



## 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)	
<b>Processor</b>	Intel® Atom™ x6425E Processor (1.5M Cache, up to 3.00 GHz)
<b>System Memory</b>	1 x 260-Pin SODIMM Socket Max. up to 32GB DDR4 3200MT/s
<b>I/O Chipset</b>	AMI uEFI BIOS 256 Mbit SPI Flash ROM
<b>Watchdog Timer</b>	H/W Reset, 1sec. ~ 65535sec.
<b>H/W Status Monitor</b>	Horizontal battery socket Supports wide operating temperature Supports no RTC battery mode
<b>TPM</b>	dTPM 2.0 (Default)
<b>SBC</b>	EBM-EHLR + EBM-EHLR DB-A
Expansion (CS)	
<b>mPCIe</b>	1 x mPCIe support PCIe III x1 / USB2.0 and SIM slot2 (external)
<b>M.2</b>	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)	
<b>M.2</b>	1 x M.2 2242 (SATA III)
<b>2.5" Drive Bay</b>	1 x 2.5" Front Access Drive Bay (SATA III), supports w/9.5mm SSD
Edge I/O (Front) (CS)	
<b>USB Port</b>	2 x USB 3.2 Gen.2 (10Gbps)
<b>Power Button</b>	Push Button for Power on/off (w/LED)
<b>Reset Button</b>	Push Button for Reset (Hidden)
<b>LED Indicator</b>	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
<b>Digital I/O</b>	1 x 8-Bit 2.5KV Isolated GPIO in DB-9
<b>CAN Bus</b>	1 x 4-Pin CAN Bus H/L in DB-9
<b>SIM Slot</b>	2 x Front Access SIM Slot
<b>Antenna</b>	3 x Antenna Mount
Edge I/O (Rear) (CS)	
<b>USB Port</b>	1 x USB 2.0 in M12-A code connector
<b>COM Port</b>	2 x COM Port (RS-232/422/385 in DB-9, select via BIOS, auto flow control via HW)
<b>HDMI</b>	1 x HDMI 2.0
<b>DP</b>	1 x DP 1.4
<b>VGA</b>	1 x VGA
<b>Audio</b>	1 x Line-In, Line-Out and Mic-In in DB-15
<b>RJ-45</b>	2 x LAN Port in M12-X code connector
Edge I/O (Right) (CS)	
<b>Antenna</b>	2 x Antenna Mount
Edge I/O (Left) (CS)	
<b>Antenna</b>	2 x Antenna Mount
GPS (CS)	
<b>Chipset</b>	u-blox NEO-M9N GNSS LCC module with Untethered Dead Reckoning and onboard sensors
<b>Protocol</b>	BeiDou, Galileo, GLONASS, GPS / QZSS
Display (CS)	
<b>Graphic Chipset</b>	Intel® UHD Graphics for 10th Gen Intel® Processors
<b>Resolution</b>	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)	
<b>Audio Codec</b>	Realtek ALC888S
Ethernet (CS)	



<b>LAN Chipset</b>	Intel® Ethernet Controller I210-IT
<b>Specification</b>	10/100/1000Base-T
<b>LED Indicator</b>	4 x LED indicator (LAN for active, speed)
<b>Power Requirement (CS)</b>	
<b>DC Input</b>	Typical 24Vdc ( +9~ 36Vdc ) w/ Isolation TVS component for surge protection Reverse current/voltage protection
<b>DC Input Connector</b>	M12-A code (4 Poles: V+, V-, GND, IGN)
<b>ACPI</b>	Single power ATX Support S0,S3, S4, S5 ACPI 5.0 Compliant
<b>Power Mode</b>	AT/ATX (ATX is default setting)
<b>Software Support (CS)</b>	
<b>OS Information</b>	Win 10 64bit / Linux
<b>Certification (CS)</b>	
<b>Certification Information</b>	CE, FCC Class A, UKCA, EN50155, EN50121, EN45545
<b>Mechanical &amp; Environmental</b>	
<b>Operating Temperature</b>	-40°C ~ 70°C (w/SSD) ambient w/ 0.2 or 0.5 air flow
<b>Storage Temperature</b>	-40°C ~ 75°C (-40°F ~ 167°F)
<b>Operating Humidity</b>	40°C @ 95% Relative Humidity, Non-condensing
<b>Dimension (W x L x H)</b>	240*150*55 mm
<b>Weight</b>	2.2kg
<b>Vibration Test</b>	Operating with SSD : MIL-STD-810G, Method 514.6, Category 4, common carrier US highway truck vibration exposure
<b>Shock Test</b>	Operating with SSD: MIL-STD-810H, Method 516.8, Procedure I, functional shock=20G
<b>IP Rating</b>	IP50
<b>Mounting Kit</b>	Wall Mount Kit (standard) DIN RAIL (optional)
<b>Ordering Information</b>	
<b>Ordering Information</b>	VMS-EHLR-A1-1R Intel® Elkhart Lake Atom™ x6425E Processor Rugged Fanless Railway System