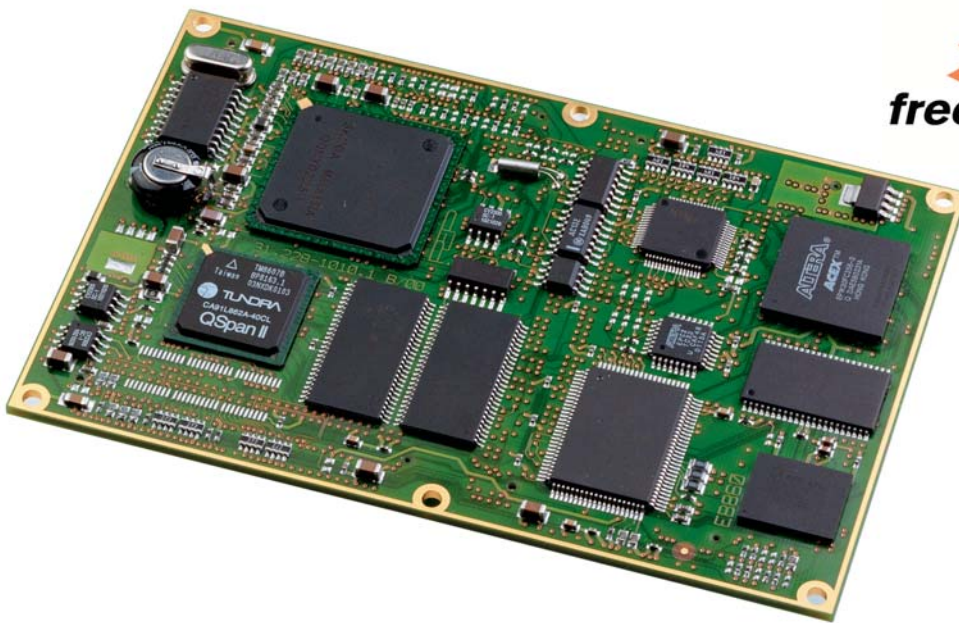


# ➤ **EB860**

# **MPC860 PowerPC**



***E<sup>2</sup>BRAIN*** *the intelligent module*

- **Communication oriented**  
The EB860 provides comprehensive communication performance for embedded applications.
- **Rich Mix Of Features**  
Targeted to mid range performance communication systems, the EB860 provides a comprehensive set of interfaces including UTOPIA.
- **Open Standard**  
Take advantage of the open E<sup>2</sup>Brain standard assuring compatibility, upgradability and easy deployment.

## Product Overview

As a communication oriented E<sup>2</sup>Brain Computer-on-Module, the EB860 is a perfect platform for mid-range performance, cost-sensitive embedded communication appliances.

### Communication Oriented

The EB860 provides a comprehensive set of interfaces suited for embedded communication applications. Built around the Motorola PowerPC MPC860T (PowerQUICC), it delivers an excellent combination of CPU and communication performance. The feature set comprises four serial interfaces (two T1/E1 channels, up to 64 HDLC channels), two terminal ports, one Fast Ethernet port or optional an 8bit UTOPIA 1 interface. RTC, watchdog and a PCI interface (optional) complete the extensive functionality.

### Rich Mix of Features

Six multi-protocol capable serial interfaces and Ethernet make the EB860 an ideal base for all kind of protocol converter or data concentrator applications. PCI and LPC can be used to interface to additional I/O devices.

### Open Standard

The open E<sup>2</sup>Brain Computer-on-Module standard assures compatibility, upgradability and easy deployment.

### Processor

Integrated PowerPC microprocessor Freescale MPC860T (PowerQUICC) @ 80MHz with internal RISC communication processor (CPM)  
106 Dhrystone (2.1) MIPS  
**Other MPC8xx derivatives on request (857T/859T/862/866)**

### Memory

Up to 128MB soldered SDRAM (32bit data bus with burst support)  
Up to 16MB soldered Flash  
1MB SRAM with backup by auxiliary power 64kBit EEPROM for user settings

### Additional onboard devices

Real time clock w. backup by goldcap capacitor  
Watchdog

### System Interface

PCI Master/Agent interface (optional), 32 Bit address/data/33 MHz, Universal signaling voltage (3,3V, to fit in 3,3V or 5V bus), LPC (Low Pin Count) interface (no DMA) for I/O extensions, I<sup>2</sup>C, JTAG/BDM interface, 2 Terminal ports (Rx/Tx), Utility port (LEDs, Reset, Abort), SPI port

### I/O Interface

FastEthernet (MDI/MII) or 8bit UTOPIA 1 interface  
4 (MPC855: 1) serial ports with multiprotocol support (E1/T1, HDLC) or 4 10MBit Ethernet ports

### Software Support

Operating system independent boot loader with network support  
VxWorks board support package  
Linux board support packages

### Power Consumption

typ. 2W at 3,3V (80MHz, 16MB Flash, 128MB SDRAM)

### Common

Mechanical Conformance: E<sup>2</sup>Brain Module Specification Rev. 0.2  
Dimension: 115 mm x 75 mm (E<sup>2</sup>Brain card size)  
Temperature Ranges: 0 °C to +70 °C (standard)  
-40 °C to +85 °C (extended)  
Operation Humidity Range: 93% RH at 40 °C, non-condensing (acc. to IEC 60068-2-78)  
Weight: 50 g  
MTBF: ca. 221,700 h (acc. MIL-HDBK-217F)

## Ordering Information

Product	Description	Order No.
EB860	Freescale MPC860T@80MHz, 64MB SDRAM, 16MB Flash, 1MB SRAM, PCI, Fast Ethernet, 6 serial interfaces	25932
EB855	Freescale MPC855T@80MHz, 16MB SDRAM, 8MB Flash, 3 serial interfaces	26020
EB860-EVALKIT	Evaluation kit for EB860, contains EB860 (64MB SDRAM, 8MB Flash), evaluation carrier board, power supply, cabling, pre-installed Linux BSP, CD-ROM with documentation and Linux software	26868
KIT-EB860	EB860 documentation on CD-R <sup>1</sup>	26024
KIT-EB855	EB855 documentation on CD-R <sup>1</sup>	
VXW-BSP-EB860	VxWorks Board Support Package for EB860/EB855, for WindRiver Workbench	26022
LIN-BSP-EB860	Linux Board Support Package for EB860/EB855, distribution independent package with cross toolchain and root file system	26023
Note:	1) Kits downloadable free of charge from the Internet	

## Corporate Offices

**US/ Canada**  
14118 Stowe Drive  
Poway, CA 92064-7147  
Tel.: +1 (0)888-294-4558  
Fax: +1 (0)858-677-0898

sales@us.kontron.com

**Europe, Middle East and Africa**  
Oskar-von-Miller-Straße 1  
85386 Eching/Munich Germany  
Tel.: +49 (0)8165-770  
Fax: +49 (0)8165-77219

sales@kontron.com

**Asia Pacific**  
2F. No.2, Lane 50, Nankang Road,  
Sec. 3, Nankang District  
Taipei, Taiwan  
Tel.: +886-2-2782 0201  
Fax: +886-2-2782 7486  
sales@kontron.com.tw

**Kontron Modular Computers GmbH**  
Sudetenstr. 7  
D-87600 Kaufbeuren  
Tel.: +49 (0) 8341 803 0  
Fax: +49 (0) 8341 803 499

sales@kontron.com

Our worldwide sales representatives and partners can be found on our websites: <http://www.kontron.com>, <http://www.kontron-emea.com>