Features

Industrial Carrier Design

- Micro-ATX form factor: 9.6 x 9.6 inches (244 x 244mm)
- Made in the USA
- -40ºC to +85ºC with supporting cooling options
- ATX Mode: Standard ATX Power input
- AT Mode: 12VDC +/- 5%
- Supports all interfaces on the WINSYSTEMS COMeT6 Modules

Graphics

- 3x DisplayPort++ Ports
- Support for Dual Channel LVDS and eDP, including backlight

USB I/O

- 4x USB 3.2 Gen1 (2x Front Panel Type A, 2x Header)
- 4x USB 2.0 (2x Front Panel, 2x Header)

Serial UART I/O

- 2x RS 232 2pin (Tx/Rx) from COMe Module
- 2x RS232/422/485 Multiprotocol Legacy mode

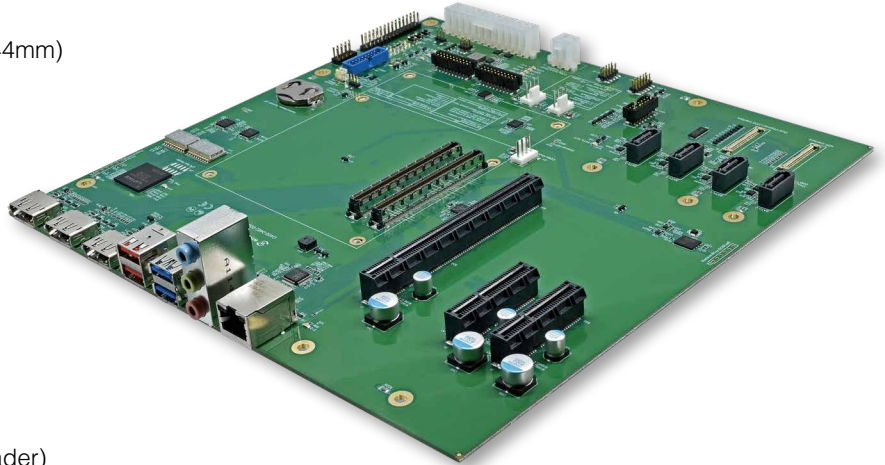### Storage/SATA Channels

- 4x SATA Type III (6Gb/s) channels

Network

- 1x RJ45 supporting 2.5G Ethernet from COMe

PCI Express Expansion

- 1x PCI Express Gen4 x16 PEG / NVMe
- 2x PCI Express Gen3 x4

Software

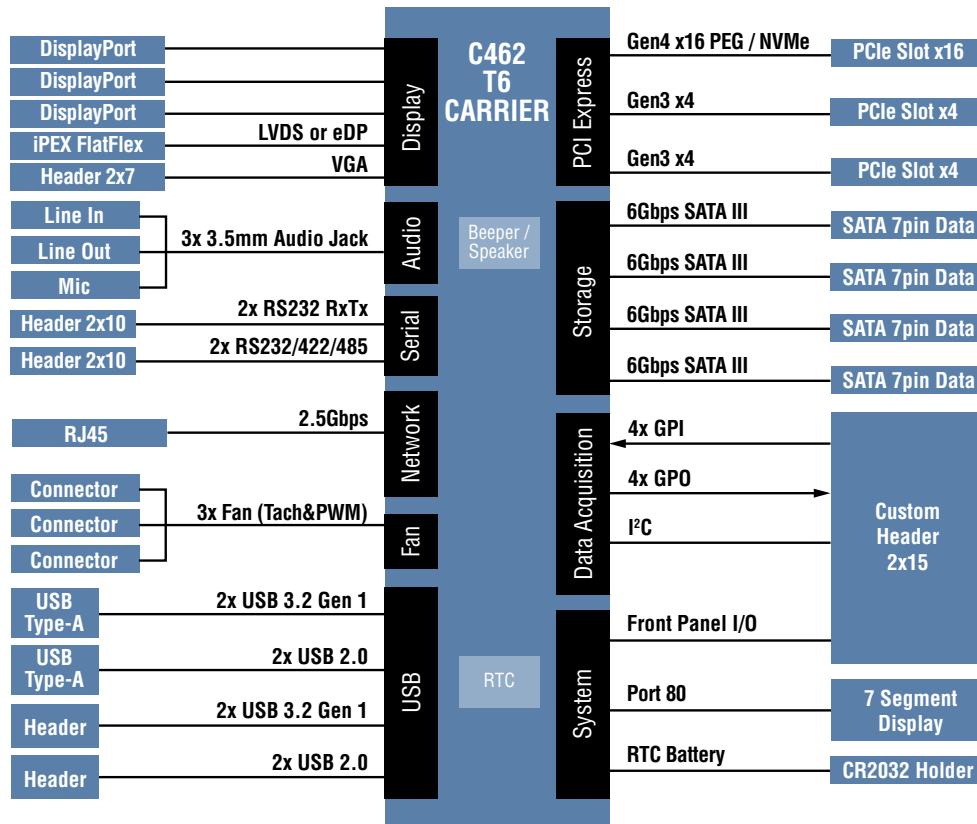- Windows 10 and 11
- Linux

Product Description

