

mCOM10-L1900

Mini COM Express® Module

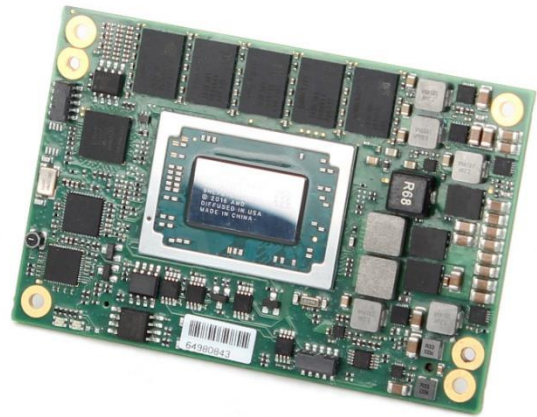
As machinery continues to expand to the Industrial Internet of Things (IIoT), computer processors continue to evolve to perform more tasks at greater speeds in harsh environments. To remain competitive, businesses must proactively respond to these twin forces of machine connectivity and processor obsolescence. Addressing these needs, Emerson's mCOM10-L1900 utilizes AMD's V1000 series of powerful and scalable Accelerated Processing Units (APU) that combine excellent Central Processing performance with strong Graphical Processing in one chipset. Thanks to its COM Express architecture, products based on this technology can easily swap in more capable CPUs as technology increases with minimal efforts. The mCOM10-L1900 is ideal for a variety of commercial, industrial, transportation and defense applications in a range of embedded computing environments requiring high CPU and GPU performance. This durable COM Express solution reduces overall design cycle and validation requirements to lower the total cost of ownership.

Best-in-class performance and reliability

The mCOM10-L1900 COM Express module is the miniature form-factor solution in the 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. 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

COM Express architecture separates the processor and carrier card. This 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 with limited engineering resources and time-to-market is critical. Therefore, Emerson 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 work, or build a custom carrier specifically for you.

Features & Benefits

- **Small Form Factor** – minimal size makes the mCOM10-L1900 ideal for applications where compact size and high CPU and GPU performance are critical
- **Rugged design with soldered components** – Reliable computing capabilities for applications needing higher immunity to shock and vibration
- **Multicore AMD V1000 APU** – Delivers high computing and graphical performance coupled with scalability from 12W to 25W while supporting Multi-Display and 4K Graphics
- **Flexible options** – Offers shock and vibration protection with extended operating temperature range and conformal coating options for extreme environments

Specifications

Processor / Chipset	<ul style="list-style-type: none"> • AMD Embedded V1000 series: V1404i Quad Core 1.6 (2.8) GHz 4MB Cache, 15W TDP, extended temperature V1605B Quad Core 2.0 (3.6) GHz 4MB Cache, 12-25W TDP • AMD Embedded R1000 series: R1505G Dual Core 2.4GHz 4MB Cache, 12-25W TDP R1305G Dual Core 1.5GHz 4MB Cache, 8-10W TDP
Memory	<ul style="list-style-type: none"> • Supports up to 16GB of DDR4-2400 • Soldered with ECC • Single Channel
Graphics Features	<ul style="list-style-type: none"> • Integrated graphics interface • DisplayPort++ on DDI0 • eDP
Audio	<ul style="list-style-type: none"> • HDA Interface
LAN Port	<ul style="list-style-type: none"> • 1x Gigabit Ethernet port with DASH
USB Interface	<ul style="list-style-type: none"> • 2x USB 3.1 Gen.1 • 7x USB 2.0
Serial ATA Interface	<ul style="list-style-type: none"> • Supports 2x serial ATA interfaces • Compliant with SATA 3.0 specification
Extension	<ul style="list-style-type: none"> • PCIe 3.0 four lanes • Flexible port configuration
I/O interface	<ul style="list-style-type: none"> • 8x GPIO ports or SD-Card Interface
BIOS	<ul style="list-style-type: none"> • AMI Aptio® 5 UEFI firmware • SPI Interface
Power	<ul style="list-style-type: none"> • Input: 5V-19V (wide-range), 5V Standby
Environmental	<ul style="list-style-type: none"> • Standard Operating Temperature: 0° to +65° C (dependent on processor version) • Extended Operating Temperature: -40° to +85° C (dependent on processor version) • Storage Temperature: -40° to +125° C • Operating humidity: 10% to 90% • Shock: 40 g, 11 ms • Vibration: 15 – 2000 Hz, 0.1 g² / Hz
Dimensions	<ul style="list-style-type: none"> • 84 mm x 55 mm • COM Express mini form factor; Type 10 • Compliance: PICMG COM Express R3.0
Software Support	<ul style="list-style-type: none"> • Microsoft® Windows® 10, Linux®, VxWorks®
Additional Features	<ul style="list-style-type: none"> • States: S0, S3, S5 • Alarm sensors for temperature • Pre-mounted heat spreader for optimal cooling
Conformal Coat	<ul style="list-style-type: none"> • Available option for protection against dust, moisture and chemicals

Ordering Information

PART NUMBER	DESCRIPTION
MC10L19C6SZHA	V1605B, 4 GByte DRAM, SD card interface, heat spreader
MC10L19C7SZHA	V1605B, 8 GByte DRAM, SD card interface, heat spreader
MC10L19C8SZHA	V1605B, 16 GByte DRAM, SD card interface, heat spreader
MC10L19D6SZHA	R1505G, 4 GByte DRAM, SD card interface, heat spreader
MC10L19D7SZHA	R1505G, 8 GByte DRAM, SD card interface, heat spreader
MC10L19D8SZHA	R1505G, 16 GByte DRAM, SD card interface, heat spreader
MC10L19G6SZHA	R1305G, 4 GByte DRAM, SD card interface, heat spreader
MC10L19G7SZHA	R1305G, 8 GByte DRAM, SD card interface, heat spreader
MC10L19G8SZHA	R1305G, 16 GByte DRAM, SD card interface, heat spreader
MC10L19BBSZHF	V1404i, 4 GByte DRAM, SD card interface, heat spreader, extended temperature range
MC10L19BCSZHF	V1404i, 8 GByte DRAM, SD card interface, heat spreader, extended temperature range
MC10L19B8SZHF	V1404i, 16 GByte DRAM, SD card interface, heat spreader, extended temperature range

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