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

ADVANTECH

Enabling an Intelligent Planet

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

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.

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

GLOBAL ADVANTECH Cellular Routers & Gateways

NAM region

SmartFlex SR305

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

SmartStart SL302

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

ICR-3241 ICR-3241W

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

ICR-3211B

Industrial IoT LTE router Cat M1
Max download 375kbps

EMEA, LATAM, APAC

LR77v2

SmartFlex SR303, SR304, SR307, SR308

LTE

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

UR5i v2

UR5i v2 Libratum

UMTS/HSPA+

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-3231 ICR-3231W

ICR-3232 ICR-3232W

LTE

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

SmartMotion ST352, ST355

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

Wired LAN Routers

Spectre RT

ALL REGIONS

XR5i v2

SmartFlex SR300

ICR-3201(W)

LAN

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
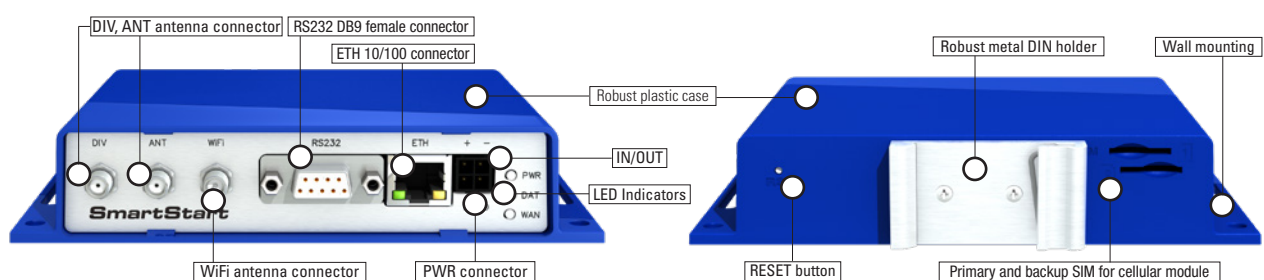- Loaded with advanced features to secure your data

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.

Labels: DIV, ANT antenna connector · RS232 DB9 female connector · ETH 10/100 connector · Robust plastic case · IN/OUT · LED Indicators · DIV · ANT · WiFi · RS232 · ETH · PWR · DAT · WAN · WiFi antenna connector · PWR connector · Robust metal DIN holder · Wall mounting · 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 **WebAccess/VPN** makes it easy to build private network.

SmartStart router is compatible with:

WebAccess/DMP
R-SEENET™
WebAccess/VPN

ISO9001 · RoHS

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:

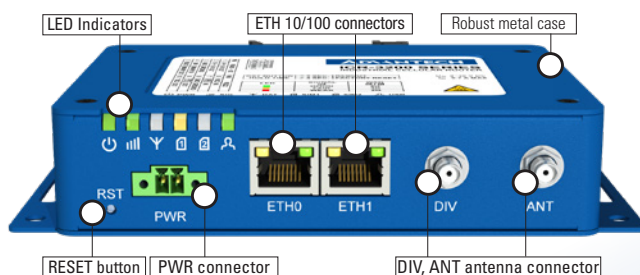**WebAccess/DMP**
R-*SEE*NET™
WebAccess/VPN

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.
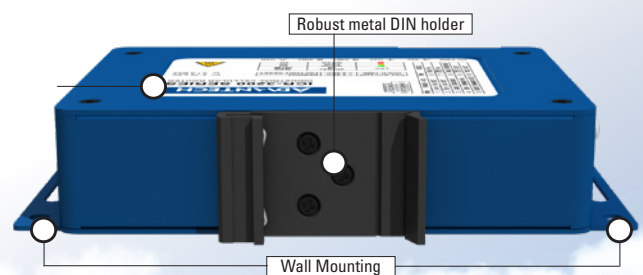
The router supports VPN tunnel creation using various protocols to ensure safe communications. The router provides diagnostic functions which include automatic monitoring of the wireless and wired connections, automatic restart in case of connection losses, and a hardware watchdog that monitors the router 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
RST · PWR · ETH0 · ETH1 · DIV · ANT
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
SERIAL I/O
Primary and backup SIM for cellular module · Serial port RS232 - RS485