The ATX-M-CC462-T6 is a fully featured COM Express Type 6 carrier board designed to use industry standard COM Express Type 6 modules including the WINSYSTEMS COMeT6-TGLU Series of COM Express Type 6 modules featuring the Intel® Tiger Lake UP3 SOC.

The carrier implements the full capabilities of the Type 6 connectors and is compliant with PICMG® COM Express Rev 3.0 Specifications. The ATX-M-CC462-T6 carrier board has multiple interface options including 3x PCIe slots, multiple Video options, 4x SATA devices, 8x USB ports (2.0 and 3.1), and high speed 2.5Gbps Ethernet that make it highly configurable for use in any application.
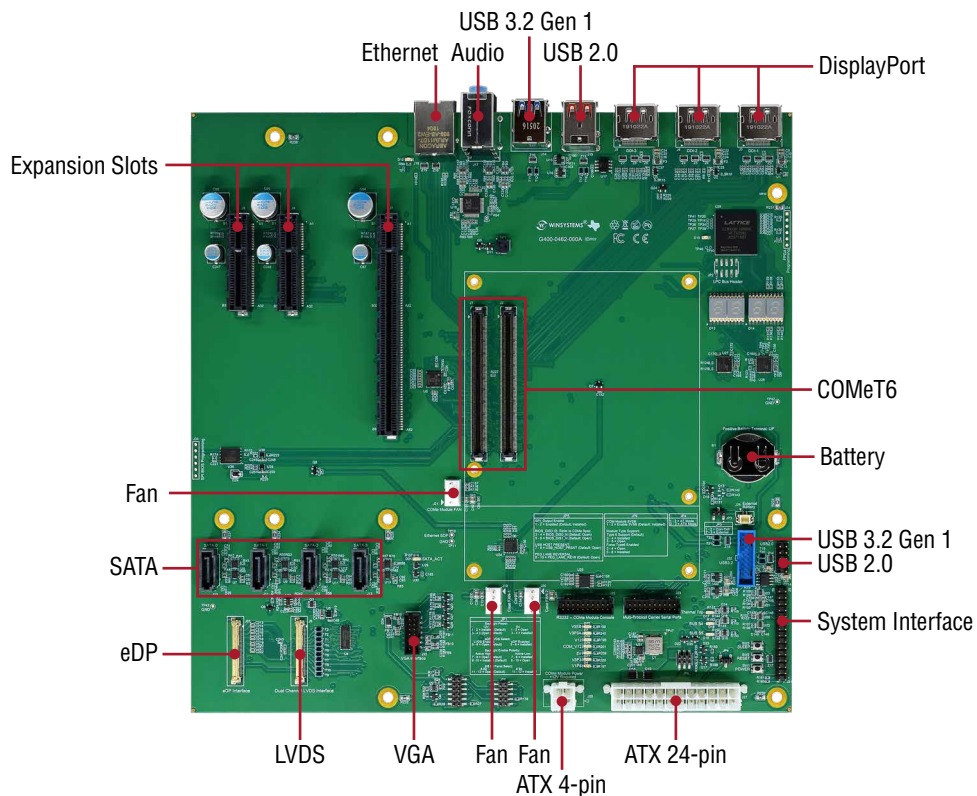
This is a production-ready reference board which can be taken directly into production for customer use, or available schematics and layout can be leveraged for customers working to design their own carrier.

The carrier board is designed to support a wide range of commercial, industrial, and automotive applications across a wide temperature spectrum (-40ºC to +85ºC).

