



VMS-EHLR

Intel® Atom® x6425E Processor Rugged Fanless Railway System

- > Intel® Elkhart Lake Atom™ x6425E Processor
- > Intel® UHD Graphic for 10th Gen Intel® Processor
- > 1-Memory Socket, Max. Up to 32GB DDR4 3200
- > 2-COM Port (RS-232/422/485 by BIOS & Jumper)
- > 2-Storage (Front Access 2.5" & M.2 Key-B SSD)
- > 3-Display (DP 1.4 & HDMI 2.0 & VGA)
- > 3-Expansion (mPCIe & M.2 Key-E/B)
- > 4-M12 (DC-Input, USB 2.0, 2-LAN Port)
- > 8-Bit Programmable GPIO with 2.5KV Isolated
- > Default Wall Mount Kit, dTPM 2.0 onboard

+ Spec

System Information (CS)	
Processor	Intel® Atom™ x6425E Processor (1.5M Cache, up to 3.00 GHz)
System Memory	1 x 260-Pin SODIMM Socket Max. up to 32GB DDR4 3200MT/s
I/O Chipset	AMI uEFI BIOS 256 Mbit SPI Flash ROM
Watchdog Timer	H/W Reset, 1sec. ~ 65535sec.
H/W Status Monitor	Horizontal battery socket Supports wide operating temperature Supports no RTC battery mode
TPM	dTPM 2.0 (Default)
SBC	EBM-EHLR + EBM-EHLR DB-A
Expansion (CS)	
mPCIe	1 x mPCIe support PCIe III x1 / USB2.0 and SIM slot2 (external)
M.2	1 x M.2 Key-B 2242/3042/3052 support PCIe III x1 / USB3.1 Gen.2 and SIM slot1 (external) 1 x M.2 Key-E 2230 for Wi-Fi & BT Module (PCIe III x1 / USB2.0)
Storage (CS)	
M.2	1 x M.2 2242 (SATA III)
2.5" Drive Bay	1 x 2.5" Front Access Drive Bay (SATA III), supports w/9.5mm SSD
Edge I/O (Front) (CS)	
USB Port	2 x USB 3.2 Gen.2 (10Gbps)
Power Button	Push Button for Power on/off (w/LED)
Reset Button	Push Button for Reset (Hidden)
LED Indicator	3 x LED indicator (PWR/Wi-Fi/LTE) Storage LED (Yellow)- M.2 B-key SATA / 2.5" SSD Storage LTE LED (Green)- M.2 B-key PCIe/USB3 Wi-Fi LED (Green)- M.2 E key
Digital I/O	1 x 8-Bit 2.5KV Isolated GPIO in DB-9
CAN Bus	1 x 4-Pin CAN Bus H/L in DB-9
SIM Slot	2 x Front Access SIM Slot
Antenna	3 x Antenna Mount
Edge I/O (Rear) (CS)	
USB Port	1 x USB 2.0 in M12-A code connector
COM Port	2 x COM Port (RS-232/422/385 in DB-9, select via BIOS, auto flow control via HW)
HDMI	1 x HDMI 2.0
DP	1 x DP 1.4
VGA	1 x VGA
Audio	1 x Line-In, Line-Out and Mic-In in DB-15
RJ-45	2 x LAN Port in M12-X code connector
Edge I/O (Right) (CS)	
Antenna	2 x Antenna Mount
Edge I/O (Left) (CS)	
Antenna	2 x Antenna Mount
GPS (CS)	
Chipset	u-blox NEO-M9N GNSS LCC module with Untethered Dead Reckoning and onboard sensors
Protocol	BeiDou, Galileo, GLONASS, GPS / QZSS
Display (CS)	
Graphic Chipset	Intel® UHD Graphics for 10th Gen Intel® Processors
Resolution	DP++ 1.4: 4096x2304 @ 60Hz (DP to HDMI cable can not support 4K@60Hz, max support 1920x1080(60Hz)) HDMI 2.0b: Max. resolution 4096x2304 @ 60Hz VGA: 1920 x 1080 @ 60Hz
Audio (CS)	
Audio Codec	Realtek ALC888S
Ethernet (CS)	



LAN Chipset	Intel® Ethernet Controller I210-IT
Specification	10/100/1000Base-T
LED Indicator	4 x LED indicator (LAN for active, speed)
Power Requirement (CS)	
DC Input	Typical 24Vdc (+9~ 36Vdc) w/ Isolation TVS component for surge protection Reverse current/voltage protection
DC Input Connector	M12-A code (4 Poles: V+, V-, GND, IGN)
ACPI	Single power ATX Support S0,S3, S4, S5 ACPI 5.0 Compliant
Power Mode	AT/ATX (ATX is default setting)
Software Support (CS)	
OS Information	Win 10 64bit / Linux
Certification (CS)	
Certification Information	CE, FCC Class A, UKCA, EN50155, EN50121, EN45545
Mechanical & Environmental	
Operating Temperature	-40°C ~ 70°C (w/SSD) ambient w/ 0.2 or 0.5 air flow
Storage Temperature	-30°C ~ 70°C (-22°F ~ 158°F)
Operating Humidity	40°C @ 95% Relative Humidity, Non-condensing
Dimension (W x L x H)	240*150*55 mm
Weight	2.2kg
Vibration Test	Operating with SSD : MIL-STD-810G, Method 514.6, Category 4, common carrier US highway truck vibration exposure
Shock Test	Operating with SSD: MIL-STD-810H, Method 516.8, Procedure I, functional shock=20G
IP Rating	IP50
Mounting Kit	Wall Mount Kit (standard) DIN RAIL (optional)
Ordering Information	
Ordering Information	VMS-EHLR-A1-1R Intel® Elkhart Lake Atom™ x6425E Processor Rugged Fanless Railway System