

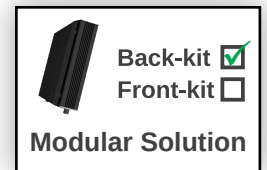
Modular Mini-ITX IPC 12th/13th/14th Gen. Intel® Core

PCBAMITX[CPU]



*) Front- & Back-kit Concept - Preliminary Datasheet

- **12th/13th/14th Generation Intel® Core™ LGA1700 Socket Processor (w/ max 65W & integrated graphics)**
 - Build-your-own Intel IPC with any 12th/13th/14th Gen. Intel® Processors
 - The Mini-ITX IPC Includes powerful Intel® H610 chipset
 - Customizable Memory (max. 32GB) and SSD Storage (unlimited)
- **Supports Windows 10/11, Linux Ubuntu & Debian 12**
- **Connectors - to mount on front-kit (screwable)**
- **VESA 100 mounting on back**
- **Included CPU fan & SSD heatsink**
- **Integrated LAN & W-LAN module**
- **2 year guarantee (24/7 usage)**



faytech's Mini ITX Intel-based IPC back-kits have a pre-installed Windows 10/11, with Linux and Debian available on request. All the IPCs have VESA 100 screw patterns on the back for easy mounting.

With this solution being a modular system, the back-kit can easily be connected to any of faytech front-kit models using various connectors and 4 screws. The IPCs are build for 24/7 operation and powered any of Intel's 12th/13th/14th Generation Intel® Core™ LGA1700 Socket Processor, with Max. 65W power consumption and integrated graphics:

- **12th Generation - Alder Lake S series**
Core™ i9, i7, i5, i3, Pentium® Gold, Celeron® processors
- **13th Generation - Raptor Lake series**
Core™ i9, i7, i5, i3 processors
- **14th Generation - Raptor Lake Refresh series**
Core™ i9, i7, i5, i3 processors

It is the perfect choice for a wide variety of applications, including industrial automation, control panels, POS systems and digital signage, with easily switchable front-kits to ensure longevity.



Legend / Notes	
Applicable to version 1	(v1)
Applicable to version 2	(v2)
Applicable to all Versions	None

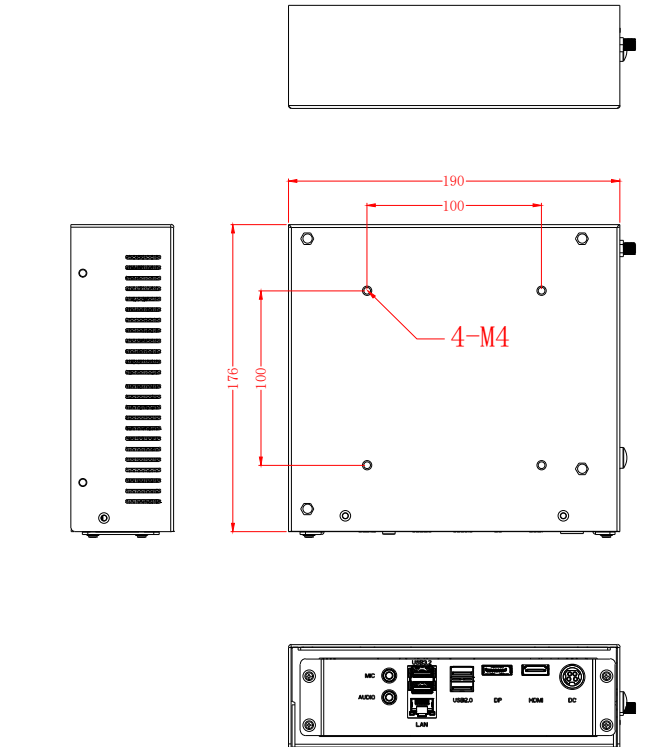


Product name				Mini-ITX IPC Alder Lake S Core™			
Model number / EAN number				IPCBAMITX[CPU] / TBD			
Global Article Code	European Article Code	Release date (D/M/Y)	Version*	Global Article Code	European Article Code	Release date (D/M/Y)	Version*
TBD	-	31/03/2025	v1				

