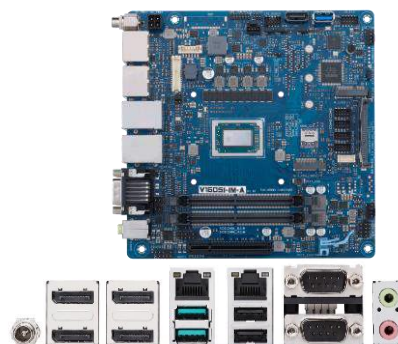


V1605I-IM-A & R1505I-IM-A

Mini-ITX, AMD Ryzen™ Embedded R-Series V1605/R1505 APU, 2 x SO-DIMM

Features

- Up to four 4K displays
- Up to 7-year longevity supply
- Wide temperature range endurance: 0~60°C



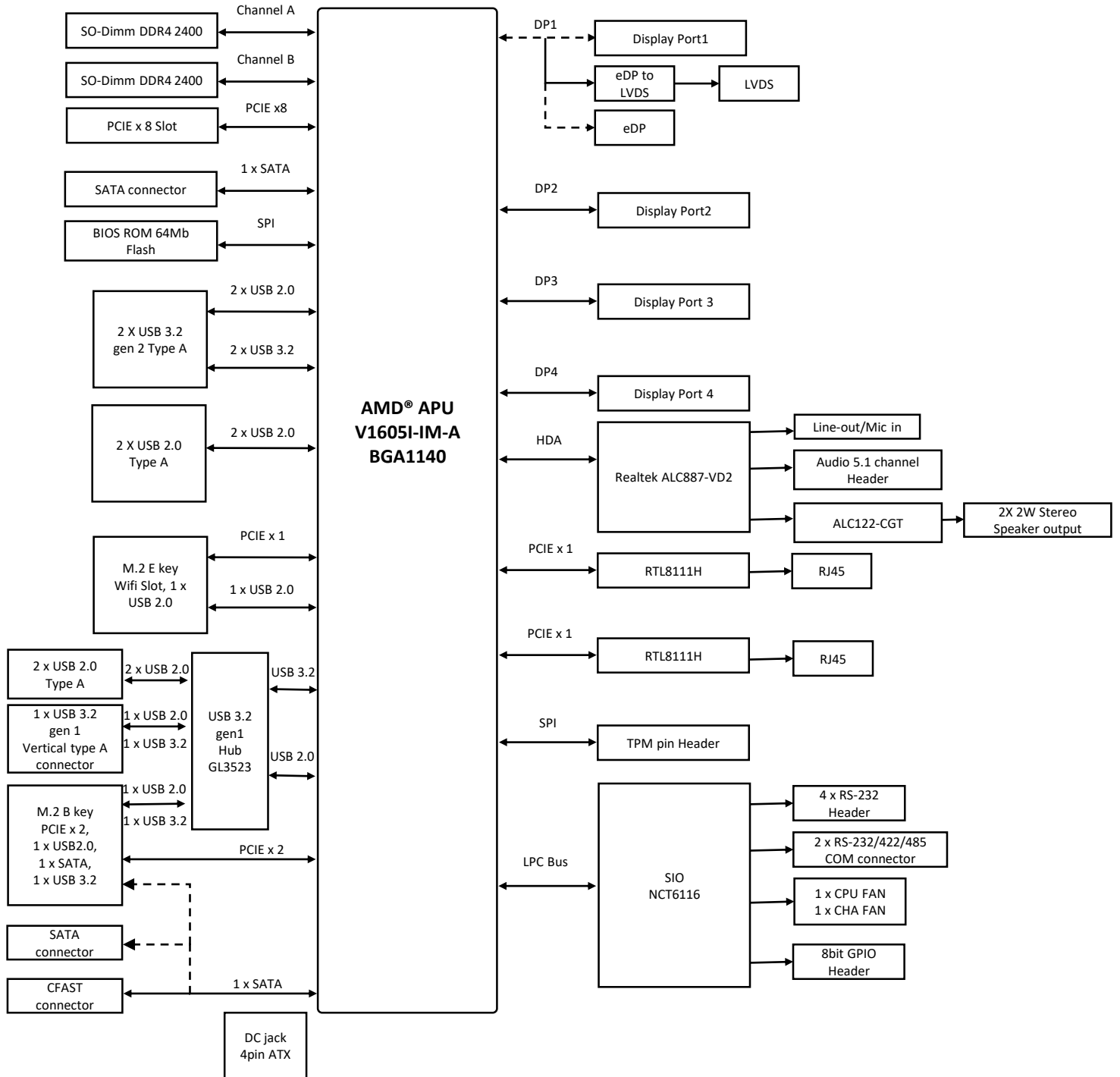
Specifications

Processor System	APU	AMD Ryzen™ Embedded V1605B/R1505G APUs
Memory	Technology	DDR4 2400MHz, ECC support
	Max.	32GB
	Socket	2 x SO-DIMM
Display	Display Port	3/2, DP++ supports DisplayPort 1.4 with max. resolution 3840x2160 @60Hz (V1605I-IM-A/R1505I-IM-A) 1, DP++ DisplayPort 1.4 with max. resolution 3840x2160 @60Hz (Optional, shared with LVDS and eDP)
	LVDS (default option)	1, LVDS supports LVDS with max. resolution 1920 x1200 @60Hz (Optional, shared with DisplayPort1 and eDP)
	eDP (optional)	1, eDP supports eDP 1.4 with max. resolution 3840 x 2160 @ 60Hz (Optional, shared with DisplayPort1 and LVDS)
	Multi Display	4DP/ 3DP+eDP/ 3DP+LVDS (V1605I-IM-A) , 3DP/ 2DP+eDP/ 2DP+LVDS (R1505I-IM-A) Multi-VGA output support: DP/ eDP/ LVDS ports Supports up to 4/3 displays simultaneous under OS (V1605I-IM-A/R1505I-IM-A)
Expansion Slot	PCIe	1 x PCIe 3.0 x8 slot (PCIe x8 mode for V1605I-IM-A/ PCIe x4 mode for R1505I-IM-A)
