

ICR-2734 Libratum

Industrial 4G Router & IoT Gateway



- LTE Cat.4 with 3G/2G fallback
- 1.3 GB eMMC storage to host customer SW applications
- 2× SIM with cover, eSIM ready
- 2× Ethernet 10/100
- USB Host 2.0
- Optional Metal or Plastic case
- DIN Rail mounting
- Wide operational temperature range
- Backup real time clock
- Sleep mode

Project based customization: Last-gasp Supercapacitor, TPM 2.0

Introduction



ICR-2734 Libratum is fully compatible enhanced successor of the Advantech's balanced-features cellular router LR77 v2 Libratum introduced in 2014. Ruggedized for industrial use and compatible in form and fit with LR77 v2 Libratum (configuration, dimensions, interfaces, accessories) ICR-2734 Libratum offers even more features and improvements such as USB port, more detailed LED indication and mainly more powerful CPU and ample of data storage to ensure long lifecycle (software updates) with broad software customization possibilities for user. On project-based agreement, we can optionally add a TPM 2.0 chip (Trusted Platform Module) onboard verifying router integrity to provide trusted solution as a response to increasing cybersecurity demands in many industrial and public sectors.

The cellular router is equipped with most popular interfaces that include 2 × Ethernet 10/100 ports with two independent LANs/IP addresses, 1 × USB 2.0 host port and 2 × plate covered SIM card holders for automatic failover to an alternate service provider.

The router is powered by well-known Linux based Advantech's operating system ICR-OS. A secure web interface allows users to configure and manage ICR-2734 from remote locations. ICR-2734 supports real-time data encryption and establishing of VPN tunnels using IPsec, WireGuard, OpenVPN, GRE, etc. It supports standard and advanced networking features like DHCP, NAT, NAT-T, DynDNS, NTP, VRRP, control by SMS, and numerous other functions.







The 1.3 GB eMMC available storage for customer with an open Linux platform and the wide possibility of programming customer SW applications in Python and C/C++ ICR-2734 offers a real open development platform for Industrial IoT applications. Advantech existing Router App library (User modules) with apps already developed to enhance specific router functionalities includes industrial protocol conversions, dynamic protocols and support of IoT platforms such as MS Azure, Cumulocity, and others.

ICR-2734 is easy to install individually and in mass deployments scenarios too by using a full-featured configuration and monitoring software tool WebAccess/DMP. Safe remote VPN access to customer devices and PC's connected to routers through Internet can be administrated by additional software WebAccess/VPN.

Popular use cases in industrial and non-industrial environment includes camera connection (streets/highways/parking etc.), various industrial automation and industry 4.0 applications, mobile signs and warning systems, wind turbines and solar power stations connection, measuring and monitoring systems in transportation, remote access for maintenance staff or electricity or petrol distribution. ICR-2734 Libratum is to be designed as truly universal player for a large scope of applications to serve for connection into your devices and systems whenever cellular connection available.



Order Codes

| Model no. - Order Codes | REGION | 2× Ethernet 10/100 Mbps | 2× SIM | 1× DIV 1× ANT | 1× USB Host 2.0 | Metal Case | Plastic Case | Accessories |
|--|--------|-------------------------|--------|---------------|-----------------|------------|--------------|-------------------|
|  ICR-2734 | EMEA | ✓ | ✓ | ✓ | ✓ | ✓ | | |
|  ICR-2734P | EMEA | ✓ | ✓ | ✓ | ✓ | | ✓ | |
|  ICR-2734A01 | EMEA | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ EU Power Supply |
|  ICR-2734PA01 | EMEA | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ EU Power Supply |
|  ICR-2734A02 | EMEA | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ UK Power Supply |
|  ICR-2734PA02 | EMEA | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ UK Power Supply |

Specifications

| System | |
|----------------|--|
| CPU | ARM926EJ-S, 600 MHz |
| Memory | RAM - 128 MB eMMC - 4096 MB (838 MB for Router Apps, 512 MB for customer data) |
| Watchdog | HW Watchdog |
| RTC | Battery backup RTC |
| TPM* | Trusted Platform Module (TPM) 2.0 |
| Supercap* | Last-gasp Supercapacitor |
| Interfaces | |
| Ethernet | 2x Ethernet, RJ45, 10/100 Mbps, Isolation 1.5 kV |
| USB | 1x USB 2.0 Host Connector |
| Reset Button | Reboot / Factory reset |
| LED Indicators | System, Signal strength, Data activity, SIM1, SIM2, 2G/3G/4G technology, User, ETH |

