

IB996

**Intel® 14th/13th/12th Gen Core™ i9/i7/i5/i3
Full-Size CPU Card
with Intel®Q670E PCH**

User's Manual

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Compliance



In a domestic environment, this product may cause radio interference in which case users may be required to take adequate measures.



This product has been tested and found to comply with the limits for a Class A 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 manufacturer's instructions, may cause harmful interference to radio communications.

WEEE



This product must not be disposed of as normal household waste, in accordance with the EU directive of for waste electrical and electronic equipment (WEEE - 2012/19/EU). Instead, it should be disposed of by returning it to a municipal recycling collection point. Check local regulations for disposal of electronic products.

Green IBASE



This product complies with RoHS 2 restrictions, which prohibit the use of certain hazardous substances in electrical and electronic equipment. The following substances must not exceed the specified concentrations:

- Hexavalent chromium: 1,000 ppm
- Poly-brominated biphenyls (PBBs): 1,000 ppm
- Poly-brominated diphenyl ethers (PBDEs): 1,000 ppm
- Cadmium: 100 ppm
- Mercury: 1,000 ppm
- Lead: 1,000 ppm
- Bis(2-ethylhexyl) phthalate (DEHP): 1,000 ppm
- Butyl benzyl phthalate (BBP): 1,000 ppm
- Dibutyl phthalate (DBP): 1,000 ppm
- Diisobutyl phthalate (DIBP): 1,000 ppm

Important Safety Information

Carefully read the precautions before using the board.



WARNING

Attention during use:

- Do not use this product near water.
- Avoid spilling water or any other liquids on this product.
- Do not place heavy objects on the top of this product.

Anti-static precautions

- Wear an anti-static wrist strap to avoid electrostatic discharge.
- Place the PCB on an anti-static kit or mat.
- Handle the PCB by its edges.
- Touch the edges of non-metallic components rather than the PCB surface.
- Frequently ground yourself by touching a grounded metal object to discharge any static.



CAUTION

Risk of explosion if the internal lithium-ion battery is replaced with an incorrect type. Use only the same or an equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions or recycle them at an appropriate facility.

Warranty Policy

- **Industrial standard products:**

24-month (2-year) warranty from the date of shipment. If the date of shipment cannot be ascertained, the product serial numbers can be used to determine the approximate shipping date.

- **3rd-party parts:**

12-month (1-year) warranty from delivery for the 3rd-party parts that are not manufactured by IBASE, such as CPU, CPU cooler, memory, storage devices, power adapter, panel and touchscreen.

Note: Failures caused by or unauthorized repair will be considered out of warranty. Customers will be billed for repair and shipping charges in such cases.

Technical Support & Services

1. Visit our website to find the latest information about the product. at IBT.ca
2. If you need any further assistance from your distributor or sales representative, prepare the following information of your product and elaborate upon the problem.
 - Product model name
 - Product serial number
 - Detailed description of the problem
 - The error messages in text or in screenshots if there is any
 - The arrangement of the peripherals
 - Software in use (such as OS and application software, including the version numbers)
3. If repair service is required, please visit our website and fill support the support form to request an RMA number, authorizing you to send the product for repair.

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Chapter 1

General Information

The information provided in this chapter includes:

- Introduction
- Features
- Packing List
- Optional Accessories
- Specifications
- Block Diagram
- Board Pictures
- Board Dimensions

1.1 Introduction

The IB996 PICMG1.3 SHB Express CPU Card is powered by the latest **14th/13th/12th Gen Intel® Core™ i9/i7/i5/i3 processors**, supporting two DDR5 slots with a maximum capacity of **64GB memory**. It features an **integrated graphics core** compatible with LVDS, DVI-I, and DVI-D display outputs.

Designed to leverage Intel's latest advancements, the IB996 delivers a significant performance boost. Measuring **338mm x 126mm**, it includes support for **6Gbps SATA** (up to 7 ports), **USB 3.1** (8 ports), and interfaces for **two 2.5G LAN** connections, making it ideal for high-performance applications.



Photo of IB996

1.2 Features

- 14th/13th/12th Gen Intel® Core™ i9/i7/i5/i3 Desktop Processors
- 2x DDR5 DIMM, Max. 64GB
- 2x Intel® 2.5G LAN
- Intel® processor integrated Xe graphics, supports DVI-I & LVDS & DVI-D
- 8x USB 3.1, 5x SATA III, 4x COM
- 2x M.2 socket (M-Key/E-Key)

1.3 Packing List

Your IB996 package should include the items listed below. If any of the items is missing, please contact the distributor or dealer from whom you have purchased the product.

- IB996 PICMG1.3 SHB x 1
- SATA cable (SATA-3F)
- COM port cable (PK1-20B)

1.4 Optional Accessories

- Audio cable (AUDIO-18K)
- DVI-D cable (DVIK-3)
- USB3.0 cable (USB-3K)
- Printer port cable (PK3K)

1.5 Specifications

Product Name	IB996
Form Factor	PICMG 1.3 SHB Express Full- Size CPU card
CPU Socket	LGA1700
CPU	14th/13th/12th Gen Intel® Core® i9/i7/i5/i3 processors
PCH	Intel® Q670E PCH
Memory	2x DDR5-5600MHz DIMM, Max. 64GB, Non-ECC
BIOS	AMI
Watchdog Timer	256 levels
H/W Monitor	Yes
Storage Device	1x M.2 (supports NVMe)
Expansion Slots	<ul style="list-style-type: none">• 4x PCI, 4x PCI-E (x1) or 1x PCI-E (x4)• 1x PCI-E (x16) from backplane
Mini Type Slots	<ul style="list-style-type: none">• 1x M.2 (M-Key, type:2280, supports NVMe)• 1x M.2 (E-Key, type:2230, supports CNVi)
Graphics	Intel® DT processor integrated Xe graphics
Video Output	Supports DVI-I, LVDS, DVI-D
Ethernet	<ul style="list-style-type: none">• Intel® I226LM 2.5G LAN• Intel® I226V 2.5G LAN (as 2nd LAN)
I/O Chipset	Fintek F81964
Serial Port	1x RS232/422/485 (jumperless select), 3x RS232
USB 2.0	1x USB 2.0 via M.2 (E-Key)
USB 3.1	<ul style="list-style-type: none">• 6x USB 3.1 on board• 1x USB 3.1 on edge• 1x USB 3.1 Type-A on board (vertical type)
Serial ATA	5x SATA III
Audio	Intel® PCH built-in HD audio controller + Realtek ALC888S codec
TPM	TPM 2.0 (SPI)
Others	Printer Port, Digital I/O (4-in/4-out), RAID, iAMT (16.1)
Dimensions (LxW)	338mm x 126mm (13.3" x 4.96")
RoHS2	Yes
Certification	CE, FCC

