

# EMS-EHL

Intel® Celeron®/Atom™ SoC Processor J6413/x6425E  
Fanless Rugged Embedded System



## Specification

System Information	
Processor	Intel® Celeron® Processor J6413 (1.5M Cache, up to 3.00Ghz), ST, Tj=105°C Intel® Atom® Processor x6425E(1.5M Cache, up to 3.00Ghz), WT, Tj=-40°C ~105°C
System Memory	1 x 260-pin SODIMM socket Max. Up to 32GB DDR4 3200 MT/s
Watchdog Timer	H/W Reset, 1sec. ~ 65535sec.
H/W Status Monitor	CPU & system temperature monitoring and Voltages monitoring
TPM	TPM 2.0
SBC	EBM-EHLS
Expansion	
M.2	1 x M.2 Key-B 2242/3042/3052 support SATA3/ PCIe III/ USB3.2 Gen.1 and SIM slot1 (internal), default support 3.3V, jumper setting to adjust 3.3V/ 3.8V 1 x M.2 Key-E 2230 for Wi-Fi & BT Module (USB2.0/ PCIe III)
IET	1 x IET interface (1 x DDI, 4x PCIeIII x1, 3 x USB2.0, 1 x Line-Out(R/L), 1 x SMBus, LPC)
Storage	
M.2	1 x M.2 Key-B 2242/2280, support SATA 1 x M.2 Key-B 2242, support SATA (share with expansion slot)
Front I/O	
COM Port	2 x COM RS232/422/485 (select via BIOS, auto flow control via HW)
Audio	1 x Mic-In, 1 x Line-Out
Power Button	1 x Push Button for Power on/off
Reset Button	1 x Push Button for Reset
Wire-Control Power On/Off	1 x 2-Pin Terminal Block for wire-control power on/off
LED Indicator	1 x Power LED (Blue) 1 x Storage LED (Yellow)- M.2 B-key SATA 1 x LTE LED (Green)- M.2 B-key PCIe 1 x Wifi LED (Green)- M.2 E key
Digital I/O	1 x 8-bit GPIO (DB9)
Antenna	2 x Antenna with dust cover

Rear I/O	
<b>USB Port</b>	2 x USB 3.1 Gen.2 (10Gbp/s) 2 x USB 3.1 Gen.1 (5Gbp/s), via USB Hub
<b>HDMI</b>	1 x HDMI 2.0b
<b>DP</b>	1 x DP 1.4
<b>Audio</b>	1 x Mic-In, 1 x Line-Out
<b>LAN Port</b>	2 x RJ45
<b>Antenna</b>	2 x Antenna with dust cover
<b>AC/DC Input</b>	3-Pin Terminal Block (V+, V-, GND)
Left I/O	
<b>Antenna</b>	2 x Antenna with dust cover
Right I/O	
<b>Antenna</b>	2 x Antenna with dust cover
Display	
<b>Graphic Chipset</b>	Intel® UHD Graphics for 10th Gen Intel® Processors
<b>Resolution</b>	DP++ 1.4: 4096x2304 @ 60Hz HDMI 2.0b : Max. resolution 4096x2304 @ 60Hz
Audio	
<b>Audio Codec</b>	Realtek ALC888S (co-lay with ALC897) HD codec
Ethernet	
<b>LAN Chipset</b>	2 x Intel I226-IT
<b>Specification</b>	2 x 10/100/1000/2.5G Base-Tx GbE compatible
Power Requirement	
<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)
Mechanical & Environment	
<b>Operating Temp.</b>	-40°C ~ 70°C (w/SSD) ambient w/ 0.5 air flow, WT sku, x6425E -40°C ~ 60°C (w/SSD) ambient w/ 0.2 air flow, WT sku, x6425E 0°C ~ 65°C (w/SSD) ambient w/ 0.5 air flow, ST sku, J6413 0°C ~ 55°C (w/SSD) ambient w/ 0.2 air flow, ST sku, J6413
<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*L*H)</b>	240mm x 150mm x 43 mm (Standard) 240mm x 150mm x 64 mm (w/ IET module)
<b>Weight</b>	1.9 kg (System) 2.7 kg (w_Package)
<b>Vibration Test</b>	With SSD : 5Grms, IEC 60068-2-64, Random, 5 ~ 500Hz, 1hr/axis
<b>Shock Test</b>	With SSD : 55Grms, IEC 60068-2-27, Half Sine, 11ms
<b>IP Rating</b>	IP 50

**Mounting Kit** Wall mount kit (standard)  
DIN RAIL (optional)

**Software Support**

**OS Information** Win 10 64bit / Win 11 64 bit/ Linux

**Certification**

**Certification Information** CE, FCC Class B, LVD 62368-1

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