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# ITX-i92QA

## Mini-ITX Industrial Motherboard

### Quick Installation Guide

Version 1.0

Form Factor
<b>Mini-ITX</b>

CPU
<b>10<sup>th</sup> Generation Intel® Core™/Xeon W® Processor</b>

Video
<b>HDMI</b>

I/O
<b>SATA/ USB 2.0/ USB3.0/ PCIe/ M.2 2280 M-key/</b>

LAN
<b>Intel i210AT GbE con- troller/ Intel i219LM PHY with iAMT</b>

### ◆ Technical Support

If you have any technical difficulties, please consult the user's manual or contact us at:  
<https://www.arbor-technology.com/>

### ◆ Declaration of Conformity

FCC Class A

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.

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CE  P/N: 4040092000100P

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## Packing List

Before you begin to install your single board, please make sure that the following materials have been shipped:



1 x ITX-i92QA Mini-ITX industrial motherboard



1 x Quick Installation Guide

If any of the above items is damaged or missing, contact your vendor immediately.

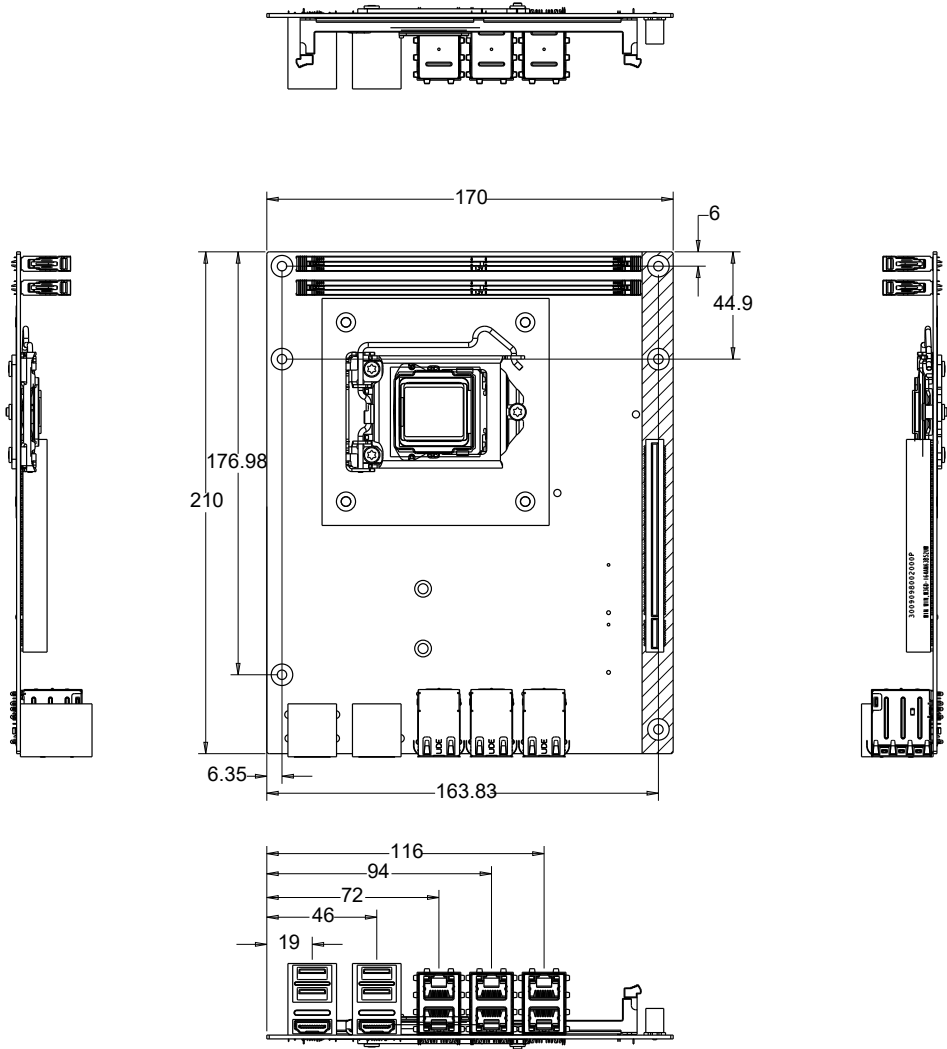
## Driver Installation

To install the drivers, please visit our website at [www.arbor-technology.com](http://www.arbor-technology.com) and download the driver pack from the product page. If you need login access, please contact your local ARBOR sales representative.

