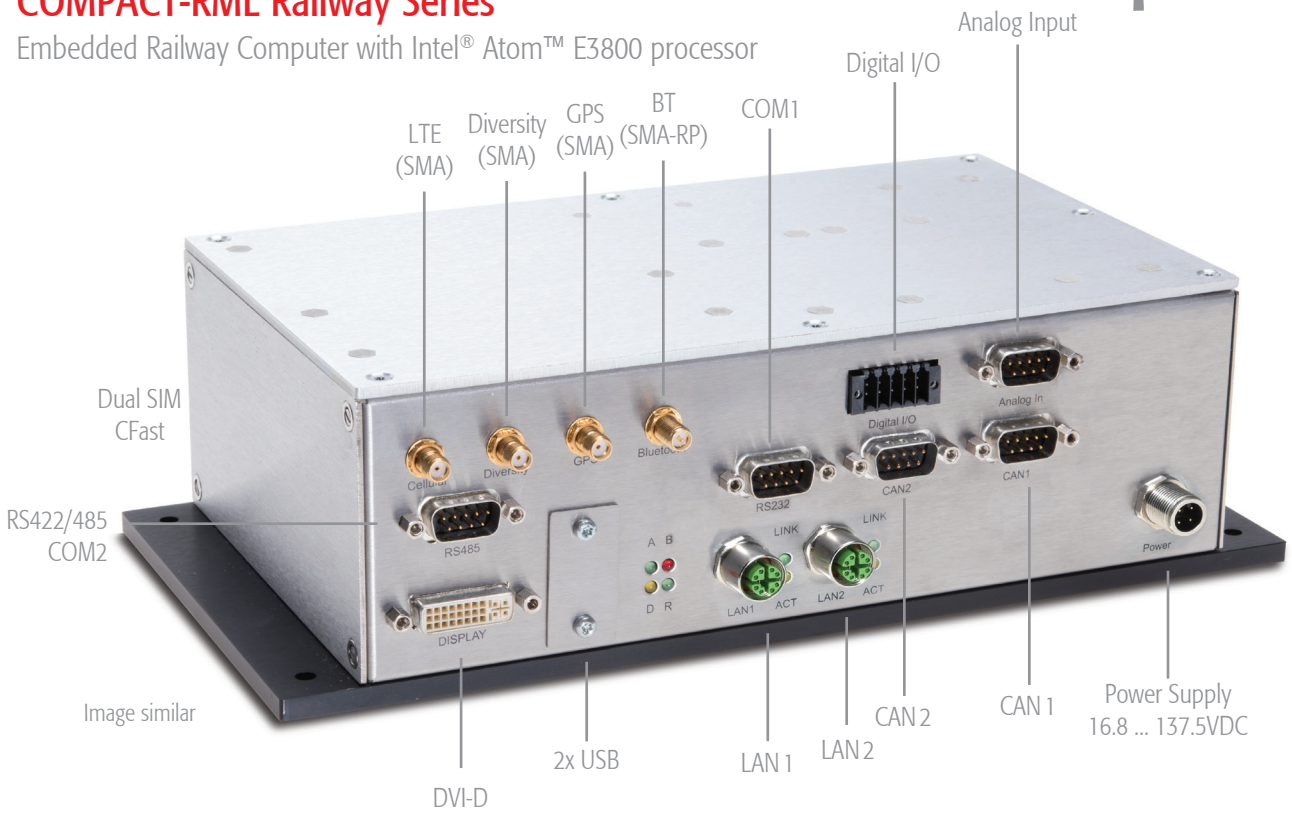
Railway Computer

COMPACT-RML Railway Series

Embedded Railway Computer with Intel® Atom™ E3800 processor

preliminary



IPC/COMPACT8 - RML

This fan less IPC/COMPACT8 generation is based on the Intel® Atom™ E3800 processor technology and 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.

