



fitlet

Owner's Manual



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For technical support questions email to: support@fit-pc.com

For more information and to obtain the latest revision of this document, please visit
www.fit-pc.com

Introduction

Package contents

1. fitlet computer
2. Power supply: input 100-240VAC 50/60Hz, 36W output 12VDC 3A
3. HDMI to DVI adapter (in some models)
4. Audio 3.5mm to RCA cable (in some models)
5. Wifi antennas (in models with internal WiFi)
6. External WiFi module with integrated antenna (in models without internal WiFi)
7. Mini-serial to DB9-female adapter cable (in some models)

Note: For more information about fitlet package content please consult www.fit-pc.com/fitlet --> models specifications

To use fitlet you will need:

- A display with DVI/HDMI input + DVI/HDMI cable
- USB keyboard and mouse
- For Barebone models - compatible RAM module and storage device

Hardware specifications

Processor	
Type	AMD A10 Micro-6700T SoC (64-bit quad core, 1.2-2.2GHz, 4.5W) AMD A4 Micro-6400T SoC (64-bit quad core, 1.0-1.6GHz, 4.5W) AMD E1 Micro-6200T SoC (64-bit dual core, 1.0-1.4GHz, 3.95W)
Memory	
Supported	1x SO-DIMM 204-pin DDR3L memory slot Up to 8GB (1x 8GB) DDR3L-1333
Storage	
Supported	1x mSATA slot up to 6 Gbps (SATA 3.0) 1x eSATA (shared) up to 6 Gbps (SATA 3.0) (in fitlet-i)
Graphics	
GPU	AMD Radeon R6/R3/R2 Dual display mode supported
Display Interface 1	HDMI 1.4a up to 1920 x 1200 @ 60Hz
Display Interface 2	HDMI 1.4a up to 1920 x 1200 @ 60Hz
Audio	
Codec	Realtek ALC886 HD audio codec
Audio Output	Analog stereo output Digital 7.1+2 channels S/PDIF output 3.5mm jack
Audio Input	Analog stereo Microphone input Digital S/PDIF input 3.5mm jack
Networking	
LAN	LAN1: Intel I211 GbE controller LAN2: Intel I211 GbE controller (in fitlet-i)

Wireless	WLAN 802.11ac + BT4.0 (in fitlet-i variants), WLAN 802.11b/g/n Wifi module (in fitlet-X)
Connectivity	
USB	2x USB 3.0 3x USB 2.0 (4x USB 2.0 in fitlet-i variants)
Serial	1x Serial communication port COM1: RS232 via ultra mini serial connector (in fitlet i/X)
SD	Micro-SD slot support SD/SDHC cards
Special I/O	1x micro SIM slot (in fitlet-i/X)
Expansion	1x Full-size mSATA socket 1x Half/Full-size mini-PCIe socket (in fitlet-i) FACET connector (in fitlet-X)
Operating System	
Supported	Windows 7/8/10, 32-bit and 64-bit Linux 32-bit and 64-bit
Operating Conditions	
Input Voltage	Unregulated 10 – 15VDC (12V nominal)
Power Consumption	3W – 10.5W (depends on model, workload and connected devices)
Operating Temperature	Commercial (SSD inside): 0°C – 40°C
Enclosure	
Material	Aluminum chassis and PC/ABS panels
Cooling	Passive cooling fanless design
Dimensions	10.8cm x 8.3cm x 2.4cm
Weight	250 gr
Reliability and warranty	
Warranty	5 years
MTTF (Mean Time To Failure)	> 100,000 hours

fitlet features

RAM

fitlet supports DDR3L 1333 single SODIMM up to 8 GB. The SODIMM is user-accessible.

Storage

fitlet includes an internal user-accessible mSATA socket supporting up to 6 Gbps (SATA 3.0).

fitlet-i provides a powered eSATA (5V) port supporting up to 6 Gbps (SATA 3.0).

fitlet includes a bootable microSD socket and can also boot from USB.

Power

fitlet is powered by 12V DC and is 10V-15V tolerant. 100-240V power supply is included.

The DC jack has a twist-lock that prevents accidental unplugging.

fitlet has a tactile power push-button. It is used for turning on/off the PC and for standby/resume when supported by the operating system.

A push of at least 5 seconds will always turn off the fitlet.