RIGHT SIDE VIEW

WiFi2 · GNSS · WiFi1
GPS, WiFi antennas

ISO9001
RoHS 2002/95/EC
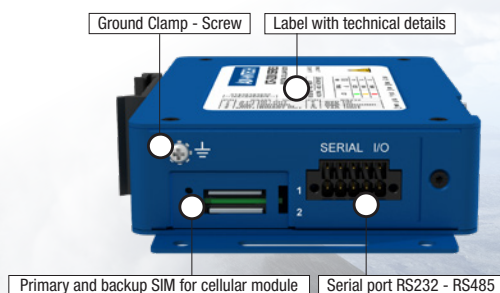
SmartFlex

... 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.
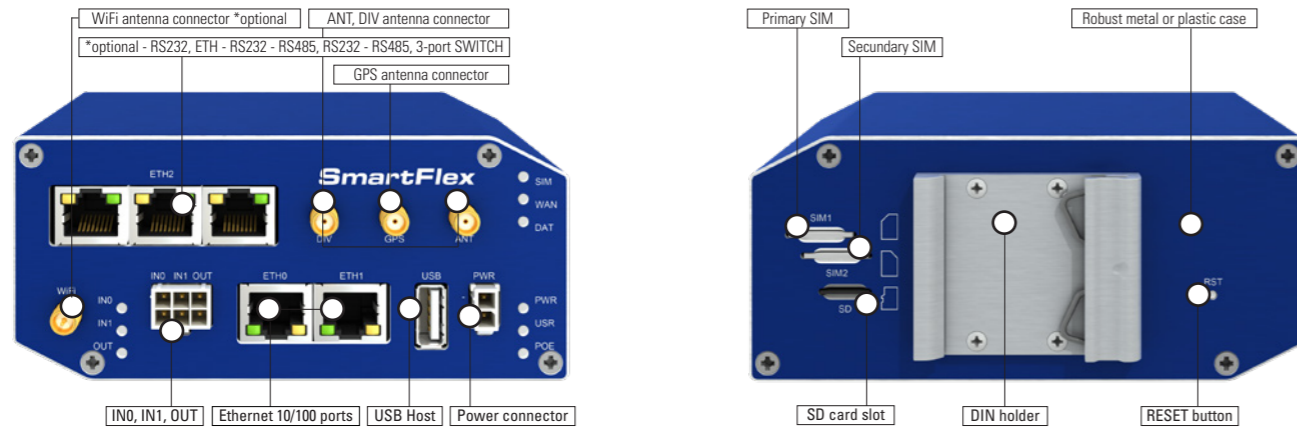
Product Features:

- 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

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™
WebAccess/VPN

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
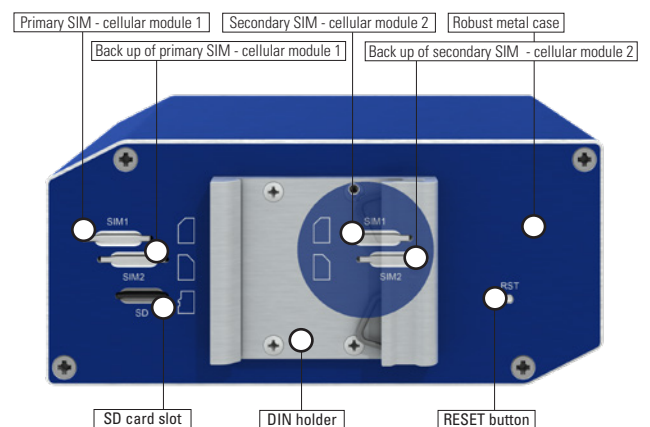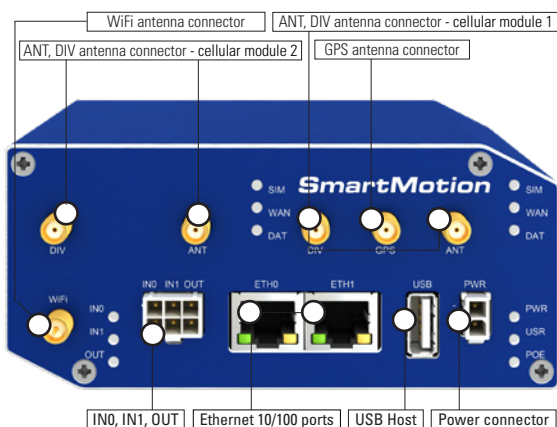- PoE PD, PoE PSE, In/Out, USB Host
- Advanced security features

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.

Left panel labels: 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

Right panel labels: 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.

