

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

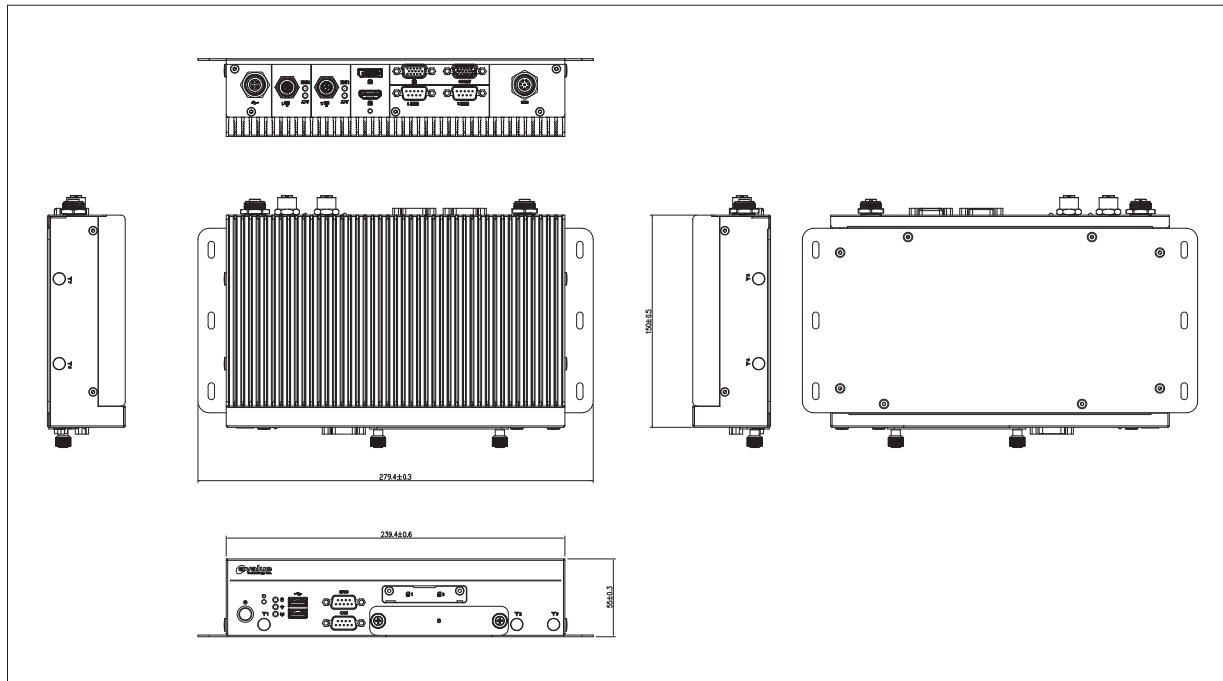
System Information	
Processor	Intel Atom® x6425E Processor 1.5M Cache, up to 3.00 GHz
System Memory	1 x 260-Pin SODIMM DDR4 3200MHz up to 32GB
I/O Chipset	AMI uEFI BIOS 256 Mbit SPI Flash ROM
Watchdog Timer	H/W Reset, 1sec. ~ 65535sec.
H/W Status Monitor	Horizontal battery socket Supports wide operating temperature Supports no RTC battery mode
TPM	TPM 2.0 (Default)
SBC	EBM-EHLR + EPM-1721
Expansion	
M.2	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)
mPCIe	1 x mPCIe support PCIeIII x1/ USB2.0 and SIM slot2 (external)
Storage	
M.2	1 x M.2 key-B 2242 support SATA III (share with expansion slot)
2.5 Drive Bay	1 x 2.5" drive Bay (SATA III)
Front I/O	
USB	2 x USB 3.2 Gen.2 (10Gbp/s)
Power Button	Push Button for Power on/off (w/LED)
Reset Button	Push Button for Reset (Hidden)
LED Indicator	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
CAN Bus	1 x 4-Pin CAN Bus H/L in DB-9
SIM Slot	2 x Front Access SIM Slot
Digital I/O	1 x 8-Bit 2.5KV Isolated GPIO in DB-9
Antenna	3 x Antenna Mount
Rear I/O	
USB	1 x USB 2.0 in M12-A code connector
COM Port	2 x COM RS232/422/485 (select via BIOS, auto flow control via HW)
LAN Port	2 x LAN Port in M12-X code connector
Audio	1 x Line-In, Line-Out and Mic-In in DB-15
DP	1 x DP 1.4
HDMI	1 x HDMI 2.0
VGA	1 x VGA
AC/DC Input	M12-A code (4 Poles: V+, V-, GND, IGN)

Right I/O & Left I/O	
Antenna	2 x Antenna Mount
GPS	
Chipset	u-blox NEO-M9N GNSS LCC module with Untethered Dead Reckoning and onboard sensors
Protocol	BeiDou, Galileo, GLONASS, GPS / QZSS
Display	
Graphic Chipset	Intel® UHD Graphics
Resolution	DP++ 1.4: Max. resolution 4096x2304 @ 60Hz HDMI 2.0 : Max. resolution 4096 x 2304 @ 60Hz VGA: Max. resolution 1920 x 1080 @ 60Hz
Audio	
Audio Codec	Realtek ALC888S
Ethernet	
LAN Chipset	2 x Intel® I210-IT
Specification	10/100/1000 Base-T
LED Indicator	4 x LED indicator (LAN for active, speed)
Power Requirement	
Voltage Input Spec.	Typical 24Vdc (+9~ 36Vdc) w/ Isolation TVS component for surge protection Reverse current/voltage protection
ACPI	Single power ATX Support S0, S3, S4, S5;ACPI 5.0 Compliant
Power Mode	AT/ATX(AT default), w/ignition control and power management
Software Support	
OS	Win 10 64bit / Linux
Certification	
Certification Information	CE, FCC Class A, UKCA, EN50155, EN50121, EN45545
Mechanical & Environmental	
Operating Temp.	-40°C ~ 70°C (w/SSD) ambient w/ air flow. Follow EN50155, Class OT4
Storage Temp.	-30°C ~ 70°C (-22°F ~ 158°F)
Operating Humidity	40°C @ 95% Relative Humidity, Non-condensing
Dimension (W x L x H)	240 x 150 x 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)

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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

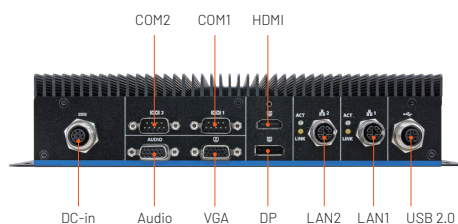
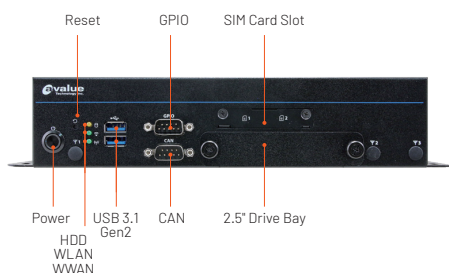
Packing List

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 QP-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

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