	M.2	1 x M.2 (key B 2242/2260/2280) PCIe x2(NVME)/ SATA/ USB mode for storage / 3G / LTE cat6 (USB3.2 Gen1) (V1605I-IM-A) or 3G / LTE cat4 (USB2.0) (R1505I-IM-A) mechanical support for module sizes: - 3042 (width up to 30 mm) - 2260 (width up to 22 mm) - 2280 (width up to 22 mm) 1x M.2 E key for PCIe/USB2.0 support (V1605I-IM-A only) - 2230 (width up to 22 mm)
Ethernet	Speed	10/100/1000Mbps
	Controller	2 x Realtek® 8111H, supports WOL/PXE
	Connector	2 x RJ-45
Audio	Codec	Realtek® ALC887 codec
	Connector	2 x Audio jacks (1 x Mic-in, 1 x Line-out) 2 x 2W Stereo Speaker output 1 x 5.1 channel (internal pin header)
Storage		<u>Option 1 (Default):</u> 1 x SATA port Gen 3.0, up to 6Gb/s 1 x M.2 (Key B, 2242 / 2260 / 2280) PCIe x2 and SATA mode* 1 x CFAST* *If CFAST is enabled, M.2 SATA mode will be disabled, and vice versa. You may configure this setting in the BIOS.
		<u>Option2 (per request)</u> 2 x SATA port Gen 3.0, up to 6Gb/s 1 x M.2 (Key B, 2242 / 2260 / 2280) PCIe x2
Rear I/O	Display Port	<u>Default:</u> 3 x DP + 1 x LVDS (V1605I-IM-A), 2 x DP + 1 x LVDS (R1505I-IM-A) <u>Per request:</u> 4 x DP / 3 x DP + eDP (V1605I-IM-A) ,3 x DP / 2 x DP + eDP (R1505I-IM-A)
	USB 3.2 Gen2 Type-A ports	2 x ports
	USB 2.0 Type-A ports	2 x ports
	Ethernet	2 x RJ45 ports
	Serial Port	2 x COM connectors (support RS232/422/485)
	Audio jack	1 x Mic in , 1 x Line out
	Power	1 x DC jack (lockable)

