

C7156ES-IM-AA

3.5" SBC, Intel® Core™ Ultra Processor, DDR5 SO-DIMM, HDMI, DP, USB-C, LVDS, Dual-LAN, Multiple COM, 9-36V DC-in put

Features

- Four display configurations by multiple interface: HDMI 2.1, DP 1.4, USB-C, LVDS/eDP
- Equipped with three M.2 slots for LTE/5G/WiFi 6E/BT 5.2 connectivity
- Wide range of power inputs (9~36V) and operating temperatures (-20°~60°)



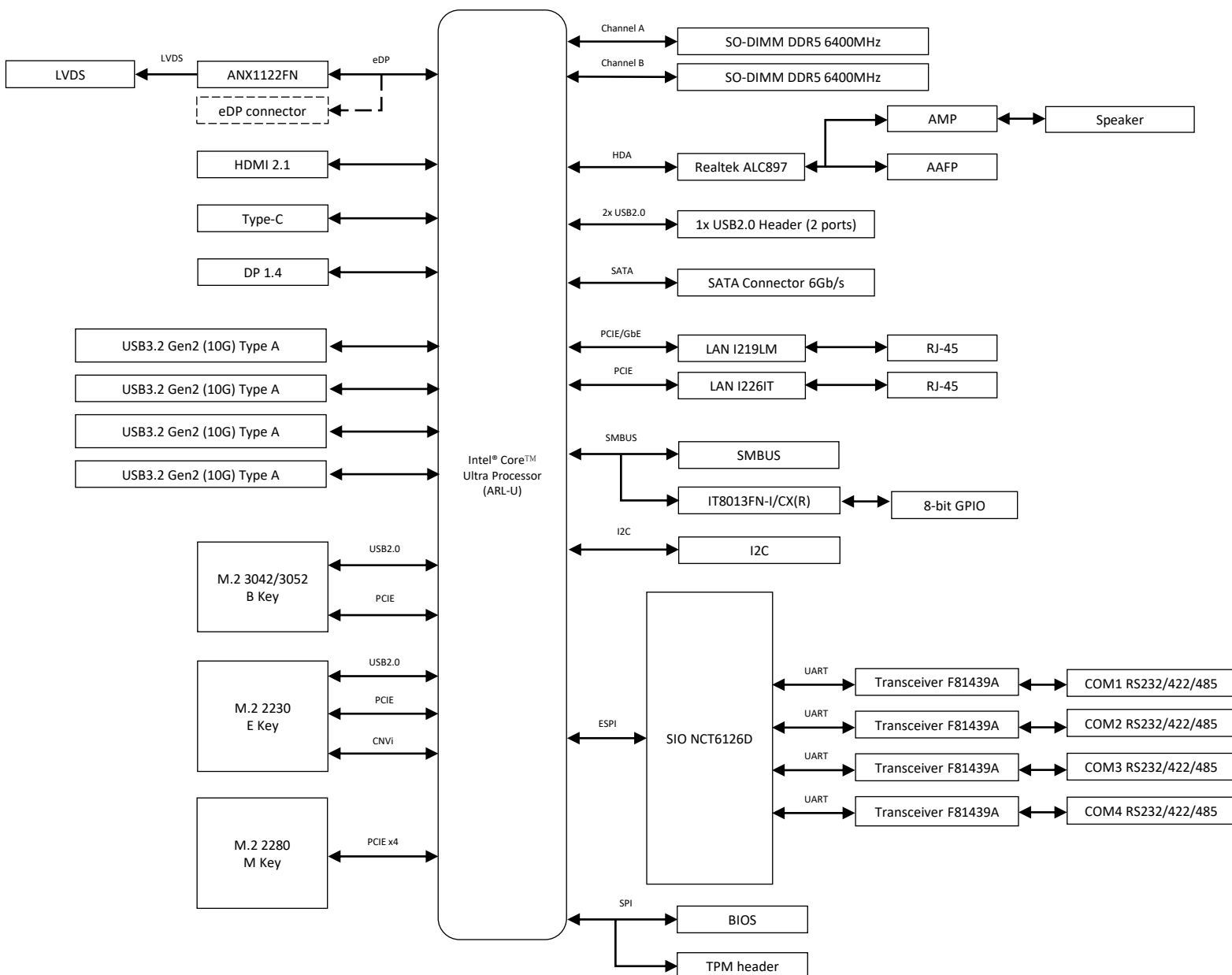
Specifications

Processor System	CPU	Intel® Core™ Ultra 7 processor 265U, vPro supported
	TDP	15W
	# of Cores	12
	Base Freq.	2.1 GHz
	Max Turbo Freq.	5.3 GHz
Memory	Technology	DDR5 6400 MHz
	Max.	64GB
	Socket	2 x SO-DIMM
Display	Controller	Intel® Xe LPG Graphics
	HDMI	1, Supports HDMI 2.1 up to 4096 x 2160 @ 60 Hz
	Display Port	1, Supports DP 1.4 up to 5120 x 3200 @ 60 Hz
	USB-C	1, Supports USB3.2 Gen2 (DP 1.4 Alt. Mode)
	LVDS	1, Supports 1920 x 1080 @ 60 Hz (co-lay with eDP)
	Embedded Display Port	1, Supports eDP 1.4b (co-lay with LVDS, reserved and support by request)
	Multi Display	4 Display Configuration: HDMI + DP + USB-C + LVDS/eDP
Expansion Slot	M.2 B key	1 x M.2 3042/3052 B key socket (USB 2.0/ PCIe x1) supports LTE/5G module
	M.2 E key	1 x M.2 2230 E key socket (USB 2.0/ PCIe x1/ CNVi) supports WiFi/BT module
	M.2 M key	1 x M.2 2280 M key socket (PCIe x4) supports M.2 SSD
	SIM	1 x Nano-SIM slot (on-board)
	Speed	10/100/1000Mbps/2.5G
Ethernet	Controller	1 x Intel® i219LM (1 GbE) 1 x Intel® I226IT (2.5 GbE)
	Connector	2 x RJ-45
	Codec	Realtek ALC897 High Definition Audio
Storage	SATA port	1 x SATA Gen 3.0, up to 6Gb/s