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.
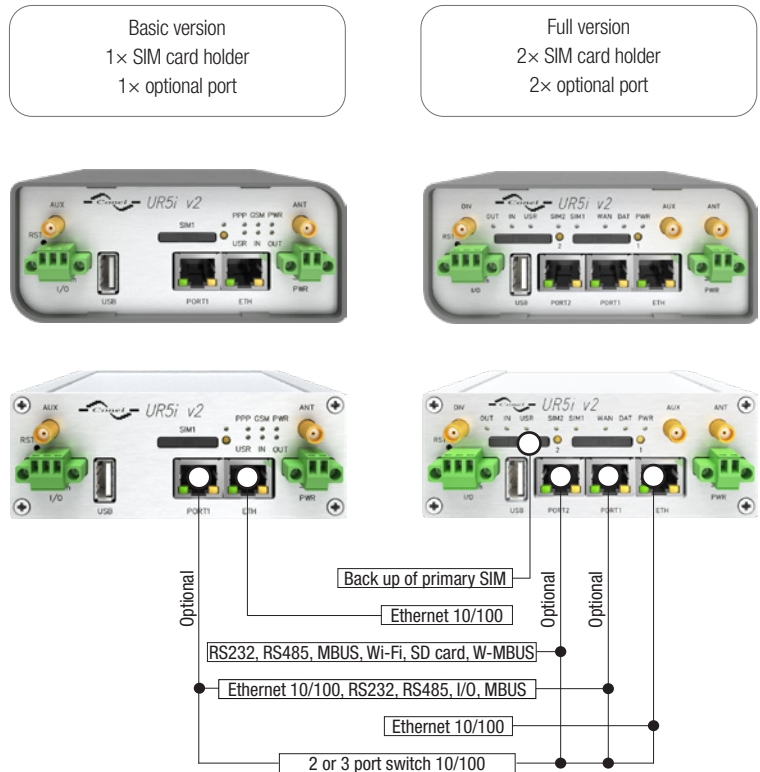
Fixed communication interfaces:

• 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
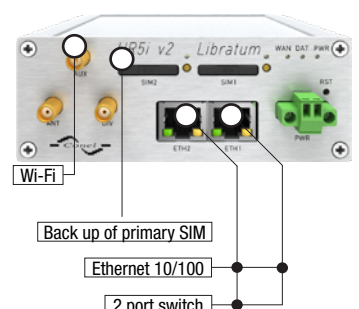• You can choose either a metal or plastic casing

All v2 routers are compatible with:

R-SEENET
WebAccess/VPN   WebAccess/DMP

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

SELECTION GUIDE

	LR77 v2 Libratum	UR5i v2 Libratum	LR77 v2	UR5i v2	XR5i v2E	XR5i v2F	SmartFlex LAN	SmartFlex	SmartMotion	SmartStart	ICR-3200 LAN	ICR-3200	ICR-3800 Railway
REGION													
EMEA	✔	✔	✔	✔	✔	✔	SR300	SR303, SR304, SR307	ST352, ST355	SL304	ICR-3201	ICR-3231, ICR-3211	ICR-3831
NAM						ERT31x	SR300	SR305		SL302	ICR-3201	ICR-3241, ICR-3211	
ASIA & LATAM		✔		✔	✔	✔	SR300	SR304		SL306, SL304	ICR-3201		
AUS & NZ		✔					SR300	SR308			ICR-3201	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	Cat.4
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	2x	2x (M12 connector)
PoE PSE / PoE PD							optional	optional	optional				PoE PD
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	optional	
USB Host			✔	✔		✔	✔	✔	✔				✔ (M12 connector)
RS232/RS422/RS485			optional	optional		optional		optional		RS232	RS232/RS485	RS232/RS485	RS232 (M12 connector)
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	✔	✔	✔	2xIN / 2xOUT (M12 connector)
GNNS 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	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	2x 256 MB – FW 512 MB – User data storage 838 MB – Space for User Modules	256 / 512 / 128
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	2.5 / 4 W / 11 W / 10 mW	2,5 / 4 / 11 W / 10mW
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	9 - 36	12 - 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 (-40 to +70 LTE450)	-40 to +75 (-40 to +70 LTE450)	-40 to +75	-40 to +75	-40 to +75	-40 to +70
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	55 x 97 x 125	59 x 113 x 203
DIN holder TS35/TS32	✔	✔	✔	✔	✔	✔	✔	✔	✔	Wall / DIN	Wall / DIN	Wall / DIN	Wall
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	optional	optional
IPv6 Dual Stack							✔	✔	✔	✔	✔	✔	✔
COM Port TCP/UDP server/client			✔	✔		✔		✔	✔	✔	✔	✔	✔
MODBUS RTU/TCP Gateway			optional	optional		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	838 MB	128 MB
WebAccess/DMP	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
R-SeeNet	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
WebAccess/VPN	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
Python, Node-RED							✔	✔	✔	✔	✔	✔	✔

WebAccess/DMP₂

Remote device provisioning, monitoring and management platform.

