

# BPC-iMX8MP-05 Industrial Computer



## BPC-iMX8MP-05 Industrial Computer



### Overview:

BPC-iMX8MP-05 Industrial Computer is a compact and durable box PC that is powered by a DEBIX SOM A core board and a DEBIX SOM A I/O Board carrier board. It features a fanless design and a solid steel & aluminum enclosure, making it ideal for use in harsh industrial environments.

### Main Features:

- **Durable:** Solid steel and aluminum enclosure
- **Modular:** Utilizes DEBIX SOM A core board and DEBIX SOM A I/O Board carrier board for flexibility
- **Multiple boot options:** Support eMMC, Micro SD and SPI Nor Flash (reserved)
- **Software Compatibility:** Support Ubuntu, Yocto, Windows IoT, Debian, Android, OpenWRT and FreeRTOS operating systems
- **Powerful connectivity:** Include dual Gigabit network, 2.4GHz & 5GHz Wi-Fi5, Bluetooth 5.0 and one Mini PCIe for 4G module/LoRa module/network card
- **Rich and isolated I/O:** 4 x USB 3.0, 2 x USB 2.0 and isolated interface: 2 x RS485, 1 x RS232, 2 x CAN, 2 x DI, 1 x DO

## Specification:

<b>System</b>	
Motherboard	DEBIX SOM A (Core Board) + DEBIX SOM A I/O Board (Carrier Board)
Boot	(1) Support boot from eMMC on DEBIX SOM A (default) (2) Support boot from Micro SD on carrier board (3) Support boot from SPI Nor Flash on carrier board (reserved)
Memory	Onboard 2GB LPDDR4 (1GB/4GB/8GB optional)
Storage	Onboard 16GB eMMC (8GB/32GB/64GB/128GB/256GB optional)
OS	Win10 IoT Enterprise, Ubuntu 22.04, Yocto-L6.1.22_2.2.0, Debian 12 (also supports Android, OpenWRT and FreeRTOS.)
<b>Communication</b>	
Gigabit Ethernet	2 x Independent MAC Gigabit Ethernet ports with POE power supply (need POE power device module) (one supports TSN)
Wi-Fi & Bluetooth	2.4GHz & 5GHz Wi-Fi and Bluetooth 5.0, external Wi-Fi&BT SMA antenna connector
<b>Video &amp; Audio</b>	
Display	1 x HDMI output
Audio	1 x Headphone and mic combo port 1 x 4Pin L&R speaker
<b>External I/O</b>	
Antenna	2 x external SMA antenna connectors for Wi-Fi&BT (default) and 4G/LoRa (optional)
DC IN	1 x Power socket, support 5.5mm x 2.1mm plug
USB 3.0	4 x USB 3.0 Host
USB 2.0	2 x USB 2.0 Host
Serial Ports	(1) 1 x I2C (2) 2 x Isolated CAN (3) 2 x Isolated RS485 (4) 1 x Isolated RS232 (5) 1 x UART
GPIO	(1) 2 x Isolated DI, support dry contact and wet contact (2) 1 x Isolated DO, support wet contact, compatible with dry contact of external relay
LED & KEY	(1) 1 x System LED (2) 1 x Power LED (3) 1 x ON/OFF
<b>Internal I/O</b>	
SIM Slot	1 x Built-in Micro SIM slot, push pop-up slot
SD Slot	1 x Built-in Micro SD slot, push pop-up slot
Mini PCIe	(1) Support 4G module such as Quectel 4G module, built-in SIM card, etc. (2) Support LoRa module (3) Support other expansion such as network card, SATA and serial port
<b>Power Supply</b>	
Power Input	Support DC 12V-36V
<b>Mechanical &amp; Environmental</b>	
Enclosure Material	Steel and aluminum alloy
Dimension	192.70(W)mm x 41.60(H)mm x 124.00(D)mm ( $\pm 0.5\text{mm}$ )
Gross Weight	830g ( $\pm 0.5\text{g}$ )
Operating Temp.	-20°C to +70°C (-40°C to +85°C optional)

## Product Variant:

BPC-iMX8MP-05 (standard version) variant, see the table below for details.

