Cellular Routers & Gateways
for Industrial IoT & Enhanced Networking

4G LTE/3G HSPA+/UMTS/EDGE/GPRS

- **Key features & Networking overview**
- **Product lines introduction**
- **Selection guide**
- **WebAccess/DMP management platform**
- **Case studies**

26-08-19

LTE/HSPA+/UMTS/EDGE/GPRS Cellular Routers & Gateways
... functions, features, networking, diagnostics ...

Functions & Software Features

Advantech routers enhanced functionality incorporates self-diagnostics and a HW watchdog to ensure secure and consistent operation and ultra-reliable wireless connections.

With multi SIM card holders and automatic failover, these routers provide wireless redundancy for critical applications, along with SMS and email messaging and control capability for remote alerts and resets. They support the most commonly used LAN/WAN network protocols and Advantech custom software allows for easy, flexible and effective networking and management.

Remote Router Supervision & Mass Network Management

- HTTP/HTTPS, Telnet/SSH for local and remote configuration and firmware updates
- Schedule automatic configuration and firmware updates from your FTP/HTTP servers
- Up to 4 independent configuration profiles can be stored and remotely switched using scripts, SMS messages, I/O, etc.
- Additional software for easy networking and monitoring, like WebAccess/DMP, Smart-CLUSTER and R-SeeNet

Diagnostics

- Detailed logs of operational information, including signal status and data traffic
- Signal level data, cell identifiers and data traffic are saved in router's memory for up to 2 months
- SNMP: router diagnostics, communication with I/O and MBUS
- LED indication: signal strength, connection status, ports, customer's application LED

Networking

- DHCP: automatic IP addressing in LAN network
- NAP/PAT: IP address and port translation
- Firewall: filtering of addresses, ports, protocols
- VRRP: virtual backup router function
- DynDNS client: access to the dynamic IP address
- VLAN 802.1Q: virtual LAN
- QoS: quality of service
- PPPoE Bridge: PPP over Ethernet Bridge mode
- NTP client, NTP server: time synchronization
- Dynamic routing protocols: BGP, OSPF, RIP, IS-IS
- MODBUS RTU/TCP gateway and mapping: convert data from RTU to TCP/IP format
- Captive Portal

Multiple SIM for carrier fail-over

- Back-up by switching between up to 4 independent mobile carriers
- Switch when data limit is exceeded, when roaming is detected or by any other programmable option

VPN Tunneling & Security

- IPSec, OpenVPN, PPTP, L2TP, EasyVPN, GRE
- Authentication by certificates, shared keys, name/password, RADIUS

SMS & E-mail Info

- Information about status, connection or disconnection and many other parameters
- SMS control: on/off connection, switching SIM, router profile, I/O
- SMS communication: AT commands (RS232 and TCP/IP), I/O or HTTP

Modular LINUX Software Environment

Open LINUX based system allows use of common LINUX commands, scripts and other features. With open Linux platform and wide posibilities of programming customer SW applications in Python, C/C++ or browser-based flow editor Node-RED the routers offer a real open development platform for Industrial IoT applications. The Advantech existing app library (User modules) with apps already developed to enhance specific router functionality including industrial protocol conversions and support of IoT platforms such as MS Azure, Cumulocity, ThingWorx and others are supported on the router.

GLOBAL Cellular Routers & Gateways

EMEA, LATAM, APAC

LTE

SmartFlex SR305

LTE router
Max download / Max upload
100 / 50 Mbit/s

LR77v2

SmartFlex SR303, SR304, SR307, SR308

LTE routers
Max download / Max upload
100 / 50 Mbit/s

LR77 v2 Libratum

Balanced
LTE router
Max download / Max upload
100 / 50 Mbit/s

SmartStart SL304, SL306

Intelligent
LTE router cat.4
Max download / Max upload
150 / 50 Mbit/s

SmartStart SL302

Intelligent
LTE router cat.1
Max download / Max upload
10 / 5 Mbit/s

UMTS/HSPA+

UR5i v2

UR5i v2 Libratum

UMTS/HSPA+ router
Max download / Max upload
14.4 / 5.76 Mbit/s

Balanced **UMTS/HSPA+** router
Max download / Max upload
14.4 / 5.76 Mbit/s

ICR-3241
ICR-3241W

Industrial & IoT
LTE router cat.4
Max download / Max upload
150 / 50 Mbit/s

LTE

ICR-3231
ICR-3231W

ICR-3232
ICR-3232W

Industrial & IoT
LTE routers cat.4
Max download / Max upload
150 / 50 Mbit/s

ICR-3211B

Industrial IoT
LTE router Cat M1
Max download 375kbps

SmartMotion ST352, ST355

Twin Module Design
Max download / Max upload
by the modules / by the modules

LAN

Spectre RT

XR5i v2

SmartFlex SR300

LAN router

LAN routers

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SmartStart

Intelligent 4G LTE Router & Gateway

Product Features:

