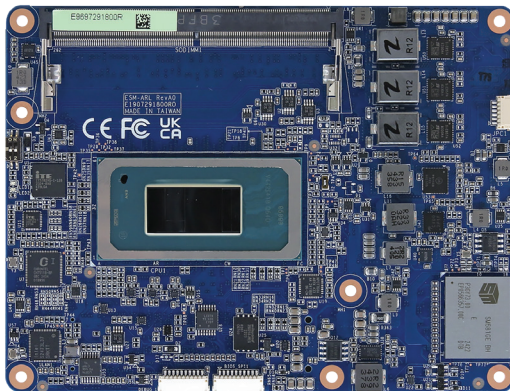




ESM-ARL

Type6 COM Express (COMe) Rev. 3.1 Module with Intel® Core™ Ultra Processor U/H Series (TDP 15W/28W)



Features

- Intel® Core™ Ultra Processor U/H Series (TDP 15W/28W), formerly Intel® Arrow Lake Platform
- 2 x DDR5 5600MHz SO-DIMM sockets support up to 96GB
- Intel® Xe LPG Graphics
- Supports HDMI 2.1, DisplayPort 1.4 8K, 1 x LVDS/eDP
- Support 4 Independent Display
- Supports PEG (H Series): 1 x PCIe Gen5 x8, 2 x PCIe Gen4 x4
- Supports PEG (U Series): 3 x PCIe Gen4 x4
- Supports PCIe: 5 x PCIe Gen4 x1 or 1 x PCIe Gen4 x1, 1 x PCIe Gen4 x4
- 2 x USB 4, 4 x USB 3.2 Gen2, 8 x USB 2.0
- Onboard TPM 2.0
- +9 ~ +19V Power Requirement
- 4.92" x 3.74" (125 x 95mm)

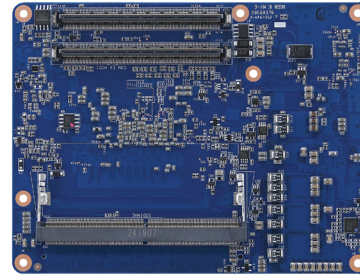
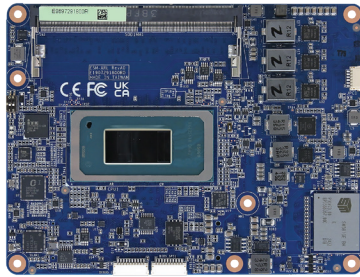
SPECIFICATIONS