Display

fitlet has dual display interface with support for dual head, 2x HDMI with audio support. DVI and VGA displays can be used with an adapter.

Audio

There are 2 standard 3.5mm jacks on the front panel.

Right:

- Stereo line-out using a standard 3.5mm plug
- SPDIF 7.1 out using provided cable

Left:

- Stereo line-in using a standard 3.5mm plug
- SPDIF 7.1 in using provided cable

LAN

fitlet features a GbE LAN ports using standard RJ45 connector. fitlet-i features a 2nd identical port on the left panel. Use a standard Ethernet cables to connect. The connectors feature built-in connection and activity LEDs. PXE boot and Wake-on-LAN are supported.

WLAN

fitlet-X features an external USB 802.11n Wifi module with integrated antenna.

fitlet-i features an internal 802.11ac WiFi modules with two antennas.

USB

All fitlet models features 2x USB 3.0 ports (5 Gbps) and 3x USB 2.0 ports. fitlet-i includes an additional USB 2.0 port for a total of 4 ports. All USB ports are USB-A and support up to 1A.

Serial port

RS232 mini-serial ports located on the back panel.

Mini-serial to DB9 cable to connect to standard serial devices is supplied in the package (not all models).

GPIO

fitlet GPIO interface provides easy and convenient way to operate external devices without the need to open the box, solder wires and designs special hardware. The interface accessible from fitlet's back panel connector via 14-pin ribbon cable (sold as accessory).

For more information please visit: http://fit-pc.com/wiki/index.php/Fitlet_GPIO_Connector_User_Guide

Remote power button

fitlet features a remote power button connector. The remote power button is a simple 50cm twisted pair cord terminated on one side by a panel-mount push-button and on the other with a simple 2-pin cable-to-board connector (sold as accessory).

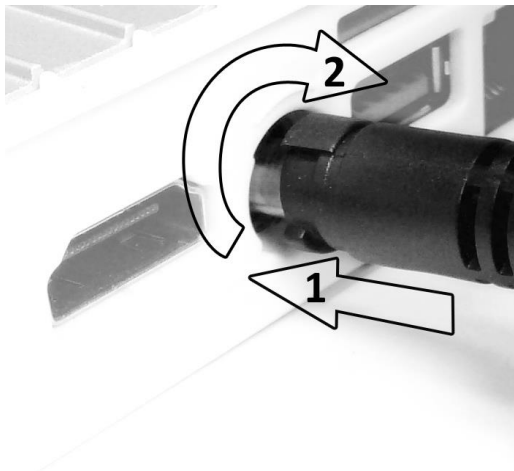
For more information please visit: http://fit-pc.com/wiki/index.php/Remote_power_button:_fitlet

Quick start guide

Many fitlet models are sold "Barebone" – without RAM and storage. To install RAM and mSATA please consult "Installation and service" below.

Connecting fitlet

- Turn off the display and connect it to the fitlet HDMI connector (use the HDMI to DVI adapter if needed).
- Connect the USB keyboard and mouse to USB 2.0 ports.
- Plug the Ethernet cable into the Ethernet connector.
- Mount Wifi antennas on SMA connectors by turning it clockwise repeatedly until the antenna holds firm (fitlet-i models), or plug the USB Wifi module to USB port (fitlet-X models).
- Firmly Insert the DC plug into the fitlet DC-in jack (1).
Rotate plug clockwise 90° to secure (2).



- Plug the speakers into the line-out jack.
- Connect the power supply to the AC cord and plug the cord into AC outlet.

Booting Linux

Linux loads automatically on power up. Upon boot you will be guided through the Linux Mint first-boot setup procedure.

Booting Windows 7

Upon first power-up, you will be guided through the Windows Welcome procedure which is self-explanatory. The Windows 7 serial number is printed on the Windows 7 label.