Block Diagram

DisplayPort		
DisplayPort		
DisplayPort		Display
iPEX FlatFlex	LVDS or eDP	
Header 2x7	VGA	

C462 T6 CARRIER

Line In		
Line Out	3x 3.5mm Audio Jack	Audio
Mic		

Beeper / Speaker

Header 2x10	2x RS232 RxTx	Serial
Header 2x10	2x RS232/422/485	

RJ45	2.5Gbps	Network

Connector		
Connector	3x Fan (Tach&PWM)	Fan
Connector		

USB Type-A	2x USB 3.2 Gen 1	
USB Type-A	2x USB 2.0	USB
Header	2x USB 3.2 Gen 1	
Header	2x USB 2.0	

RTC

PCI Express

Gen4 x16 PEG / NVMe	PCIe Slot x16
Gen3 x4	PCIe Slot x4
Gen3 x4	PCIe Slot x4

Storage

6Gbps SATA III	SATA 7pin Data
6Gbps SATA III	SATA 7pin Data
6Gbps SATA III	SATA 7pin Data
6Gbps SATA III	SATA 7pin Data

Data Acquisition

4x GPI	
4x GPO	Custom Header 2x15
I²C	

System

Front Panel I/O	
Port 80	7 Segment Display
RTC Battery	CR2032 Holder

Connectors

Ethernet
Audio
USB 3.2 Gen 1
USB 2.0
DisplayPort
Expansion Slots
COMeT6
Battery
Fan
USB 3.2 Gen 1
USB 2.0
SATA
System Interface
eDP
LVDS
VGA
Fan Fan
ATX 24-pin
ATX 4-pin

Technical Specifications

FORM FACTOR	• Micro-ATX 9.6 x 9.6 inches (244 x 244mm)
STORAGE	• 4x SATA Type III (6Gb/s) channels
DISPLAY	• Quad Simultaneous Displays • 3x DisplayPort++ • Support for Dual Channel LVDS and eDP including backlight • VGA
NETWORK INTERFACE	• 1x 2.5G Ethernet
ONBOARD I/O	• 4x USB 3.2 Gen1 (2x Front Panel Type A, 2x Header) • 4x USB 2.0 (2x Front Panel Type A, 2x Header) • 2x RS 232 2pin (Tx/Rx) from COMe Module • 2x RS232/422/485 Multiprotocol Legacy mode • 1x PCIe Gen4 x16 slot • 2x PCIe Gen3 x4 slot • 1x EEPROM socket • 1x LPC header • 3x Fan Header • 1x GPIO/Feature connector
FRONT PANEL CONNECTORS	• 1x 2.5 Ethernet RJ45 port • 1x Audio with separate 3.5mm jacks for MIC, LINE-OUT, LINE-IN • 3x Standard DisplayPort connectors • 2x USB 3.1 Type A connector • 2x USB 2.0 Type A connector
POWER	• ATX Mode: Standard ATX Power input • AT Mode: 12VDC +/- 5%
ENVIRONMENTAL	• Operating Temperature -40°C to +85°C with supporting cooling options • Storage Temperature -40°C to +85°C • Thermal Shock Operational Temperature limit exposures in <1 minute • Shock IAW IEC60068-2-27 Half Sine Wave, 50g/11ms • Vibration IAW IEC60068-2-27 Random waveform, 10Hz-2KHz, 7g • CE Compliant • CISPR B and FCC Class B • ESD (Human body) – JEDEC Standard JA114/JS-001
MECHANICAL	Dimensions: 6.7 in x 6.7 in (mITX) (170 mm x 170 mm) Weight: 8.0 oz (225 gm) without COMe Module PC Board thickness: 0.078 inches (2.0 mm)
SOFTWARE	• Windows 10 and 11 • Linux

Order Information

SBC PART NUMBER	**ATX-M-CC462-T6** m = Module installed (0 = no module is default) t = Thermal solution installed (0 = no thermal solution is default)	
COM EXPRESS TYPE 6 REFERENCE MODULES	ATX-M-CC462-T6	COM Express Type 6 Compact Module
CABLES AND ACCESSORIES	CBL-PWR-125-20	Input Power Cable

Expansion and Customization Options

WINSYSTEMS provides customization options for OEMs with minimum order quantities. Please contact an Application Engineer for details. Additional cables, expansion cards, power supplies, and solid-state drives to complete your embedded computing solution including data acquisition, communications, location, and other features are available. Our Application Engineers are available to guide you through product selection and customized options.

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Contact us for more information about this new product.

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