System Specifications	
Available Mainboards	See next page
CPU	
Total Cores (P+E)	
Total Threads	
Single P-Core & E-Core turbo freq.	
Smart Cache	
Base Power	
Memory	2× SO-DIMM , max. 32GB, Dual Channel DDR4 3200 MHz
Storage	128GB ~ 2TB SSD
I/O Chipset	TBD
Ethernet	Realtek® RTL8111H
Audio	Realtek® ALC897
TPM	---
Expansion Slot	1× M.2 E-key (2230;PCIex1/USB2)
Bios	256Mbit Flash ROM, AMI BIOS
H/W Monitor	Realtek® ALC897
Smart Fan Control	CPU Fan / Chassis Fan
Wake On LAN / PXE	Yes (WOL / PXE)
Power State	S3, S4, S5
OS Support	Windows 10/11, Linux Ubuntu, Debian 12

Graphics	
Graphics	Intel® UHD Graphics
Graphics Multi Display	Triple Independent Display
VGA	---
DVI	---
HDMI	HDMI 1.4; Up to 4096 × 2160 @ 30 Hz / 2560 x 1600 @ 60 Hz, with Digital Audio
DP	DP1.4a; Up to 4096 × 2160 @ 60 Hz
LVDS*	Up to 1920 × 1080 @60Hz, Daul Channel 18/24 bit
EDP*	Up to 4096 × 2340 @ 60Hz
Backlight Control	PWM

*) CH7513 support LVDS/EDP switch via BIOS



IP Rating
IP40 (if combined with faytech front-kit)

Power	
Power Supply	100-240V ACDC active switching; 24V DC-Out
Working Power (V)	24
Power Consumption (W)	See next page
Stand-By Consumption (W)	<1

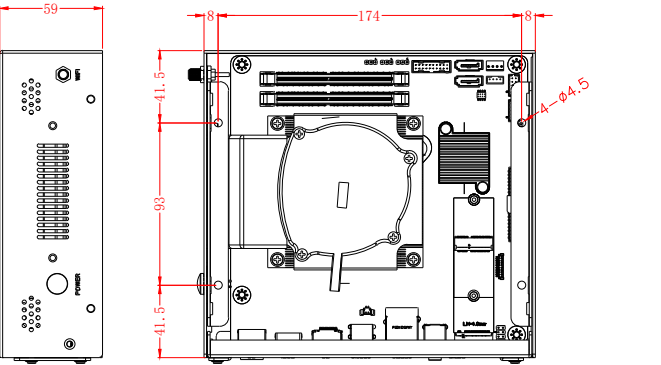
Environmental & Power & ME	
Battery	Lithium Battery
Power Requirement	24V DC-In
Operating Temperature	-10 ~ +60 °C
Storage Temperature	-20 ~ +60 °C
Operating Humidity (RH)	10% - 90%
Certification	CE & FCC (Class A)
Form Factor	Mini-ITX: 6.7" × 6.7" (170mm × 170mm)

Chassis & Housing	
Net weight (kg)	~2.00 est.
Gross weight (kg)	~2.80 est. (incl. cartonage)
Housing material	Aluminum case
Housing (mm) L × W × H	190.0 × 176.0 × 53.0
Mounting	VESA 100

External Connectors	
1x 24V DC-In (4-pin)	1x HDMI 1.4
1x DisplayPort 1,4	1x 10/100/1000Mbit RJ45 Ports
2x USB 3.2	2x USB 2.0
1x Line-out	1x Mic-in
1x Wi-Fi Antenna (screwable)	

Connector - front-kit assembly
Various pin connectors with converter for front- / back-kit assembly (see separate pdf sheet)

Included in the Delivery
Power Supply (see Power section)
W-LAN Antenna (RP-SMA female)
Short Installation Manual
Inside: CPU fan & SSD heatsink



Tolerance: ISO 2768-1c

CPU / Processor Compatibility:

Any 12th/13th/14th Gen. Intel® LGA1700 Socket Processor, with max. 65W with integrated graphics is compatible.
Below is a list of the tested processors.