- For Industrial IoT and consumer focused high speed data applications
- Ethernet, serial RS-232 and I/O for connecting a wide array of field assets with DIN rail or wall mounting
- Low power consumption for solar and battery power applications
- Exceptionally resilient wireless and wired connection
- Enhanced memory to host custom software applications and a wide variety of protocols
- Easy deployment, mass maintenance and troubleshooting with our SmartWorx remote management and monitoring tools
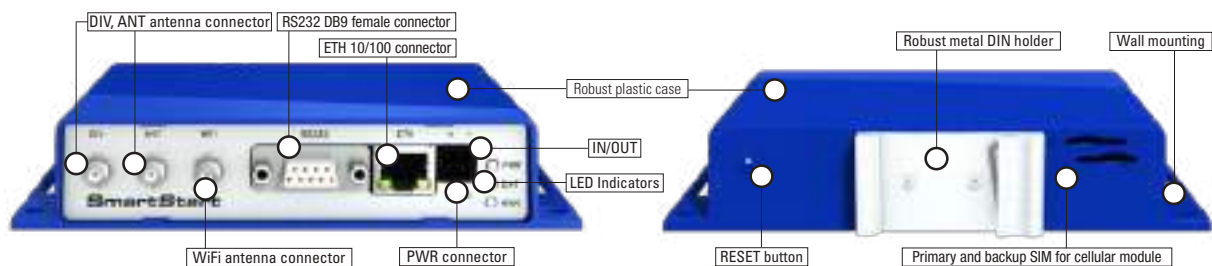- Loaded with advanced features to secure your data

The **SmartStart** LTE Cat.4 family of cellular routers and gateways are the perfect way to connect RS-232 and Ethernet devices to a cellular network. Industrial M2M and IoT applications include Ethernet lottery machines, ATM stations, kiosk locations, gaming terminals along with RS-232 traffic controllers, meters, UPS systems, PLCs and much more.

The processor is powerful enough to handle the full range of LTE communications capabilities, including video streams. The internal memory provides ample storage for custom scripts, software applications and a wide variety of protocols.

In addition to its Ethernet and RS-232 ports, **SmartStart** has built-in digital I/O connectivity. Competing routers in the same price range generally provide only Ethernet or RS-232. StartSmart™ provides all three.

SmartStart provides best-in-class power consumption combined with LTE performance, and is optimized for solar and battery powered applications. Low Power Mode extends battery life by dropping power consumption to 40 mW, and can be triggered by timers, low voltage detection or I/O.

SmartStart is the industry's only cellular gateway with power consumption equivalent to 2G devices. It is DIN rail and panel mountable.

| DIV, ANT antenna connector | RS232 DB9 female connector | | Robust metal DIN holder | Wall mounting |

ETH 10/100 connector

Robust plastic case

IN/OUT

LED Indicators

WiFi antenna connector

PWR connector

RESET button

Primary and backup SIM for cellular module

SmartStart is an excellent fit for applications that are migrating to LTE technology. **SmartStart** provides fallback to 3G/2G technologies to ensure that connectivity is reliable in areas where LTE is still under development. This future proofs your existing installations and protects your investment. You can upgrade your systems according to your own schedule, as **SmartStart** will continue to connect your legacy devices, even after the cellular providers sunset their 2G and 3G cellular networks.

SmartStart is easy to install using **WebAccess/DMP**, a full featured configuration and monitoring tool. Our VPN portal DIGICLUSTER makes it easy to build private network.

SmartStart router is compatible with:

WebAccess/DMP

R-*SEE*NET™

DIGICLUSTER

ISO9001 RoHS

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ICR-3200

Industrial IoT 4G LTE Router & Gateway

Product Features:

- 4G LTE Cat.4, Cat M1 VPN Gateway for Industrial IoT applications
- Powerful CPU with 1.3GB storage to host customer SW applications
- 2× SIM with cover, eSIM ready
- 2× Ethernet 10/100, 1x RS232, 1x RS485 and I/O
- Optional Wi-Fi 802.11ac using MO-MIMO technology
- Optional GNSS receiver
- Robust metal cover with DIN and Wall mount options
- Operational temperature range from -40 °C to +75 °C
- Backup real time clock
- Sleep mode & Power ignition

ICR-3200 router is compatible with technologies:

