Safety instructions

Use the following safety guidelines to help protect your computer from potential damage and to help to ensure your personal safety. Unless otherwise noted, each procedure included in this document assumes that you have read the safety information that shipped with your computer.

**WARNING:** Disconnect all power sources before opening the computer cover or panels. After you finish working inside the computer, replace all covers, panels, and screws before connecting to the power source.

**CAUTION:** Some repairs may only be done by a certified service technician. You should only perform troubleshooting and simple repairs as authorized in your product documentation, or as directed by the online or telephone service and support team. Damage due to servicing that is not authorized by Compulab is not covered by your warranty. Read and follow the safety instructions that came with the product.

**CAUTION:** To avoid electrostatic discharge and prevent internal components damage from electrostatic discharge when touching computer or its parts, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface, such as a connector on the back of the computer.

**CAUTION:** Handle components and cards with care. Do not touch the components or contacts on a card. Hold a card by its edges or by its metal mounting bracket. Hold a component such as a processor by its edges, not by its pins.

**CAUTION:** When you disconnect a cable, pull on its connector or on its pull-tab, not on the cable itself. Some cables have connectors with locking tabs; if you are disconnecting this type of cable, press in on the locking tabs before you disconnect the cable. As you pull connectors apart, keep them evenly aligned to avoid bending any connector pins. Also, before you connect a cable, ensure that both connectors are correctly oriented and aligned.

**CAUTION:** Only IEC/EN 60825-1 certified and UL Recognized CDRH Registered Class 1 Optical Laser Transceivers shall be used within FC-OPLN FACETCard [https://fit-iot.com/web/product/fc-opln-facet-card-optical-lan/](https://fit-iot.com/web/product/fc-opln-facet-card-optical-lan/)
Consignes de sécurité

Utilisez les consignes de sécurité suivantes pour protéger votre ordinateur contre les dommages potentiels et pour assurer votre sécurité personnelle. Sauf indication contraire, chaque procédure incluse dans ce document suppose que vous avez lu les informations de sécurité fournies avec votre ordinateur.

**AVERTISSEMENT**: débranchez toutes les sources d'alimentation avant d'ouvrir le capot ou les panneaux de l'ordinateur. Une fois que vous avez fini de travailler à l'intérieur de l'ordinateur, remettez en place tous les capots, panneaux et vis avant de vous connecter à la source d'alimentation.

**ATTENTION**: certaines réparations ne peuvent être effectuées que par un technicien de maintenance agréé. Vous devez effectuer le dépannage et les réparations simples uniquement comme autorisé dans la documentation de votre produit ou selon les instructions de l'équipe de service et d'assistance en ligne ou par téléphone. Les dommages dus à un entretien non autorisé par Compulab ne sont pas couverts par votre garantie. Lisez et suivez les consignes de sécurité fournies avec le produit.

**PRÉCAUTION**: pour éviter les décharges électrostatiques et éviter que les composants internes ne soient endommagés par les décharges électrostatiques lorsque vous touchez l'ordinateur ou ses composants, reliez-vous à la terre à l'aide d'un bracelet antistatique ou en touchant périodiquement une surface métallique non peinte, comme un connecteur à l'arrière de l'ordinateur.

**ATTENTION**: Manipulez les composants et les cartes avec soin. Ne touchez pas les composants ou les contacts d'une carte. Tenez une carte par ses bords ou par son support de montage métallique. Tenez un composant tel qu'un processeur par ses bords et non par ses broches.

**ATTENTION**: lorsque vous déconnectez un câble, tirez sur son connecteur ou sur sa languette, pas sur le câble lui-même. Certains câbles ont des connecteurs avec des languettes de verrouillage; si vous déconnectez ce type de câble, appuyez sur les languettes de verrouillage avant de déconnecter le câble. Lorsque vous séparez les connecteurs, maintenez-les uniformément alignés pour éviter de plier les broches du connecteur. De plus, avant de connecter un câble, assurez-vous que les deux connecteurs soient correctement orientés et alignés.

Table of contents

Safety instructions ............................................................. 2

Introduction .............................................................................. 5

  fitlet2RC features ............................................................ 5
  Package contents ............................................................... 5
  Hardware specifications ..................................................... 6
  Connectors layout .............................................................. 7

Quick start guide ...................................................................... 8

  Minimum requirements ....................................................... 8
  Identifying fitlet2RC configuration ..................................... 8
  Opening fitlet2RC ............................................................ 8
  Installing RAM ................................................................... 10
  M.2 cooling plate and SSD .................................................. 11
  RTC battery ......................................................................... 13
  Re-assembling fitlet2RC ..................................................... 14
  Connecting fitlet2RC ........................................................ 15
  Entering BIOS Setup ........................................................ 16
  Installing and booting operating system ......................... 16

Service .................................................................................... 17

  Support ................................................................................. 17
  Warranty ............................................................................... 17
  RMA .................................................................................... 17

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

For technical support and product related questions, please email: support@fit-iot.com
Introduction

