

## JNAF791 Series

**ATX Embedded Motherboard, 8th Generation Intel® Xeon® E, Core™ i7/ i5 /i3, Pentium® Celeron LGA1151 Socket Processor, Max. 95W TDP**



### Overview

The JETWAY JNAF791 Series are ATX form factor board adopts the Intel® 8<sup>th</sup> generation Xeon® E, Core i7/i5/i3, Pentium and Celeron Processor. The board supports four U-DIMM DDR4 2666Mhz memory slot, up to 64GB (with ECC for C246). Featuring the integrated Intel® Gigabit Ethernet controller, the JNAF791 offers two 10/100/1000Base-TX Ethernet devices for network transmission. Five SATAIII (6Gb/s) interface and one M.2 (PCIex4 with SATA interface, M-key, 2242/2260/2280/22110) offer storage devices. One M.2 (E-key, 2230), four USB3.1 Gen.2 ports, four USB3.1 Gen.1 ports, four USB2.0 ports and ten COM ports provide versatile expansion. The JNAF791 provides two PCI slots, one PCIex1 slot, one PCIex4 slot, two PCIex16 slots (there are two configurations if plug one PCIe x16 card in one slot, the other slot is disable; or plug one PCIe x8 card in one slot, the other slot is able to plug one PCIe x8/x4/x1 card) can support different function expansion. The JNAF791 offers one HDMI1.4 port, one DP1.2 port, one VGA port and one DVI-D port which can support 3 independent displays. Because of the above features, JNAF791 is suitable for ATM machine, Industrial PCs, Factory Automation, Public Sector, Digital Security and Surveillance applications.

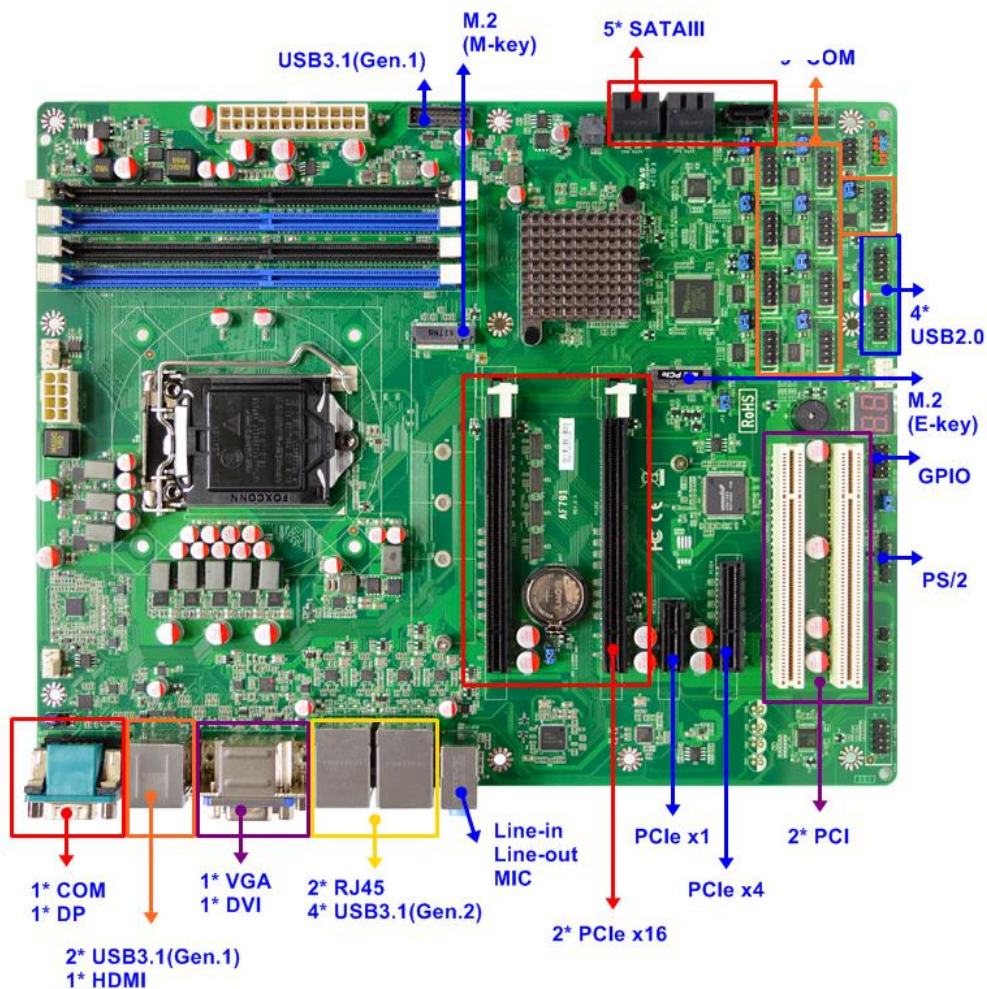
## Features

1. Intel® Coffee Lake Processor (TDP 95W).
2. 4 \* DDR4 2666MHz U-DIMM up to 64 GB (ECC for C246 only)
3. 2 \* 10/100/1000 Base-TX Ethernet Ports
4. 1 \* HDMI, 1 \* DP, 1 \* VGA, 1 \* DVI-D
5. 10 \* COM (COM1/2 support RS232/422/485), 4 \* USB3.1 Gen.2, 4 \* USB3.1 Gen.1 & 4 \* USB2.0
6. 2 \* PCIe x16 slots, 1 \* PCIe x4 slot, 1 \* PCIe x1 slot, 2 \* PCI slots, 1 \* M.2 (PCIex4 with SATA interface, M-key, 2242/2260/2280/22110), 1 \* M.2 (2230, E-key)
7. 5 \* SATA III (6Gb/s) support RAID 0, 1, 5, 10
8. Support TPM1.2/2.0 (on board option)