Product Features

- Performance at Scale
- Extensible Architecture
- AssureAuth™ PKI
- Multi Tenancy
- AssureSync™ Configuration Management
- Edge Intelligence App management
- Secure Device Health Monitoring
- Built for Interoperability
- Fully API Enabled
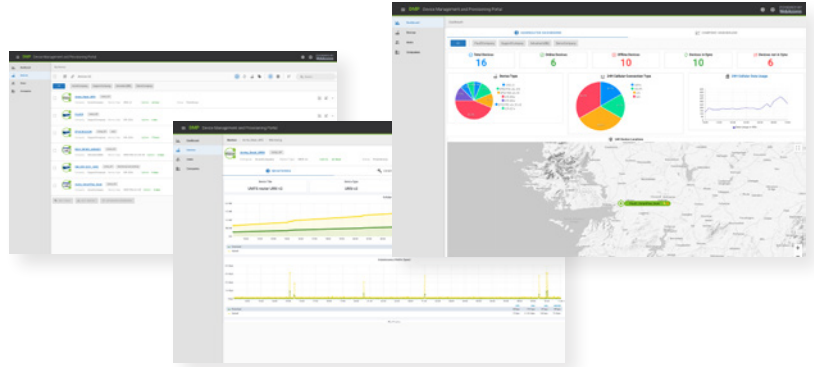
WebAccess/DMP Generation 2 is an advanced Enterprise-Grade platform solution for provisioning, monitoring, managing and configuring Advantech's routers and IoT gateways. It provides a zero-touch enablement platform for each remote device.

With **WebAccess/DMP**, secure zero-touch pre-provisioning and pre-configuration is simple, regardless of how large your deployment is: from one device to thousands. The platform supports full multi-tenancy, with the possibility of permissions-enabled power-user oversight across tenancies.

Performance at Scale

WebAccess/DMP Generation 2 has been built for scale and performance. The backend service architecture includes high-availability broker clusters, with load-balancing and elastic scale enablement. Rest assured that your needs will be met, as you grow and scale your business.

Extensible Architecture

The platform has been designed for **extensibility**. Using **leading-edge micro-services** enabled architectural best practices, together with **leading-edge elastic scale technologies**, load balancing and brokerage services, the platform will scale-out as necessary. The **user-interface** is built on our publicly **available API**, via our publicly available API Gateway, which enables real-time extensibility to available functionality, and the ability to integrate functionality with your existing services and infrastructure seamlessly: plug in, build-out.

AssureAuth™ PKI

Security is **built-in** by design: we have built a full **Public Key Infrastructure** (PKI) stack into the product suite: your connected devices are securely provisioned, certified and authenticated.

Multi Tenancy

Every User must belong to at least one Tenant. Every User may belong to one or more Tenancies. Every Tenant has an "Admin" User, who decides on how to grant user-permissions. For each User, for each Tenancy they belong to, unique user permissions may be granted.

AssureSync™ Configuration Management

WebAccess/DMP Generation 2 has incorporated **industry best-practice Digital Twin Device Model technology** and combined it with **real-time user-interface configuration** status indicators. It is possible to granularly configure every possible configuration item on every device, as a Desired State. Every device will report its **actual configuration**, for every configuration item, which will be stored as a Reported State. Our **AssureSync™** Configuration Management engine will detect differences between Desired and Reported states, and automatically reconcile differences.

Edge Intelligence App management

Deploy one or many of our pre-prepared **Edge Intelligence applications** (also known as "**user modules**" or "**Apps**") directly from WebAccess/DMP, to one or many of your remote devices. Manage the Apps and versions you deploy: you can "pin" a specific App version, for each of your selected devices, as a Desired State, and you can manage the configuration settings for each App, for each device it's deployed onto.

Use the device's SDK to **build your own Edge Intelligence Apps**, then use the WebAccess/DMP API to publish and deploy your own Apps, at scale: WebAccess/DMP enables you to build your own required platform-side user-interface automatically.