Installation and service

Maintenance

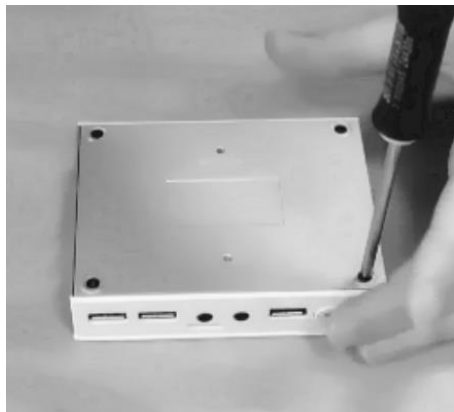
fitlet has no moving parts and requires no maintenance.

fitlet disassembly

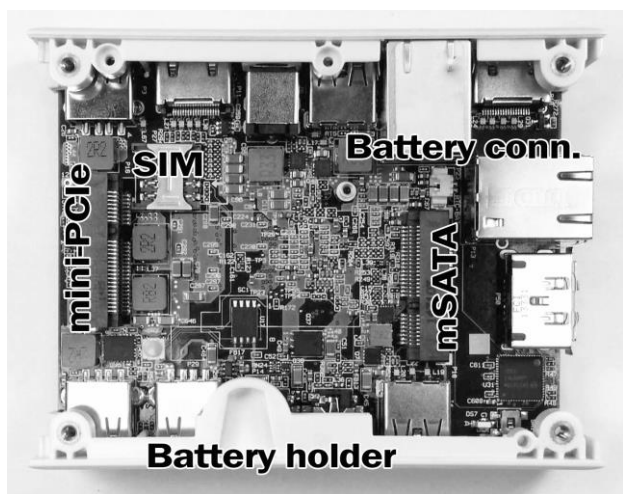
For your convenience fitlet disassembly video available at www.fit-pc.com/fitlet/open

To access storage, SIM, miniPCle and battery

Open the bottom cover by unscrewing 4 philips-head screws.

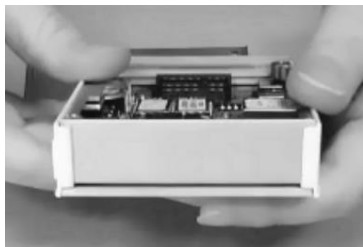


mSATA, SIM socket, miniPCIe and battery which are located at the bottom side of the motherboard are now accessible for installation/replacement.



To access RAM

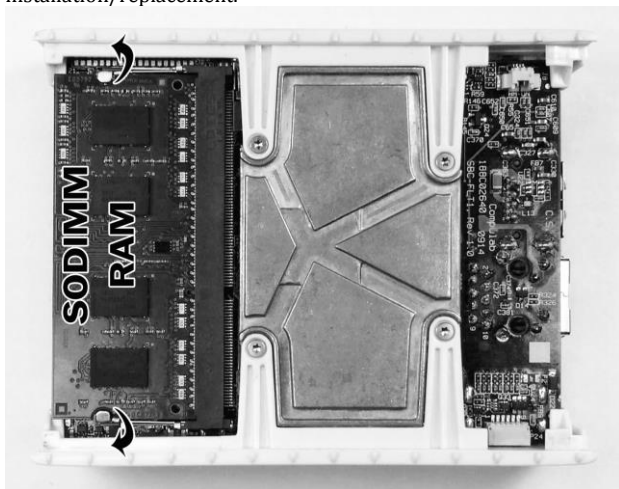
1. Start by removing bottom cover (see above).
2. Slide out slightly the side panel



3. Hold firmly the fitlet as depicted and push out the top cover with your thumbs.



4. SODIMM which is located at the top side of the motherboard is now accessible for installation/replacement.

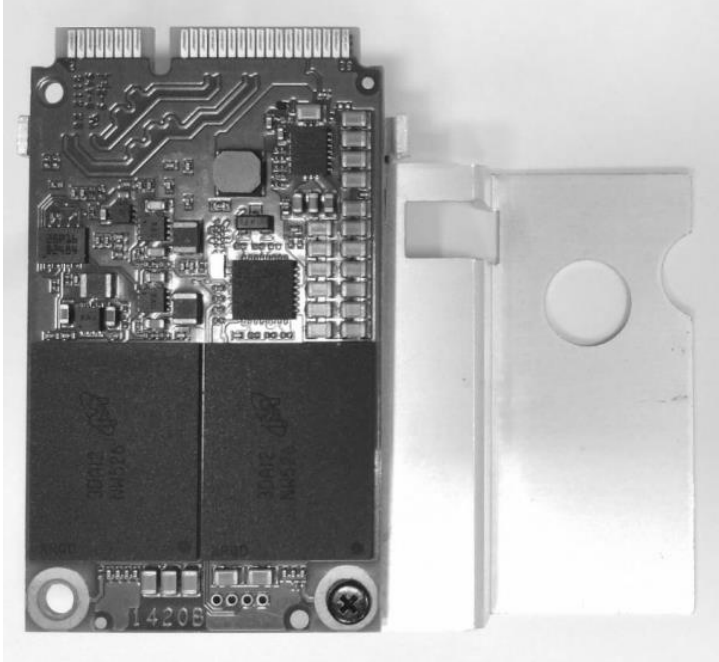


Re-assemble in reverse order.

