



# Rugged Computer RSL 10

Embedded Rugged Computer with Intel® Core™ Raptor Lake (P-Series)

PRELIMINARY



### Product Highlights

- Maintenance free
- Long term availability
- Hardware Watchdog
- Trusted platform module (TPM 2.0)
- UEFI Secure Boot
- Integrated IMU
- Ignition Controller
- Sealed housing (IP67)
- Temperature supervision
- Persistent Flash BIOS
- Fanless, no moving parts

### Market/Applications

- Heavy Industry
- Agriculture
- Construction
- Mining vehicles
- Automated guided vehicles (AGV)
- Outdoor applications

## RPC/RSL10

This fan less RSL COMPACT10 generation is based on the 13th Generation Intel® Core™ processor technology and offers high performance and a wide range of interface options. The robust and uncompromising industrial design allows the implementation in the most demanding applications and guarantees long term availability.

- Extended Temperature
- Rugged aluminum housing
- IP67 approved
- Shock and vibration resistant

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	Order Code	RPC/RSL10L70-C101E <sup>1</sup>	RPC/RSL10L70-A101E <sup>1</sup>
<b>Processor / Performance</b>			
Intel® Core™ i7-1365URE U-Series 2 P-cores 1.7GHz up to 4.9GHz and 8 E-cores 1.2GHz up to 3.7GHz		on request	on request
Intel® Core™ i7-1370PRE P-Series 6 P-cores 1.9GHz up to 4.8GHz and 8 E-cores 1.2GHz up to 3.7GHz Intel's use cases for 24/7 and Turbo Mode usage apply. For further details please contact the manufacturer or the user manual.		✓	✓
<b>Memory / Storage</b>			
Intel® Smart Cache		12MB	12MB
Dual channel LPDDR5x 6000 MT/s SDRAM (memory soldered down)		64GB	64GB
M.2 2280 Key M socket (PCIe x4) for additional NVMe Drive 120GB to 2TB		2	2
CFAST socket with latching retainer <sup>2</sup>		1	1
MicroSD Card socket <sup>2</sup>		1	1
<b>Features</b>			
Real time clock PC compatible with Battery backup (CR2477N)		✓	✓
Hardware Watchdog & Temperature supervisor		✓	✓
TPM 2.0 according to ISO/IEC11889		✓	✓
UEFI Secure Boot key material must be provided by customer, custom bios version required		on request	on request
IMU - Inertial measurement unit STMicroelectronics ISM330DHCX (Please see user documentation for more detailed information and maximum sampling rate)		✓	✓
<b>Communication Interfaces</b>			
HDMI 2.1		1	1
USB version 3.2	(Type A)	1	1
100/1000/2500Mbit Ethernet (NBASE-T) with 2x separated Intel® I226 NICs	(M12 female X-coded)	2	2
Ethernet 10/100/1000 BASE-T (4x Intel I210-IT)	(M12 female X-coded)		
Single Pair Ethernet 100/1000 BASE-T1 with 4 dedicated NIC's NIC: Microchip LAN7431-I   T1-Phy: Microchip LAN8870   SPE Connector: acc. IEC 63171-5	(M8 male SPE)	on request larger housing required	on request larger housing required
CAN 2.0A/B & CAN FD (PEAK FPGA chip, ISO bus compatible) active/passive, isolated Expandable to max. 6x CAN-FD using mPCIe Modules	(M12 A-coded)	2	2
Serial RS232 <sup>3</sup> RX, TX, RTS, CTS, GND	(M12 A-coded)	1	1
Digital I/O module, 24/36VDC - Galvanic isolation 1500Vrms (process to Logic) current sourcing output / current sinking inputs	(M12 male, 8P A-coded)	4 inputs, 2 outputs	4 inputs, 2 outputs
M.2 Key E socket <sup>2</sup>	(2230)	1	
M.2 Key B socket <sup>2</sup>	(3042/52)	1	
Mini PCIe socket <sup>2</sup>		1	1
Buzzer		✓	✓
<b>Wireless connectivity</b>			
4G LTE Cat-13 (3G fallback) Sierra Wireless EM7590 - M2M only! Dual nano SIM slot for cellular modules for 4G module	(2x SMA)	on request	✓
Cellular 5G module (4G/3G fallback) with GNSS		on request	on request
GNSS module u-blox NEO-M9V Module	(1x SMA)	on request	✓
High precision GNSS module (with RTK) u-blox ZED-F9P	(1x SMA) <sup>3</sup>	on request	on request
Wireless LAN (Wi-Fi 6) 802.11ac/a/b/g/n/ax Intel, Bluetooth 5.2 Module Intel Wireless- AX210	(2x RP-SMA)	on request	✓
<b>Technical Data</b>			
Exterior Dimensions [mm] (housing incl. mounting plate)		tbd (w320 x h85 x d170)	tbd (w320 x h85 x d170)
Net weight [gram]		-3000	-3000
Input voltage reverse polarity protected	(M12 male L-coded)	9 ... 45VDC	9 ... 45VDC
Power consumption typ. in Watt @ 24V without Add-Ins, idle		tbd	tbd
<b>Environmental Conditions</b>			
Operating temperature <sup>4</sup>		-40°C ... +70°C	-40°C ... +70°C
Non operating temperature (Recommended storage temperature 20°C ... 25°C)		-40°C ... +85°C	-40°C ... +85°C
Ingress protection standard according to EN60529		IP67	IP67
Conformal coating <sup>5</sup>		on request	on request
MTBF @ 25°C <sup>5</sup> according to Telcordia SR-332, Environment GM, excluding CFast and optional interfaces		tbd	tbd
<b>Certifications</b>			
Shock EN60068-2-27		✓	✓
Vibration EN60068-2-64		✓	✓
EMI-Conformity EN55032 / EN55035		✓	✓
Safety (according to EN62368-1)		designed to meet	designed to meet
Radio and Telecommunication (RED)		✓	✓
CE/UKCA		✓	✓
<b>Software</b>			
Linux Debian 12 (Bookworm)		✓	✓
BSP Windows 10 IoT Enterprise LTSC		✓	✓

## Optional accessories

- Ethernet Cable with M12 Connector  
CPN/CABETHM12XMRJ-200A
- Power Cable with M12-L Connector to Weidmüller 4 Pin terminal Connector  
CAB/M12L5FSCZ4-150A

**Scope of delivery**  
1x Device packaging

<sup>1</sup>Please contact factory for minimum order quantities

<sup>2</sup>Internal connector

<sup>3</sup>Multiband antenna needed (GNSS L1 band and L2/E5b/B2I bands). Example u-Blox type ANN-MB

<sup>4</sup>Depending on installation situation and interface connection. Please see user documentation.

<sup>5</sup>on all possible components (excl. Connectors and wireless devices)

Product specifications subject to change without notice. All data is for information purposes only and not guaranteed for legal purposes. Information in this data sheet has been carefully checked and is believed to be accurate. However, no responsibility is assumed for inaccuracies. Please refer to the user documentation for additional product specification.

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