Name	Core Count	Core Clock	Boost Clock	Microarchitecture	TDP
Intel 300	2	3.9 GHz	N/A	Raptor Lake Refresh	46 W
Intel Celeron G6900	2	3.4 GHz	N/A	Alder Lake	46 W
Intel Pentium G7400	2	3.7 GHz	N/A	Alder Lake	46 W
Intel Core i3-12100	4	3.3 GHz	4.3 GHz	Alder Lake	60 W
Intel Core i3-12100T	4	2.2 GHz	4.1 GHz	Alder Lake	35 W
Intel Core i3-13100	4	3.4 GHz	4.5 GHz	Raptor Lake	60 W
Intel Core i3-13100T	4	2.5 GHz	4.2 GHz	Raptor Lake	35 W
Intel Core i3-14100	4	3.5 GHz	4.7 GHz	Raptor Lake Refresh	60 W
Intel Core i5-12400	6	2.5 GHz	4.4 GHz	Alder Lake	65 W
Intel Core i5-12500	6	3 GHz	4.6 GHz	Alder Lake	65 W
Intel Core i5-12600	6	3.3 GHz	4.8 GHz	Alder Lake	65 W
Intel Core i5-13400	10	2.5 GHz	4.6 GHz	Raptor Lake	65 W
Intel Core i5-13500	14	2.5 GHz	4.8 GHz	Raptor Lake	65 W
Intel Core i5-13500T	14	1.6 GHz	4.6 GHz	Raptor Lake	35 W
Intel Core i5-13600	14	2.7 GHz	5 GHz	Raptor Lake	65 W
Intel Core i5-14400	10	2.5 GHz	4.7 GHz	Raptor Lake Refresh	65 W
Intel Core i5-14500	14	2.6 GHz	5 GHz	Raptor Lake Refresh	65 W
Intel Core i5-14500T	14	1.7 GHz	4.8 GHz	Raptor Lake Refresh	35 W
Intel Core i7-12700	12	2.1 GHz	4.9 GHz	Alder Lake	65 W
Intel Core i7-13700	16	2.1 GHz	5.2 GHz	Raptor Lake	65 W
Intel Core i7-13700T	16	1.4 GHz	4.9 GHz	Raptor Lake	35 W
Intel Core i7-14700	20	2.1 GHz	5.4 GHz	Raptor Lake Refresh	65 W
Intel Core i9-12900	16	2.4 GHz	5.1 GHz	Alder Lake	65 W
Intel Core i9-13900	24	2 GHz	5.6 GHz	Raptor Lake	65 W
Intel Core i9-13900T	24	1.1 GHz	5.3 GHz	Raptor Lake	35 W
Intel Core i9-14900	24	2 GHz	5.8 GHz	Raptor Lake Refresh	65 W

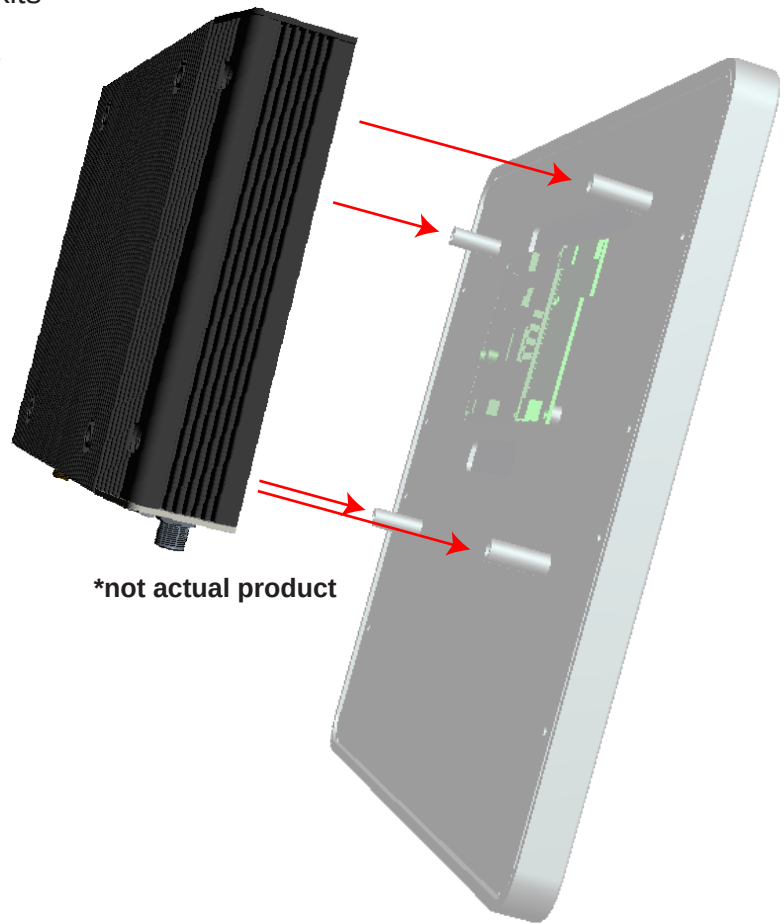
Front- & Back-kit concept:

Pre-assembled (together) or separately packaged available

Easily replace or switch back- or front-kits

Connected through various connectors

Assembly to be done by a professional



Update Notes:

Version:

v1

-

Changes:

First version

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