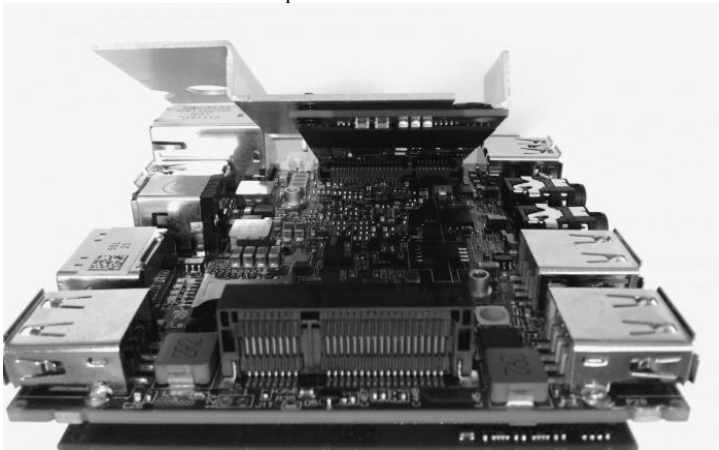
Installing mSATA heatplate

Follow the steps shown below in order to attach mSATA heat plate to the mSATA SSD itself.

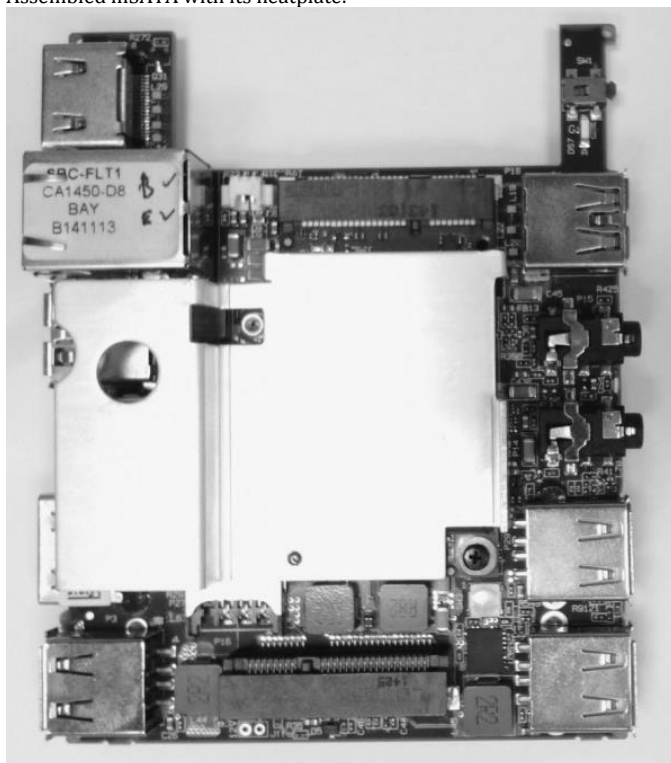
1. mSATA SSD attached to heat-plate with a screw.
Make sure that SATA controller face the heat-plate. Do not over-tighten the screw.



2. Install the mSATA with its heatplate into mSATA slot of the fitlet.



3. Assembled mSATA with its heatplate.



Installing FACET card

Note: The procedure suitable in fitlet-X configuration only (motherboards with a bay).

FACET Card (Function And Connectivity Extension T-Card) serve as optional extension board providing additional peripherals and IO connectivity options for fitlet computer. The FACET Cards interface is documented to allow 3rd party to design & develop their own application specific modules.

1. Remove fitlet bottom cover in order to have access to mini PCIe slot, at described in fitlet disassembly section.
2. Slide out fitlet side cover.
3. Install FACET card into mini PCIe slot.
4. Re-assemble the bottom cover.