WebAccess/DMP
R-SEENET™
DIGICLUSTER

The **ICR-3200** LTE gateway is the perfect way to connect IP or serial devices to a cellular network. Industrial M2M and IoT applications include kiosks, industrial PCs, HMIs, traffic controllers, meters, UPS systems, and much more. With LTE Cat.4 upload speeds of up to 50 Mbps and download speeds of up to 150 Mbps, the router provides ample bandwidth for high data demand applications such as CCTV or public Wi-Fi hotspots. LTE Cat M1 version of the router use a new cellular technology specifically designed for the needs of applications targeting the Internet of Things (IoT) or machine-to-machine (M2M) communications.
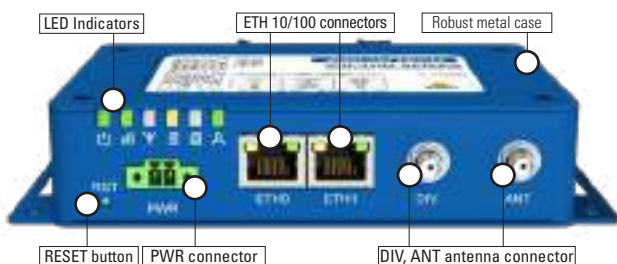
In addition to its two independent or switched Ethernet ports, serial ports RS232 and RS485, ICR-3200 has built-in digital I/O connectivity, backup real-time clock and sleep mode support. The device has two SIM readers protected by metallic cover for carrier failover redundancy. As an addition the router is ready to use internal eSIM. Optional built-in GNSS chipset provides information about the accurate position of the router. An optional built-in Wi-Fi module is also available, with 802.11a,b,g,n,ac modes and MO-MIMO support is appropriate for on-board Wi-Fi transport applications.

The router supports VPN tunnel creation using various protocols to ensure safe communications. The router provides diagnostic functions which include automatic monitoring of the wireless and wired connections, automatic restart in case of connection losses, and a hardware watchdog that monitors the router status.
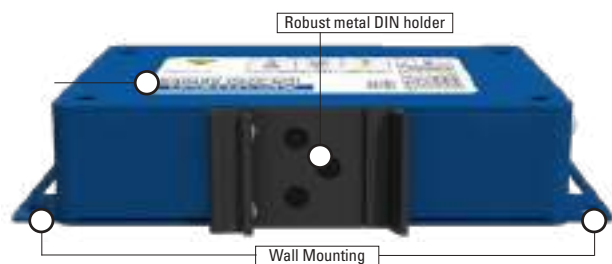The ICR-3200 places intelligence at the network edge with an extremely powerful Cortex A8 CPU at 1GHz, 512 MB RAM and 4 GB EMMC FLASH memory in pSLC mode for a long-lifetime and critical industrial applications. 1.3 GB of memory space is allocated for customer SW applications and data.

ICR-3200 is easy to install using **WebAccess/DMP**, a full featured configuration and monitoring tool.
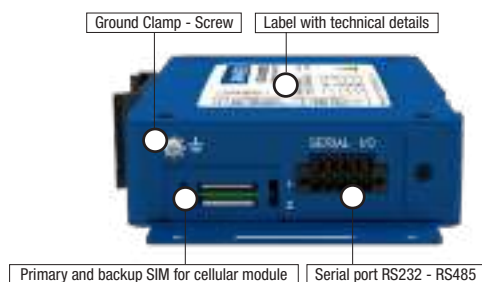
FRONT VIEW

LED Indicators | ETH 10/100 connectors | Robust metal case
RESET button | PWR connector | DIV, ANT antenna connector

REAR VIEW

Robust metal DIN holder
Wall Mounting

LEFT SIDE VIEW

Ground Clamp - Screw | Label with technical details
Primary and backup SIM for cellular module | Serial port RS232 - RS485

RIGHT SIDE VIEW

GPS, WiFi antennas

ISO9001 CERTIFIED   RoHS 2002/95/EC

26-08-19

SmartMotion
TWIN Cellular Module Router

Product Features:

- Two Independent cellular modules for advanced fail over feature
- Powerful CPU and enhanced memory to support high demand customer applications
- Load Balancing
- Extended operational temperature range from -40 °C to +75 °C
- 10-60 VDC operated with transient and reverse polarity voltage protection
- GPS and GLONASS support
- MicroSD card holder
- Low power consumption mode for solar and battery power applications
- Optional industrial grade WiFi
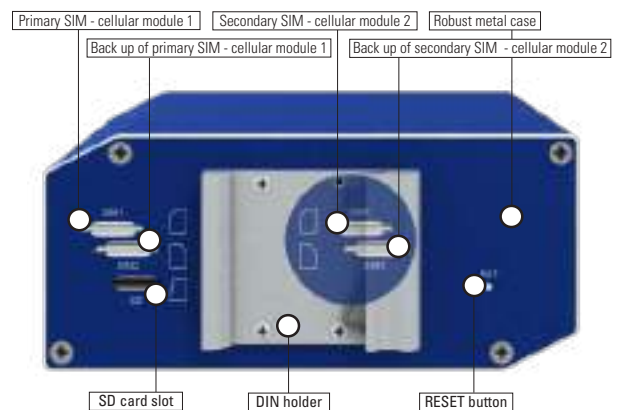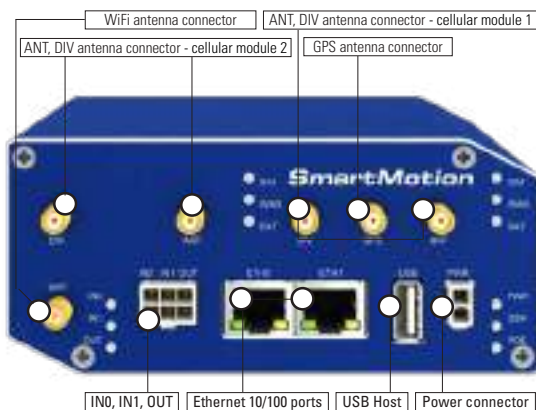- PoE PD, PoE PSE, In/Out, USB Host
- Advanced security features

The **SmartMotion** cellular router provides a reliable, secure network, with failover protection for devices and LANs.

