

# VMS-EHLR

Intel® Atom® x6425E Processor  
Rugged Fanless Railway System



## Features

- Intel 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



EN 50155  
EN 50121-3-2



EN 45545



MIL-STD  
810G/H



Wide Temp.  
-40~70°C



Wide Voltage  
Input  
9-36Vdc

## Specifications

### System Information

<b>Processor</b>	Intel Atom® x6425E Processor 1.5M Cache, up to 3.00 GHz
<b>System Memory</b>	1 x 260-Pin SODIMM DDR4 3200MHz up to 32GB
<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>	TPM 2.0 (Default)
<b>SBC</b>	EBM-EHLR + EPM-1721

### Expansion

<b>M.2</b>	1 x M.2 Key-B 2242/3042/3052 support PCIeIII x1/ USB3.1 Gen.2 and SIM slot1 (external) 1 x M.2 Key-E 2230 for Wi-Fi & BT Module (PCIeIII x1/ USB2.0)
<b>mPCIe</b>	1 x mPCIe support PCIeIII x1/ USB2.0 and SIM slot2 (external)

### Storage

<b>M.2</b>	1 x M.2 key-B 2242 support SATA III (share with expansion slot)
<b>2.5 Drive Bay</b>	1 x 2.5" drive Bay (SATA III)

### Front I/O

<b>USB</b>	2 x USB 3.2 Gen.2 (10Gbp/s)
<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>	1 x Power LED (Blue) 1 x Storage LED (Yellow) - M.2 B-key SATA/2.5"SSD Storage 1 x LTE LED (Green) - M.2 B-key PCIe/USB3 1 x Wifi LED (Green) - M.2 E key
<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>Digital I/O</b>	1 x 8-Bit 2.5KV Isolated GPIO in DB-9
<b>Antenna</b>	3 x Antenna Mount

### Rear I/O

<b>USB</b>	1 x USB 2.0 in M12-A code connector
<b>COM Port</b>	2 x COM RS232/422/485 (select via BIOS, auto flow control via HW)
<b>LAN Port</b>	2 x LAN Port in M12-X code connector
<b>Audio</b>	1 x Line-In, Line-Out and Mic-In in DB-15
<b>DP</b>	1 x DP 1.4
<b>HDMI</b>	1 x HDMI 2.0
<b>VGA</b>	1 x VGA
<b>AC/DC Input</b>	M12-A code (4 Poles: V+, V-, GND, IGN)

### Right I/O & Left I/O

<b>Antenna</b>	2 x Antenna Mount
<b>GPS</b>	
<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

<b>Graphic Chipset</b>	Intel® UHD Graphics
<b>Resolution</b>	DP++ 1.4: Max. resolution 4096x2304 @ 60Hz HDMI 2.0 : Max. resolution 4096 x 2304 @ 60Hz VGA: Max. resolution 1920 x 1080 @ 60Hz

### Audio

<b>Audio Codec</b>	Realtek ALC888S
--------------------	-----------------

### Ethernet

<b>LAN Chipset</b>	2 x Intel® I210-IT
<b>Specification</b>	10/100/1000 Base-T
<b>LED Indicator</b>	4 x LED indicator (LAN for active, speed)

### Power Requirement

<b>Voltage Input Spec.</b>	Typical 24Vdc ( +9~ 36Vdc ) w/ Isolation TVS component for surge protection Reverse current/voltage protection
<b>ACPI</b>	Single power ATX Support S0, S3, S4, S5; ACPI 5.0 Compliant
<b>Power Mode</b>	AT/ATX (AT default), w/ignition control and power management

### Software Support

<b>OS</b>	Win 10 64bit / Linux
-----------	----------------------

### Certification

<b>Certification Information</b>	CE, FCC Class A, UKCA, EN50155, EN50121, EN45545
----------------------------------	--

