DMB-AQ670

DARVEEN

Intel® 12/13th Generation Core™ i3/i5/i7/i9 CPU, Q670 Chipset, 2× PCIeX16, 4× PCIeX4, 1× PCI 6× COM, 13× USB, 2× LAN

Features

- Supports Intel 12th Gen Core™ i3/i5/i7/i9 CPU
- Adopting Intel® Q670 Chipaet
- 2× Intel GbE LAN, 8× USB 3.0, 5× USB 2.0, 6× COM
- 1× VGA, 1× HDMI, 1× DVI, 1× eDP
- 2× PCIe x16, 4× PCIe x4, 1× PCI
- Supports vPro, AMT, RAID, TPM 2.0, Case Open

Specifications

Model	DMB-AQ670	DMB-AQ670S
CPU	Support Intel® 12/13th Generation Core™ / Pentium/ Celeron Desktop CPU, LGA1700 Support MAX CPU TDP:8+8Core 125W	
Chipset[1]	Intel® Alder Lake PCH-S, Q670, TDP 6W	
Display [2]	1× DVI-D (DVI-I): Support DVI-D, max resolution up to 1920× 1200@60Hz 1× HDMI 1.4b (TYPE-A): up to 4096× 2160@30Hz 1× VGA(DB15/F): max resolution up to 1920x1200@60Hz 1× eDP (Header): max resolution up to 4096x2304@60Hz	
Memory [3]	Support DDR4-3200MHz, 4× Non-ECC U-DIMM Slot, Up to 128GB	
Storage	Supports RST RAID 0,1,5,10, 4× SATA3.0 7P Upright Connector 1× M.2 Key-M Slot (PCIe× 4 GEN4 NVMe/SATA SSD Auto Detect, 2242/2280)	
Ethernet [4]	RJ45_USB1 (RJ45): 1× Intel I219-V GBE LAN Chip (10/100/1000 Mbps) RJ45_USB2 (RJ45): 1× Intel I225-V 2.5G LAN Chip (10/100/1000/2500Mbps)	
Audio	Realtek Audio HDA Codec, 1× Front Audio Header (Line-Out + MIC) 1× SPDIF Out Header 1× Line-out + Line-in + MIC 3.5mm Jack	
Expansion Slots	1× PCI-E16x Slot (PCIe 8X, GEN4) [5] 1× PCI-E16x Slot (PCIe 8X, GEN4)[5]	1× PCI-E 16x Slot.(PCIe 16X, GEN4, PCIE_16X_SLOT1)[5] 1× PCI-E16x Slot(PCIe 16X, GEN4, PCIE_16X_SLOT1 without sianal)[5]
	3× PCI-E 4x Slot (PCIe 4X,GEN4) 1× PCI-E 4x Slot(PCIe 4x, GEN3, [6] 1× PCI Slot 1× M.2 Key-E Slot(PCIE+USB2.0+ CNVi, support WIFI +Bluetooth Module, 2230) 1× PCI CLK 66MHz Enable/Disable Select Jumper	
COM	1× RS232 (COM1, DB9/M) 3× RS232 (cOM2/5/6, BOX Header) 1× RS232/RS422/RS485 (COM3, Box Header)[8] 1× RS232/RS485(COM4, BOX Header) [8]	
USB	6× USB3.0 (TYPE-A, Rear IO) 2× USB3.0 (Header, Internal) 1× USB2.0 (vertical TYEP-A, Internal) 4× USB2.0 (Header, Internal)	

Specifications

Other Ports	8× GPIO 1× PS/2 Connector (Keyboard & Mouse) 1× Front Panel Header (HDD LED+PWR LED+PWR ON+RESET) 1× ESPI Header (Debug Only) 1× SMBUS Header 2× System FAN Header 1× CPU FAN Header 1× Case Open Header 1× CMoS Clear Jumper 1× AT or ATX Select Jumper 1× ME Flash Header 1× Power Monitor wafer
TPM	SLB 9670VQ2.0,TPM2.0(Not onboard by default), Support Intel PTT Default
System	Windows 10 IoT Enterprise 2021 LTSC, Windows 10(21H2), windows 11 (21H2) or later, Linux Kernel 5.17 or later
Temperature	Storage: -20~75°C Operating: 0~60°C
BIOS	AMI UEFI BIOS (Support Watchdog Timer)
Power Supply	ATX Standard (24P+8P+4P) 1× ATX 4P CPU Power Input Connector 1× ATX 8P CPU Power Input Connector 1× ATX 24P Power Input Connector
Factor	ATX Standard (305mm× 244mm)

Notes:

[1]: Chipset can be customized into Intel® Q670E/R680E.

[2]: Intel® Q670 supports four independent displays.

[3]: The maximum memory frequency depends on CPU. Intel® W680E supports ECC.

[4]: RJ45_USB1(RJ45)1219-V does not support Intel AMT 12.0 and Intel vPro competent by default.