## Application

- ATM Machine
- Industrial PCs
- Factory Automation
- Public Sector
- Digital Security
- Surveillance

## Internal Diagram



## Specifications

Model	JNAF791-Q370	JNAF791-C246
<b>Form Factor</b>		
Dimensions	- ATX (305 * 244mm)	
<b>Processor System</b>		
CPU Generation	- Intel® LGA1151 Gen 8 Coffee Lake Processor (Max. TDP 95W)	
CPU SKU	- Core i7/i5/i3, Pentium, Celeron	- Xeon E, Core i7/i5/i3, Pentium, Celeron
Core Number	- (by CPU)	
Max Speed	- (by CPU)	
L2 Cache	- (by CPU)	
Chipset	- Q370	- C246
BIOS	- AMI Flash ROM	
<b>Expansion Slot</b>		
PCI	- 2	
PCIe	- 1 * PCIe x1, 1 * PCIe x4, 2 * PCIe x16. Support NVMe *Note: there are two configurations if plug one PCIe x16 card in one slot, the other slot is disable; or plug one PCIe x8 card in one slot, the other slot is able to plug one PCIe x8/x4/x1 card.	
M.2 (A/E-key)	- 1 (E-key, 2230)	
M.2 (B/M-key)	- 1 (PCIex4 with SATA interface, M-key, 2242/2260/2280/22110)	
CFast Card Socket	- 0	
CF Card Socket	- 0	
SIM Card slot	- 0	
<b>Memory</b>		
Technology	- DDR4 2666MHz Dual CH SDRAM non-ECC	- DDR4 2666MHz Dual CH SDRAM W/ECC
Max.	- 64GB	
Socket	- 4 * U-DIMM	
<b>Graphics</b>		
Controller	- Intel® HD Graphics	
VRAM	- Shared Memory	
VGA	- 1 (Max Resolution: 1920x1200@60Hz)	
LVDS	- 0	
eDP 1.3	- 0	
HDMI 1.4	- 1 (Max Resolution: 4096x2160@30Hz)	
DVI-D	- 1	

DisplayPort	- 1 (Max Resolution: 4096x2304@60Hz)	
MultiDisplay	- Triple Displays	
<b>Ethernet</b>		
Ethernet	- 10/100/1000 Mbps	
Controller	- 2 * Intel GbE (1 * i219LM, 1 * i211AT)	- 2 * Intel GbE (1 * i219LM, 1 * i210AT)
Connector	- 2 * RJ45	
<b>Audio</b>		
CODEC	- HD Audio: Realtek ALC662	
Channel	- 6 Channel	
<b>SATA</b>		
Max Data Transfer Rate	- 5 * SATAIII support RAID 0, 1, 5, 10	
<b>Rear I/O</b>		
VGA	- 1	
DVI-D	- 1	
HDMI	- 1	
DisplayPort	- 1	
Ethernet	- 2	
USB	- 4 * USB 3.1 (Gen. 2) & 2 * USB3.1 (Gen. 1)	
Audio	- 3 (Line-In, Line-Out, MIC)	
Serial	- 1 (COM1 support RS232/422/485)	
SIM card slot	- 0	
eSATA	- 0	
PS/2	- 0	
DC-input	- 0	
<b>Internal Connector</b>		
USB	- 2 * USB3.1 (Gen. 1), 4 * USB 2.0	
PS/2	- 1	
LVDS / inverter	- 0	
eDP	- 0	
VGA	- 0	
Serial	- 9 (COM2 support RS232/422/485)	
SATA	- 5 * SATAIII	
mPCIe	- 0	
M.2 (A/E-key)	- 1 (E-key, 2230)	
M.2 (B/M-key)	- 1 (PCIex4 with SATA interface, M-key, 2242/2260/2280/22110)	
GPIO	- 1 (8 bit)	

Chassis intrusion	- 1
Audio Header	- 1
SMBUS/ I2C	- 1
AT mode	- 1
TPM	- 1 (on board option)
Other	- 0
<b>Watchdog Timer</b>	
Output	- From Super I/O to drag RESETCON#
Interval	- 256 segments (10sec ~ 255min)
<b>Power Requirements</b>	
Input PWR	- ATX PWR (8+24 pin)
Power On	AT/ATX Supported - AT : Directly PWR on as Power input ready - ATX: Press Button to PWR on after Power input ready
<b>Certifications</b>	
Certifications	- CE, FCC, LVD, RoHS, REACH
<b>Environment</b>	
Temperature	- Operating: 0°C ~ 60°C
	- Storage: -20°C ~ 85°C
<b>Warranty</b>	
Warranty	- 2 Years Limited Warranty
<b>Packing</b>	
Packing	- Net Weight: - Gross Weight: - Color Box dimension:

\*Specifications subject to change without notice, not responsible for typographical errors. Does not include HDD or OS.

## Optional Accessories

Part Number	Description
	JNAF791 M/B
	JNAF791 I/O shield
G03-NAF791-F	IPC JNAF791 User's Manual
	CD Driver
G01-SATA3-BL-1F	SATAIII cable * 2
G01-COM9X3-30A-F	COM cable * 1

# Mechanical Drawings (Unit = mm)