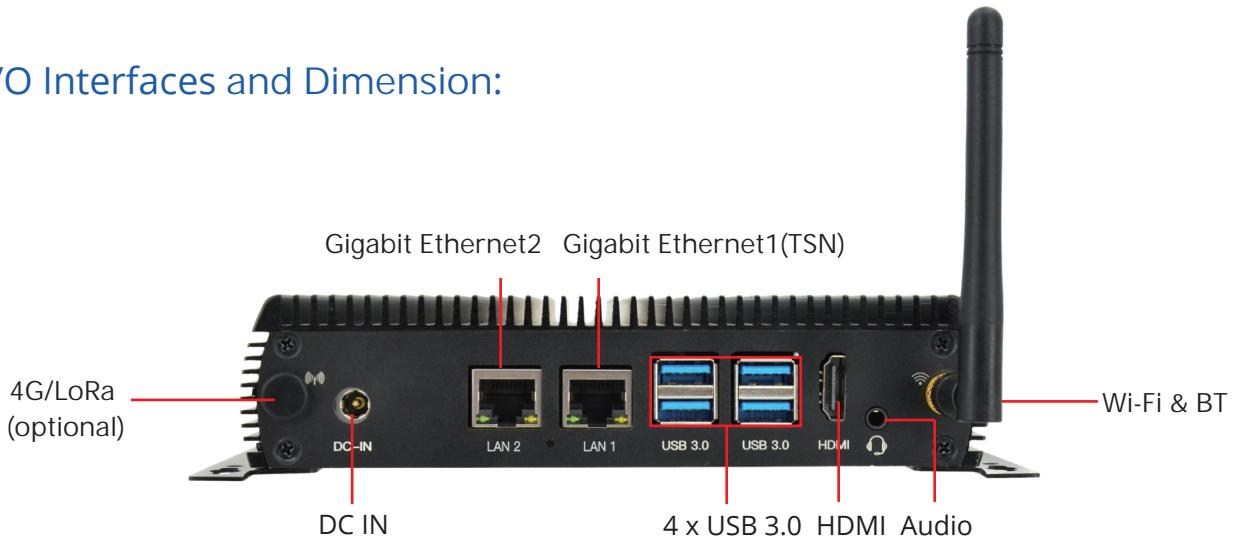
Variant Name	Differences from Base Product
BPC-iMX8MP-05A	1. SIM slot was revised to external I/O 2. Support 3 external SMA antenna connectors for GPS, 4G and 4G-DIV

## Product Compliance and Safety:

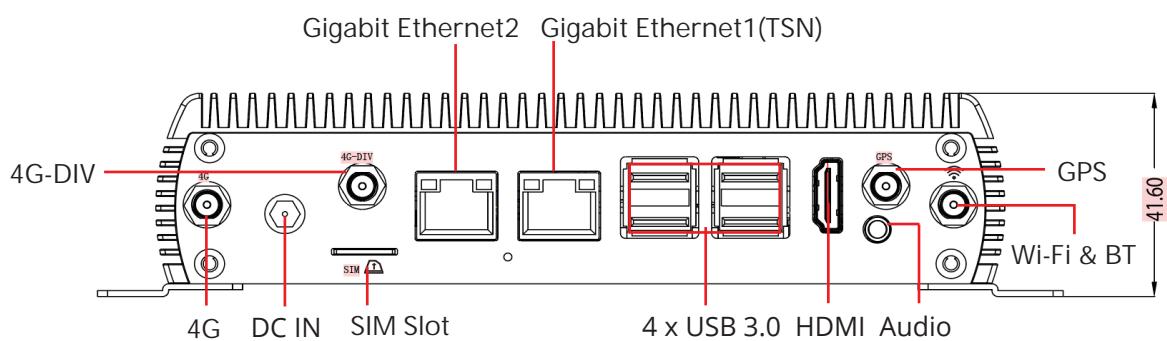
CE | FCC | UKCA | RoHS | RCM

For more information see the Certificates in the DEBIX Knowledge Center.

## I/O Interfaces and Dimension:

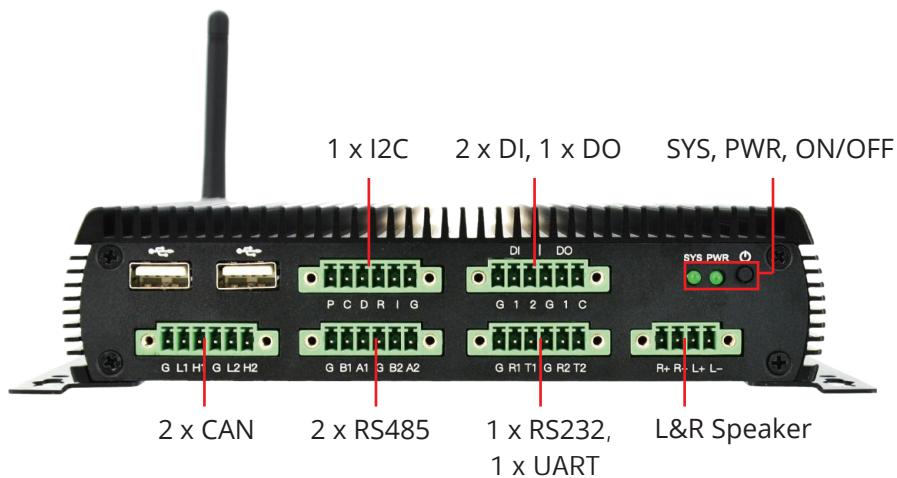


Back View of the BPC-iMX8MP-05 (standard version)

