

Fitlet2

Compact, Capable, Flexible Micro IoT PC

Product Specification v.1.1



Fully Customisable

Fitlet2 is a unique passively cooled micro PC powered by dual and quad core Intel Apollo Lake processors. Fully customisable, Fitlet2 is the best engineered micro IoT PC in the market and has been designed to answer your needs of flexibility (CPU performance, size, connectivity and mountings).

24/7 Reliability, Low Power Consumption

With latest technology, extreme reliability, enhanced flexibility and low power consumption, Fitlet2 is made for 24/7 data collection, monitoring and processing applications under challenging operating temperatures (up to -40/+85C).

Control Unit & IoT Gateway

We recommended Fitlet2 as process control unit for embedded CCTV systems and industrial supervision. Thanks to Atom Apollo Lake processors, developed especially for IoT, it is also the optimal gateway for smart building, transportation and real-time data management.

Flexibility in CPUs


Fitlet2 offers flexibility of processing performance with a variation of 3 CPUs. Thanks to these multiple options, get the right CPU for your application.

	E3950	E3930	J3455
Segment	Embedded	Embedded	Desktop
Micro Architecture	Goldmont	Goldmont	Goldmont
Code Name	Apollo Lake	Apollo Lake	Apollo Lake
Type	<u>Atom™ Processor x7 Series</u>	<u>Atom™ Processor x5 Series</u>	<u>Intel® Celeron® Processor J Series</u>
Processing performance	High Performance	Low Performance Low Power Consumption	High Performance
Cores/ Threads	4C/4T	2C/2T	4C/4T
Speed	1.6GHz to 2GHz	1.3GHz to 1.8GHz	1.5GHz to 2.3GHz
TDP	12W	6.5W	10W
Graphics	Intel HD Graphics 505	Intel HD Graphics 500	Intel HD Graphics 500
Project Longevity	Long Term	Long Term	Short Term
Usage	Data/Video Processing. Data Transmission (Gateway).	Data Monitoring. Low volume data processing or transmission.	Video Processing. Data transmission (Gateway).


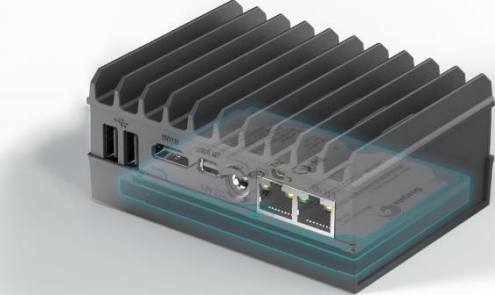
Flexibility in Sizes

With a maximum size of 112 mm x 84 mm x 34 mm (heatsink integrated), Fitlet2 is one of the smallest fully-featured Fanless PCs on the market. All enclosures are full metal housing and ensure a passively cooled system.

1) Top Cover Options

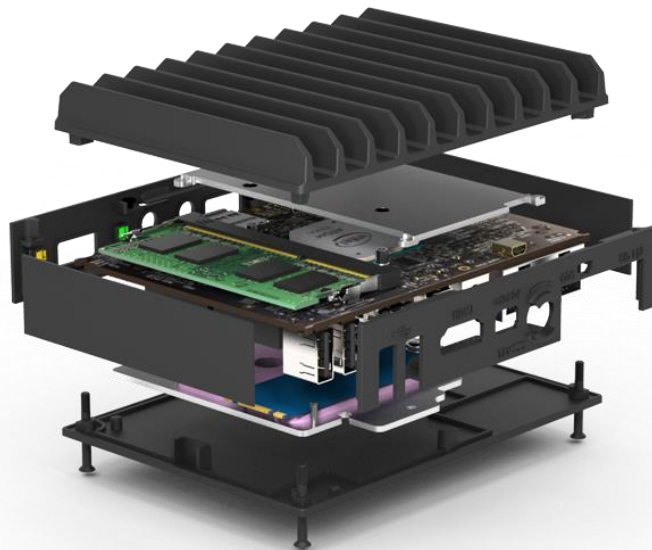
Performance Housing	Low Power Housing	Industrial Housing	SBC Model
			
112 x 84 x 34 mm	112 x 84 x 25 mm	112 x 112 x 25 mm	105 x 84 x 23 mm
Optimal passive cooling for high processing applications thanks to built-in heatsink.	Design for low processing applications.	Optimal design for enclosed applications (CPU heat dissipation through VESA mounting)	Recommended design for embedded integration.

2) Bottom Cover Options


Standard Base Cover	Deep Base Cover
	
112 x 84 x 34 mm	112 x 84 x 35.5 mm
<p>Provides small base cover to ensure the Fitlet2 is fully enclosed. VESA Mount Bracket fixing is possible on this base cover.</p>	<p>Adds 1.5cm housing to the base of the Fitlet2 creating additional storage space. This helps when using different storage options (such as Hard Drives instead of M.2) or using other PCB / custom FACETs. Ideal for media, security, data acquisition or remote acquisition applications. VESA mount bracket fixing is possible on this base cover</p>

Seamless Customisation

Fitlet2 comes with a complex yet easily customisable metal 3D design with interlocking parts. The standard model already packs a lot of connectivity. In addition, the Function And Connectivity T-card (or FACET card) provides further customisation and seamless integration into the housing.








