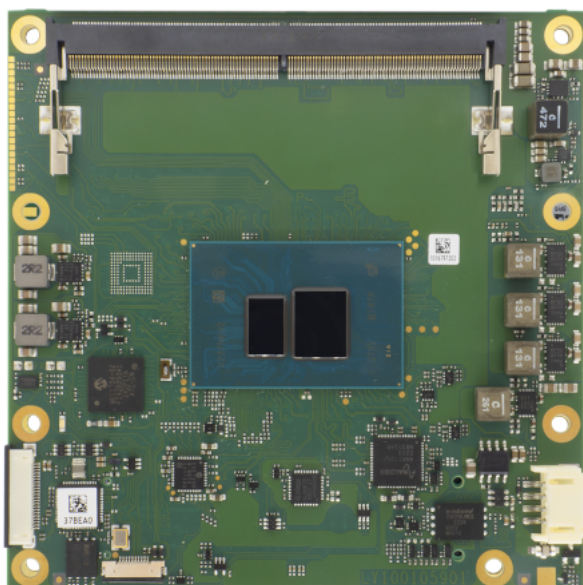


TRIA C6C-ALN

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

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

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)

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/PLH-0x HSI-xxx, MSC C6B-TLH/ALP/RLP/MLH-0x HSI-xxx, MSC C6C-WLU/TLU/ALP/RLP/PLH-0x HSI-xxx, MSC C6C-EL/ALN/ASL-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



Tria Technologies GmbH
Industriestr. 16
76297 Stutensee
info@tria-technologies.com
tria-technologies.com

Copyright © 2024 Tria Technologies GmbH. All data is for information purposes only and is subject to change without notice. No guarantee for legal purposes is implied. Information in this document has been carefully checked, however, no responsibility for inaccuracies has to be assumed. All brand or product names may be trademarks and property of their respective owners.