## Specifications

System	
<b>CPU</b>	Support Intel® 10 <sup>th</sup> Generation Xeon W / Core i3/ i5/ i7/ i9 processors in LGA1200 socket
<b>Chipset</b>	Intel PCH W480E
<b>Form Factor</b>	Wide Mini-ITX mother board
<b>Memory</b>	2 x DDR4 DIMM sockets; support ECC
<b>BIOS</b>	AMI BIOS
<b>Watchdog Timer</b>	1~255 levels reset
I/O	
<b>USB Port</b>	4 x USB 3.0/2.0 ports; 2 x USB 2.0 ports
<b>Serial Port</b>	3 x RS-232 ports; 2 x RS-232/422/485 ports
<b>Expansion</b>	1 x PCIe16 slot, support SCDB-3297; 1 x PCIe8 + 2x PCIe4 lanes Riser Card
<b>Storage</b>	4 x Serial ATA port with 600MB/s, (supports RAID 0,1,5,10) 2 x M.2 2280 M-key (Gen3x4, supports NVMe SSD)
<b>LAN</b>	5 x Intel i210AT GbE controllers, 1 x Intel i219LM PHY with iAMT
Display	
<b>Graphic Chipset</b>	Integrated Intel® UHD Graphics
<b>Graphic Interface</b>	2 x HDMI 2.0 port
OS Support	
Windows 10 64-bit Linux Ubuntu	
Mechanical & Environmental	
<b>Power Requirement</b>	Wide range DC input 9 ~ 36V, supports ATX 4-pin
<b>Power Consumption</b>	2.98A@12V (w/ i5-10500TE)
<b>Operating Temp.</b>	0 ~ 60°C (32 ~ 140°F)
<b>Operating Humidity</b>	10 ~ 95% @ 60°C (non-condensing)
<b>Dimensions (L x W)</b>	170 x 210 mm (6.7" x 8.3")

# Board Dimensions



Unit: mm

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## Jumpers/Connectors Quick Reference

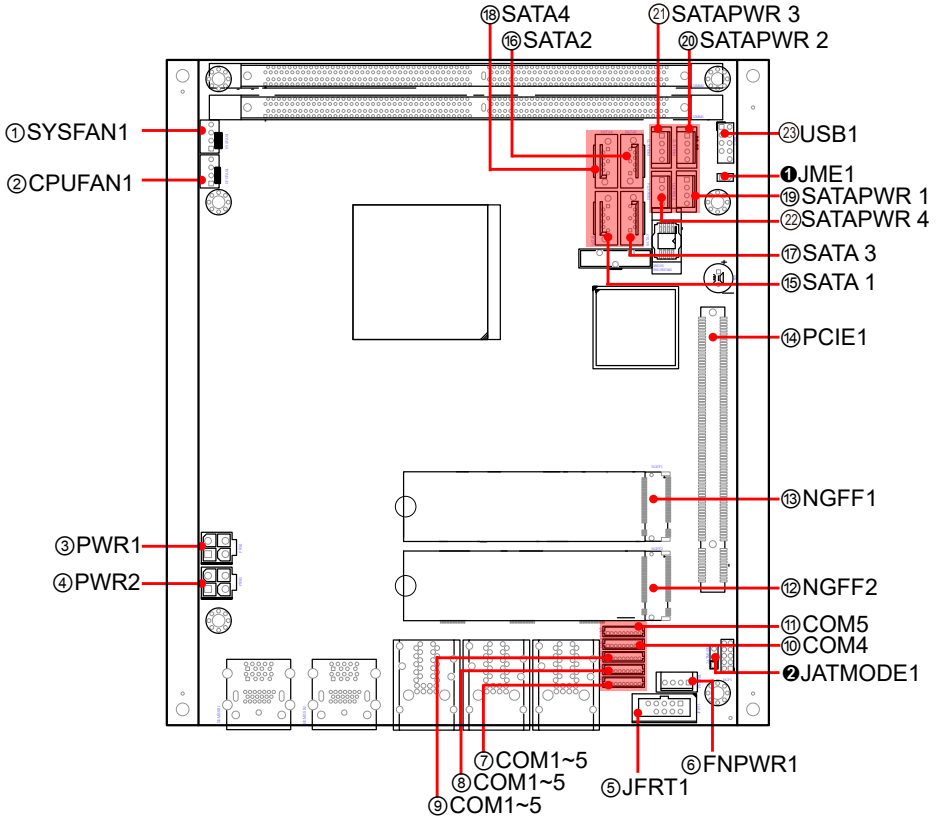
### Jumper

P/N	Name	Description
①JME	Clear CMOS Jumper	2-pin Block
②JATMODE1	AT/ATX Type Selection	2-pin Block

