

INDUSTRIAL MOTHERBOARD

DATASHEET

Thin mini ITX, Intel® J6412 SoC onboard Processors, 2*SO-DIMM.
1*PCIe x1, HDMI, LVDS, Dual LAN, M.2 slot

Features

- Two SO-DIMM up to 32GB DDR4 3200 MHz.
- Supports 3 display configuration by multiple interface: HDMI/DP/LVDS/eDP(optional)
- 7-year longevity supply
- Wide Temperature Range: 0~60°C



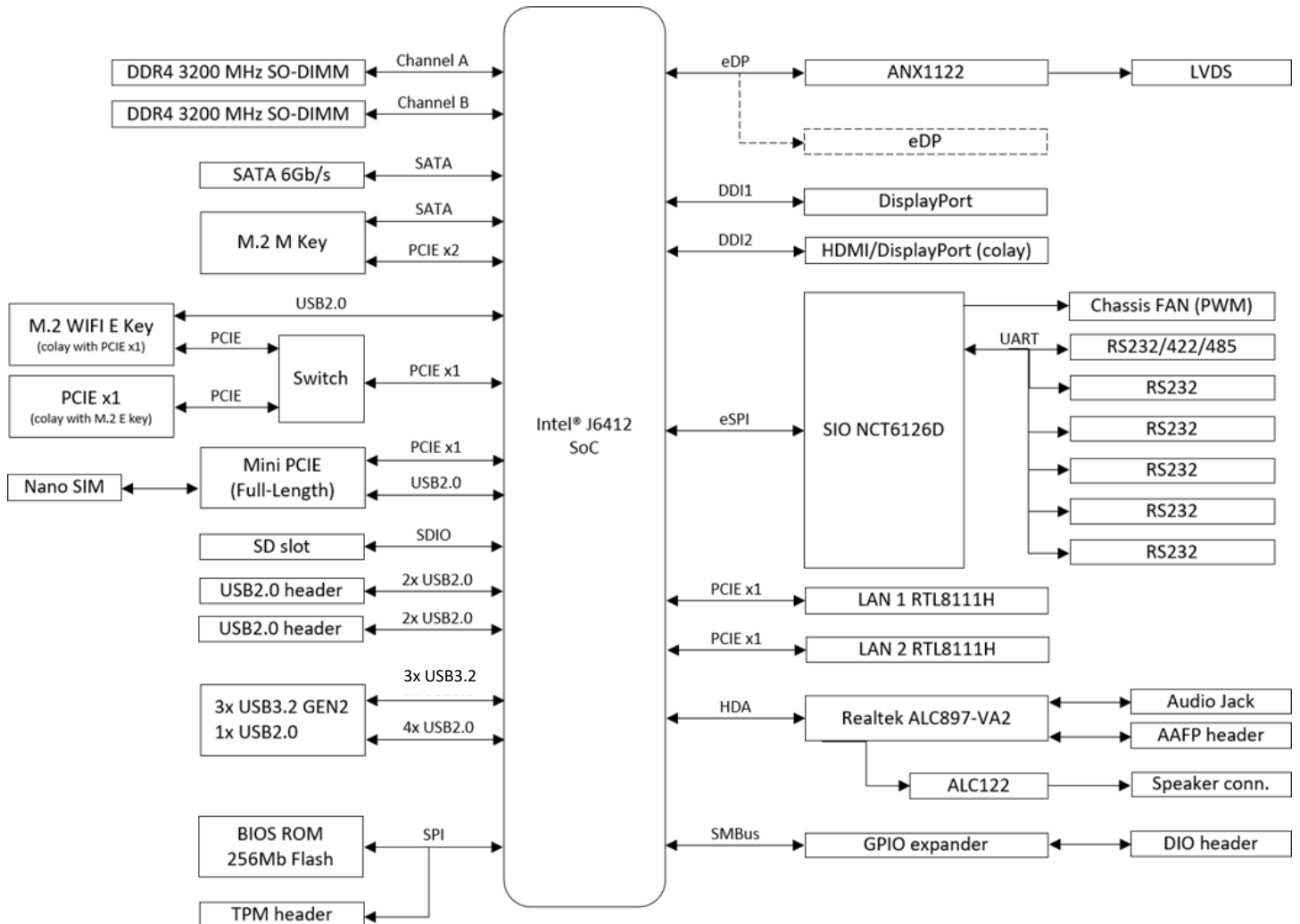
Specifications

Processor System	CPU	Intel® Celeron® Quad-Core J6412 SoC onboard Processors
	Technology	DDR4 3200/3000/2800/2666/2400/2133 MHz, (non-ECC)
Memory	Max.	32 GB
	Socket	2 x SO-DIMM
Display	HDMI	1, Supports HDMI 1.4b, up to 3840x2160 @ 30Hz (Default)
	DP++1	1, Supports DP++ 1.2, up to 4096x2160 @ 60Hz (Default)
	DP++2(optional by request)	1, Supports DP++ 1.2, up to 4096x2160 @ 60Hz (colay with HDMI)
	LVDS	1, Supports up to 1920x1200 @ 60Hz (Default)
	eDP(optional by request)	1, Supports up to 4096x2160 @ 60Hz (colay with LVDS)
	Triple Displays	HDMI+ DP+ LVDS, HDMI(Default)+ DP+ eDP, DP+ DP+ LVDS, DP+ DP+ eDP
Expansion Slot	PCIe 3.0/2.0 x1	1
	Mini PCIe	1 x Full/Half-size PCIe mini card slot(w/ SIM holder) (PCIE x1 mode)
	M.2	1 x E key, type 2230 for WIFI/BT device (PCIE x1 /USB2.0) 1 x M key, type 2242/2260/2280 (PCIE x2 / SATA mode) supports NVMe
	SD card	1 x Full-size SD card slot
Ethernet	Speed	10/100/1000 Mbps
	Controller	2 x Realtek RTL8111H (Support WOL/PXE)
	Connector	2 x RJ-45
Audio	Codec	Realtek ALC897
	Connector	Line-Out, Line-In
Storage	SATA port	1 x SATA Gen 3.0, Up to 6Gb/s
Rear I/O	HDMI	1, Supports HDMI 1.4b, up to 3840x2160 @ 30Hz (Default)
	DP++	1, Supports DP++ 1.2, up to 4096x2160 @ 60Hz (Default)
	USB	3*USB 3.2 Gen2 + 1*USB 2.0
	Ethernet	2
	Audio jack	1
	DC-12V Power Input	1
Internal I/O Connectors	Serial Port	6 <ul style="list-style-type: none">• COM1 supports RS232/422/485: Ring/5V/12V Select, switch by jumper• COM2 supports RS232: Ring/5V/12V select, switch by jumper• COM3~6 supports RS232
	USB Header	2 (support additional 4 x USB2.0 ports)