Thank you for purchasing fitlet2RC. It is a miniature PC designed to be tough, capable, versatile and user-friendly. With proper installation we expect fitlet2RC to serve you for many years. The unique fanless design of fitlet2RC eliminates the need for any maintenance after installation. Please consult this owner’s manual for getting started with fitlet2RC. You are welcome to contact fitlet2RC manufacturer – Compulab at www.fit-iot.com or support@fit-iot.com should you have any technical questions.

fitlet2RC features

• Intel CPU Atom x7-E3950 (12W), Atom x5-E3930 (6W), Celeron J3455 (10W) processors
• Up to 16 GB RAM
• eMMC | M.2 SATA | 2.5” storage*
• Dual head 4K display
• Up to 4 Gbit Ethernet ports* | WiFi* | cellular communication*
• USB 3.0, audio, serial port, SD card, indicator LEDs
• Supports Windows 10 and Linux
• Can be extended with Function And Connectivity Extention T-Cards (FACET Cards)
• All-metal fanless housing 112 mm X 84 mm X 34 mm
• Operating temperature range up to -40°C to 85°C (depending on ordered configuration)

* Feature may require an extension FACET card

Package contents

1. fitlet2RC computer
2. M.2 cooling plate with spacers and screws
3. RTC battery with cord
4. Owner’s manual
5. USA & C UL Listed Power supply (input 100-240VAC 50/60Hz, I.T.E., LPS, output 12VDC 3A)
   can be delivered in the same package with fitlet2RC on buyer’s request.

⚠️ WARNING: Buyer is responsible to verify power supply rating

Notes

• additional accessories can be purchased separately
• Some fitlet2RC configurations come pre-installed with additional devices and accessories
## Hardware specifications

| Processor / SoC | Intel Apollo Lake (Atom | Celeron)  
| Dual-core or quad-core |
|---|---|
| Memory | 1x SO-DIMM 204-pin DDR3L SDRAM  
Up to 16GB Non-ECC DDR3L-1866 (1.35V) |
| Supported Storage | 1x M.2 M-key 2242 | 2260  
Optional eMMC  
Optional 2.5" HDD | SSD |
| Graphics | Display Interface 1: HDMI 1.4b up to 3840 x 2160 @ 30Hz  
Display Interface 2: DisplayPort 1.2 up to 4096 x 2160 @ 60 Hz (via Mini DP connector) |
| Audio | Codec: Realtek ALC1150 HD audio codec  
Audio Output: Analog stereo output | Digital 7.1 channels S/PDIF output (3.5mm jack)  
Audio Input: Analog stereo Microphone input (3.5mm jack) |
| Networking | LAN1: Intel I211 GbE controller (RJ-45)  
LAN2: Intel I211 GbE controller (RJ-45) |
| Wireless | 1x M.2 E-key 2230 slot  
WiFi adapter sold separately |
| Connectivity | USB: 2x USB 3.0  
2x USB 2.0 |
| Serial | 1x Serial communication ports  
COM1: RS232 via mini serial connector |
| Expansion | FACET rev 2 slot (PCIe x2, USB2.0, eDP1.3, I2S, I2C, UART) |
| Operating System | Supported: Windows 10 | Linux |
| Operating Conditions | Power inputs: Power DC Jack for unregulated DC Power Supply: 9-20VDC OR 24VDC: 24VDC (+25%/- 25%)  
AND/OR from Power Ethernet (POE) 803.2at switch  
Note: fitlet2RC power uninterruptable ability could be provided when powered simultaneously over DC Power Jack and POE. In this case power over DC Jack mode should be <=25W.  
Ratings*: Models with P24 option: 24VDC, 30W  
Models without P24 option (blank): 9-20VDC, 40W  
Models with PoE FACET FC-POEDRC: PoE 48VDC, 25W  
Minimal Power Consumption: 6W to 15W depending on configuration and system load  
Operating Temperature: Commercial: 0°C to 45°C  
Extended: -20°C to 70°C  
Industrial*: -40°C to 85°C  
Relative Humidity: 5% to 95% (non-condensing)  
Enclosure: Die Cast Aluminum  
Cooling: Passive Cooling (fanless)  
Dimensions: 112 mm X 84 mm X 34 mm  
Weight: 350g  
Warranty: 5 years  
Warranty notes: Storage device warranty in accordance with device manufacturer’s warranty. Excludes battery. |
|---|---|

* PoE shall be indoor line limited to the same building installation, Limited Power Source per IEC 60950-1/IEC 62368-1 standards.  
Supply requirements: 48VDC, min. 25W  
** Maximum ambient: models with HTx option 70degC, with HTx blank option 85degC  

For the latest specifications please visit:  
Connectors layout
Quick start guide

Minimum requirements

To use fitlet2RC you will need:

- RAM and storage device (if not pre-installed)
- A display with HDMI or DisplayPort input + HDMI or mini-DisplayPort cable
- USB keyboard and mouse

Identifying fitlet2RC configuration

fitlet2RC configuration is detailed on the label attached to the bottom side of the computer.

Note

Pay attention to RAM and storage. If not installed fitlet2RC will not boot. You will have to first install these devices.

