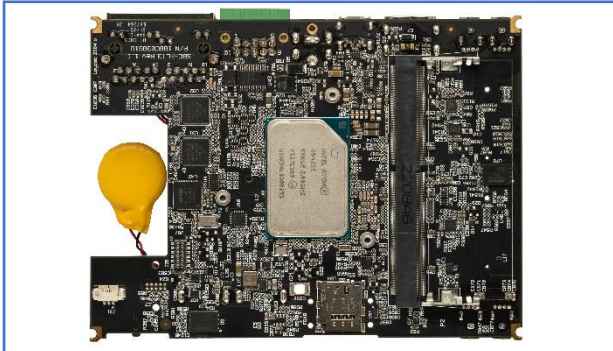


SBC-FLT3 Compact Elkhart Lake Atom Single Board Computer



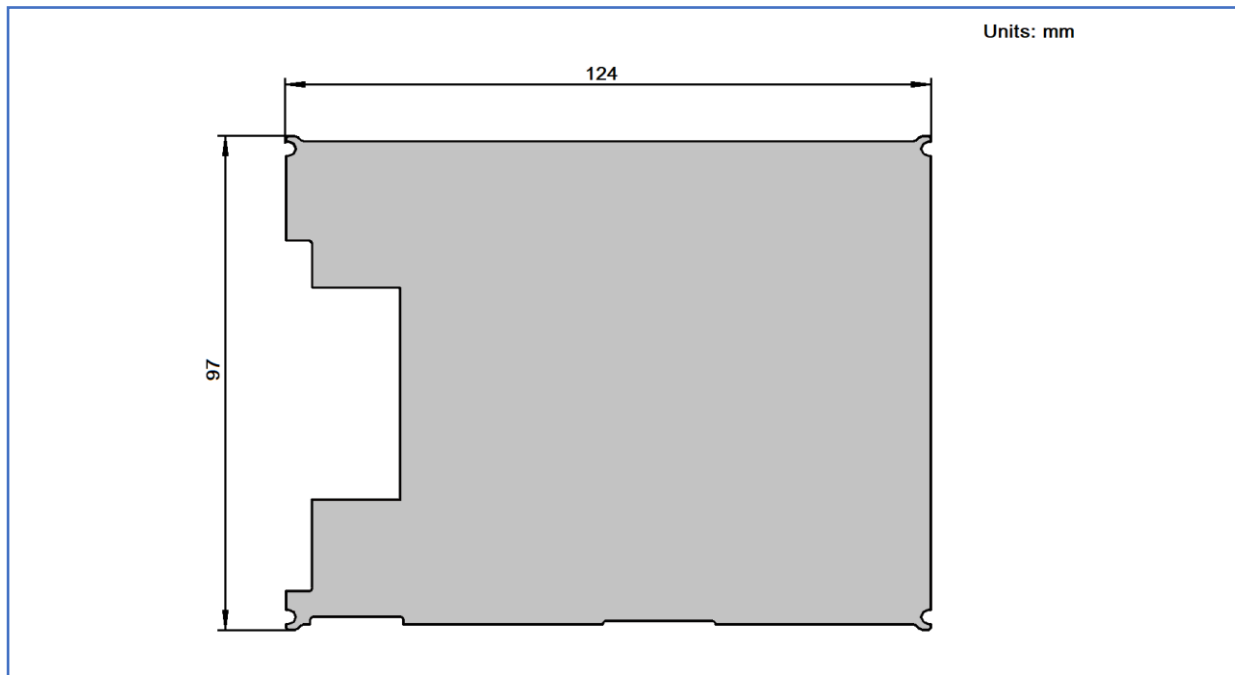
Features

- IoT gateway / Industrial SBC
- Intel® Elkhart Lake x6000E Atom processor
- 2x/4x Gigabit LAN
- Optional Wi-Fi/BT + LTE/5G modem
- Optional AI accelerator
- Optional Isolated serial + GPIO ports
- 9V – 42V DC power input