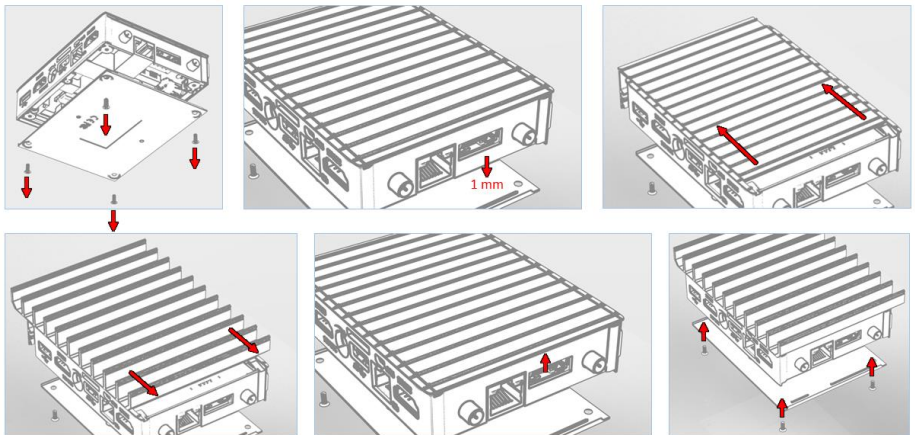
For more information please visit: http://fit-pc.com/wiki/index.php/Fit-PC_Product_Line:FACET_Cards

Heatsink top cover

Fitlet top cover with integrated heatsink made of extruded and machined aluminum with anodize finish. Large surface area for improved heat dissipation. The heatsink allows to reduce fitlet operating temperature and running fitlet at full TDP regardless of ambient temperature.

Heatsink top cover installation instructions:

1. Remove regular fitlet top cover as described in disassembly section.
2. Install heatsink top cover and reassemble.



Heatsink assembly video on YouTube: <https://youtu.be/QXpiiYGR8kA>

Direct orders: <http://www.fit-pc.com/web/purchasing/order-accessory/>

BIOS

For BIOS documentation see www.fit-pc.com/fitlet/bios

Entering BIOS Setup Utility

Turn off fitlet.

Turn on while holding down the Del key.

TDP Settings

The CPU in fitlet is rated for 4.5W TDP (thermal design power). fitlet is pre-configured for operating the CPU at that power level, but in practice higher performance can be achieved by allowing the CPU to consume more power. Users can set values between 1-25000 [mW], when effectively value of 10000 reach saturation in performance and power levels.

This can be changed in fitlet BIOS settings, under power settings, APU TDP section.

For more information please see:

http://fit-pc.com/wiki/index.php/Fitlet_BIOS_guide#Power_Settings

Warranty and RMA

Warranty

- Compulab guarantees products against defects in workmanship and material for a period of 60 months from the date of shipment.
- Warranty on the storage device is 24 months only
- Warranty on the replaceable battery is 24 months only
- Your sole remedy and Compulab's sole liability shall be for Compulab, at its sole discretion, to either repair or replace the defective product at no charge.
- This warranty is void if the product has been altered or damaged by accident, misuse or abuse.

RMA

Keep the original package for shipping in case of hardware failure.

In case of HW failure of a **fitlet** under warranty, please contact the seller of that **fitlet**.

Please provide the following required information:

- fitlet serial number
- Name of purchaser
- Address
- Problem description

If the **fitlet** was purchased directly from Compulab, please email to: rma@fit-pc.com

For technical support questions email to: support@fit-pc.com



fitlet

Manufacturer: Compulab Ltd.

This device complies with Part 15 of the FCC Rules.

Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation.

Statement

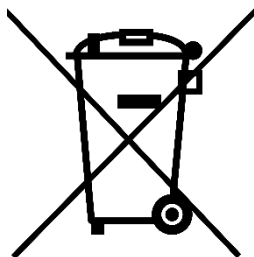
Changes or modifications to this equipment not expressly approved by the party responsible for compliance (Compulab Ltd.) could void the user's authority to operate the equipment.

Statement

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

WEEE



This symbol means that you must dispose of an electrical item separately from general household waste when it reaches the end of its useful life. Take your PC to your local waste collection point or center. This applies to all countries of the European Union, and to other European countries with a separate waste collection system.