Two interdependent cellular modules with 2 SIMs slots each to support multiple cellular carriers. Business continuity is never a problem with this advanced fail over architecture and Load Balancing feature which simultaneously receives Cellular, Wi-Fi and Ethernet data.

SmartMotion automatic wireless failover protects against loss of communications in wired or wireless networks by using dual LTE/4G cellular module technology that accommodates multiple cellular carriers. Smartmotion provides transfer speeds up to 50 Mbit/s and download speeds of up to 100 Mbit/s meeting the high demand required for video transfer.

The **SmartMotion** is designed and tested to meet the requirements of industrial, mobile, security and other harsh environment application where standard commercial designs fail. Specifications include wide operating temperature ranges from -40 to +75 °C, input voltage range 10 V DC to 60 V DC, and advanced sleep mode feature to allow low power consumption for solar and battery power applications.

WiFi antenna connector | ANT, DIV antenna connector - cellular module 1
ANT, DIV antenna connector - cellular module 2 | GPS antenna connector

IN0, IN1, OUT | Ethernet 10/100 ports | USB Host | Power connector

Primary SIM - cellular module 1 | Secondary SIM - cellular module 2 | Robust metal case
Back up of primary SIM - cellular module 1 | Back up of secondary SIM - cellular module 2

SD card slot | DIN holder | RESET button

The **SmartMotion** places intelligence out at the network edge with an extremely powerful CPU and enhanced embedded memory capacity providing full support for LTE/4G (long Term Evolution) speeds and applications. A secure Web interface allows users to configure and manage the **SmartMotion** from remote locations. The router can also upgrade its configuration and firmware from the operator's central server, allowing for simultaneous mass reconfiguration of every router on the network. Users may insert Linux scripts and they can create multiple configurations for the same router. Users may switch from one configuration to another at any time.

The flexible **SmartMotion** concept includes 2 Ethernet ports with 2 independent LANs/IP addresses. The standard configuration also includes 1 USB host port, 1 microSD card holder, 4 SIM card holders for automatic failover to an alternate service provider, 2 binary inputs(I/O) , 1 binary output (I/O) and onboard GPS. An optional built-in Wi-Fi module is also available, with industrial grade operating temperature ranges from -40 to +75 °C.

The **SmartMotion** supports real time data encryption and the creation of VPN tunnels using IPsec, OpenVPN and L2TP. It supports DHCP, NAT, NAT-T, DynDNS, NTP, VRRP, control by SMS, and numerous other functions, as well as additional software like WebAccess/DMP, SmartCluster VPN Server and R-SeeNet.
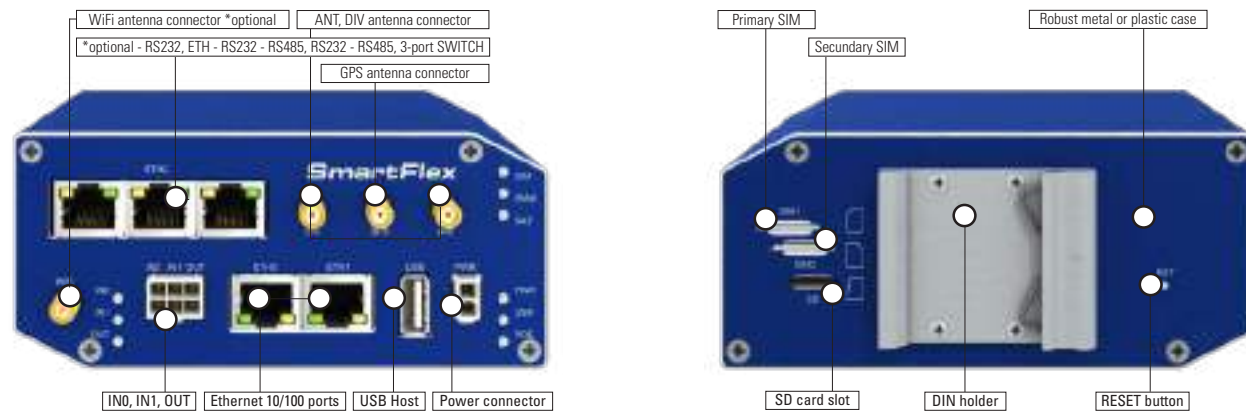
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SmartFlex

... more power, more features, more ideas

The **SmartFlex** cellular router provides secure Internet connectivity for devices and LANs via the cellular networks. It can be used to provide automatic wireless failover for wired networks, wireless connectivity for devices in remote locations where cable connections are impractical, and wireless connectivity for mobile assets. With upload speeds of up to 50 Mbit/s and download speeds of up to 100 Mbit/s, the **SmartFlex** provides ample bandwidth, even for applications that require video.

