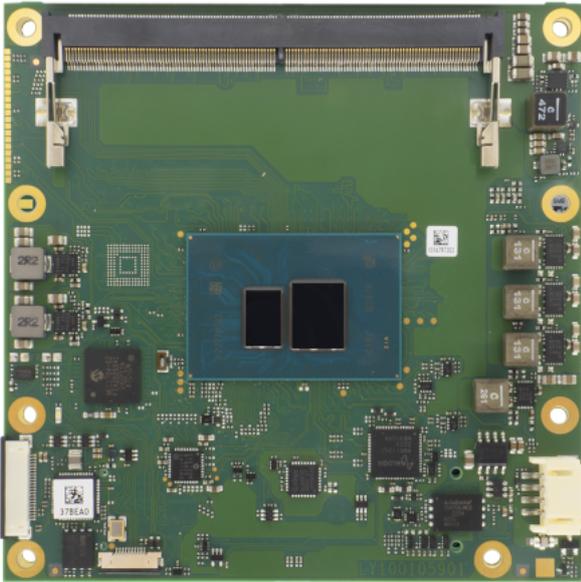


TRIA C6C-ALN

Intel Atom® Processor x7000E Series, Intel® Core™ Processor N-series, Intel® Processor N-series



95 x 95

6W

0-+60°C

COM
Express



Highlights

- COM Express Type 6, Compact module
- Intel Atom® Processor x7000E Series, Intel® Core™ Processor N-series, Intel® Processor N-series
- Up to eight processing cores, power efficient processors, TDP 6 to 15W
- Integrated Intel UHD graphics, max. 32 executing units
- Up to 16GB DDR5-4800 SDRAM, In-band ECC
- Two SATA 6Gb/s mass storage interfaces
- eMMC mass storage option
- DisplayPort/HDMI interface
- LVDS/Embedded DisplayPort interface
- Three independent displays supported
- Two USB 3.2 Gen2 (10Gb/s) and eight USB 2.0 ports
- Two UARTs
- Four PCI Express™ x1 lanes
- 1 / 2.5 Gb Ethernet port (Intel® i226)
- TSN, TCC support
- UEFI Firmware
- Trusted Platform Module TPM 2.0
- Long-term product availability

COM Express Type 6



Technical Data

Technology	x86
Formfactor	COM Express Compact
CPU	Intel® Core™ 3 Processor N355, eight-core, 1.0GHz/1.9GHz, 32EU, 9/15W, PUC Intel® Core™ i3-N305, eight-core, 1.0GHz/1.8GHz, 32EU, 9/15W, PUC Intel Atom® x7425E, four-core, 1.5GHz, 24EU, TCC, 12W, EUC Intel Atom® x7213E, two-core, 1.7GHz, 16EU, TCC, 10W, EUC Intel Atom® x7211E, two-core, 1.0GHz, 16EU, TCC, 6W, EUC Intel® Processor N250, quad-core, 1.3GHz, 32EU, 6W, PUC Intel® Processor N200, quad-core, 1.0GHz, 32EU, 6W, PUC Intel® Processor N150, quad-core, 0.8GHz, 24EU, 6W, PUC Intel® Processor N97, quad-core, 2.0GHz, 24EU, 12W, PUC Intel® Processor N50, dual-core, 1.0GHz, 16EU, 6W, PUC Note: base frequency shown, other clock frequencies supported EUC - Intel Embedded Use Conditions PUC - Intel PC Client Use Conditions
Chipset	SOC
RAM	1x 262-pin SO-DIMM socket for up to 16 GB DDR5-4800 In-band ECC
Flash	On-board eMMC mass storage option, scalable capacity up to 256GB
Storage Interfaces	2x SATA 6Gb/s
USB	2x USB 3.2 Gen2 (10Gb/s) 8x USB 2.0
Serial Interfaces	Two UARTS
Bus Interfaces	4x PCI Express x1 Gen 3, up to 4 root ports LPC bus (Low Pin Count bus; no DMA support)
Display Controller	Integrated Intel® UHD graphics Up to 32 execution units (EU)
Display Interfaces	Three independent displays supported: 2x Digital Display Interface (DP, HDMI) 1x Embedded DisplayPort (on variants without LVDS only); LVDS 24bit, dual-channel (not on all variants); max. 1920 x 1200 @ 60Hz
Network Interface	10/100/1000Base-TX, 2.5G ² based on Intel i226-LM, with TSN support ² Available bandwidths depending on carrier design
Audio Interface	High Definition Audio
Security Device	TPM 2.0
Miscellaneous	Watchdog Timer: Initiates system reset, programmable Fan Supply: 4-pin header for CPU fan, PWM speed controlled and PWM speed control for system fan supported RTC battery: external System Monitoring: voltage, temperature, CPU fan, system fan
Feature Highlights	Type 6 pin-out
Firmware	AMI Aptio UEFI
OS Support	Windows 11 IoT Enterprise LTSC 2024 Yocto Project (LTS kernel 2021)