* Project based customization

| Environmental | |
|---------------------------------|--|
| Power Supply | 9 – 48 V DC (2-pin terminal block) |
| Consumption | Idle 1.6 W / Average 3 W / Peak 6.2 W |
| Sleep Mode | Yes, 5 mW |
| Operating Temperature | -40 to +75 °C |
| Storage Temperature | -40 to +85 °C |
| Humidity | 0 to 95 % |
| IP Cover | IP30 |
| Physical Characteristics | |
| Dimensions (without DIN holder) | Metal Case: 42 x 80.3 x 113.2 mm Plastic Case: 51.4 x 83.8 x 115.5 mm |
| Enclosure | Metal Case with grounding screw or Plastic Case |
| Mounting | DIN Rail |
| Weight | Metal Case: 280 g Plastic Case: 200 g |

| Cellular Interface | |
|-----------------------|--|
| SIM Slots | 2x SIM (Mini SIM – 2FF) with cover, eSIM ready |
| Antennas | 2x SMA connector (1x Main, 1x Diversity) |
| LTE Parameters | Supported FDD frequencies: B1 (2100 MHz), B3 (1800 MHz), B5 (850 MHz), B7 (2600 MHz), B8 (900 MHz), B20 (800 MHz), B28 (700 MHz) Transfer rate: 150 Mbps (DL), 50 Mbps (UL) |
| HSPA+/UMTS Parameters | Supported frequencies: B1 (2100 MHz), B3 (1800 MHz), B8 (900 MHz) Transfer rate: 14.4 Mbps (DL), 5.76 Mbps (UL) |
| EDGE/GPRS Parameters | Supported frequencies: B2 (1900 MHz), B3 (1800 MHz), B5 (850 MHz), B8 (900 MHz) Transfer rate: 237 kbps (DL), 237 kbps (UL) |

| Software | |
|-----------------------------------|---|
| Operating System | ICR-OS (Linux based) |
| SW Customization | Router App (User Modules)* |
| Application Development | Open Linux, *Python, BASH, C/C++ |
| Industrial Protocols and IoT | *Modbus RTU/TCP gateway, *IEC 60870-5-101 to 104 gateway, *DF1, *DNP3, *MQTT, *LWM2M |
| Networking Features and Protocols | DHCP, NAT/PAT, SSH, VRRP, PPPoE, SNMP, SMTP, Dynamic DNS client, DNS proxy, VLAN, QoS, *DMVPN, NTP Client/Server, *Routing protocols RIP, BGP, OSPF, IS-IS, NHRP, Backup Routes, Port Forwarding, Host Port Routing, Ethernet Bridging, Load Balancing, IPv6 Dual Stack |
| Security | HTTPS, SSH, SFTP, DMZ, Firewall (IP Filtering, MAC address filtering, Inbound and outbound Port filtering) VPN Tunneling – WireGuard, OpenVPN, *EasyVPN, IPsec with IKEv1 and IKEv2, GRE, L2TP, PPTP Authentication – RADIUS, TACACS+, 2FA, *SCEP Encryption – DES, 3DES, AES, RSA, MD5, SHA |
| Firmware Management | Automatic firmware updates – server, locally via LAN or remotely via WAN Over-the-Air cellular module firmware updates |
| Diagnostic/Log | Status – Signal Strength, Data Usage One CLICK report – Current Configuration, Factory Identification, Routing Table Log – System Log, Reboot Log, Kernel Log Remote Diagnostics (via SSH) |
| Event Engine | StartUp script & Up/Down script (Own rules based on Digital Inputs, Network Parameters, Data Usage, Timer, Power, Device Temperature) Report Types: SMS, *email, *SNMP Trap |
| Configuration | Web server, SSH, Four configuration switchable profiles, Automatic configuration update from server, Backup & Restore configuration |
| Advanced Software Tools | WebAccess/DMP – Remote Device Provisioning, Monitoring & Management Platform WebAccess/VPN – Advanced Secure Networking Platform |

*Functionality is available with installed Router App (User Module)