The **SmartFlex** is designed and manufactured for use in tough environmental conditions. Specifications include wide operating temperature ranges from -40 to +75 °C. It accepts input voltage ranges from 10 V DC to 60 V DC and is equipped with sleep mode for reducing electrical consumption

The **SmartFlex** places intelligence out at the network edge with an extremely powerful Cortex A8 CPU at 1GHz, 256 MB flash memory, 512 MB RAM and 128kB M-RAM, providing full support for LTE (long Term Evolution) speeds and applications. A secure Web interface allows users to configure and manage the **SmartFlex** from remote locations. The router can also upgrade its configuration and firmware from the operator's central server, allowing for simultaneous mass reconfiguration of every router on the network. Users may insert Linux scripts and they can create multiple configurations for the same router. Users may switch from one configuration to another at any time.

Product Features:

- Powerful CPU and enhanced memory to support high demand customer applications
- Extended operational temperature range from -40 °C to +75 °C
- 10-60 VDC operated with transient and reverse polarity voltage protection
- Flexible Port options, such as 3-port Switch, Ethernet and RS232/422/485 serial ports with isolation
- GPS and GLONASS support
- MicroSD card holder
- Low power consumption mode for solar and battery power applications
- Optional industrial grade WiFi
- PoE PD, PoE PSE, In/Out, USB Host
- Advanced security features

WiFi antenna connector *optional | ANT, DIV antenna connector
*optional - RS232, ETH - RS232 - RS485, RS232 - RS485, 3-port SWITCH
GPS antenna connector

Primary SIM | Robust metal or plastic case
Secundary SIM

IN0, IN1, OUT | Ethernet 10/100 ports | USB Host | Power connector

SD card slot | DIN holder | RESET button

The flexible **SmartFlex** can be configured to suit any application. The standard configuration includes 2 Ethernet ports with 2 independent LANs/IP addresses. The standard configuration also includes 1 USB host port, 1 microSD card holder, 2 SIM card holders for automatic failover to an alternate service provider, 2 binary inputs(I/O) , 1 binary output (I/O) and onboard GPS. An optional built-in Wi-Fi module is also available, with industrial grade operating temperature ranges from -40 to +75 °C. Further optional boards available: 3x ETH (the router can be configured with up to 5 total Ethernet ports and 3 independent LANs/IP addresses) or ETH - RS232 - RS485 (isolation strenght up to 2.5kV) or RS232 - RS485 or RS232.

The **SmartFlex** supports real time data encryption and the creation of VPN tunnels using IPsec, OpenVPN and L2TP. It supports DHCP, NAT, NAT-T, DynDNS, NTP, VRRP, control by SMS, and numerous other functions, as well as additional software like **WebAccess/DMP**, **WebAccess/VPN** and R-SeeNet.

SmartFlex is compatible with:

WebAccess/DMP
R-SEENET™
DiGiCLUSTER

ISO 9001 | RoHS

www.lucom.de

UR5i v2, LR77 v2
MODULAR DESIGN of v2 ROUTERS

Basic and full versions are available, with different combinations of optional ports and SIM card holders.
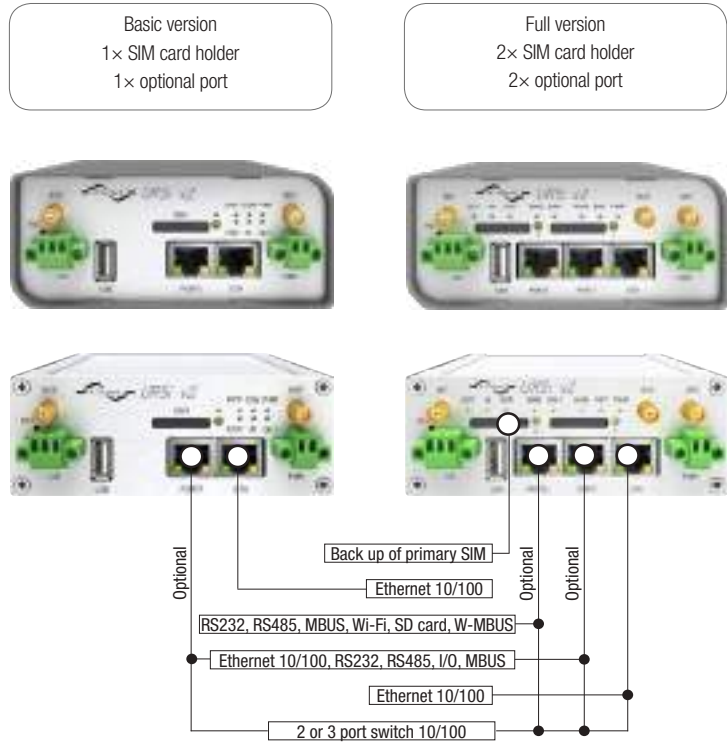
Fixed communication interfaces:
- Ethernet 10/100
- USB Host
- I/O port with 1× input and 1× output

