

mCOM10-L1500

Mini COM Express Module

As billions of machines continue to expand the Industrial Internet, they will be performing more tasks at greater speed and operating in harsh environments. At the same time, computer processors will continue to evolve.

To remain competitive, GE Intelligent Platforms understands that businesses must proactively respond to these twin forces of machine connectivity and processor obsolescence.

To address these needs, GE developed the mCOM10-L1500. This module takes advantage of the flexibility in cost, performance and power capabilities of the latest generation AMD Embedded G-Series System-on-Chip (SOC). And thanks to its COM Express architecture, as chip technology evolves, the module can be replaced without adverse effect on the underlying hardware and assets.

The mCOM10-L1500 is ideal for a variety of commercial, industrial, transportation and defense applications in a range of embedded computing environments. This durable COM Express solution reduces overall design cycle and validation requirements to lower the total cost of ownership.

Best-in-class performance & reliability

GE's mCOM10-L1500 COM Express module is the miniature form-factor solution in our COM Express portfolio, and offers the high-level performance and ultimate durability needed for applications that operate in harsh environments. It is ideal for applications requiring a small form factor and low power consumption on a type 10 COM Express platform. As with all GE COM Express modules, the mCOM10-L1500 fully uses the capabilities of the newest generation of processors.

On-board components are specifically selected for their reliability in demanding conditions. Unlike solutions designed for benign environments, the processor and memory are soldered to the board for maximum resistance to shock and vibration. Extended mechanical construction protects the module, which is designed for optional conformal coating to provide additional resistance to moisture, dust, chemicals, and temperature extremes.

Longer lifecycles & lower product costs

The COM Express architecture extends the useful life of the subsystem by allowing a simple, cost-effective upgrade of the processor alone. The long-term cost of ownership is reduced while ensuring that performance keeps pace with changing needs.

Commitment to customer satisfaction

Today's organizations are operating lean, engineering resources are scarce, and time-to-market is critical. Therefore, GE complements the performance and practical benefits of our COM Express modules with world-class domain expertise and a focus on exceptional customer service. To help you get to market faster and lower your development costs, we can assist you with in-house carrier design, or build a carrier specifically for you.

FEATURE	BENEFIT
Small form factor	<ul style="list-style-type: none"> Size (84x55mm) makes the mCOM10-L1500 ideal for applications where compact size is critical
Rugged design with soldered components	<ul style="list-style-type: none"> Reliable computing capabilities for applications needing higher immunity to shock and vibration
Next-generation multicore AMD G-Series SOC	<ul style="list-style-type: none"> Delivers high performance coupled with low power consumption Supports multiple graphics displays
Flexible options	<ul style="list-style-type: none"> Shock and vibration protection Extended operating temperature range for environments with temperature extremes Conformal coating for protection against dust, moisture and chemicals



mCOM10-L1500 Mini COM Express Module

Specifications

Processor/Chipset

- AMD Embedded G-Series SOC
 - 4 Core 15W TDP
 - 2 Core 9W TDP

Memory

- Supports up to 8GB of DDR3L
- Soldered with ECC

Graphics Features

- Integrated graphics interface
 - TMDS over DDI
 - DisplayPort over DDI
 - eDP or 18bpp single-channel LVDS

Audio

- Supports HDA

LAN Port

- 1x Gigabit Ethernet port

Serial ATA Interface

- Supports 2x serial ATA interfaces, compliant with SATA 3.0 specification

USB Interface

- 8x USB 2.0 ports
- 2x USB 3.0 ports

Extension

- PCIe lanes 0-3: 4 lanes x1 or 1 x4 Gen 2

I/O Interface

- 8x GPIO ports or SD-Card Interface

Others

- States: S0, S3, S5 (S3 is dependent on 5V standby power)
- Debug port
- Alarm sensors for temperature
- Pre-mounted heat sink/spreader for optimal cooling

BIOS

- UEFI
- SPI interface

Power

- Input: 12V (wide-range), 5V SBY

Environmental

- Operating: 0° to +65° C (standard)
- Operating: -40° to +85° C (extended; CPU dependent)
- Storage: -40° to +125° C
- Operating humidity: 10% to 90%
- Shock: 40 g, 11 ms
- Vibration: 15 – 2000 Hz, 0.1 g² / Hz.