COM Express Type 6



Power Requirement	Wide range input +8.5 ... +20V, 5V Stby optional, 6W (typ.)
Environment	Ambient Temperature; 0° ... 60°C (operating), -25° ... 85°C (storage) Humidity: 5 ... 95% (operating, non-condensing), 5 ... 95% (storage, non-condensing)
Dimensions	95mm x 95mm
Certificates	UL / CE
Cooling	Passive heat sink Active heat sink with fan Heat spreader with threaded or non-threaded standoffs
Carrier	Evaluation/carrier board options

Technical Data for TRIA C6C-ALN

COM Express Type 6



Order Reference

Order No.	Description	Reference	Status*
114506	COM Express Type 6 Compact module (95mm x 95mm); CPU: Intel Atom x7425E 4C, 1.5GHz, 12W TDP; Graphics: Intel® UHD Graphics 24 EUs; 2x DP/HDMI; 1x LVDS; Ethernet: Intel i226-LM Gbit; HD audio; TPM 2.0; eMMC 32GB; 2x SATA, 2x USB3, 8x USB2, 4x PCIe Gen 3; 1x socket for DDR5 SO-DIMM; 0...+60°C	MSC C6C-ALN-X7425E-N5231C PCBFTX	PV
114508	COM Express Type 6 Compact module (95mm x 95mm); CPU: Intel Atom x7213E 2C, 1.7GHz, 10W TDP; Graphics: Intel® UHD Graphics 16 EUs; 2x DP/HDMI; 1x LVDS; Ethernet: Intel i226-LM Gbit; HD audio; TPM 2.0; 2x SATA, 2x USB3, 8x USB2, 4x PCIe Gen 3; 1x socket for DDR5 SO-DIMM; 0...+60°C	MSC C6C-ALN-X7213E-NN231C PCBFTX	PV
114510	COM Express Type 6 Compact module (95mm x 95mm); CPU: Intel Atom x7211E 2C, 1.0GHz, 6W TDP; Graphics: Intel® UHD Graphics 16 EUs; 2x DP/HDMI; 1x LVDS; Ethernet: Intel i226-LM Gbit; HD audio; TPM 2.0; 2x SATA, 2x USB3, 8x USB2, 4x PCIe Gen 3; 1x socket for DDR5 SO-DIMM; 0...+60°C	MSC C6C-ALN-X7211E-NN231C PCBFTX	PV
114512	COM Express Type 6 Compact module (95mm x 95mm); CPU: Intel Core i3-N305 8C, 1.8GHz, 15W TDP; Graphics: Intel® UHD Graphics 32 EUs; 2x DP/HDMI; 1x LVDS; Ethernet: Intel i226-LM Gbit; HD audio; TPM 2.0; eMMC 32GB; 2x SATA, 2x USB3, 8x USB2, 4x PCIe Gen 3; 1x socket for DDR5 SO-DIMM; 0...+60°C	MSC C6C-ALN-N305-N52J1C PCBFTX	PV
114514	COM Express Type 6 Compact module (95mm x 95mm); CPU: Intel Processor N200 4C, 1.0GHz, 6W TDP; Graphics: Intel® UHD Graphics 32 EUs; 2x DP/HDMI; 1x LVDS; Ethernet: Intel i226-LM Gbit; HD audio; TPM 2.0; 2x SATA, 2x USB3, 8x USB2, 4x PCIe Gen 3; 1x socket for DDR5 SO-DIMM; 0...+60°C	MSC C6C-ALN-N200-NN231C PCBFTX	OR
114516	COM Express Type 6 Compact module (95mm x 95mm); CPU: Intel Processor N97 4C, 2.0GHz, 12W TDP; Graphics: Intel® UHD Graphics 24 EUs; 2x DP/HDMI; 1x LVDS; Ethernet: Intel i226-LM Gbit; HD audio; TPM 2.0; 2x SATA, 2x USB3, 8x USB2, 4x PCIe Gen 3; 1x socket for DDR5 SO-DIMM; 0...+60°C	MSC C6C-ALN-N97-NN231C PCBFTX	OR