Optional interfaces to optimize according to your application, with the ability to add additional interfaces in the future:

- 1-2× Ethernet 10/100 with available modes:
  - 2-port Ethernet switch
  - 3-port Ethernet switch
  - 2× independent LAN
- Wi-Fi: AP or client mode
- RS232 serial port
- RS485 galvanic separation available
- RS422 galvanic separation available
- MBUS master for up to 30 slave meters
- SD card holder
- Wireless MBUS
- I/O CNT interface including 4× binary inputs (2 inputs may be configured as counter) 2× analogue inputs and 1× binary output

For all routers, you can choose either a metal or plastic casing.

Basic version
1× SIM card holder
1× optional port

Full version
2× SIM card holder
2× optional port

Optional

Back up of primary SIM
Ethernet 10/100
RS232, RS485, MBUS, Wi-Fi, SD card, W-MBUS
Ethernet 10/100, RS232, RS485, I/O, MBUS
Ethernet 10/100
2 or 3 port switch 10/100

LIBRATUM v2
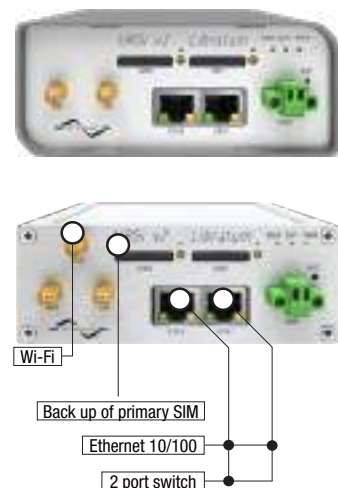## BALANCED DESIGN, GREAT VALUE, BALANCED PRICE

All the best from "Modular design" - Balanced routers UR5iv2 Libratum and LR77v2 Libratum HSPA+ and LTE wireless routers featuring high speed data rates (14.4 Mbit/s / 100 Mbit/s).

- 2× Ethernet 10/100 with possible modes:
  - 2-port Ethernet switch
  - 2× independent LAN
- Optional Wi-Fi: AP or client mode
- Dual-SIM fail over
- Antenna Rx Diversity
- Temperature up to +75 °C
- You can choose either a metal or plastic casing

All v2 routers are compatible with:

R-SEENET

DIGICLUSTER

LR77v2 Libratum, UR5iv2 Libratum
2× SIM card holder
2× LAN port, Wi-Fi optional

Wi-Fi
Back up of primary SIM
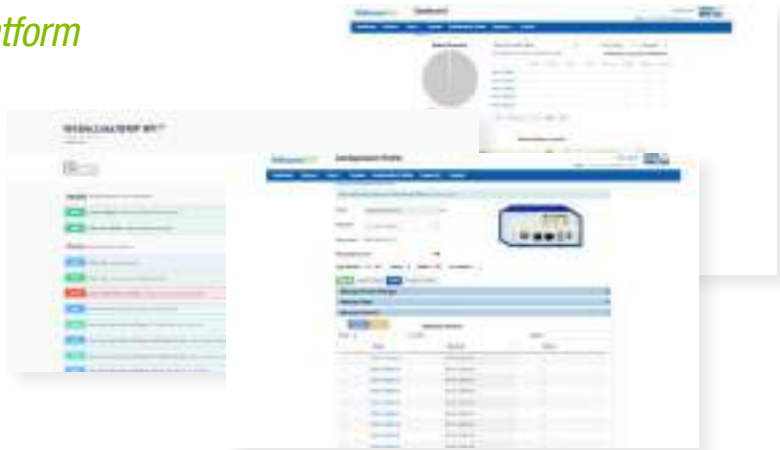Ethernet 10/100
2 port switch

WebAccess/DMP
Management and Provisioning platform

Product Features:

- Cross-browser, cross-platform based on HTML5
- Google Maps and GPS location integration
- Emu-Edition for on-premises installations
- Flexible delivery options
- Remote device configuration
- Remote device status monitoring
- "No-Touch" provisioning for mass deployments
- RESTful APIs
- Remote application management and delivery

WebAccess/DMP is a software package that provides remote device management and provisioning for Advantech WAN/WWAN Routers, IoT Gateways and Wzzard wireless sensor nodes (WSNs). The Graphical User Inteface (GUI) is provided via a HTML5 front-end, which means that it is entirely browser based: all major browsers are supported. There is also a fully functional device-management API which enablesdiscovery of, configuration of, and status from, the remote devices. The Emu-Edition enables a fully on-premises deployment: this edition enables multi-tenancy for device provisioning. The Configuration Profiles feature enables no-touch configuration and mass deployment of field devices.