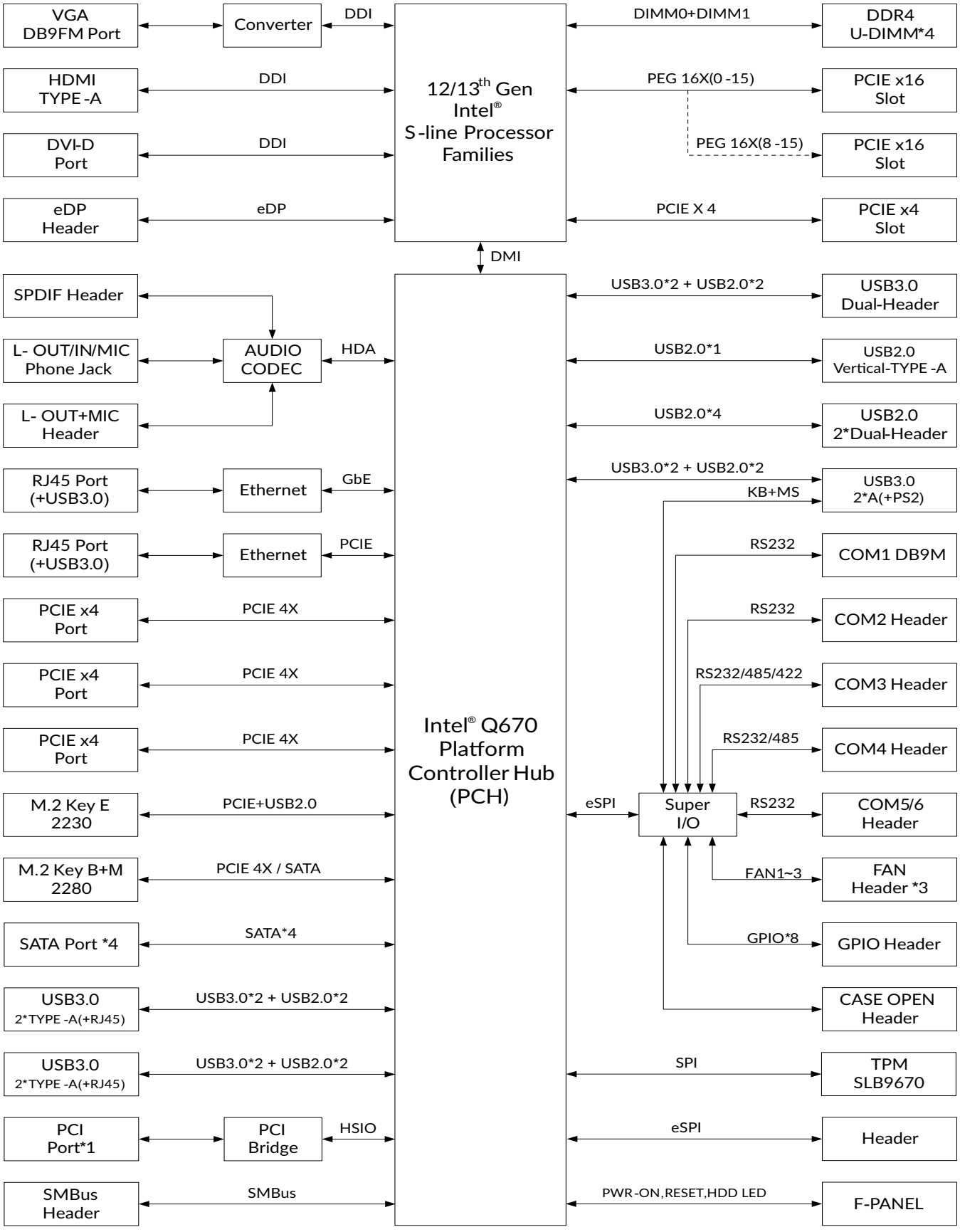
[5]: 2× PCIE 16X Slot can support 2× PCIE 8x(default) or 1× PCIE 16X.(BOM selectable)

[6]: PCIE_4X_SLOT2 support the PCIE 4X GEN3 signal.

[7]: Intel® Kiosk Peripheral Management Utility (Intel® KPM Uility) function selection support, not on board by default.

[8]: COM3 and COM4 are RS232 by default. COM3 can be RS485 orRS422 selecting by jumper and setting BIOS to RTS mode.cOM4 can be RS485 selecting by jumper and setting BIOS to RTS mode.

Functional Block Diagram



Packing list

COM data cable (single port) DB9 (with iron plate) to 10P 2.54MM spacing pin (plug the 10th hole), with a total length of 40cm cross connection	5pcs/set	COM data cable	
SATA data cable 7P-7P 180 ° -180 ° with shrapnel at both ends, with a total length of 50cm yellow wire	1pcs/set	SATA data cable	
IO blocking SVIO-312 with three layers and 2.5mm aluminum foil foam for selection (2✕ RJ45)	1pcs/set	IQ blank	

Ordering information

Product Model	Parameter
DMB-AQ670	Intel® 12/13th Generation CoreTM i3/i5/i7/i9 CPU, Q670 Chipset, 2× PCIeX16, 4× PCIeX4, 1× PCI 6× COM, 13× USB, 2× LAN