Any Apps that you create yourself will be managed through our AssureSync™ configuration management engine, just like our native Apps.

Secure Device Health Monitoring

Every remote **device has build-in secure health-monitoring status indicators**, that are reported to WebAccess/DMP, and stored in a **Time-Series database**: by default you get **3-months of history data**, which you can zoom-in on and analyse at will, in real-time.

Location Monitoring is also available, and can be enabled to show you precise GPS based geographic-location for each of your remote devices.

Built for Interoperability

WebAccess/DMP Generation 2 is Fully API Enabled: in fact, we built our entire user-interface application using the publicly-available secure REST based API, via our publicly available API gateway, which you can find at https://api.wadmp.com

This means that you have the power of interoperability with your existing infrastructure: integrate the available services that we provide with the services you wish to observe or consume.

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 c ontinuously 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
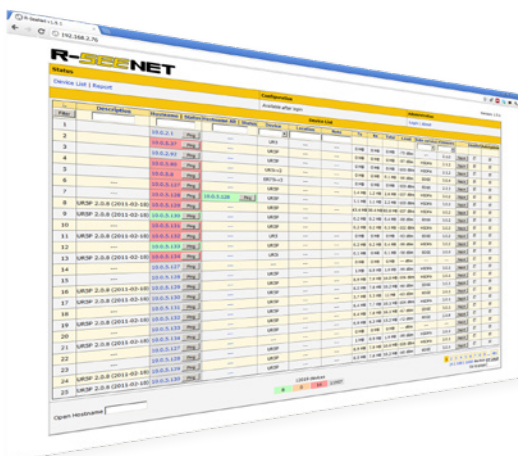
WebAccess/VPN

Advanced Secure Networking Platform

WebAccess/VPN is an advanced VPN management solution for safe interconnection of Advantech routers and LAN networks in public Internet. Connection among devices and networks can be regional or global and can combine different technology platforms and various wireless, LTE, fixed and satellite connectivities.

WebAccess/VPN provides an easy and secure connectivity platform for applications such as branch connection, remote access, machine monitoring in industry sectors like Utilities & Energy, Automation, Predictive maintenance, Industrial IoT for any end device types such as Computers, PLCs, RTUs, Cameras, Terminals…

Product features:

- Secure Private Networks in Internet
- Encrypted & Reliable Communication
- Centrally defined VPN topology
- Managed LAN, 1:1 NAT modes
- Firewall & Access Control
- User-friendly Management
- Easy Deployment
- Extensive Platform Compatibility

WebAccess/VPN makes it easy to set, scale and supervise secure networks of Advantech routers and other devices inInternet environment.

WebAccess/VPN solves network security issues and provides secure connections for individual LANs.

All communication going through the **VPN Portal** is encrypted and hidden from potential intruders.

The architecture of **WebAccess/VPN** withstands common attack vectors. The network traffic runs through OpenVPN tunnels.

Independent of mobile operators. No need for public or static IPs. No need for private APN or DDNS.

Each device connected to the router within **VPN network** has a fixed private IP address for transparent communication.

User-friendly Management helps admins and users to configure and control routers in their defined LANs.

WebAccess/VPN is compatible with SCADA systems, Linux, Windows, Smart phones, Tablets etc. & existing network topologies such as Cellular, Fibre, Satellite, ADSL.
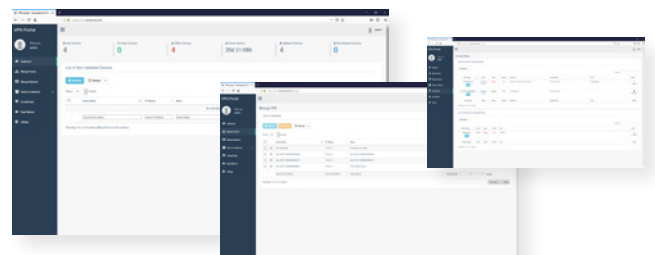
REMOTE EQUIPMENT MONITORING WITH 4G LTE
Reliable Industrial Networking in Harsh Environments

Most airline passengers have experienced a delay while their plane waits to be de-iced on the runway. Most drivers in the northern hemisphere have been delayed by snowplows on the road. But once travelers get to their car in the parking lot, they expect the path to be clear.