Feature Details

Cross-browser, cross-platform based on HTML5

WebAccess/DMP is a web based HTML5 Device Management and Provisioning platform. Based on HTML5, users can use different web browsers such as: chrome, Internet Explorer, Firefox, Safari etc to access WebAccess/DMP without installing any other packages. Users can easily and conveniently access WebAccess/DMP from any device such as a PC or mobile device.

Google Maps and GPS location tracking integration

Users can define the longitude and latitude of each device. If the device is GPS-enabled, it will automatically report it's own longitude and latidude to WebAccess/DMP. WebAccess/ DMP can then locate the position on the Google map. The location and connectivity are clearly presented on the map in the dashboard.

Emu Edition: On-Premises

WebAccess/DMP Can be installed on-premises on end-user server equipment, or hosted on an end-user's IaaS platform. This enables (a) fully secured on-premises installations for critical projects; and (b) the option to provide Device Management and Provisioning "as a service" to third party end users of the Devices.

Flexible delivery options

There are 4 off-the-shelf delivery options, to suit project needs and capital budgets. There is a growth-migration plan that enables projects to "start small" with low cost, and to grow over time.

Multi-Tenancy options

The Emu Edition enables multi-tenancy. This means, a single installation of the software enables multiple Tenants to have their own isolated environments for them to provision and manage their remote devices. Each Tenant may have as many Tenant-Admin and Tenant-User accounts as they need.

Remote device configuration

WebAccess/DMP supports many of Advantech's WAN/WWAN Routers (e.g. SmartStart, SmartFlex, SmartMotion, ICR-3x xx, LR77, and others), IoT Gateways (SmartSwarm), and Wzzard wireless sensor nodes. For each of the supported device types, it is possible to configure every configuration endpoint on that device. There are many thousands of possible configuration endpoints.

Remote device status monitoring

WebAccess/DMP enables individual device status monitoring. There are simple device statistics monitored by default (e.g. online/offline status). For each device, it is possible to get a full set of live status metrics on request, in real-time.

Remote application management and delivery

The WAN/WWAN routers allow capability-extensions, called "user modules". The IoT Gateways allow capability-extensions, called "apps". Both user-modules and apps are supported on WebAccess/DMP: These applications may be deployed and configured, to one or many remote devices.

No-touch provisioning

The Configuration Profiles Feature enables "no touch" provisioning of large quantities of remote devices. This feature enables live, in-field, mass-deployments, where the deployed remote devices will receive "push configuration" (provisioning) from the WebAccess/DMP software.

RESTful APIs

There is a feature-rich REST API that enables scriptable interaction with the remote devices. This enables device-provisioning, and/or location and status monitoring, of the remote assets, to be fully scripted and automated. The API also enables integration with 3rd partysoftware and services, or batch delivery of specific configuration items.