### Connector

P/N	Name
①SYSFAN	System Fan Connector
②CPUFAN	CPU Fan Connector
③PWR1	DCIN 9~36V Power input Connector
④PWR2	DCIN 9~36V Power input Connector
⑤JFRT1	Switches and Indicators
⑥FNPWR1	FRONT PANEL power connector
⑦~⑪COM1~5	RS232/RS422/RS485 Serial Port: COM1, 2 RS232 Serial Port: COM3-5
⑫NGFF2	M.2 M KEY PCI-E CONNECTOR 2
⑬NGFF1	M.2 M KEY PCI-E CONNECTOR 1
⑭PCIE1	PCI-E x16 SLOT
⑮⑯⑰⑱SATA 1/2/3/4	Serial ATA connector Channel 0~3
⑲⑳㉑㉒SATA- PWR 1~4	Serial ATA power connector 1~4
㉓USB1	USB2.0 HUB port 1-2


# Jumpers & Connectors Location



## Jumpers



### ① JME1

**Function:** Clear CMOS Selection`  
**Type:** 2.00mm pitch, 1x3-pin header  
**Setting:**

Pin	Description
1-2	Clear CMOS 

### ② JATMODE1

**Function:** AT/ATX Type Selection  
**Type:** onboard 3-pin 2.0 mm header  
**Setting:**

Pin	Description
1-2	*ATX 
2-3	AT 

**Note:** \*Default setting: Keep ATX mode for default setting.


## Connectors

### ① SYSFAN

**Function:** Smart FAN connector  
**Type:** WAFER,4\*1, 2.54mm, 1-WALL,HSG3/4

**Pin definition:**

Pin	Description
1	GND
2	+12V
3	FANIN
4	FANCTL




### ② CPUFAN

**Function:** Smart FAN connector  
**Type:** WAFER,4\*1,2.54mm, 1-WALL,HSG3/4

**Pin definition:**

Pin	Description
1	GND
2	+12V
3	FANIN
4	FANCTL




### ③ ④ PWR1/PWR2

**Function:** Power input  
**Type:** ATX-4P,CVILUX,CP-01304130

**Pin definition:**

Pin	Description
1	GND
2	GND
3	VIN: 9~36V
4	VIN: 9~36V



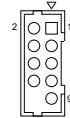
### ⑤ JFRT1

**Function:** Switches and Indicators

**Jumper Type:** 2x5-10P BOX HEADER

**Pin definition:**

Pin	Description	Pin	Description
1	HDD_LED+	2	SYSPWR_LED+
3	HDD_LED-	4	SYSPWR_LED-
5	GND	6	PWRBTN
7	RESET	8	GND
9	+5V		



### ⑥ FNPWR1

**Function:** FRONT PANEL power connector

**Jumper Type:** 2x5-10P BOX HEADER

**Pin definition:**

Pin	Description
1	5V
2	GND
3	GND
4	12V



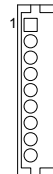
### ⑦ ⑧ COM1, COM2

**Function:** COM1 /COM2 (RS232\RS422\RS485)

**Jumper Type:** 1\*9P, WAFER-4WALL, ACES.86801-090L

**Pin definition:**

Pin	Description	Pin	Description
1	DCD	6	CTS
2	DSR	7	DTR
3	RXD	8	RI
4	RTS	9	GND
5	TXD		

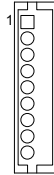




⑨ ⑩ ⑪ **COM3~COM5**

**Function:** COM3 /COM4 /COM5 (RS232C)  
**Jumper Type:** 1\*9P,WAFER-4WALL,ACES,86801-090L  
**Pin definition:**

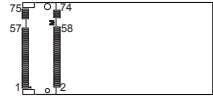
Pin	Description	Pin	Description
1	DCD	6	CTS
2	DSR	7	DTR
3	RXD	8	RI
4	RTS	9	GND
5	TXD		



⑫ ⑬ **NGFF1, NGFF2**

**Function:** M.2 M KEY PCI-E CONNECTOR  
**Jumper Type:** NGFF CARD,75P,BLACK,KEY M  
**Pin definition:**

The pin assignments conform to the industry standard.



⑭ **PCIE1**

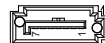
**Function:** PCI-E x16 SLOT  
**Jumper Type:** The pin assignments conform to the industry standard.  
**Pin definition:**



⑮ ⑯ ⑰ ⑱ **SATA 1/2/3/4**

**Function:** Serial ATA Connector  
**Jumper Type:** On-board Standard 7-pin Serial ATA Connector  
**Pin definition:**

The pin assignments conform to the industry standard.



### ①⑨ ②① ②② PWROUT1|2|3|4

**Function:** SATA Power

**Jumper Type:** 1\*4P,WAFER-1WALL,TECHBEST,AD04900041152

**Pin definition:**

Pin	Description	Pin	Description
1	+5V	3	GND
2	GND	4	+12V



### ②③ USB1

**Function:** USB 2.0 connector

**Jumper Type:** 2.00mm pitch 2x5(-9)pin wafer connector

**Pin definition:**

Pin	Description	Pin	Description
1	USB +5V	6	USB +5V
2	USB-	7	USB-
3	USB+	8	USB+
4	GND	9	GND
5	GND	10	GND