COM Express Type 6



Order No.	Description	Reference	Status *
114518	COM Express Type 6 Compact module (95mm x 95mm); CPU: Intel Processor N50 2C, 1.0GHz, 6W TDP; Graphics: Intel® UHD Graphics 16 EUs; 2x DP/HDMI; 1x eDP; Ethernet: Intel i226-LM Gbit; HD audio; TPM 2.0; 2x SATA, 2x USB3, 8x USB2, 4x PCIe Gen 3; 1x socket for DDR5 SO-DIMM; 0...+60°C	MSC C6C-ALN- N50-NN131C PCBFTX	OR

Ordering Information for TRIA C6C-ALN

*PV = Preferred variant; OR = on Request (in OEM quantities only)

COM Express Type 6



Accessories

Carrier Boards

Order No.	Description	Reference
111650	COM Express Type 6 Evaluation Carrier Board with various PCI Express x1, x4 and x16 slots, USB 3.0/2.0, GbE, M.2, SD card socket, SATA, DisplayPort, LVDS, eDP, VGA, HD audio interfaces; ATX power connector. Dimensions: 305 x 244 mm (ATX form factor)	MSC C6-MB-EV4 PCBFTX
119830	COM Express Type 6 Evaluation Carrier Board with PCI Express x4 and x16 slots, USB 3.0/2.0, USB4 Type-C, GbE, M.2, SATA, DisplayPort, LVDS, eDP; ATX power connector. Dimensions: 170 x 170 mm (Mini-ITX form factor)	MSC C6-MB-EV4M BRDFTX

Carrier Boards TRIA C6-MB-EV4/EV4M

Cooling Solutions

Order No.	Description	Reference
98715	Passive Heatsink for C6C-ALN/ASL, consisting of a single-piece aluminum profile with fins, standoffs without thread (2.7mm inner diameter), screws and thermopad for the thermal contact to SOC.	MSC C6C-ALN-01 HSI-001
98716	Heatspreader for C6C-ALN/ASL. Single-piece aluminum profile with standoffs without thread (2.7mm inner diameter), screws and thermopad for the thermal contact to SOC.	MSC C6C-ALN-01 HSP-001
98717	Heatspreader for C6C-ALN/ASL. Single-piece aluminum profile with threaded standoffs (M2.5), screws and thermopad for the thermal contact to SOC.	MSC C6C-ALN-02 HSP-001

Cooling Devices for TRIA C6C ALN/ASL

Order No.	Description	Reference
79809	Fan kit for Heatsink MSC HCA-ALP/RLP/MLH-0x HSI-xxx, MSC C6B-ALP/RLP/MLH-0x HSI-xxx, MSC C6B-TLH-0x HSI-xxx, MSC C6C-ALP/RLP-0x HSI-xxx, MSC C6C-TLU-0x HSI-xxx, MSC C6C-WLU-0x HSI-xxx, MSC C6C-ALN/ASL-0x HSI-xxx, MSC C6C-EL-0x HSI-xxx, MSC C6C-RYZx-0x HSI-xxx, PWM fan 80x80x15mm.	MSC C6C-FANKIT-01-HSF-001

Fan Kit for COM Express Heatsinks

Memory Options

Order No.	Description	Reference
115233	8GB DDR5-5600 SO-DIMM, Commercial Temp.	MOD SODIMM DDR5 8GB PC5-44800 CL22 1B
115234	16GB DDR5-5600 SO-DIMM, Commercial Temp.	MOD SODIMM DDR5 16GB PC5-44800 CL22 1B

Memory Options for TRIA C6C-ALN (max. DDR5-4800 supported by processor)

COM Express Type 6



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