERSION



METALLIC VERSION



Cellular Routers

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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-G	Plastic DIN holder for Plastic versions of routers v2	✓	✓	✓
BB-TG.09.0113	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 I/O	✓	✓	✓
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		✓	✓
Quick Start Guide		✓	✓	

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.