



## Fanless Atom mini-PC for industrial and IoT applications



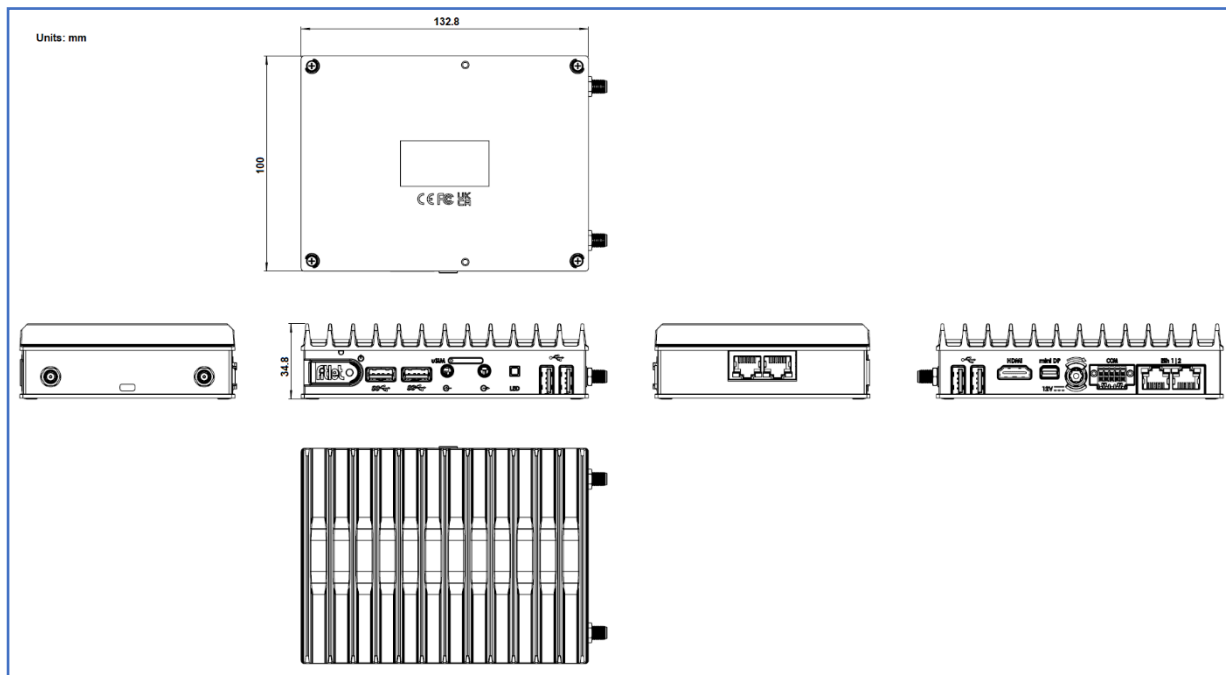
### Features

- IoT gateway / Fanless industrial PC
- Intel® Elkhart Lake x6000E Atom processor
- MIL-STD-810G
- 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                | Fanless, passive cooling   |
|                          | Dimensions             | 132.8 mm X 100 mm X 34.8 mm                                      |
|                          | Weight                 | ~ 420 gr.  |

## Dimensions



## Interfaces

| Location        | Connector                        | Interface  |  |  |
|-----------------|----------------------------------|--|--|--|
| Front Panel     | 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 Panel      | 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   |  |  |
| Right Panel     | 2x SMA (Optional)                | 2x SMA antennas for Wi-Fi/BT or cellular modem               |  |  |
| Left Panel      | FACET card connectors (Optional) | Ethernet, serial, etc. from a FACET expansion card           |  |  |
|                 | 2x SMA (Optional)                | 2x SMA antennas for Wi-Fi/BT or cellular modem               |  |  |
| Location        | Connector                        | Form factor  | Interface  | Usage  |
| Internal Top    | SO-DIMM                          | DDR4 SO-DIMM   | DDR4   | DDR4 module                                      |
| Internal Bottom | M.2 Key-M                        | M.2 up to 2280 or<br>Optional 2.5" SATA storage <sup>1</sup> | PCIe Gen 3 x4 / SATA   | - NVMe/SATA storage<br>- M.2 PCIe x4 (AI module) |
|                 |                                  | M.2 Key-B  | M.2 Up to 3060 or<br>Optional 2.5" SATA storage <sup>1</sup> | PCIe Gen 3 x1 /SATA<br>USB 2.0                   |
|                 | M.2 Key-E                        | M.2 2230 or<br>FACET expansion card <sup>2</sup>             | PCIe Gen 3 x2<br>USB 2.0                                     | - Wi-Fi/BT module<br>- 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 <sup>4</sup>                  | M.2 Key-E (FACET) <sup>1</sup>            |
| FC3-POED    | GbE LAN PoE device on RJ45                       | M.2 Key-E (FACET) <sup>1</sup>            |
| FC3-OPLN    | GbE on SFP+ for optic LAN                        | M.2 Key-E (FACET) <sup>1</sup>            |
| FC3-SC-S2   | 2x RS-232 / RS-485 on DB9                        | M.2 Key-E (FACET) <sup>1</sup>            |
| FC3-SC-C2   | 2x CAN bus on DB9                                | M.2 Key-E (FACET) <sup>1</sup>            |
| FC3-SC-S1C1 | 1x RS-232 / RS-485 + 1x CAN bus on DB9           | M.2 Key-E (FACET) <sup>1</sup>            |
| EB-M2SATA   | SATA expansion for 2.5" HDD / SSD <sup>2,3</sup> | 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. EB-M2SATA expansion requires a deep bottom to increase the fitlet3 height.
4. 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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