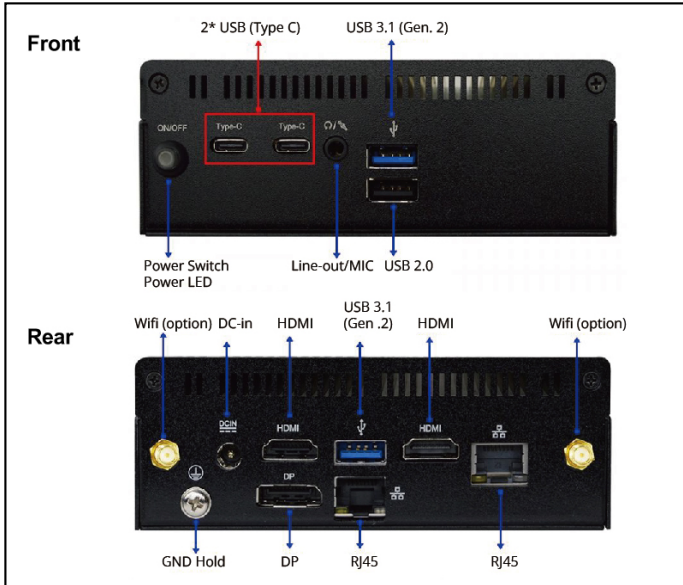


Compact Fanless Embedded system with Intel® J6412 SoC processor supporting Wide temperature operation from -20°C to 60°C



## Features

- **Powered by Intel® J6412 SoC Processor (Elkhart Lake)**
- **Triple Display Support: 2 x HDMI and 1 x DP for flexible and high-quality visuals**
- **Dual 2.5GbE Ethernet Ports: High-speed and reliable networking**
- **Comprehensive I/O: 2 x USB 3.2 Gen2, 2 x USB 3.2 Gen2 Type-C, and 1 x USB 2.0**
- **Optional Features: TPM module and onboard eMMC for customizable configurations**
- **Compact Fanless Design with Wall-Mount Compatibility: Optimized for Space-Saving**

