ASRock Industrial

COM-654

COM Express

KEY FEATURES

- Intel® 12th Gen (Alder Lake-P) Core™ Processors
- 2 x 260-pin SO-DIMM DDR4 3200 MHz, up to 64GB (32GB per DIMM)
- 1 x PCIe x8 (Gen4) (Support by 45W CPU SKUs), 1 x PCIe x4 (Gen4), 4 x PCIe x1 (Gen3), 4 x USB3.2 Gen2, 8 x USB2.0, 2 x UART, 2 x SATA3
- 1 x Intel 2.5 Gigabit LAN
- Supports Quad display, 3 x DDI, 1 x VGA, 1 x LVDS or eDP (optional)
- TPM 2.0 onboard IC (optional)
- Supports Intel® vPro, AMT (For i7/i5 SKU), VMD RAID 0/1/5/10
- ATX: 12V±5%/5Vsb±5%
- AT: 12V±5%

SPECIFICATIONS

Form Factor

Dimensions	COM Express Type6 (3.74-in x 3.74-in x 0.52-in, 9.5 cm x 9.5 cm x 1.3 cm)

Processor System

CPU	Intel® 12th Gen (Alder Lake-P) Core™ Processors -COM-654P (i7-1265UE, 2P+8E) -COM-654M (i5-1245UE, 2P+8E) -COM-654V (i3-1215UE, 2P+4E) *45W CPU SKUs are available upon request
Chipset	MCP
BIOS	AMI SPI 256 Mbit

Memory

Technology	Dual Channel DDR4 3200 MHz
Capacity	64 GB (32 GB per DIMM)
Socket	2 x 260-pin SO-DIMM

Graphics

Controller	Intel® Iris® Xe Graphics
HDMI	HDMI 2.1 Max resolution up to 4096x2160@60Hz
DisplayPort	DisplayPort 1.4a, DP++ Max resolution up to 4096x2304@60Hz
VGA	Max resolution up to 1920x1200@60Hz
LVDS	Dual channel 24 bit up to 1920 x 1200@60Hz
eDP	eDP1.4b Max resolution up to 4096 x 2304@60Hz (optional)
MultiDisplay	Quad Display

Expansion Slot

PCIe	1 x PCIe x8 (Gen4) (Support by 45W CPU SKUs) 1 x PCIe x4 (Gen4) 4 x PCIe x1 (Gen3)

Ethernet

Controller/ Speed	COM-654P / COM-654M: 1 x Intel® I225LM with 10/100/1000/2500 Mbps, support AMT/vPro COM-654V: 1 x Intel® I225LM with 10/100/1000/2500 Mbps

I/O

HDMI	DDI1/2 support HDMI/DP
DisplayPort	DDI1/2 support HDMI/DP DDI3 support DP
VGA	1
LVDS	1
eDP	1 (optional)
Ethernet	1 x 2.5 Gigabit LAN
USB	4 x USB 3.2 (Gen2), 8 x USB2.0
COM	Two UART Ports
GPIO	4 x GPI, 4 x GPO
TPM	TPM 2.0 onboard IC (optional)

Storage

SATA	2 x SATA3 (6Gb/s)
RAID	SATA: Intel® VMD RAID 0/1 PCIe: Intel® VMD RAID 0/1/5/10

Watchdog Timer

Output	From Super I/O to drag RESETCON#
Interval	256 Segments, 0, 1, 2, ...255sec

Power Requirements

Input PWR	ATX: 12V±5%/5Vsb±5% AT: 12V±5%
Power On	AT/ATX Supported - AT : Directly PWR on as power input ready - ATX : Press button to PWR on after power input ready

Environment

Operating Temp	0°C ~ 60°C
Storage Temp	-40° C ~ 85° C
Operating Humidity	5% ~ 90%
Storage Humidity	5% ~ 90%

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Assured Systems

Assured Systems is a leading technology company with over 1,500 regular clients in 80 countries, deploying over 85,000 systems to a diverse customer base in 12 years of business. We offer high-quality and innovative rugged computing, display, networking and data collection solutions to the embedded, industrial, and digital-out-of-home market sectors.

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