Industrial Cellular Routers & Gateways

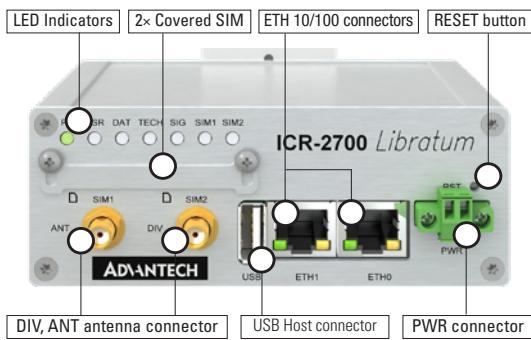
ICR-2734 Libratum

| Standards & Regulations | |
|-------------------------|--|
| Radio | EN 301 511, EN 301 908-1, EN 301 908-2, EN 301 908-13 |
| EMC | EN 301 489-1, EN 301 489-52, EN 61000-4-2, EN 61000-4-3, EN 61000-4-4, EN 61000-4-5, EN 61000-4-6, EN 61000-4-11, IEC 61000-6-2, IEC 61000-6-3 |
| Safety | EN 62 368-1, IEEE 802.3 |
| Transportation | E8 |
| National | CE, UKCA |
| Mechanical | EN 60529, EN 60068-2-27, EN 60068-2-64 |
| Climatic | EN 60068-2-1, EN 60068-2-2, EN 60068-2-14, EN 60068-2-30 |
| Environmental | REACH, RoHS3, WEEE |

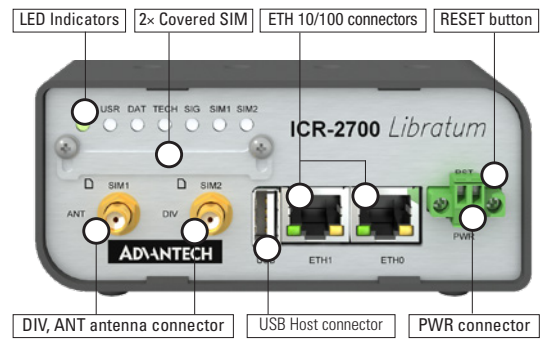
Views

FRONT VIEWS

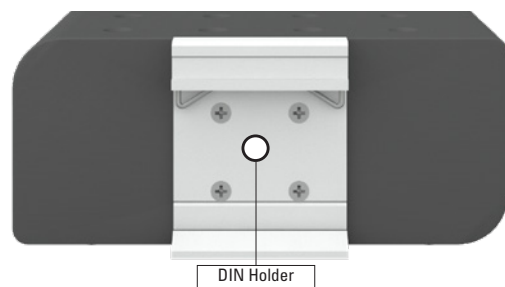
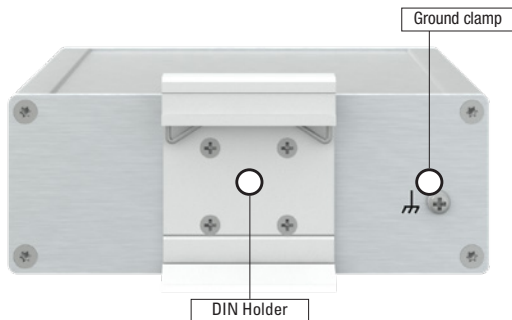
METAL VERSION