	Chassis Fan	1 (PWM)
	Front Panel Audio Header (AAFP)	1
	Front panel as Power/Reset/HDD (F_Panel)	1 (10-1 pin)
	Chassis Intrusion	1
	Speaker	1 (4 pin)
	Stereo Out	2 (2-pin, 3 watt/channel amplifier)
	Clear CMOS	1
	COM Debug Header	1 (6 pin)
	GPIO	1 (8 bit)
	LVDS Signal Header	1 (support dual channel stand type, 40 pin)
	LCD Panel Monitor Switch Header	1 (2 pin)
	LVDS Panel VCC Power Selection Jumper	1 (6 pin)
	LVDS Panel Backlight Enable Signal Selection	1 (3 pin)
	LVDS Backlight Panel Header	1 (5 pin)
PS/2	1 (2 x 4 pin)	
Power in Connector	1 (4-pin ATX power connector, DC in mode)	

Specifications

Watchdog Timer	H/W	Yes
Security	TPM	1 x SPI TPM header
Power	Power Type	12V DC-in (1x external DC jack; 1 x internal 4-pin power connector)
OS & Software Support	Microsoft Windows	Windows® 10 (64-bit) / Windows® IoT enterprise
	Linux	Ubuntu, RedHat Enterprise, Fedora Workstation, OpenSUSE
	ASUS IoT Suite	<input checked="" type="checkbox"/> HW Monitor <input checked="" type="checkbox"/> Power Scheduling <input checked="" type="checkbox"/> Fan Control <input checked="" type="checkbox"/> Watch Dog Timer <input checked="" type="checkbox"/> GPIO
	User Interface	<input checked="" type="checkbox"/> API <input checked="" type="checkbox"/> GUI
Environment	Operating Temperature	0 ~ 60°C
	Non-Operating Temperature	-40 ~ 85° C
	Relative Humidity	Operational humidity: 40°C@10%~95%
Mechanical	Dimensions	Thin Mini-ITX, 170 x 170 mm
Certification	EMC	CE, FCC, VCCI, BSMI, RCM
	Safety	CE-LVD

Block Diagram



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Order Information

Model name	Part number	Description
WADE J6412T	90ME04B0*	BGA1493,J6412,USB3.2 G2,HDMI,LVDS,MB

* The part number might vary for different regulations and package. Please consult the TPM in your region for exact 90PN.

Packing List

Part number	Description	Quantity
13020*	IO shield	2
14013*	SATA 6G CABLE	1
14013*	SATA power CABLE	1

* The part number might vary due to part number revision.