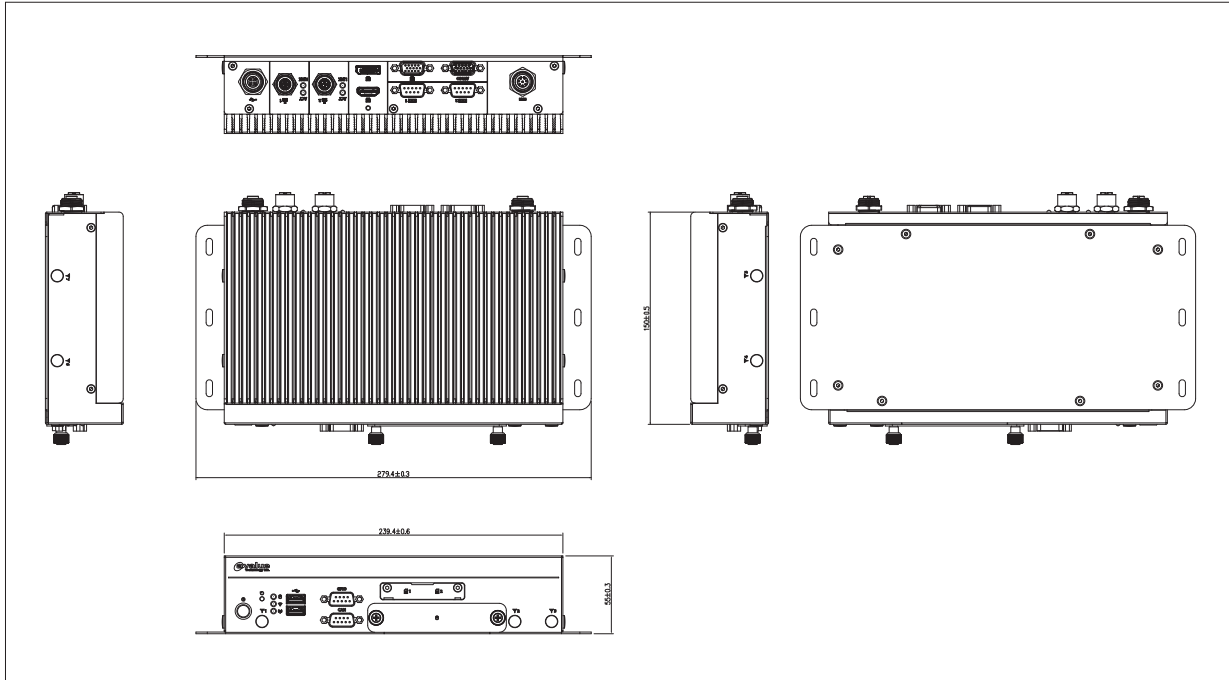
### Mechanical & Environmental

<b>Operating Temp.</b>	-40°C ~ 70°C (w/SSD) ambient w/ air flow. Follow EN50155, Class OT4
<b>Storage Temp.</b>	-30°C ~ 70°C (-22°F ~ 158°F)
<b>Operating Humidity</b>	40°C @ 95% Relative Humidity, Non-condensing
<b>Dimension (W x L x H)</b>	240 x 150 x 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)

# VMS-EHLR

Intel® Atom® x6425E Processor  
Rugged Fanless Railway System

## Mechanical Drawing



## Ordering Information

P/N	Processor	Chipset	Memory	Storage	Adapter/ PSU	Mounting Kit	Temp.
VMS-EHLR-A1-1R	Intel Atom® x6425E Processor	N/A	4GB DDR4 (Up to 32G Optional)	(Optional)	60W Adapter (Optional)	Wall Mount (Din Rail Optional)	-40°C ~ 70°C

## Packing List

Item	Quantity
VMS-EHLR Intel® Elkhart Lake Atom® x6425E Processor Rugged Fanless Railway System	1
Wire tie for HDMI	1
Screw driver for chassis	1
Screw Kits for Peripheral	1

## Optional Items

Item	P/N
5 x M12 cable kit for VMS-EHLR Series	ACC-VMS-M12-01R
AC/DC adapter 12V/5A 90 Screw Type	ACC-ADP-060N-08R ACC-ADP-060N-14R
Terminal block to lockable DC Jack cable	E170P040031R
Power Cord 3P (F)-3P (M) 183cm, USA type	E1702031833R
Power Cord SL-6+SL-3 183cm, EU type	E1702031000R
Power Cord 3P (F)-3P (M) 183cm, Japan w/PSE type	E1702031834R
Power Cord 0P-026+SL-3 183cm, UK type	E170P060380R
Power Cord 3P (F)-3P (M) 183cm, Australia type	E1702031831R
Din Rail Kit	-

## I/O Overview



## Assured Systems

Assured Systems is a leading technology company with over 1,500 regular clients in 80 countries, deploying over 85,000 systems to a diverse customer base in 12 years of business. We offer high-quality and innovative rugged computing, display, networking and data collection solutions to the embedded, industrial, and digital-out-of-home market sectors.

### US

[sales@assured-systems.com](mailto:sales@assured-systems.com)

Sales: +1 347 719 4508  
Support: +1 347 719 4508

1309 Coffeen Ave  
Ste 1200  
Sheridan  
WY 82801  
USA

### EMEA

[sales@assured-systems.com](mailto:sales@assured-systems.com)

Sales: +44 (0)1785 879 050  
Support: +44 (0)1785 879 050

Unit A5 Douglas Park  
Stone Business Park  
Stone  
ST15 0YJ  
United Kingdom

VAT Number: 120 9546 28  
Business Registration Number: 07699660