

Vehicle Computer

COMPACT VSL Vehicle Series

Embedded In-Vehicle Computer with Intel® Atom™ Elkhart Lake processor (x6000 Series)



IPC/COMPACT82 - VSL

This fanless RSL COMPACT82 generation 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
- Shock and vibration resistant
- Wide Temp. -40...+85°C on component level
- Made for 24/7 continuous operation



Product Highlights

Maintenance free & long term availability
Power Ignition controller
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
up to 16GB LPDDR4 RAM
LTE-4G, GNSS and WiFi6 connectivity
CFast socket
microSD socket
1Gbit Ethernet and USB 3.1
CAN-FD and Serial Ports
Modular product design
wide range of expansion options

Industries / Applications

Automotive
Transportation
Automated Guided Vehicles (AGV)
Special purpose vehicles
Agriculture
Industrial trucks

		Order Code	IPC/VSL82J19-A153E 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			•
Communication Interfaces			
DisplayPort 1.4 (4096 x 2160 @ 60Hz)			1
USB version 3.1		(Type A)	2
Ethernet 10/100/1000 BASE-T (1x Intel® GbE 1x Intel® I210-IT)		(M12 female x-coded)	2
CAN 2.0A/B & CAN FD (PEAK FPGA chip, SJA1000 compatible) active/passive, isolated		(DSUB9)	2
M.2 Key B socket ² - used for LTE-4G extensions		(3042)	
M.2 Key E socket ² - used for WiFi extensions		(2230)	
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)			w228 x h53 x d127
Net weight [gram]			~1750
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 ⁴			-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/B2L 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)

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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industrial computing

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