Rugged Computer
COMPACT RSL Rugged Series
Industrial rugged PC with Intel® Atom™ Elkhart Lake processor (x6000)

LTE / GNSS / Wi-Fi

image similar

DC supply
8.4 ... 45VDC

2x CAN FD

DIO

RS232

2x Gbit LAN

2x USB

DisplayPort

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 guar-
antees long term availability.

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

Windows IoT   debian

UKCA CE

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

Indutries / 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/IEC11889		•
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

[2] Internal connector

[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.

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

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