

JNAF791 Series

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



Overview

The JNAF791 Series ATX form factor board adopts the Intel 8th generation i7/i5/i3, Pentium and Celeron Processors. The board supports four U-DIMM DDR4 2666Mhz memory slot, up to 64GB RAM. Featurin 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 (PCIe x4 with SATA interface, M-key, 2242/2260/2280/22110) for storage devices. One M.2 (E-key, 2230), four USB3.1 Gen. 2 ports, four USB3.1 Gen.1 ports, four USB 2.0 ports and 10 COM ports provide versatile expansion. The JNAF791 provides two PCI slots, one PCIe x1 slot, one PCIe x4 slot, two PCIe x16 slots (function as x16/NA or x8/x8). The JNAF791 offers one HDMI 1.4 port, one DP 1.2 port, one VGA port and one DVI-D port which can support 3 independant displays. This board is rated function in temperatures from 0 to 60 degrees Celsius and is suitable for many applications in many environments. The JNAF791 is a long life board, with a 5 to 7 year production life.

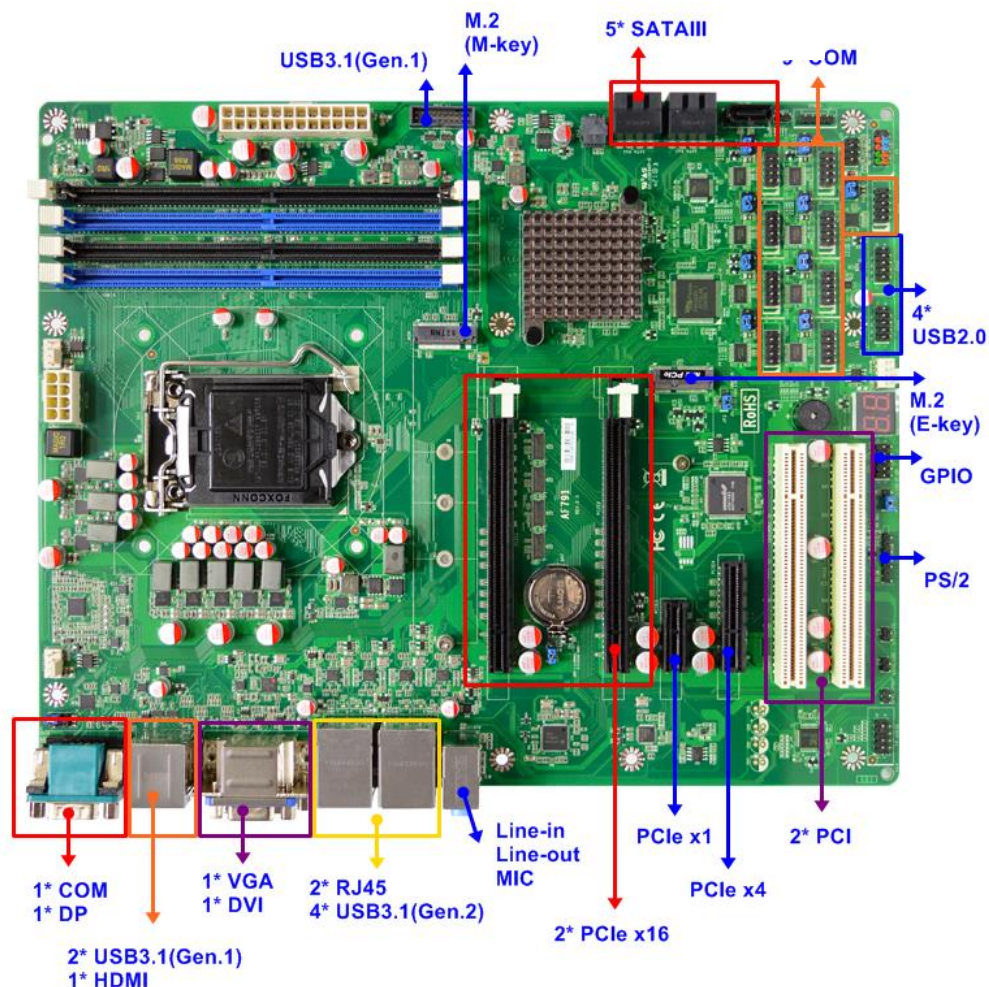
Features

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
Form Factor	
Dimensions	- ATX (305 * 244mm)
Processor System	
CPU Generation	- Intel® LGA1151 Gen 8 Coffee Lake Processor (Max. TDP 95W)
CPU SKU	- Core i7/i5/i3, Pentium, Celeron
Core Number	- (by CPU)
Max Speed	- (by CPU)
L2 Cache	- (by CPU)
Chipset	- Q370
BIOS	- AMI Flash ROM
Expansion Slot	
PCI	- 2
PCIe	- 1 * PCIe x1, 1 * PCIe x4, 2 * PCIe x16 *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
Memory	
Technology	- DDR4 2666MHz Dual CH SDRAM non-ECC
Max.	- 64GB
Socket	- 4 * U-DIMM
Graphics	
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	
Ethernet		
Ethernet	- 10/100/1000 Mbps	
Controller	- 2 * Intel GbE (1 * i219LM, 1 * i211AT)	- 2 * Intel GbE (1 * i219LM, 1 * i210AT)
Connector	- 2 * RJ45	
Audio		
CODEC	- HD Audio: Realtek ALC662	
Channel	- 6 Channel	
SATA		
Max Data Transfer Rate	- 5 * SATAIII support RAID 0, 1, 5, 10	
Rear I/O		
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	
Internal Connector		
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
Watchdog Timer	
Output	- From Super I/O to drag RESETCON#
Interval	- 256 segments (10sec ~ 255min)
Power Requirements	
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
Certifications	
Certifications	- CE, FCC, LVD, RoHS, REACH
Environment	
Temperature	- Operating: 0°C ~ 60°C
	- Storage: -20°C ~ 85°C
Warranty	
Warranty	- 2 Years Limited Warranty
Packing	
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)