PLASTIC VERSION



REAR VIEWS

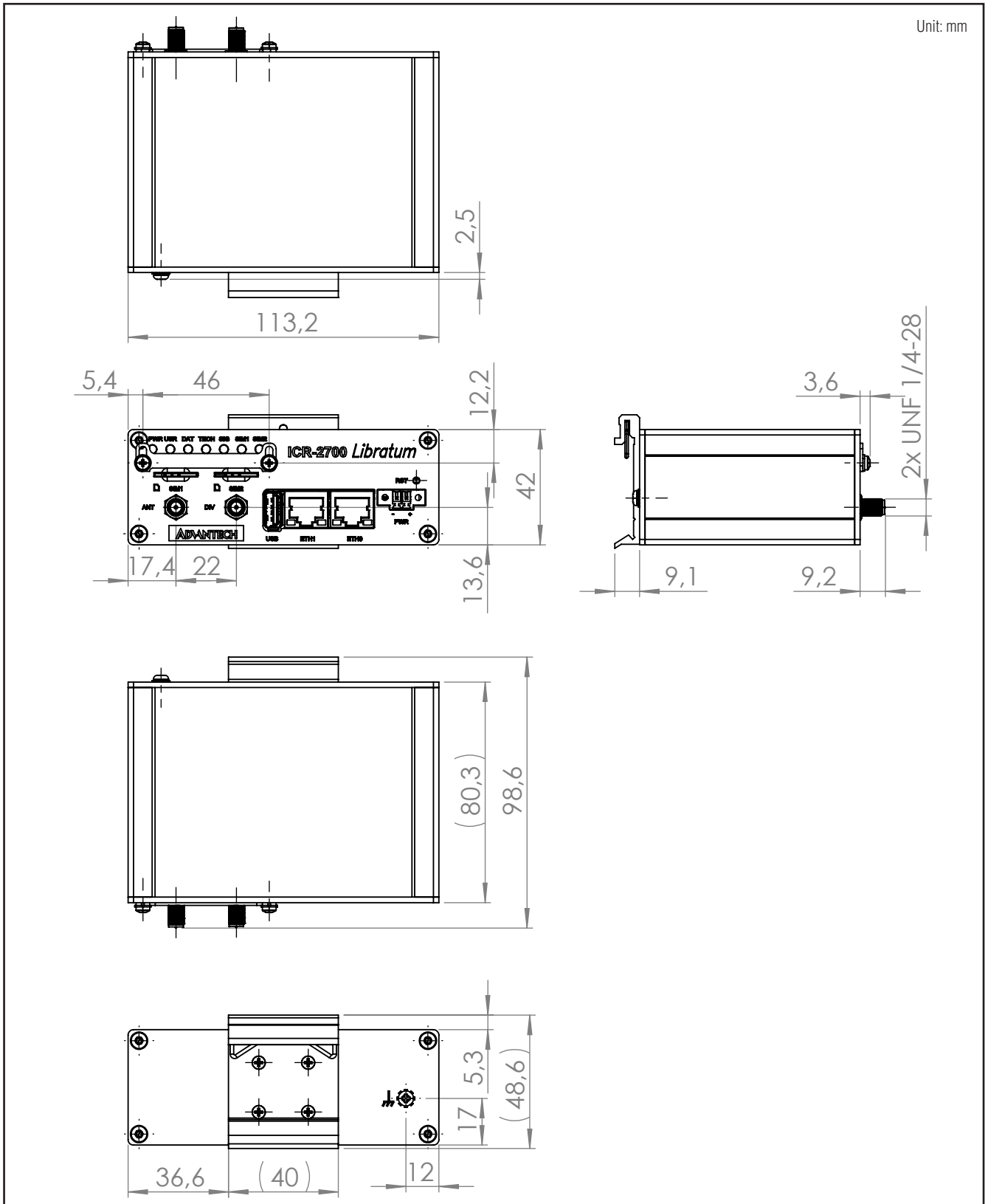


Accessories

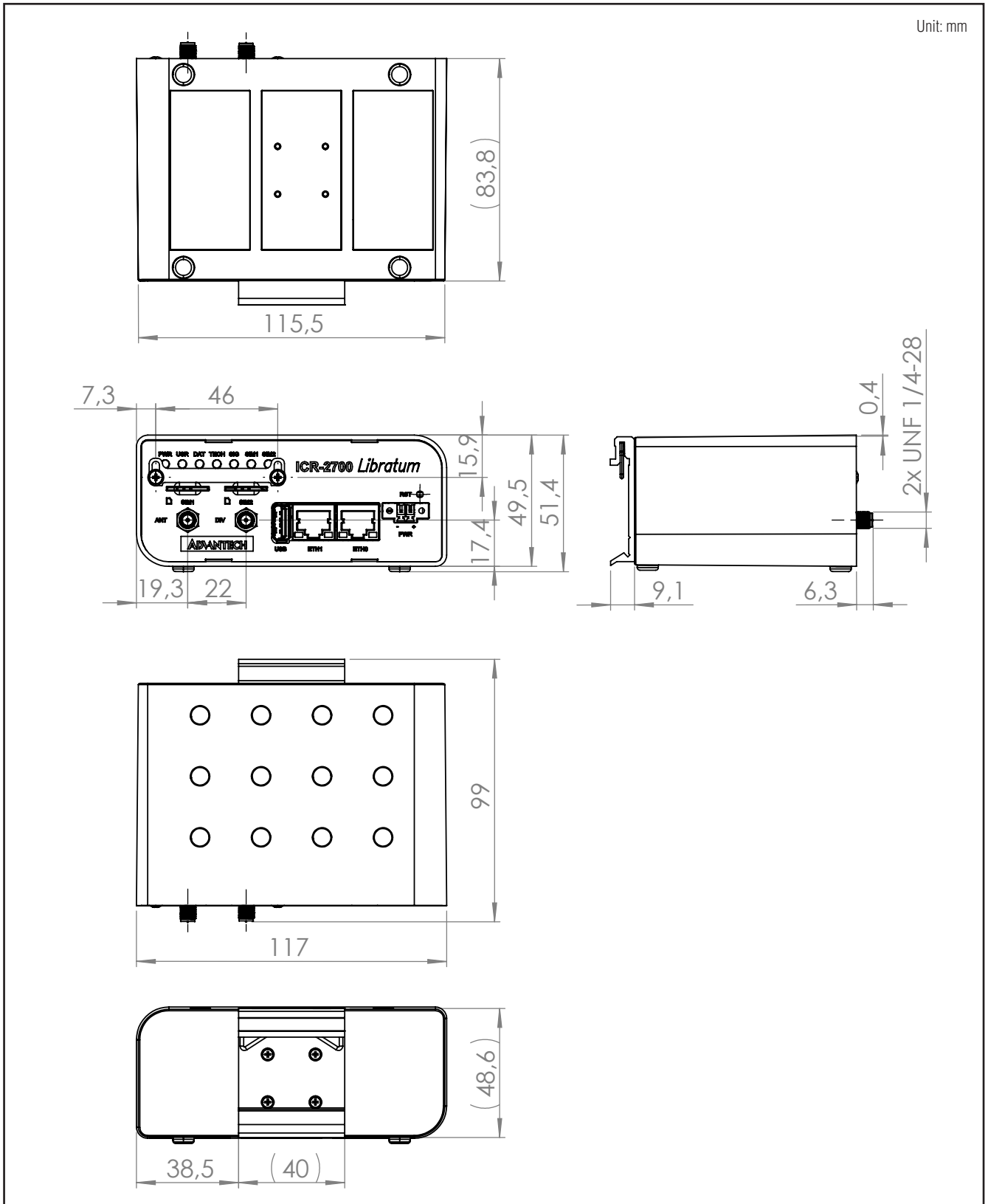
| Part Number | Description | Included in the package | | | | | | Sold Separately |
|------------------|--|-------------------------|-----------|-------------|--------------|-------------|--------------|-----------------|
| | | ICR-2734 | ICR-2734P | ICR-2734A01 | ICR-2734PA01 | ICR-2734A02 | ICR-2734PA02 | |
| BB-CON-WR2 | 2-pin PWR connector | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| BB-SBD40 | DIN clip | ✓ | | ✓ | | ✓ | | ✓ |
| BB-SBD40P | DIN clip | | ✓ | | ✓ | | ✓ | ✓ |
| BB-KD-ETH | Ethernet cross cable | | | ✓ | ✓ | ✓ | ✓ | ✓ |
| BB-RPS-v2-WR2-EU | Wall mount Power supply, 12V/1A, EU plug | | | ✓ | ✓ | | | ✓ |
| BB-RPS-v2-WR2-UK | Wall mount Power supply, 12V/1A, UK plug | | | | | ✓ | ✓ | ✓ |
| BB-RPS-v2-WR2-US | Wall mount Power supply, 12V/1A, US plug | | | | | | | ✓ |
| ANT-LTE5G-025 | Antenna 5G/LTE, Terminal | | | ✓ 2 pcs | ✓ 2 pcs | ✓ 2 pcs | ✓ 2 pcs | ✓ |

For more accessories (Antennas, Power Supplies) visit www.advantech.com

Dimensions - Technical Drawing - Metal Case



Dimensions - Technical Drawing - Plastic Case



Tento produkt můžete zakoupit u společnosti AutoCont IPC a.s.



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Pravidelní zákazníci u nás nakupují za nižší ceny. Výše slevy se odvíjí od realizovaného obrátu.



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K projektovým dodávkám nabízíme rozšířenou podporu a servis s garancí výměny zařízení do 48 hodin.