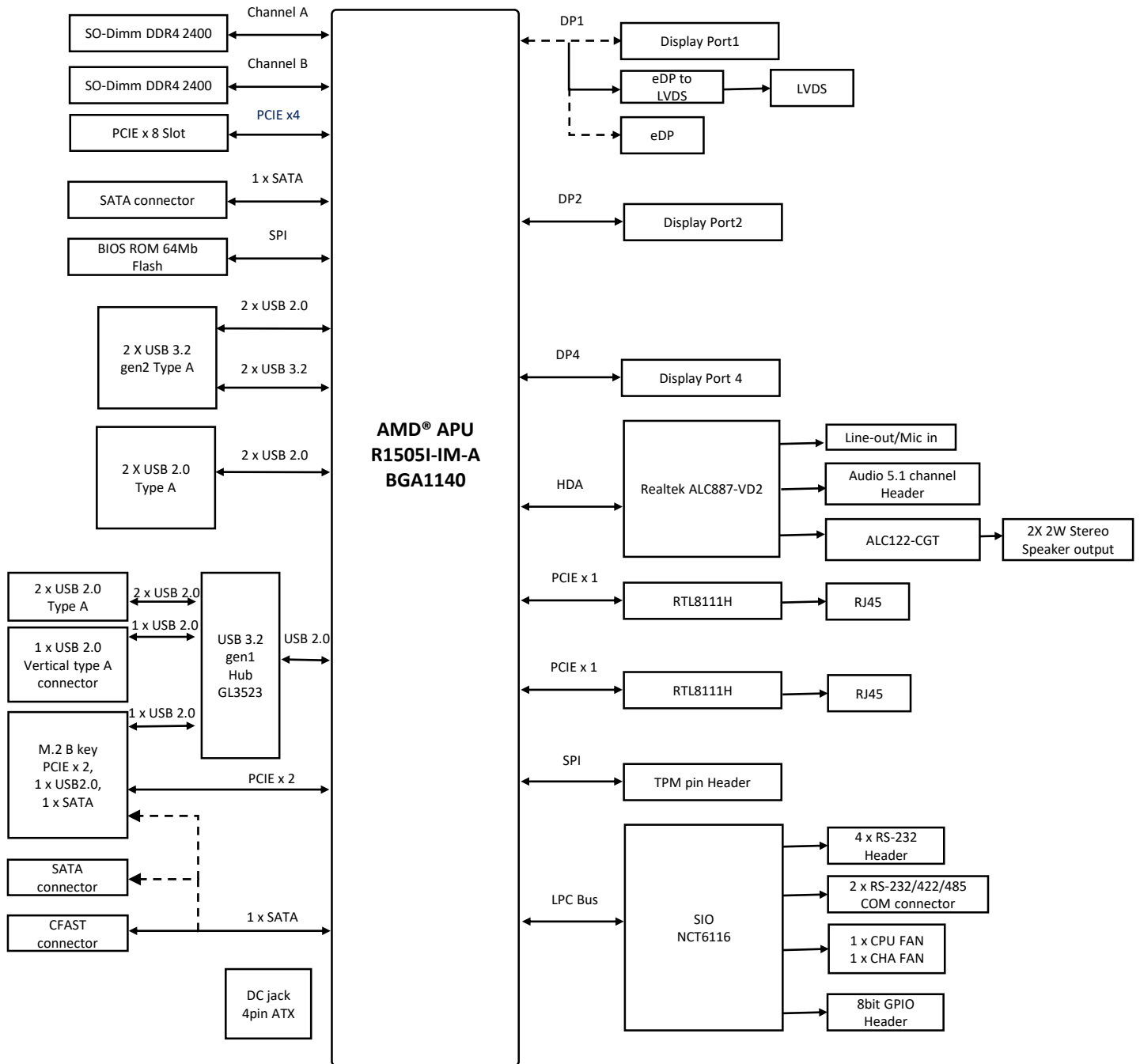
Specifications

Internal Connector	Serial Port	4 x header (RS-232); COM3 colay CCtalk & COM4 colay TTL (BOM option)
	USB 3.2 Gen1	1 x Type A vertical connector (V1605I-IM-A)
	USB 2.0	1 x header support additional 2 x USB2.0 Connectors 1 x type A vertical connector (R1505I-IM-A)
	CPU Fan	1 x header (PWM mode)
	Chassis Fan	1 x header (PWM mode)
	Chassis Intrusion	1 x header
	Front Panel Audio (AAFP)	2 x headers
	System Panel Header	1 x header
	Clear CMOS Jumper	1 x header
	SATA power	2 x header
	LPC Debug	1 x header
	S/PDIF	1 x header
	I ² C	1 x header
	GPIO	1 x header
	AT/ATX Select	1 x header
	Power Connector	1 (4 pin)
Watchdog Timer	H/W	Yes
Security	TPM	1 x SPI TPM header
Power	Power Type	DC-in (ATX and AT mode supported)
	Voltage	DC-in 12V ~ 24V
Operating System	Microsoft Windows	Windows® 10 (64bit) / Win10 IoT Enterprise
	Linux	Ubuntu, RedHat Enterprise, Fedora Workstation, OpenSUSE
Environment	Operating Temperature	0~60° C
	Non-Operating Temperature	-40~85° C
	Relative Humidity	0%~85%
Dimension	Form Factor	Mini-ITX, 170 x 170 mm
Certification	Safety	CE, FCC

Block Diagram



Block Diagram



Order Information

Model name	Part number	Description
V1605I-IM-A	90ME01V0*	SOC, V1605, 3*DP, MB
R1505I-IM-A	90ME01U0*	SOC, R1505, 2*DP, 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	1
14013*	SATA 6G CABLE	1
13020*	M.2 screw pack	1
13071*	Fansink backplane	1
13070*	Fansink	1

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