



IPC2 Owner's Manual



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For more information and to obtain the latest revision of this document, please visit

www.fit-pc.com

Introduction

Package contents

1. IPC2 computer
2. Power supply: input 100-240VAC 50/60Hz, 60W output 12VDC 5A, DC plug lock,
3. Attachable Standard North-American and EU plugs AC cord.*
4. HDMI to DVI adapter
5. Audio 3.5mm to RCA cable
6. 2 WiFi antennas (in some models)
7. Mini-serial to DB9-female adapter cable

To use IPC2, you will need:

- A display with DVI, HDMI or DisplayPort input + DVI, HDMI or DisplayPort cable
- USB keyboard and mouse

* Local resellers may supply IPC2 with other AC cord types.

Hardware specifications

Processor	
Type	Intel 4th Gen Core Celeron-2955U / i3-4010U / i5-4300U / i7-4600U (Haswell)
Cores	64-bit dual core
Clock speed	1.4-2.1GHz (turbo boost up to 3.3GHz) (depends on CPU)
TDP	15W
Chipset	Mobile Intel 8 Series (Lynx Point) in MCP package
Memory	
Supported	2x SO-DIMM 204-pin DDR3L SDRAM memory slots Up to 16GB (2x 8GB) DDR3L-1600 (1.35V only)
Storage	
Supported	1x SATA up to 6 Gbps (SATA 3.0) for internal 2.5" HDD/SSD 2x mSATA slot up to 6 Gbps (SATA 3.0)
Graphics	
GPU	Intel HD 4400 Graphics Triple display mode supported
Display Interface 1	HDMI 1.4a up to 4096 x 2304 @ 24 Hz
Display Interface 2	DisplayPort 1.2 up to 3200 x 2000 @ 60 Hz
Display Interface 3	HDMI 1.4a up to 4096 x 2304 @ 24 Hz
Audio	
Codec	Realtek ALC888-VC2 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	2x GbE LAN ports LAN1: Intel I218 GbE PHY (MAC integrated into the chipset) (RJ-45) LAN2: Intel I211 GbE controller (RJ-45)
Wireless	WLAN 802.11ac (2.4/5GHz dual band Intel 7260HMW) Bluetooth 4.0
Connectivity	
USB	4x USB 3.0 2x USB 2.0
Serial	3x Serial communication ports COM0: Full RS232 via mini serial connector COM1: 2-wire RS232 via mini serial connector COM3: 2-wire RS232 via mini serial connector
SIM	1x micro SIM slot (6 pins) ⁴
Special I/O	N/A
Expansion	Half-size mini-PCIe socket Full-size mini-PCIe socket ²
Advanced Technologies	
vPRO	Yes (Intel vPRO Technology) ⁵
AMT	Yes (Intel Active Management Technology) ⁵
CPU Virtualization	Yes
Special Functionality	Auto-On Wake-on-LAN Wake-on-Timer PXE Boot Watchdog
Operating System	
Supported	Windows 7/8, 32-bit and 64-bit Linux 32-bit and 64-bit Embedded OS
Operating Conditions	
Input Voltage	Unregulated 10 – 15VDC input ¹
Power Consumption	6W – 24W
Operating Temperature	1. Commercial HDD models: 0°C – 50°C SSD models: 0°C – 70°C 2. Extended (TE) SSD models only: -20°C – 70°C 3. Industrial (TI) SSD models only: -40°C – 70°C
Enclosure	
Material	Die Cast Aluminum
Cooling	Passive Cooling Fanless Design
Dimensions	19cm x 16cm x 4cm
Weight	1150gr
Package	
Warranty	5 years ³
Notes	1. Nominal input voltage: 12V 2. Shared with mSATA 3. For products purchased since 1-Jan-2013 4. For use with mini PCIe Cellular Modem module 5. Supported on LAN1 only

IPC2 features



Front panel

The features of the front panel of IPC2 depend on specific FACE Module used and are documented separately.

Power

IPC2 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 IPC2.

Display

IPC2 has triple display interface with support for triple head.

1. 2x HDMI with audio support
2. 1x DisplayPort

To connect IPC2 to a DVI display, use the provided HDMI to DVI-D adapter. Use a DVI cable to connect the adapter to the display.

Audio

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

Right:

- Stereo line-in using a standard 3.5mm plug
- S/PDIF 7.1 in using provided cable

Left:

- Stereo line-out using a standard 3.5mm plug
- S/PDIF 7.1 out using provided cable

LAN

IPC2 features two 10/100/1000BaseT Ethernet ports using standard RJ45 connectors. Use a standard Ethernet cables to connect.

The connectors feature built-in LEDs that are lit when a connection is detected.

WLAN

2 WLAN antennas are supplied in models with integrated WiFi and should be screwed into the standard SMA connectors.

USB

There are 2 USB 3.0 ports (5 Gbps) and 2 USB 2.0 ports on the back panel.