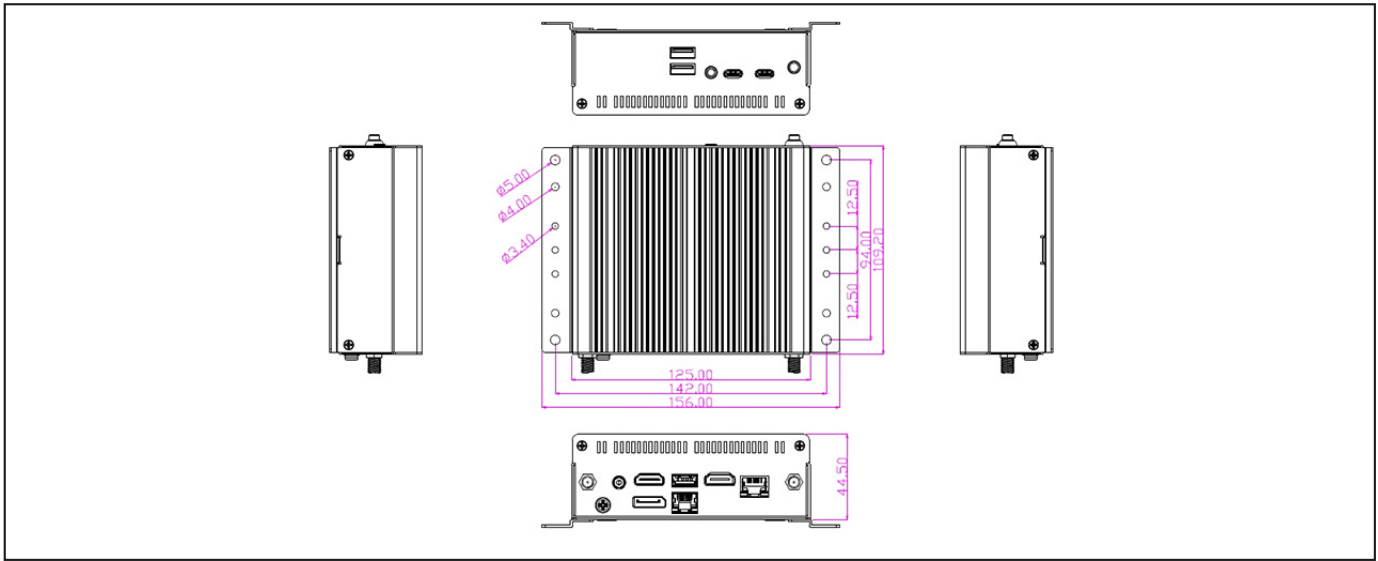
## Packing List

PART NUMBER	DESCRIPTION	QTY
HBFBU03 Series	HBFBU03 Series	1
HCSFBMWM01B-F	FB Wall Mount	1
L01AS050-F	Adapter DC12V_40W	1
Change according to shipping area	Power Cord	1
LCSCHBIC3XX-F	JBC3XX Barebone Screw Pack	1
J05-ANT-GX57245-F	Antenna 2G4/5G 2.8dBi GX572450001SM (Wifi Series only)	1

## Specifications

SYSTEM	
MB FORM FACTOR	Compact
CPU	Onboard Intel® Celeron® Processor J6412 (Formerly Elkhart Lake, TDP 10W) For additional compatible CPUs, please contact regional sales
CHIPSET	Intel® SoC
MEMORY	1 x DDR4 3200MHz, Single Channel SO-DIMM, up to 32GB
BIOS	AMI Flash ROM
WATCHDOG TIMER	255 Levels
SECURITY	TPM2.0 (Optional)
OS SUPPORT	Windows® 11 (64bit) Windows® 10 (64bit) Linux
POWER	
POWER REQUIREMENT	DC-in 12V 40W Adapter: AC90-240V, DC12V/3.3A
POWER ON MODE	AT / ATX
DISPLAY	
GPU	Intel® HD Graphics, shared memory
DP	1 x DP (Max Resolution: 4096*2160@60Hz)
HDMI	2 x HDMI 2.0 (Max Resolution: 4096 x 2160@60Hz)
MULTIPLE DISPLAY	Support 3 Displays
LAN	
ETHERNET	2 x RJ45 for Intel® I226-V 2.5GbE
SYSTEM I/O	
REAR PANEL I/O	2 x RJ45 1 x DP 1 x DC-in 2 x HDMI 1 x USB 3.1 (Gen 2) 2 x WIFI Antenna Holes 1 x GND Hold
FRONT PANEL I/O	1 x Power Button 1 x Power LED 2 x USB 3.1 Gen 2 Type C 1 x Combo Audio (Line out & Mic) 1 x USB 2.0 1 x USB 3.1 (Gen 2)
STORAGE	
eMMC	Onboard 64GB eMMC 5.1 (optional)
EXPANSION	
M.2	1 x M-Key 2260/2280 (PCIe 3.0 x2/SATA) Support NVMe 1 x E-Key 2230 (USB 2.0/PCIe 3.0 x1)
MECHANICAL	
MOUNTING	Wall Mount
DIMENSIONS (W x H x D)	125.0 (W) x 109.2 (D) x 44.5 (H) mm
ENVIRONMENT & CERTIFICATION	
SHOCK	15G, 11ms duration
VIBRATION	1 Grms/ 5- 500Hz/ Operation
OPERATING TEMPERATURE	-20°C - 60°C (-4°F - 140°F)
STORAGE TEMPERATURE	-40°C - 85°C (-40°F - 185°F)
OPERATING HUMIDITY	10 - 95% @ 40°C, Non-condensing
CERTIFICATION	CE/FCG Class A LVD
ESG DECLARATION	EU RoHS China RoHS ErP