Rear I/O	HDMI	1
	Display Port	1
	USB-C	1
	USB 3.2 Gen2	4 (10G)
	LED (Back)	Power status, HDD R/W
	Ethernet	2
Internal Connectors & Jumpers	Serial Port	2 x Serial connectors support 4 x RS-232/422/485 ports
	USB2.0	1 x Header support additional 2 x USB2.0 ports
	Chassis Fan Connector	1 (4-pin)
	Chassis Intrusion Header	1 (2-pin)
	Front Panel Audio Header (AAFP)	1
	Internal Stereo Speaker Connector	1 (4-pin) with AMP IC
	System Panel Header	1
	SATA Power Header	1 (4-pin)
	GPIO Header	1 (8-bit)
	SMBus Header	1 (4-pin)
	I ² C Header	1 (3-pin)
	Power Connector	1 x WAFER Header (4-pin)
	COM Debug Header	1 (3-pin)
	AT/ATX Select Jumper	1 (2-pin)
	LVDS Panel Power selection Jumper	1 (3-pin)
COM RS232 Ring/5V/12V Selection Jumper	2 (6-pin)	

Specifications

Watchdog Timer	BIOS	YES
Security	TPM	1 x SPI TPM header
Power	Power Type	DC power input
	Voltage	9V-36V
Operating System	Microsoft Windows	Windows 11 IoT Enterprise, Windows 10 IoT Enterprise
	Linux	Ubuntu
Environment	Operating Temperature	-20~60° C
	Non-Operating Temperature	-40~85° C
	Relative Humidity	10 to 95% (non condensing)
Dimension	Form Factor	3.5", 146 x 105 mm
Certification	EMC, Safety	CE, FCC, BSMI, VCCI, ISED, EN62368

Block Diagram



Order Information

Model name	Part number	Description
C7156ES-IM-AA	90ME0AC	BGA2049, ULTRA 7, 165U, HDMI, DP, USB C, MB
SATA Cable	14013-00260000	SATA 22P TO SATA 7P+4P 15+12CM

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

Optional Items

Model name	Part number	Description
POWER Cable (Phoenix)	14017-01480100	POWER CABLE TB 5.08 2P TO 3.96 4P 125MM