And additional 2 USB3.0 ports on the front panel.

All USB ports support current up to 1A.

Ports on the back are upside down – note when connecting USB plugs.

Serial port

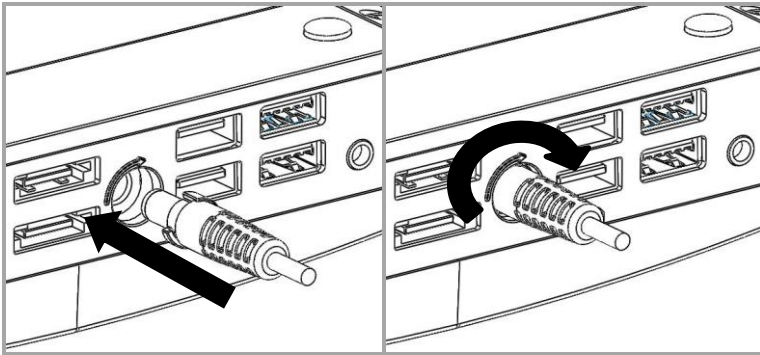
Three RS232 mini-serial ports is located on the back panel.

Mini-serial to DB9 cable to connect to standard serial devices is supplied in the package.

Quick start guide

Connecting IPC2

- Turn off the display and connect it to the IPC2 HDMI connector (use the HDMI to DVI adapter if needed).
- Connect the USB keyboard and mouse to USB 2 connectors.
- Plug the Ethernet cable into the Ethernet connector.
- In IPC2 models with WiFi: Mount the WiFi Antennas on the SMA connector by turning it clockwise repeatedly until the antenna holds firm.
- Insert the DC plug into the IPC2 DC-in jack. Rotate clockwise 90° to secure.



- Plug the speakers into the line-out jack.
- Connect the power supply to the AC cord and plug the cord into AC outlet. The front panel logo should light up as the IPC2 boots.

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

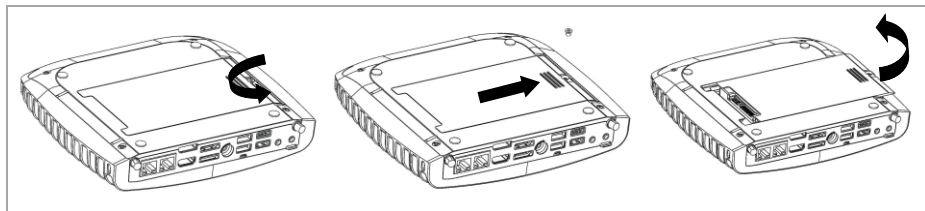
Upon first power-up, you will be guided through the Windows Welcome procedure which is self-explanatory. The Windows 7 serial number is printed on the Windows 7 label on the bottom of your IPC2.

Maintenance

IPC2 requires no maintenance. You should not take the IPC2 apart other than opening the service door. Taking IPC2 apart will void its warranty.

The following operations can be conducted by the user:

Opening service door



1. Unscrew marked Philips screw at the bottom to release service-door.
2. Slide out service-door until it stops – about 10 mm.
3. Service-door is now detached. Lift edge of service-door to completely remove.

Re-assemble in reverse order. Hard disk connects by sliding-in the service-door.

Service bay



The service-bay provides easy access to hard-disk, RAM, and mini-PCIe sockets incl. WLAN module.

Hard disk is 2.5" 7mm/9.5mm SATA. It is screwed to service door by 4 screws, 2 on each side. It is recommended to use 5400 RPM hard disk or SSD. 7200 RPM or higher is not recommended due to higher power consumption and risk of overheating.

RAM – use DDR3L-1333/1600 SO-DIMM modules.

Mini-PCIe – the half-size mini-PCIe is normally used for WLAN. If you remove the WLAN module make sure to isolate the ends of antenna cables with some tape to avoid short-circuit. The full-size mini PCIe is available for any use.

BIOS Setup Utility

Entering BIOS Setup Utility

Turn off the IPC2.

Turn on while holding down the F2 key.

See http://www.fit-pc.com/wiki/index.php/Main_Page.

Warranty and RMA

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 in case of hardware failure.

In case of HW failure of an IPC2 under warranty, please contact the seller of that IPC2.

Please provide the following required information:

- IPC2 serial number
- Name of purchaser
- Address
- Problem description

If the IPC2 was purchased directly from CompuLab, please email rma@fit-pc.com.

Tips for saving power

General

- Working without a connected display automatically disables the graphics controller – saving power.
- Disconnect external USB devices when not in use.

In Operating System

Use power scheme as follows

- Turn of monitor after several minutes not in use
- Turn off hard disk after several minutes not in use
- System standby after an hour not in use



IPC2

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.