



EMS-EHL-6LAN

Intel® Celeron® J6413 / Atom™ x6425E SoC
Processor Fanless Rugged Embedded System
w/LAN IET Module

On board Intel® Celeron® J6413 / Atom™ x6425E BGA Processor
1 x 260-pin SODIMM socket Max. up to 32GB DDR4 3200MT/s
Rich I/O, 4-USB3.2, 2-USB2.0, 1-DP, 1-HDMI, 2-LAN, 1-8bit GPIO
Support 4 ports LAN Bypass function (w/ IET-6LAN Bypass)
Support 5G (Sub-6G) module, HDMI 2.0b (4K @ 60Hz), LAN 2.5G Base-Tx GbE
Fanless operation temperature from -40°C ~ 70°C 0°C ~ 65°C (ST)
CE, FCC Class B, LVD 62368-1, IP50
Wide range DC power input from +9~36V
Support HW TPM 2.0
Support IET modules

+ Spec

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/ 3.3V/ 3.8V
1 x M.2 Key-E 2230 for Wi-Fi & BT Module (USB2.0/ PCIe III)

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)

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-

USB Port

2 x USB 3.1 Gen.2 (10Gbp/s)
2 x USB 3.1 Gen.1 (5Gbp/s), via USB Hub
2 x USB 2.0

HDMI

1 x HDMI 2.0b

DP

1 x DP 1.4

Audio

1 x Mic-In, 1 x Line-Out

RJ-45

EMS-EHL-6 LAN Bypass
6 x RJ45, 4 ports support bypass function

EMS-EHL-6 LAN Normal
6 x RJ45

Antenna

2 x Antenna with dust cover

Right I/O-

Antenna

2 x Antenna with dust cover

Left I/O-

Antenna	2 x Antenna with dust cover
.-Display-	
Graphic Chipset	Intel® UHD Graphics for 10th Gen Intel® Processors
Resolution	DP++ 1.4: 4096x2304 @ 60Hz HDMI 2.0b : Max. resolution 4096x2304 @ 60Hz
.-Audio-	
Audio Codec	Realtek ALC888S (co-lay with ALC897) HD codec
.-Ethernet-	
LAN Chipset	2 x Intel I226-IT 4 x Intel® I210-IT(WT) or I210-AT (ST)
Specification	2 x 10/100/1000/2.5G Base-Tx GbE compatible 4 x 10/100/1000Base-Tx GbE compatible
.-Power Requirement-	

W



DC Input Voltage	DC in typical 12/24V (+9V ~ +36V), wide voltage single power input TVS component for surge protection Reverse current/voltage protection (Max. Currency: 13A)
DC Input Connector	3-Pin Terminal Block (V+, V-, GND)
ACPI	Single power ATX Support S0, S3, S4, S5 ACPI 5.0 Compliant
Power Mode	AT/ATX (ATX is default setting)
.-Software Support-	
OS Information	Win 10 64bit / Win 11 64 bit/ Linux
.-Certification-	
Certification Information	CE, FCC Class B, LVD 62368-1
.-Mechanical & Environmental	
Operating Temperature	-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
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)	240mm x 150mm x 64 mm (w/ IET module)
Weight	1.9 kg (System) 2.7 kg (w_Package)
Vibration Test	With SSD : 5Grms, IEC 60068-2-64, Random, 5 ~ 500Hz, 1hr/axis
Shock Test	With SSD : 55Grms, IEC 60068-2-27, Half Sine, 11ms
IP Rating	IP 50
Mounting Kit	Wall mount kit (standard) DIN RAIL (optional)
.-Ordering Information	
Ordering Information	EMS-EHL-6 LAN Bypass On board Intel® Celeron® J6413 / Atom™ x6425E SoC BGA Processor Fanless Rugged Embedded System w/ Bypass support 4 ports bypass EMS-EHL-J64-A1-BR (J6413) EMS-EHL-X64-A1-BR (x6425E) EMS-EHL-6 LAN Normal On board Intel® Celeron® J6413 / Atom™ x6425E SoC BGA Processor Fanless Rugged Embedded System w/ LAN EMS-EHL-J64-A1-CR (J6413) EMS-EHL-X64-A1-CR (x6425E)

W