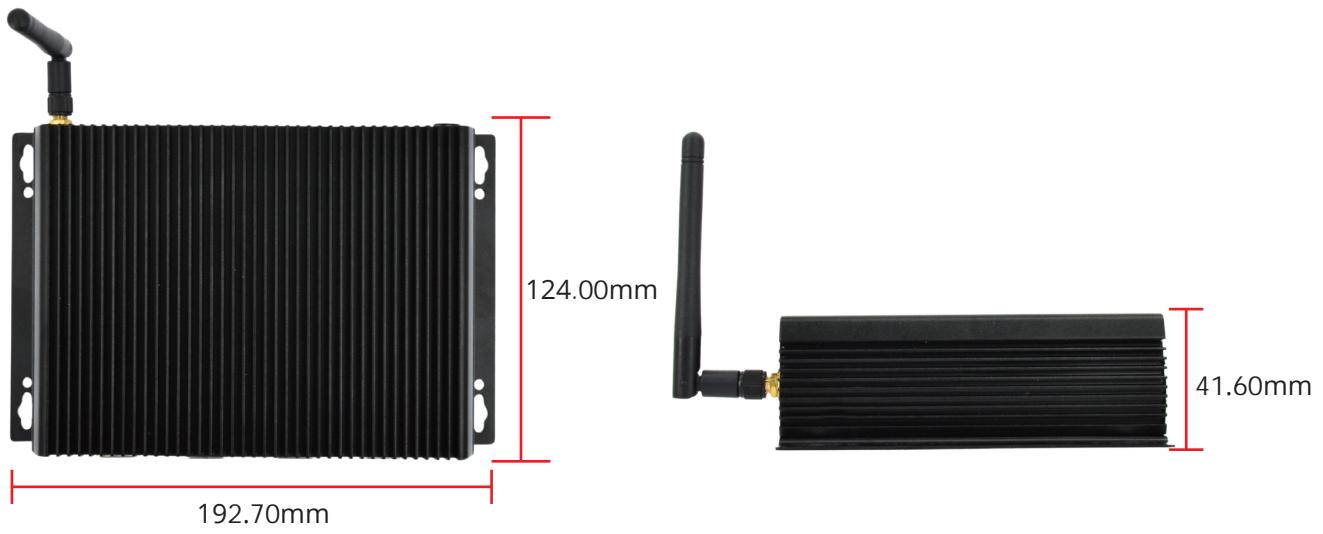


Back View of the BPC-iMX8MP-05A

## I/O Interfaces and Dimension: (Contd)



Front View



Top View

Side View

## Ordering Codes:

RAM LPDDR4	eMMC Storage	PN for BPC-iMX8MP-05-20°C~70°C	PN for BPC-iMX8MP-05-40°C~85°C
1GB DDR	8GB	BPC-iMX8MP-05-D1E8	BPC-iMX8MP-05-I-D1E8
	16GB	BPC-iMX8MP-05-D1E16	BPC-iMX8MP-05-I-D1E16
	32GB	BPC-iMX8MP-05-D1E32	BPC-iMX8MP-05-I-D1E32
	64GB	BPC-iMX8MP-05-D1E64	BPC-iMX8MP-05-I-D1E64
2GB DDR	8GB	BPC-iMX8MP-05-D2E8	BPC-iMX8MP-05-I-D2E8
	16GB	BPC-iMX8MP-05-D2E16	BPC-iMX8MP-05-I-D2E16
	32GB	BPC-iMX8MP-05-D2E32	BPC-iMX8MP-05-I-D2E32
	64GB	BPC-iMX8MP-05-D2E64	BPC-iMX8MP-05-I-D2E64
4GB DDR	8GB	BPC-iMX8MP-05-D4E8	BPC-iMX8MP-05-I-D4E8
	16GB	BPC-iMX8MP-05-D4E16	BPC-iMX8MP-05-I-D4E16
	32GB	BPC-iMX8MP-05-D4E32	BPC-iMX8MP-05-I-D4E32
	64GB	BPC-iMX8MP-05-D4E64	BPC-iMX8MP-05-I-D4E64
8GB DDR	8GB	BPC-iMX8MP-05-D8E8	
	16GB	BPC-iMX8MP-05-D8E16	
	32GB	BPC-iMX8MP-05-D8E32	
	64GB	BPC-iMX8MP-05-D8E64	

## Compatible with DEBIX's Accessories:

Product	Model
DEBIX Display Screens	DEBIX TD050H
	DEBIX TD070H
	DEBIX TD101H

## Safety Instruction:

***To avoid malfunction or damage to this product please observe the following:***

- Disconnect the device from the DC power supply before cleaning. Use a damp rag. Do not use liquid detergents or spray-on detergents.
- Keep the device away from moisture.
- During installation, put the device on a reliable table. It will be damaged if you drop it.
- Before connecting the power supply, ensure that the voltage is in the required range.
- The air vent in the bottom of the enclosure is used for heat dissipation. To prevent the device from overheating, don't cover the hole.
- Put the power cable in place to avoid stepping on it.
- If the device is not used for a long time, power it off to avoid damage caused by sudden overvoltage.
- Do not pour liquid into the hole of the enclosure, as this could cause fire or electrocution.
- For safety reasons, the device can only be disassembled by professional personnel.
- Do not place the device in a place where the ambient temperature is below -40°C or above 85°C. This will damage the machine. It needs to be kept in an environment at controlled temperature.

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## Contact Us:

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