Cellular Routers & Gateways

SELECTION GUIDE

	LR77 v2 Libratum	UR5i v2 Libratum	LR77 v2	UR5i v2	XR5i v2E	XR5i v2F	SmartFlex LAN	SmartFlex	SmartMotion	SmartStart	ICR-3200
REGION											
EMEA	✔	✔	✔	✔	✔	✔	SR300	SR303, SR304, SR307	ST352, ST355	SL304	ICR-3231
NAM						ERT31x	SR300	SR305		SL302	ICR-3241, ICR-3211
ASIA & LATAM		✔		✔	✔	✔	SR300	SR304		SL306, SL304	
AUS & NZ		✔					SR300	SR308			ICR-3232
MOBILE WIRELESS NETWORK TECHNOLOGY											
GPRS/EDGE	✔	✔	✔	✔				✔	✔	✔	✔
UMTS/HSPA+	✔	✔	✔	✔				✔	✔	✔	✔
LTE	Cat.3		Cat.3					Cat.3/Cat.4	Cat.3	Cat.1/Cat.4	Cat.4/Cat M1
LTE 450								SR307	ST355		
WAN ETHERNET	✔		optional	optional	✔	✔	✔	✔	✔		✔
Two VF modules									✔		
COMMUNICATION INTERFACES AND EXPANSIONS											
Ethernet 10/100	2x	2x	1x - 3x	1x - 3x	2x	1x - 3x	5x	2x - 5x	2x	1x	2x
PoE PSE / PoE PD							optional	optional	optional		
SD Card Holder			optional	optional		optional	✔	✔	✔		
Wi-Fi (IEEE 802.11 b, g, n)	optional	optional	optional	optional	optional	optional	optional	optional	optional	optional	optional
USB Host			✔	✔		✔	✔	✔	✔		
RS232/RS422/RS485			optional	optional		optional		optional		RS232	RS232/RS485
MBUS, Wireless MBUS			optional	optional		optional					
I/O CNT (4x bin. IN, 2x analog IN, 1x output)			optional	optional		optional					
I/O (1xIN/1xOUT)			✔	✔		✔	2xIN / 1xOUT	2xIN / 1xOUT	2xIN / 1xOUT	✔	✔
GPS Receiver			optional	optional				by module	✔		optional
CPU, RAM, CONSUPTION, SIM, DESIGN, ENVIRONMENTAL, DIMENSIONS											
CPU Power (MHz)	333	333	333	333	333	333	1000	1000	1000	1000	1000
Flash RAM / RAM / M-RAM (MB / MB / kB)	16 / 64 / 128	16 / 64 / 128	16 / 64 / 128	16 / 64 / 128	16 / 64 / 128	16 / 64 / 128	256 / 512 / 128	256 / 512 / 128	256 / 512 / 128	256 / 512 / 128	2x 256 MB – FW 512 MB – User data storage 838 MB – Space for User Modules
Consumption - Idle / Average / Peak / Sleep Mode	2,3 / 3,5 / 5,5W / -	2,3 / 3,5 / 5,5W / -	2,3 / 4 / 6W / -	2,3 / 4 / 6W / -	2,3 / 4 / 6W / -	2 / 2,5 / 3W / -	2,5 / 4 / 11 W / 10mW	2,5 / 4 / 11 W / 10mW	2,5 / 4 / 11 W / 10mW	2,7 / 5.5 / 11 W / 40mW	2.5 / 4 W / 11 W / 10 mW
2xSIM Card	✔	✔	optional	optional				✔	4x	✔	✔ / eSIM
Power Supply (V DC)	9 - 36	9 - 36	9 - 36	9 - 36	9 - 36	9 - 36	10 - 60	10 - 60	10 - 60	9 - 36	9 - 36
Op. Temperature (°C)	-40 to +75	-40 to +75	-40 to +75	-40 to +75	-40 to +75	-40 to +75	-40 to +75	-40 to +75 (-20 to +60 LTE450)	-40 to +75 (-20 to +60 LTE450)	-40 to +75	-40 to +75
Plastic Casing (mm)	51x87x116	51x87x116	51x87x116	51x87x116	51x87x116	51x87x116	55x97x125	55x97x125		30x87x127	
Metal Casing (mm)	42x87x113	42x87x113	42x87x113	42x87x113	42x87x113	42x87x113	55x97x125	55x97x125	55x97x125		55 x 97 x 125
DIN holder TS35/TS32	✔	✔	✔	✔	✔	✔	✔	✔	✔	Wall / DIN	Wall / DIN
FUNCTIONS											
Linux	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
IPSec, OpenVPN, PPTP, L2TP, GRE, Easy VPN	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
Authentication (X.509 certificate, Pre-shared key, PW)	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
Firewall, NAT/PAT	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
DHCP Server, Client, Relay	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
HTTP/HTTPS Server, Telnet/SSH, NTP Server, NTP Client	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
DynDNS	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
FTP Server	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
SNMP, VRRP, PPPoE Bridge	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
SMTP, E-mail, SMS Functions	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
VLAN 802.1Q	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
QoS, IGMP, BGP, OSPF, RIP	optional	optional	optional	optional	optional	optional	optional	optional	optional	optional	optional
IPv6 Dual Stack	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
COM Port TCP/UDP server/client			✔	✔		✔		✔	✔	✔	✔
MODBUS RTU/TCP Gateway			optional	optional		optional		optional	optional	optional	optional
4 Configuration Profiles	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
Automatic Configuration and FW Update	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
ADDITIONAL SOFTWARE SUPPORT											
Support of Software User Modules (free space for UM)	2 MB	2 MB	2 MB	2 MB	2 MB	2 MB	128 MB	128 MB	128 MB	128 MB	838 MB
WebAccess/DMP	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
R-SeeNet	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
WebAccess/VPN	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
Python, Node-RED							✔	✔	✔	✔	✔

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SMART DECISIONS BEGIN

with Intelligent Management Software

R-*SEE*NET™

Monitoring & Management Software

R-SeeNet is the software system used for monitoring Advantech B+B Smart-Worx routers. It continuously collects information from individual routers in the network and records the data into a SQL database.
Then it creates visual forms and reports for the network administrator.

R-SeeNet consists of two parts:

- **R-SeeNet Server**
  A server application that 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**
  A web-based application that accesses to the SQL database and provides the user or network administrator with information about the status of individual routers as well as the status of the entire network.

Available Data

Everything you need to know about your network's current status as well as a historical view of the information transferred today, yesterday, this week, this month and last month.

- Signal strength
- Data traffic
- Response time
- Router availability
- Number of PPP connections
- Number of channels connected
- Visual reports, tables and graphs
- Up to 2 months of past data for each router

26-08-19

01.
PROJEKTIERUNG

Lösungsdefinition
Produktsuche
Technikberatung
Konfigurationsauswahl
...

02.
HARDWARE

Router
Gateway
Alarm-/Meldesystem
Lichtgitter
...

03.
ZUBEHÖR

Signalscanner
Antenne
XC-Module
Erweiterungen
...

04.
SOFTWARE

Fernwartung
Auswertung
Datenkommunikation
...

05.
SUPPORT

Individuelle Unterstützung
Fehlerauswertung
Schulungen
...

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