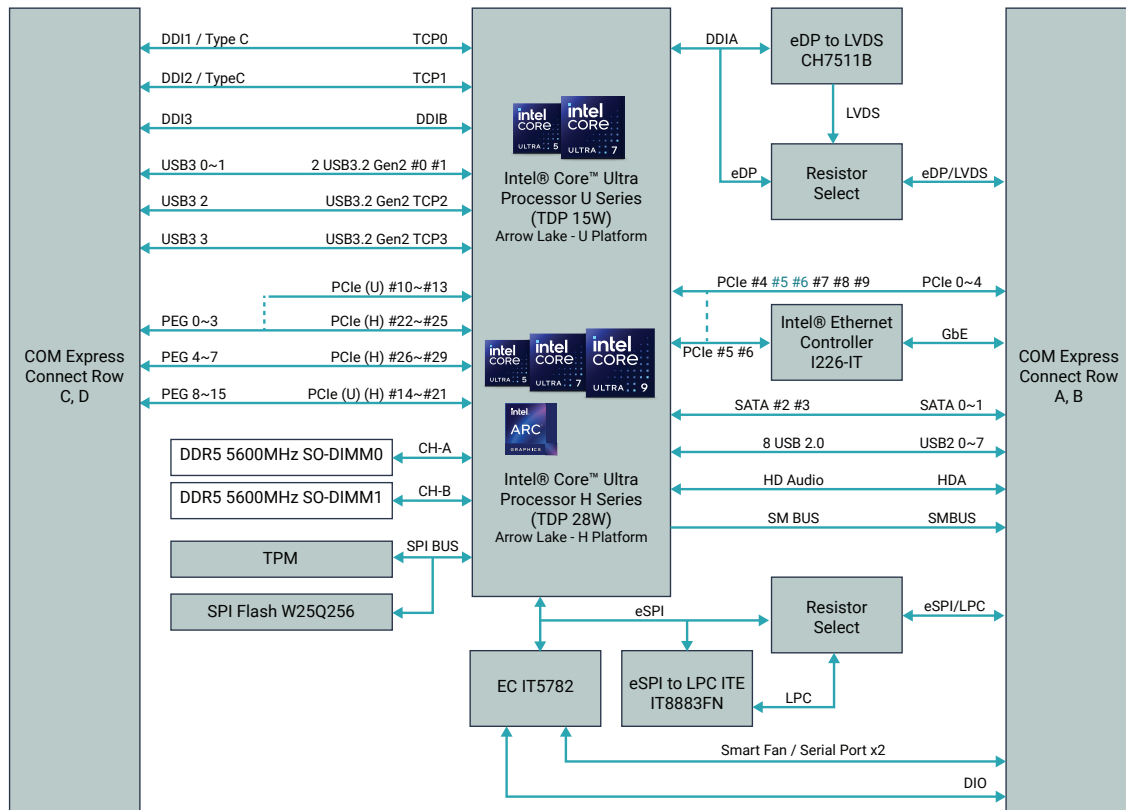
System	
CPU	Intel® Core™ Ultra 5, 7 Processor (TDP 15W) (U Series) Intel® Core™ Ultra 5, 7, 9 Processor (TDP 28W) (H Series) with integrated Intel® ARC Graphics Formerly Intel® Arrow Lake U/H Platform
System Memory	2 x 262-pin DDR5 5600MHz SO-DIMM sockets up to 96GB
BIOS	AMI 256 Mbit uEFI BIOS, 256Mbit SPI Flash ROM
I/O Chipset	EC ITE IT5782VG-I-128/BX
Ethernet	1 x Intel® Ethernet Controller I226-IT (2.5GbE)
Audio	Intel® Integrated HD Audio
Storage	1 x NVMe (Optional)
Watchdog Timer	H/W Reset, 0 ~ 65535Sec
H/W Status Monitor	CPU temperature monitoring Voltages with auto throttling control
Expansion	PEG (H Series): 1 x PCIe Gen5 x8 and 2 x PCIe Gen4 x4 PEG (U Series): 3 x PCIe Gen4 x4 PCIe: 5 x PCIe Gen4 x1 or 1 x PCIe Gen4 x1, 1 x PCIe Gen4 x4 (configurable x1, or x2, or x4)
TPM	TPM 2.0
OS Support	Microsoft® Windows 11 64-bit, Linux Ubuntu 24.04
Display	
Chipset	Intel® Xe LPG Graphics
Resolution	DDI (HDMI/DisplayPort): Supports up to 3 x DDI ports. Configurable HDMI/DisplayPort HDMI 2.1: 4096 x 2304 @ 60Hz DisplayPort 1.4 8K @ 60Hz LCD (LVDS/eDP): 1 x LVDS: 1920 x 1200 @ 60Hz or 1 x eDP 1.4b (optional): 4K

Display Continued	
Multi-Display	Supports 4 Independent Display
LVDS	CH7511B (eDP to LVDS)
I/O	
USB	USB 4: 2 Ports USB 3.2 Gen2: 4 Ports (10Gbps) USB 2.0: 8 Ports (480Mbps)
COM Port	2 x UART (RX/TX Only)
GPIO	1 x 8-bit GPIO
SATA	2 x SATA III (6.0 Gb/S)
MIO	1 x SMBus 1 x LPC 1 x eSPI (W-B 10Px1 1.0mm 90D for debug conn) 1 x I2C 1 x SPI
Mechanical and Environment	
Power Requirement	+9 ~ +19V
Power Type	AT/ATX
Operating Temp	0°C ~ 60°C (32°F ~ 140°F)
Storage Temp	-40°C ~ 75°C (-40°F ~ 167°F)
Operating Humidity	40°C @ 95% Relative Humidity, Non-condensing
Form Factor	COM Express Modules
Dimensions	4.92" x 3.74" (125 x 95mm)
Weight	TBD

SPECIFICATIONS / ADDITIONAL PRODUCT PHOTOS



BLOCK DIAGRAM



ORDERING INFORMATION

Model Name	CPU	Description
ESM-ARL		Please contact BCMSales@bcmcom.com for details.

PACKING LIST

✓ 1 x ESM-ARL COMe module



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