- **24/7 continuous operation**
- **M12 connectors**
- **EN50155 Class S2 power supply**
- **Extended temp. Range acc to EN50155 OT4**
- **Railway approved (EN50155 & EN45545)**

Windows Embedded Standard 7

Windows IoT

Debian 8 - Jessie

Debian 9 - Stretch

CE

Product Highlights

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

Product Features

Intel® Atom™ E3800 Series
up to 1.91GHz, 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)

		Order Code IPC/RML8H19-A101E [1]
Processor / Performance		
Intel® Atom™ E3845 1.91GHz 64-bit - Quad Core		•
Memory		
L2 cache		1MB
DDR3 RAM		4GB
CFast memory card (Cactus Technologies KC128GFI-240S, 15nm MLC NAND)		128GB
Features		
Real time clock PC compatible with goldcap backup		•
Hardware Watchdog & Temperature supervisor		•
Intelligent power management (Ignition controller)		•
Inertial measurement unit (IMU)		•
TPM2.0 (SLB9665)		optional
Communication Interfaces		
DisplayPort up to 2560 x 1600px		1
CFast socket with retention frame [2]		1
USB version 2.0	(Type A with cover)	1
USB version 3.0	(Type A with cover)	1
Ethernet 10/100Mbit (I210-IT)	(M12 female d-coded)	1
Ethernet 10/100Mbit (I210-IT) with 24V, 500mA Power non isolated to internal electronics	(M8 female 6 pin)	1
RS232 ESD protected	(DSUB9)	1
RS422/485 ESD protected and galv. isolated	(DSUB9)	1
passive CAN (SJA1000 compatible, listen only) ESD protected, isolated	(DSUB9)	2
Digital input (24 / 110VDC) isolated	(Weidmüller BCZ Series or similar)[3]	3
Counter input (24V, 32bit 1khz) isolated	(Weidmüller BCZ Series or similar)[3]	1
Analog input (0 - 30 VDC accuracy ±2%)	(DSUB9 or similar)[3]	2
LTE Celluar Module with dual SIM Support u-blox MPCI-L210 Module (TOBY-L210) - M2M only!	(2x SMA)	1
Positioning Wireless Module (GPS) u-blox NEO-M8U Module incl. acceleration sensor	(SMA)	1
Bluetooth v4.0 with Bluetooth low energy USB Adopter Parani-UD100 Module	(RP-SMA)	1
Mini PCIe socket [2]		1
Buzzer		•
Technical Data		
Dimensions in mm (housing)		w278 x h80 x d155
Net weight in gram		~2250
Isolated input voltage (with ignition controller and reverse polarity protection	(M12 4P male A-coded)	16.8 ... 45VDC
Non isolated wide input voltage (with reverse polarity protection)	(M12 4P male A-coded)	16.8 ... 137.5VDC
Interruption of voltage supply time: EN50155 (>10ms)		Class S2
Current consumption typ. in mA @ 24V without Add-Ins, idle		~625
Power consumption typ. in Watt @ 24V without Add-Ins, idle		~15
Environmental Conditions		
Operating temperature		-40°C ... +70°C
Storage temperature		-40°C ... +85°C
Protection standard: IP40		•
Conformal coating		•
Shock: EN60068-2-27 / EN61373		designed to meet
Vibration: EN60068-2-64 / EN61373		designed to meet
EMI-Conformity EN-50121-3-2		designed to meet
Safety according to EN62368-1		designed to meet
Fire protection: DIN EN 45545-2		designed to meet
Radio and Telecommunication: RED		designed to meet
estimated MTBF ~100 000h (11.4 Years) @ 20°C excluding battery and S2 power supply		•
Enhancement cards		
WLAN on mPCIe		optional

[1] Please contact factory for minimum order quantities
[2] Internal connector
[3] Mating plug type for process interface connection: Weidmüller BCZ Series or similar
[4] Depending on installation situation and interface connection. Please see user documentation.

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