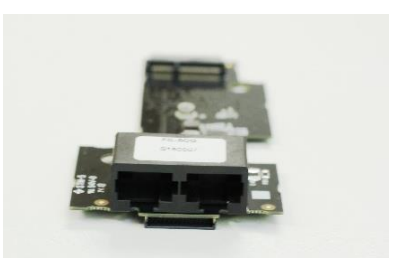

Standard Features

Version	Interfaces	Appearance
Barebone	<p>2x I211 Gbe ports; 2x 4K video outputs (HDMI + mini DP); 1x microSD card slot; 1x RS232 serial port; 2x GPIO LED; 2x USB 3.0 ports; 2x USB 2.0 ports; 1x audio input 3.5 Jack; 1x audio output 3.5 Jack.</p> <p>Internal: 1x M.2 M-Key – for storage; 1x M.2 E-Key – for options; 1x connector for remote button</p>	

Customisation via FACET

In addition to the standard connectivity, the Function And Connectivity T-card (or FACET card) provides additional customisation choices.

FACET	Description	Features	Appearance
M.2 Modem FACET	Adds M.2 Cellular Modem (micro SIM Card on FACET) + WiFi/BT + M.2 SATA 2260/2280 possibility. Ideal for remote / outdoor locations connectivity and positioning applications.	<ul style="list-style-type: none"> - Micro-SIM on FACET - M.2 B-Key for M.2 modem - M.2 M-Key for M.2 SATA 2280/2260 - M.2 E-key for optional WiFi* 	
mini PCIe MODEM FACET	Adds mini PCIe cellular modem (micro SIM card on FACET) + WiFi/BT + M.2 SATA 2260/2280 possibility. Ideal for remote / outdoor locations connectivity and positioning applications.	<ul style="list-style-type: none"> - Micro SIM on FACET - mini PCIe slot for modem** - M.2 M-Key for M.2 SATA 2280/2260 - M.2 E-key for optional WiFi* 	

<p>POE-D FACET</p>	<p>Enables POE connectivity. Only one cable needed for ethernet and power. Ideal for security, indoor, positioning, access points and IoT.</p>	<ul style="list-style-type: none"> - 1 x LAN port I211 for a total of 3x LAN ports. - POE for device - M.2 M-Key for M.2 SATA 2280/2260 - M.2 E-key for optional WiFi* 	
<p>4x USB 2.0 Ports</p>	<p>Adds 4x USB 2.0 ports for a total of 6x USB 2.0 + 2x 3.0. Ideal for intensive USB devices connection.</p>	<p>4x USB 2.0 ports for a total of 6x USB 2.0. Using M.2 E-Key from SBC.</p>	
<p>2 x LAN FACET</p>	<p>Adds 2x LAN ports I211 for a total of 4x LAN Ports. Enables multi ethernet connection. Ideal for networking applications.</p>	<p>2x LAN ports I211 for a total of 4x LAN ports.</p>	
<p>GPIO + RS232/485 + Can Bus FACET)</p>	<p>Enables serial communication and data acquisition by adding GPIO + RS232/485 + CANBUS possibility. Ideal for Building Control and Networking, HVAC and IoT applications.</p>	<ul style="list-style-type: none"> - RJ45 port for serial RS232 or RF485 connection - RJ45 port for CANBUS - GPIO - M.2 E-key for optional Wi-Fi* 	
<p>Optical Fiber Port</p>	<p>Enables optical fiber connectivity. Ideal for security network and long-distance communications. Deep Base Cover provided.</p>	<ul style="list-style-type: none"> - SFP+ socket for optical GbE connection - M.2 M-Key for M.2 SATA 2242/2260/2280 - M.2 E-key for optional WiFi* 	

* We can supply WiFi/BT WiFi-W18260 for this module

** We can supply and fit the following MODEM for this model:

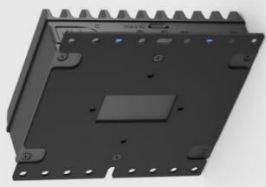


- miniPCIe 4G/LTE modem for fitlet2, Europe bands. SIMCOM SIM7100E
- miniPCIe 4G/LTE modem for fitlet2, North America bands. SIMCOM SIM7100A

Connectivity Options

OPTIONS	Description	Compatibility
M.2 Intel WIFI/BT	Intel dual band wireless AC-8260 M.2 E-Key: - WIFI 801.11ac, dual band, 80MHz. - Bluetooth 4.2	- Barebone (fitted on SBC) - FACET mini PCIe cellular + WiFi/BT. - FACET M.2 cellular + WiFi/BT. - FACET POE-D + WiFi/BT. - FACET GPIO + RS232/485 + CAN + WiFi/BT. - FACET optical fiber + WiFi/BT.
mini PCIe 4G LTE Modem	SIMCOM SIM7100E (Europe) SIMCOM SIM7100A (America)	- FACET mini PCIe cellular + WIFI/BT.

Mounting Options

Easily and securely mounted in nearly any IoT scenario – in a cabinet, in a vehicle, inside a vending machine or just mounted behind a display, on the wall or on a furniture:

	VESA Mounting Bracket	Industrial Top Cover	Din Rail	Din Rail for side mounting
				IMAGE TO COME
Product Info	Bracket with large number of mounting holes for extra installation flexibility.	For CPU heat dissipation through metal body when coupled.	For industrial application with DIN RAILS. Vertical and horizontal positions possible.	For industrial application with DIN RAILS. Keeps the Fitlet2 horizontal.
Fitting on Fitlet2	Screw on base	Mounted on top (CPU side)	Screwed on VESA bracket	Mounted on either right or left side-panel of fitlet2*
Can be added with Housing	- Performance on top; - Power on top; - Industrial on top.		- Performance on top - Low power on top	

*If you are using WiFi it will block the left FACET-Card side panel.

If you are using a FACET-Card with connectivity it will block the right WiFi-antenna panel.

If you need both sides, please consider fitlet2 DIN-rail bracket for bottom mounting.

Contact and Support

For further information and quotations, please contact info@tinygreenpc.com

For support and technical questions, send your email to technical@tinygreenpc.com
or raise a ticket via our website <http://www.tinygreenpc.com/support>