Specifications

CPU	Intel® Atom x6425E	4 Core Base: 2.0 GHz, Boost: 3.0 GHz TDP: 12 W
	Intel® Celeron J6413	4 Core Base: 1.8 GHz, Boost: 3.0 GHz TDP: 10 W
	Intel® Atom x6211E	2 Core Base: 1.3 GHz, Boost: 3.0 GHz TDP: 6 W
Memory	Type	SO-DIMM DDR4 up to 3200MT/s
	Max. capacity	32 GB
Storage	M.2 Key-M	PCIe x4 / SATA for NVMe or M.2 SATA, size up to 2280
	M.2 Key-B	SATA for M.2 SATA, size up to 2260 (mutual with LTE/5G modem)
	2.5" HDD/SSD	Optional M.2 to SATA expansion for 2.5" HDD / SSD
AI Accelerator	M.2 Key-M	Optional Hailo-8 M.2 Key-M with PCIe x4 and 26 TOPS
	M.2 Key-E	Optional Hailo-8 M.2 Key-A+E with PCIe x1 and 26 TOPS
Display	HDMI	HDMI 1.4b (up to 3840 x 2160 @ 30Hz)
	Mini-Display Port	DP 1.2 (up to 4096 x 2160 @ 60Hz) Dual mode
Ethernet	Type	2 x Gigabit Ethernet on RJ45
	Controllers	Internal MAC with discreet PHY
	Speed	1 Gbps / 100 Mbps / 10 Mbps
	Optional FC3-LAN	Additional 2x GbE LAN on RJ45
	Optional FC3-OPLN	Additional 1x GbE LAN on SFP+ for optical LAN
Wireless Connectivity	On-board	Optional On-board module with Wi-Fi 6E, BT 5.2
	M.2 Key-E	For M.2 2230 module with Wi-Fi 6E, BT 5.2, or AI accelerator
	M.2 Key-B	For M.2 LTE/5G modem (mutual with M.2 SATA), w/ micro-SIM tray
USB	USB 2.0	4x USB 2.0 on USB Type-A
	USB 3.1	2x USB 3.1 on USB Type-A
Serial/GPIO	Type	Optional terminal block with Isolated serial and GPIO, up to 24V
	Serial port	Isolated RS-232/422/485
	GPIO	2x isolated GPI + 2x isolated GPO
Audio	Codec	Optional I2S audio codec
	Interfaces	Optional analog output, analog input on 3.5 mm jacks
Power	Input power	9V – 42V, up to 3.33A DC input
	Connector	5.5 mm power jack w/ locking
	Power supply unit	Including universal AC wall mount power supply
	Optional FC3-POE	Input power by PoE, GbE LAN on RJ45
TPM	Internal firmware TPM	Intel® PTT (TPM 2.0)
	Discreet TPM	Optional discreet TPM 2.0
OS support	Windows 10	Windows 10 IoT Enterprise LTSC 2021 / Windows 10 Pro
	Windows 11	Windows 11 Pro
	Linux	Linux Mint / Ubuntu
Operating Environment	Commercial temperature	0°C to 45°C
	Extended temperature	-20°C to 70°C
	Industrial temperature	-40°C to 85°C
	Humidity	5% - 95% non-condensing
Physical Characteristics	Cooling	CPU heat plate + M.2 Key-M + M.2 Key-B heat plate
	Dimensions	124 mm X 97 mm
	Weight	195 gr. with cooling plates, 105.5 gr. w/o cooling plates

Dimensions



Interfaces

Location	Connector	Interface		
Front	2x USB Type-A	2x USB 2.0		
	1x HDMI	HDMI 1.4b (up to 3840 x 2160 @ 30Hz)		
	1x mini-DP	DP 1.2 (up to 4096 x 2160 @ 60Hz) Dual mode		
	1x 5.5 mm power jack	9V – 42V DC power input		
	1x terminal block (Optional)	Isolated RS-232/422/485 + 2x GPI + 2x GPO		
	2 x RJ45	2 x RJ45 10/100/1000 Mbps Ethernet		
Rear	Power button	On/Off push button w/ power LED		
	2x USB Type-A	2x USB 3.1		
	2x 3.5 mm jacks (Optional)	Analog output, analog input audio		
	Micro-SIM tray	Micro-SIM Tray for M.2 LTE/5G modem		
	LED	Debug/programmable LED		
	2x USB Type-A	2x USB 2.0		
Left	FACET card connectors (Optional)	Ethernet, serial, etc. from a FACET expansion card		
Location	Connector	Form factor	Interface	Usage
SBC Top	SO-DIMM	DDR4 SO-DIMM	DDR4	DDR4 module
SBC Bottom	M.2 Key-M	M.2 up to 2280 or Optional 2.5" SATA storage ¹	PCIe Gen 3 x4 / SATA	- NVMe/SATA storage - M.2 PCIe x4 (AI module)
	M.2 Key-B	M.2 Up to 3060 or Optional 2.5" SATA storage ¹	PCIe Gen 3 x1 /SATA USB 2.0	- LTE/5G modem - SATA storage
	M.2 Key-E	M.2 2230 or FACET expansion card ²	PCIe Gen 3 x2 USB 2.0	- Wi-Fi/BT module - FACET card

Notes:

- Up to 1 unit of 2.5" SATA storage expansion (EB-M2SATA) is possible
- FACET expansion card and Wi-Fi/BT card are mutually exclusive. For Wi-Fi/BT on systems with FACET cards, an onboard Wi-Fi/BT module must be selected. The onboard Wi-Fi/BT module is not functional with FC3-LAN installed.

Expansion boards

Name	Description	Compatible connector from the motherboard
FC3-LAN	2x GbE LAN on RJ45 ³	M.2 Key-E (FACET) ¹
FC3-POED	GbE LAN PoE device on RJ45	M.2 Key-E (FACET) ¹
FC3-OPLN	GbE on SFP+ for optic LAN	M.2 Key-E (FACET) ¹
FC3-SC-S2	2x RS-232 / RS-485 on DB9	M.2 Key-E (FACET) ¹
FC3-SC-C2	2x CAN bus on DB9	M.2 Key-E (FACET) ¹
FC3-SC-S1C1	1x RS-232 / RS-485 + 1x CAN bus on DB9	M.2 Key-E (FACET) ¹
EB-M2SATA	SATA expansion for 2.5" HDD / SSD ^{2,3}	M.2 Key-M or M.2 Key-B

Notes:

1. FACET expansion card and Wi-Fi/BT card are mutually exclusive. For Wi-Fi/BT on systems with FACET cards, an onboard Wi-Fi/BT module must be selected.
2. Up to 1 unit of EB-M2SATA is possible, and up to two storage devices in total.
3. FC3-LAN and a Wi-Fi module are mutually exclusive. An external Wi-Fi dongle may be used for Wi-Fi functionality with FC3-LAN.

Optional accessories

Name	Description
FITLET3-ACC-PSU	Universal power supply unit (one unit is included in fitlet3 package)
FITLET3-ACC-BRKT	VESA mounting bracket
FITLET3-ACC-DIN	DIN rail mounting kit (Requires VESA mounting bracket)
FITLET3-ACC-DINSD	Side DIN rail mounting kit (does not require VESA mounting bracket)
FITLET3-ACC-POWBTN	Remote power button with LED with 25cm wire

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