

Rugged Computer

COMPACT RSL Rugged Series

Industrial rugged PC with Intel® Atom™ Elkhart Lake processor (x6000)



Rugged Computer

RPC/COMPACT82 - RSL

This fanless rugged computer RSL82 is based on the Intel® Atom™ Elkhart Lake (EHL) processor technology, using the new 10nm "Tremont" architecture, it offers 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.

- Multi-core Intel® Atom™ processor
- Protection class IP67
- Shock and vibration resistant
- Designed for 24/7 continuous operation



Product Highlights

Ultra rugged with sealed housing
Each LAN interface has its own dedicated NIC
Power Ignition controller
Maintenance free & long term availability
Hardware Watchdog
Trusted platform module (TPM 2.0)
UEFI Secure Boot
Temperature supervision
Persistent Flash BIOS
Fanless, no moving parts

Product Features

Intel® Atom™ Elkhart Lake, up to 4 cores
16GB LPDDR4 RAM
Modular product design, wide range of expansion options
Socket for CFast storage card (up to 480GB)
Gbit Ethernet, CAN-FD, USB 3.1, RS232
Digital I/Os
Optional LTE, GNSS & WiFi extensions
Rugged M12 connectors
Rugged aluminum housing
Protection class IP67

Industries / Applications

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

		Order Code	RPC/RSL82J19-A154E ¹
Processor / Performance			
Intel® Atom™ x6425RE - Quad core 1.9GHz clock 16GB RAM			•
Intel® Atom™ x6414RE - Quad core 1.5GHz clock 4GB RAM			on request
Memory / Storage			
L2 cache			1.5MB
4267MT/s LPDDR4x RAM soldered on board			16GB
Internal eMMC			32GB
CFast socket with latching retainer ²			1
MicroSD Card socket ²			1
Features			
Real time clock (RTC) with battery backup			CR2477N
Hardware Watchdog & Temperature supervisor			•
Intelligent power management (Ignition controller)			•
TPM 2.0 according to ISO/IEC 11889			•
UEFI Secure Boot key material must be provided by customer			•
Inertial measurement unit STMicroelectronics ISM330DHCXTR (Please see user documentation for more detailed information and maximum sampling rate)			•
Communication Interfaces			
DisplayPort 1.4 (4096 x 2160 @ 60Hz) behind the front cover			1
USB version 3.1 behind the front cover		(Type A)	2
Ethernet 10/100/1000 BASE-T (1x Intel® GbE 1x Intel® I210-IT)		(1x M12 female, 8P x-coded)	2
CAN 2.0A/B & CAN FD (PEAK FPGA chip, SJA1000 compatible) active/passive, isolated		(1x M12 female, 8P a-coded)	2
Serial RS232 non isolated		(M12 male, 8P a-coded)	1
Digital I/O module, 24/36VDC - Galvanic isolation 1500Vrms (process to Logic) current sourcing output / current sinking inputs (Mating plug type Weidmüller B2CF 3.5/10/180F SN BK)		(M12 male, 8P a-coded)	4 inputs, 2 outputs
Mini PCIe socket ²			1
Buzzer			•
Wireless connectivity			
4G LTE Cat-13 (3G fallback) Sierra Wireless EM7590 - M2M only!		(2x SMA)	•
Dual nano SIM slot for cellular modules for 4G module			•
GNSS module u-blox NEO-M9V Module		(1x SMA)	•
High precision GNSS module (with IMU, RTK) u-blox ZED-F9P/R		(1x SMA) ³	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)	•
Technical Data			
Exterior Dimensions [mm] (housing incl. mounting plate)			w276 x h58 x d210
Dimensions [mm] (housing, excl. mounting)			w276 x h58 x d162
Net weight [gram]			~3500
Non-isolated input voltage, with ignition controller function, reverse polarity protected		(M12 4P male a-coded)	8.4 ... 45VDC
Power consumption typ. in Watt @ 24V without Add-Ins, idle			~17
Environmental Conditions			
Operating temperature			-40°C ... +70°C
Non operating temperature (Recommended storage temperature 20°C ... 25°C)			-40°C ... +85°C
Ingress protection standard according to EN60529			IP40
Conformal coating ⁵			on request
UNECE-R10 certified (E-mark)			on request
Shock EN60068-2-27 / EN61373			•
Vibration EN60068-2-64 / EN61373			•
EMI-Conformity EN50121-3-2 / EN301489-1			•
Safety (according to EN62368-1)			designed to meet
MTBF @ 25°C according to Telcordia SR-332, Environment GM, excluding CFast and optional interfaces			tbd

¹ Please contact factory for minimum order quantities

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

⁴ Depending on installation situation and interface connection. Please see user documentation.

² Internal connector

⁵ on all possible components (excl. Connectors and wireless devices)

Assured Systems

Assured Systems is a leading technology company with over 1,500 regular clients in 80 countries, deploying over 85,000 systems to a diverse customer base in 12 years of business. We offer high-quality and innovative rugged computing, display, networking and data collection solutions to the embedded, industrial, and digital-out-of-home market sectors.

US

sales@assured-systems.com

Sales: +1 347 719 4508

Support: +1 347 719 4508

1309 Coffeen Ave
Ste 1200
Sheridan
WY 82801
USA

EMEA

sales@assured-systems.com

Sales: +44 (0)1785 879 050

Support: +44 (0)1785 879 050

Unit A5 Douglas Park
Stone Business Park
Stone
ST15 0YJ
United Kingdom

VAT Number: 120 9546 28

Business Registration Number: 07699660