Note: maximum operating temperature range dependent on the selected processor version.

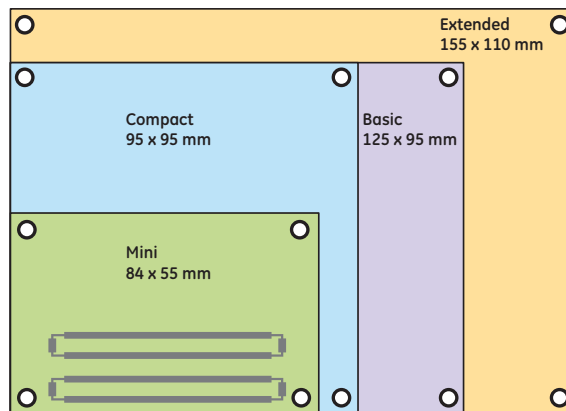
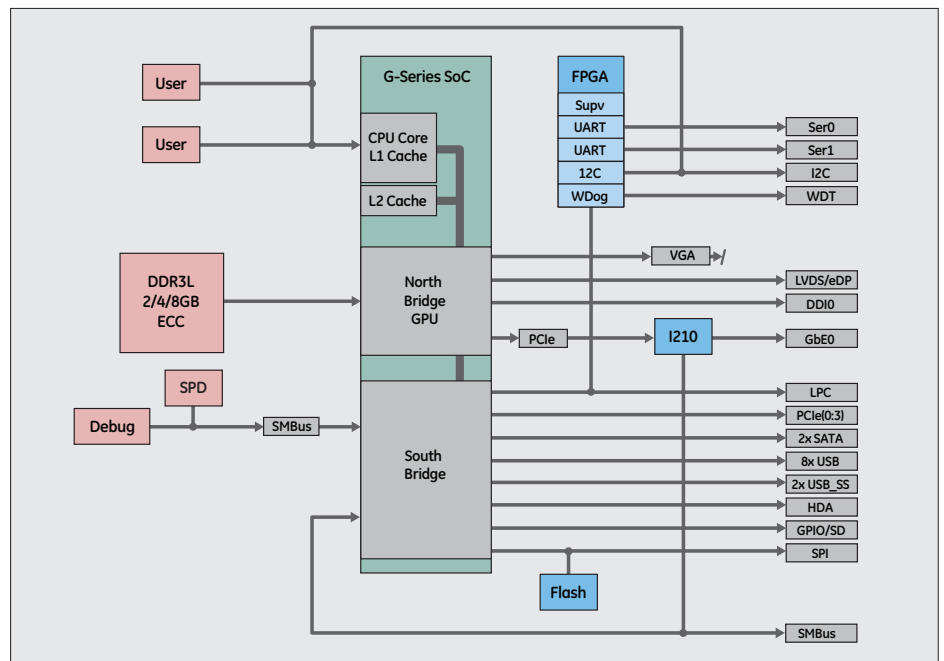
Dimensions

- 55 mm x 84 mm
- COM Express mini form factor; Type 10
- Compliance: PICMG COM Express R2.1

Software Support

- Windows, Linux, VxWorks

Block Diagram



Options

- Conformal coating available

Ordering Information

MC10L15A2ZA	2 core, 1 GHz, 2GB Memory, standard temperature range
MC10L15ABZF	2 core, 1 GHz, 2GB Memory, extended temperature range
MC10L15B4ZA	4 core, 1.5 GHz, 4GB, standard temperature
MC10L15B8ZA	4 core, 1.5 GHz, 8GB, standard temperature range

GE Intelligent Platforms Contact Information

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Global regional phone numbers are listed by location on our web site at www.ge-ip.com/contact

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