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**Data Sheet**

August 15, 2026

EMERSON / MOTOROLA

# Emerson / Motorola MBX860-001C EBX Form Factor Embedded Controller

The Emerson/Motorola MBX860-001C is an EBX form factor embedded controller designed for rugged environments. It features a solid processing platform suitable for industrial control, data acquisition, and communication applications. Its compact EBX form factor ensures compatibility with a variety of enclosures and systems, providing a reliable solution for demanding embedded computing needs.



MODEL

**Emerson /  
Motorola MBX860-  
001C**

CALIBRATION

**Available on  
request**

CONDITION

**Used**

STATUS

**In stock**

RFQ / SKU

**MBX860-001C**

LISTING

<https://aumictechlabs.com/products/mbx860-001c-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

## This unit

The Emerson/Motorola MBX860-001C is an EBX form factor embedded controller built around the Motorola MPC860 PowerQUICC processor. It integrates RISC processing with communications functions to deliver real-time performance in industrial control, data acquisition, and communication systems. The compact 5.75 × 8.0 inch board combines on-board memory, multiple serial and network interfaces, and extensive expansion connectivity to support demanding embedded applications in rugged environments. Technical Specifications Processor & Memory Motorola MPC860 PowerQUICC processor 16 MB on-board DRAM (standard

configuration) 2 MB Flash memory (MBX860-001 model) 32 KB NVRAM Floppy Disk Drive Controller (2.88 MB) Mechanical Form Factor: EBX Dimensions: 5.75 inches × 8.0 inches Interfaces & Connectivity 10BaseT Ethernet Asynchronous Serial Ports (COM1, COM2) MPC8xx Serial Communications Interface Keyboard Interface Mouse Interface Infrared (IR) EIDE interface (MBX860-002 model) Expansion Connectors PC/104-Plus expansion bus PCMCIA slot 8xx/COMM expansion connector (P1, 144-pin high-density socket) Power +12V DC input required On-board backup battery support Key Features The MPC860 PowerQUICC architecture consolidates processor and communications functions on a single die, eliminating the need for separate communications controllers. Multiple serial ports and 10BaseT Ethernet provide direct connectivity without additional adapters. The 144-pin 8xx/COMM expansion connector enables integration of specialized communications and I/O modules. Typical Applications Industrial control systems, real-time data acquisition platforms, network appliances, telecommunications equipment, and embedded systems requiring deterministic processing with integrated communications in space-constrained enclosures. Compatibility & Integration The EBX form factor ensures mechanical and electrical compatibility with standard system enclosures. PC/104-Plus expansion supports both ISA and PCI bus architectures. PCMCIA slot accepts I/O cards, memory expansion, and communication devices. The 8xx/COMM connector provides direct integration of Motorola 8xx-family compatible expansion modules.

# MBX860001C Characteristics / Specifications

| PARAMETER                   | VALUE                                      |
|-----------------------------|--------------------------------------------|
| Model Family                | MBX860                                     |
| Example Model               | MBX860-001C                                |
| Processor                   | Motorola MPC860 PowerQUICC                 |
| Architecture                | 32 bit PowerPC                             |
| Form Factor                 | EBX                                        |
| Cpu Clock Class             | up to 50 to 80 MHz class per MPC860 family |
| Instruction Cache Class     | 4 KB or 16 KB per MPC860 variant           |
| Data Cache Class            | 4 KB or 8 KB per MPC860 variant            |
| Communications Module       | CPM with SCC SMC SPI I2C class             |
| Memory Controller Banks     | 8                                          |
| Data Bus                    | up to 32 bit with dynamic sizing           |
| Address Lines               | 32                                         |
| Ethernet Class              | 10/100 class on MBX builds                 |
| Serial Ports Class          | multiple SCC SMC UARTs                     |
| Flash Memory Class          | onboard boot Flash                         |
| Dram Class                  | onboard soldered or SODIMM per build       |
| Expansion                   | EBX PC104 style expansion class            |
| Operating Temperature Class | commercial or industrial builds            |
| Manufacturer                | Motorola Emerson                           |
| Power Input Class           | embedded DC input                          |
| Realtime Clock              | integrated RTC class                       |
| Debug                       | BDM JTAG class                             |
| Humidity Class              | non condensing                             |
| Firmware                    | board support package boot                 |
| Operating temperature       | Class: commercial or industrial builds     |

| PARAMETER | VALUE                 |
|-----------|-----------------------|
| Humidity  | Class: non condensing |

# MBX860001C Specifications

| PARAMETER                                   | VALUE                       |
|---------------------------------------------|-----------------------------|
| Emerson Motorola MBX860 Embedded Controller | Overview                    |
| Key Features                                | MPC860 PowerQUICC processor |
| Technical Specifications                    | Model Family: MBX860        |

# General Specifications & Supplementary Characteristics

| PARAMETER                   | VALUE                                                                                                                                                                                                          |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Operating temperature       | Class: commercial or industrial builds                                                                                                                                                                         |
| Operating Temperature       | Class: commercial or industrial builds                                                                                                                                                                         |
| Humidity                    | Class: non condensing                                                                                                                                                                                          |
| Operating Temperature Class | commercial or industrial builds                                                                                                                                                                                |
| Manufacturer                | Motorola Emerson                                                                                                                                                                                               |
| Power Input Class           | embedded DC input                                                                                                                                                                                              |
| Realtime Clock              | integrated RTC class                                                                                                                                                                                           |
| Debug                       | BDM JTAG class                                                                                                                                                                                                 |
| Humidity Class              | non condensing                                                                                                                                                                                                 |
| Firmware                    | board support package boot Notes Family specs from Motorola MBX Series / MPC860 documentation. Exact DRAM Flash and I/O population for MBX860-001C are build-option specific on the board configuration label. |

# Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

| Specifications              |                                            |
|-----------------------------|--------------------------------------------|
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| Humidity Class              | non condensing                             |
| Firmware                    | board support package boot                 |

#### Notes

Family specs from Motorola MBX Series / MPC860 documentation. Exact DRAM Flash and I/O population for MBX860-001C are build-option specific on the board configuration label.



### Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: [sales@aumictech.com](mailto:sales@aumictech.com) · +1 (484) 841-9341

#### Aumictech

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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.