Railway Computer

COMPACT-RSL Rail Series

Embedded Railway Computer with Intel® Atom™ E39xx processor (formerly Apollo Lake-I)

IPC/COMPACT81

This fan less RPC COMPACT81 generation is based on the Intel® Atom™ E3900 (formerly Apollo Lake-I) processor technology and offers a wide range of interface options.
The robust and uncompromising industrial design allows the implementation in the most demanding rail applications and guarantees long term availability.

- **24/7 continuous operation**
- **M12 connector**
- **EN50155 Class S2 power supply**
- **Extended temp. Range**
- **Railway approved (EN50155 & EN45545)**

Windows IoT

Debian 9 - Stretch

CE

Product Highlights

Maintenance free/Long term availability
Goldcap instead of battery backup
No moving parts
Scalable CPU core
Hardware watchdog
Temperature supervision
Intelligent power management system
ESD- protection on all interfaces
Motion Sensor
Dead Reckoning
Shock and vibration resistant

Product Features

Intel® Atom™ E3900 Series
up to 2.0GHz, up to 4 Cores
RAM soldered on board up to 8GB
Socket for CFast
Graphic resolution up to WUXGA
Ethernet, USB, CAN
M12 connectors
Stainless steel housing
Protection class IP40
EN50155 certified (OT4)

Markets / Applications

Railway (rolling stock)
Automotive
Traffic control
Transportation and vehicle construction
Automated Guided Vehicle (AGV)

Order Code		IPC/RSL81I20-R245E[1]	IPC/RSL81I20-R301E[1]	MySyslogic[1]
Processor / Performance				
Intel® Atom™ x5-E3930 1.80GHz (Burst) | 1.3GHz Clock - Dual Core		optional	optional	
Intel® Atom™ x7-E3950 2.00GHz (Burst) | 1.6GHz Clock - Quad Core		•	•	
Memory				
L2 cache		2MB	2MB	2MB
DDR3 RAM		8GB	8GB	8GB
4GB or 2GB DDR3 RAM[1]		optional	optional	optional
Features				
Real time clock PC compatible		•	•	•
Hardware Watchdog & Temperature supervisor		•	•	•
Intelligent power management (Ignition controller)		•	•	•
Goldcap backup		•	•	•
TPM2.0 (SLB9665)		•	optional	optional
Communication Interfaces				
DisplayPort 1.2 up to 4096x2160 @60Hz		•	•	•
CFast socket with retention frame[2]		1	1	1
USB version 3.0	(Type A)	1	1	1
USB version 2.0	(Type A)	1	1	1
Ethernet 10/100/1000 (I210-IT)	(M12 female X-coded)		2	up to 2
Ethernet 10/100 (I210-IT)	(M12 female d-coded)	2		
RS232 ESD protected	(DSUB9)		2	up to 6
RS422/485 ESD protected	(DSUB9)			up to 2
CAN (PEAK, SJA1000 compatible) ESD protected, isolated	(DSUB9)	2		up to 6
Mini PCIe socket[2]		1	1	up to 4
I2C bus[2]		•	•	•
Buzzer		•	•	•
Wireless Functions				
Cellular 4G Module (GSM/UMTS/LTE) u-blox MPCI-L210-03S-00 Module (TOBY-L210) - M2M only!		2x SMA		
Dual SIM Support		•		
Positioning Wireless Module (GPS, Galileo, Glonass, Beidou) u-blox NEO-M8U Module		1x SMA		
Acceleration / Motion Sensor STMicroelectronics ISM330DLC		•		
Technical Data				
Dimensions w262 x h52 x d138 mm (housing)		•	•	•
Net weight in gram		1750	1850	1750
Input voltage (isolated and reverse polarity protected)	(M12 4P male A-coded)	16.8 ... 45VDC	optional	optional
Wide input voltage (isolated and reverse polarity protected)	(M12 4P male A-coded)	optional	16.8 ... 137.5VDC	16.8 ... 137.5VDC
Interruption of voltage supply time: EN50155 (>10ms)		Class S2	Class S2	Class S2
UPS: Interruption of voltage supply time up to 30s[3]				optional
Power consumption typ. in Watt @ 24V without Add-Ins, idle		~10	~12	~10
Environmental Conditions				
Operating temperature (up to 85°C for 10 min. according to EN 50155 Class OT4)[3]		-40°C ... +70°C	-40°C ... +70°C	-40°C ... +70°C
Storage temperature -40 ... +85°C		•	•	•
Protection standard: IP40		•	•	•
Conformal coating[4]		•	•	•
Shock: EN60068-2-27 / EN61373		•	•	•
Vibration: EN60068-2-64 / EN61373		•	•	•
EMI-Conformity EN50121-3-2 / EN301489-1		•	•	•
Safety according to EN62368-1		•	•	•
Fire protection HL3: DIN EN45545-2		•	•	•
Radio and Telecommunication: Designed to meet RED		•	•	•
MTBF ~455 000h @ 25°C according to Telcordia SR-332, Environment GB, excluding battery		•	•	•
Enhancement cards				
Wireless Module (LTE / GPS / WiFi / BT) [1]			optional	optional
Digital and Analog I/O[1]			optional	optional

[1] Please contact factory for minimum order quantities
[2] Internal connector
[3] Depending on installation situation and interface connection. Please see user documentation.
[4] on all possible components (excl. Connectors and wireless devices)

Syslogic Datentechnik AG
Täfernstrasse 28
CH-5405 Baden Dättwil

Version 0.8 | May 2020

For further information and support:
info@syslogic.com
support@syslogic.com
www.syslogic.com

+41 56 200 90 40 **Switzerland (Headquarters)**
+49 7741 967 14 20 **Germany and Austria**

syslogic
industrial computing