## Dimension Unit: mm



## Ordering Information

PART NUMBER	HBFBU03-6412-B	HBFBU031-6412-B-A1	HBFBU03-6412-E	HBFBU031-6412-E-A1	HBFBU03-6412-T	HBFBU031-6412-T
CPU	Intel® Celeron® J6412	Intel® Celeron® J6412	Intel® Celeron® J6412	Intel® Celeron® J6412	Intel® Celeron® J6412	Intel® Celeron® J6412
SECURITY					TPM	TPM
POWER REQUIREMENT	DC-in 12V	DC-in 12V	DC-in 12V	DC-in 12V	DC-in 12V	DC-in 12V
GPU	Intel® HD Graphics, shared memory	Intel® HD Graphics, shared memory	Intel® HD Graphics, shared memory	Intel® HD Graphics, shared memory	Intel® HD Graphics, shared memory	Intel® HD Graphics, shared memory
DP	1 x DP	1 x DP	1 x DP	1 x DP	1 x DP	1 x DP
HDMI	2 x HDMI	2 x HDMI	2 x HDMI	2 x HDMI	2 x HDMI	2 x HDMI
MULTIPLE DISPLAY	Support 3 Displays	Support 3 Displays	Support 3 Displays	Support 3 Displays	Support 3 Displays	Support 3 Displays
ETHERNET	2 x 2.5GbE	2 x 2.5GbE	2 x 2.5GbE	2 x 2.5GbE	2 x 2.5GbE	2 x 2.5GbE
I/O	2 x USB 3.2 Gen 2	2 x USB 3.2 Gen 2	2 x USB 3.2 Gen 2	2 x USB 3.2 Gen 2	2 x USB 3.2 Gen 2	2 x USB 3.2 Gen 2
I/O	2 x USB 3.1 Gen 2 Type C	2 x USB 3.1 Gen 2 Type C	2 x USB 3.1 Gen 2 Type C	2 x USB 3.1 Gen 2 Type C	2 x USB 3.1 Gen 2 Type C	2 x USB 3.1 Gen 2 Type C
I/O	1 x USB 2.0	1 x USB 2.0	1 x USB 2.0	1 x USB 2.0	1 x USB 2.0	1 x USB 2.0
I/O	1 x Audio (Line-out, MIC)	1 x Audio (Line-out, MIC)	1 x Audio (Line-out, MIC)	1 x Audio (Line-out, MIC)	1 x Audio (Line-out, MIC)	1 x Audio (Line-out, MIC)
I/O	1 x Power Button	1 x Power Button	1 x Power Button	1 x Power Button	1 x Power Button	1 x Power Button
I/O	1 x Power LED	1 x Power LED	1 x Power LED	1 x Power LED	1 x Power LED	1 x Power LED
I/O	1 x DC Jack	1 x DC Jack	1 x DC Jack	1 x DC Jack	1 x DC Jack	1 x DC Jack
I/O	2 x SMA	2 x SMA	2 x SMA	2 x SMA	2 x SMA	2 x SMA
I/O	1 x GND Hold	1 x GND Hold	1 x GND Hold	1 x GND Hold	1 x GND Hold	1 x GND Hold
eMMC			eMMC 64GB	eMMC 64GB	eMMC 64GB	eMMC 64GB
M.2	1 x M-Key 2260/2280	1 x M-Key 2260/2280	1 x M-Key 2260/2280	1 x M-Key 2260/2280	1 x M-Key 2260/2280	1 x M-Key 2260/2280
M.2	1 x E-Key 2230	1 x E-Key 2230	1 x E-Key 2230	1 x E-Key 2230	1 x E-Key 2230	1 x E-Key 2230
OTHER		Wifi		Wifi		Wifi
OPERATING TEMPERATURE	-20°C - 60°C (-4°F - 140°F)	-20°C - 60°C (-4°F - 140°F)	-20°C - 60°C (-4°F - 140°F)	-20°C - 60°C (-4°F - 140°F)	-20°C - 60°C (-4°F - 140°F)	-20°C - 60°C (-4°F - 140°F)