Opening fitlet2RC

You will need to open fitlet2RC in order to install RAM, storage and RTC battery.
Required tool: Phillips screwdriver.
To open fitlet2RC please follow these steps:

1. Place fitlet2RC on a flat surface bottom-up.
2. Open the four screws using the Phillips screwdriver (counter clock-wise).
3. Lift the bottom cover to remove it. Side panels should fall-off.
4. Lift fitlet2RC from the top cover.
Installing RAM

RAM socket is positioned on the top side of the motherboard. fitlet2RC accepts a single SODIMM DDR3L (1.35V).

Insert DDR3L SODIMM module and press it down until it is latched firmly on both sides.
M.2 cooling plate and SSD

The M.2 cooling plate has several purposes:
- Allow installation of multiple form factor M.2 devices and FACET Cards
- Provide cooling to M.2 devices
- Assist in battery placement
- Provide proper cable management inside fitlet2RC

fitlet2RC accepts M.2 M-key 2242 | 2260 SATA SSD.
The SSD has to be fastened to the M.2 cooling plate. Then the M.2 cooling plate is placed at the underside of the motherboard and fastened to the front and back panel.

To install SSD onto M.2 cooling plate

1. Screw the 3 alignment screws into the marked holes. These screws are used to position the M.2 devices
2. Peel-off protective film from the two thermal pads.
3. Place the red M.2 spacer according to the length of the M.2 SSD as depicted below.
   Note orientation of the spacer: The recessed side should face the alignment screws.
   Insert M.2 fastening screw but do not tighten.
4. Place edge of M.2 SSD against the fastening screw and press the SSD firmly against the thermal pad until its connector edge is seated between the alignment screws. Once positioned correctly the connector edge should stick out above the edge of the M.2 cooling plate.

5. Tighten the fastening screw.

6. Turn over the M.2 cooling plate and push the M.2 SSD into its socket at the underside of the motherboard.

7. Push down the M.2 cooling plate and tighten the 3 panel screws.
RTC battery

The RTC battery is used for keeping time and date while fitlet2RC is disconnected from power. BIOS settings and power-up policy is independent of battery. fitlet2RC normally ships with the battery unplugged to ensure that the battery is not discharged during warehousing. The battery can keep charge for approx. 5 years when fitlet2RC is disconnected and significantly longer when fitlet2RC is connected to power. Battery can be purchased separately to be replaced by the user.

CAUTION: Risk of explosion if battery is replaced by an incorrect type. Replace only with the same type and manufacturer.

Installing RTC battery

1. Connect the battery plug to the corresponding socket (see illustration).
2. Place the wire as shown inside the slots of the M.2 cooling plate to minimize clutter.
3. Place the battery in the marked pocket. Once fitlet2RC bottom cover is assembled the battery is secured in place.
Re-assembling fitlet2RC

1. Place the fitlet2RC onto the top cover.
   Note: The top cover is symmetric – direction does not matter.
2. Place the bottom cover onto the fitlet2RC.
   **Important note:** The tall U-shaped boss has to be near the M.2 sockets. Otherwise the bottom cover will not fit!
3. Click both side panels into place
4. Tighten the 4 screws
1. Before connecting fitlet2RC please ensure that RAM and storage device are installed as detailed in the above sections.
2. Connect the display to fitlet2RC using HDMI or mini-DP cable.
3. Connect to fitlet2RC USB keyboard and mouse.
4. Insert the DC plug into the fitlet2RC DC-in jack. Rotate clockwise 90° to secure.
5. Slide into the power-supply the AC blade correct to your country and plug the power-supply into an AC-outlet. The power button on fitlet2RC should turn green, in a few seconds an image should appear on the display.
6. Connect Ethernet cable as needed. When link is established the link LED on RJ45 should light.
7. If fitlet2RC has WiFi adapter installed you will observe two SMA connectors (gold color screws) on the side panel. Connect the included antennas by screwing them clockwise onto the SMA connectors to enable WiFi communication.
Entering BIOS Setup

Turn off the fitlet2RC.
Turn on while holding down the Del key, until access into AMI Inc. BIOS utility.

Installing and booting operating system

Service

Support
For technical support and product related questions, please email: support@fit-iot.com
For fitlet2RC on support wiki please visit: http://fit-pc.com/wiki/index.php/Fit-PC_Product_Line:_FITLET2RC

Warranty

- Compulab guarantees products against defects in workmanship and material for a period of 60 months from the date of shipment.
- 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.
- Please contact the seller of that fitlet2RC.
- When issuing an RMA please provide the following required information:
  - fitlet2RC serial number
  - Name and address of buyer
  - Invoice number
  - Problem description
- If fitlet2RC was purchased directly from Compulab, please email: rma@fit-pc.com
fitlet2RC  
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.

WEEE

This symbol means that you must dispose of an electrical item AND/OR containing in it Li-Mn battery separately from general household waste when they reach the end of their useful life. Take your PC or the battery to your local waste collection point or center. This applies to all countries of the European Union, and to other countries with a separate waste collection system.

This symbol means that device is UL listed for use in USA and Canada and is registered in UL data base under E510538 number