Trecan Combustion, based in Nova Scotia Canada, builds and maintains the industrial snowmelters that keep airports, parking lots, and commercial roadways free from snow. They are the world's largest manufacturer of snowmelters, with over 800 units in operation across North America, Europe, and Asia.

The process of melting snow may seem fairly simple, but maintaining a fleet of industrial snowmelters operating in a busy airport or commercial environment can quickly become a complicated task. Concerns about reliability and thermal efficiency are paramount. In addition, many urban municipalities have enacted regulations that govern the ability to dump snow in local bodies of water due to environmental concerns.

In order to keep snowmelters operating in harsh conditions, Trecan uses a 4G LTE connection from B+B SmartWorx. Each snowmelter has Programmable Logic Controller (PLC) and Human Machine Interface (HMI) devices to give local operators information about the equipment. Each of these computers is also connected to a SmartFlex LTE router. This remote connection allows Trecan and its customer to monitor engine run time, fuel level, GPS coordinates and other SCADA information to predict maintenance issues. For example, imagine being able to combine the weather forecast with the GPS coordinates and fuel level of snowmelters to send customers a message telling them to fuel up because a snow storm is coming!

SmartFlex

Carrier-agile LTE
Dedicated Software Dev Tools
Extended Operating Temp
Rugged Wi-Fi
Class I Div 2 and ATEX rated
Onboard GPS included
Industrial operating temperature
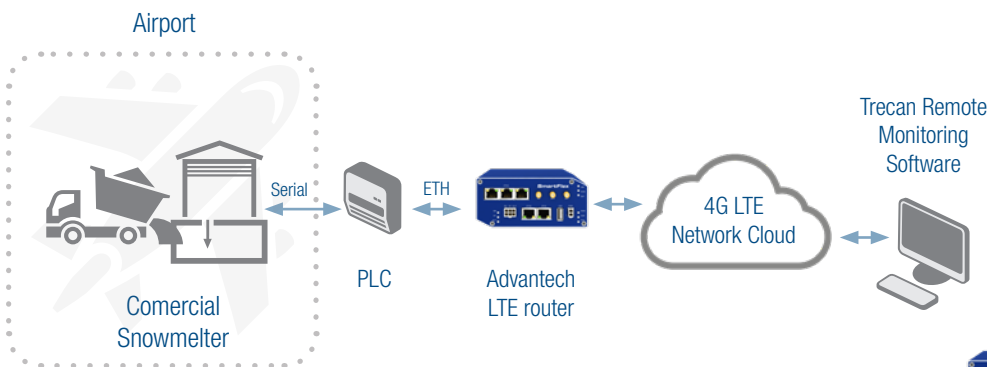
IRRIGATION AND AUTOMATION
Powering the future of agriculture?

Hermisan designs, manufactures and manages highly advanced agricultural systems such as irrigation trains, which allow a perfect distribution of irrigation and fertigation in the production of plants. All of these systems are managed through optimized software in a powerful PLC.
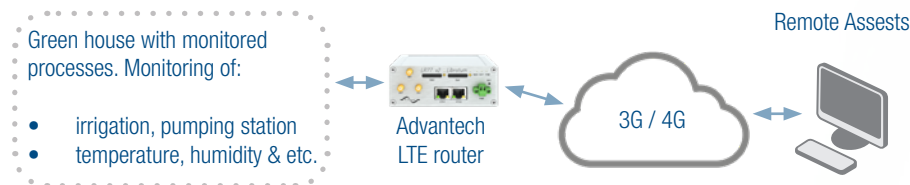
VITRIKO, as a provider of telecommunications solutions worked with the Hermisan technology department in order to provide a secure communication system based on a VPN platform utilizing the very latest in industrial LTE-4G routers from Advantech B+B SmartWorx.
This system provides a comprehensive and dependable remote management suite with a host of valuable features, including:

- System alerts: providing warnings of power loss and temperature thresholds
- Remote display of installation
- Monitoring: allows for the remote monitoring of machine irrigation, pumping stations and other vital system hardware
- Activation and desactivation machines through digital inputs / outputs
- Data collection: connecting the user with voltage, temperature and other crucial information
- Secure system access to data through a reliable VPN platform

LR77 v2 Libratum

LTE Router
2× Ethernet 10/100
WiFi
2× SIM card

Green house with monitored processes. Monitoring of:

- irrigation, pumping station
- temperature, humidity & etc.

Advantech LTE router

3G / 4G

Remote Assests

ESTÁ REGANDO LA FINCA

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hermisan
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