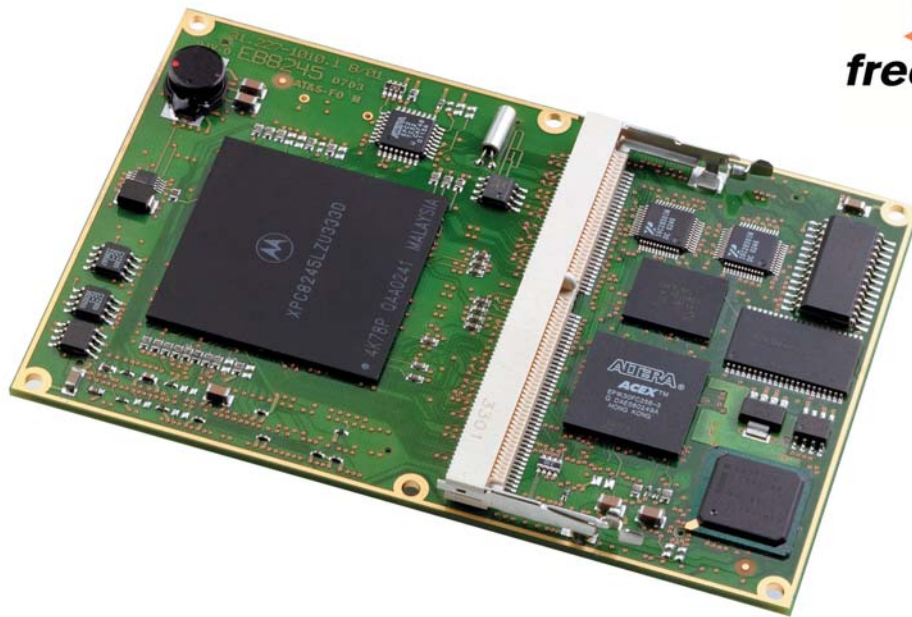


# ➤ **EB8245**

# **MPC8245 PowerPC**



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

- **Excellent Performance**  
The EB8245 delivers excellent computing and I/O performance for embedded control applications.
- **Embedded PowerPC made easy**  
As a complete Computer-on-Module, the EB8245 extremely simplifies embedded PowerPC designs.
- **Open standard**  
Accelerate time-to market by taking advantage of an open-standard Computer-on-Module.

## Product Overview

Finishing projects early gets more and more important in today's fast moving Embedded Computer world. The highly application oriented E<sup>2</sup>Brain Computer-on-Modules help you achieving this goal.

### Excellent Performance

Featuring the highly integrated Freescale PowerPC MPC8245, the EB8245 delivers excellent computing performance at a remarkably low power consumption. Due to the SO-DIMM socket, memory can be easily scaled to the requirements of the application.

### Embedded PowerPC made easy

More than just a CPU core, the EB8245 provides a comprehensive set of features and interfaces tailored to the needs of real-time industrial applications. Industry standard interfaces make the module easy to deploy.

### Open Standard

Looking for a stable solution for Your Embedded Computer challenge? E<sup>2</sup>Brain guarantees long term availability and form-fit-function upgrades.

### Processor

Integrated PowerPC microprocessor Freescale MPC8245 @ 330MHz  
Internal processor core MPC603e with FPU (floating point unit)  
465 Dhrystone (2.1) MIPS at 330MHz

### Memory

Up to 512MB SDRAM (SO-DIMM),  
Up to 32MB soldered Flash (133MHz, 64bit)  
1MB SRAM with backup by onboard goldcap capacitor or external auxiliary power  
64kBit EEPROM for user settings

### Additional onboard devices

Real time clock w. backup by goldcap capacitor, Watchdog, LM75 temperature sensor SJA1000 CAN controller

### System Interface

PCI Master/Agent interface, 32 Bit address/data/33 MHz, PCI transfer rate up to 132 MB/sec., LPC (Low Pin Count) interface (no DMA) for I/O extensions, I<sup>2</sup>C, JTAG/BDM interface, 2 Terminal ports (Rx/Tx only), Utility port (LEDs, Reset, Abort), CompactFlash (IDE) interface

### I/O Interface

Fast Ethernet Interface 10/100Base-Tx with autosensing  
4 high-speed serial ports (16550 compatible)  
CAN (L2) interface with SJA1000 controller

### Software Support

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

### Power Consumption

typ. 5W at 3,3V (330MHz, 16MB Flash, 64MB 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: 62g (without SO-DIMM)  
MTBF: ca. 251,000 h (acc. MIL-HDBK-217F)

## Ordering Information

Product	Description	Order No.
EB8245	E <sup>2</sup> Brain PowerPC module with Freescale MPC8245 @ 330MHz, 8MB Flash, 1MB SRAM, 4 serial ports, CAN interface	25931
EB8245-E2	E <sup>2</sup> Brain PowerPC module with Freescale MPC8245 @ 330MHz, 8MB Flash, 1MB SRAM, 4 serial ports, CAN, ext. temp. range	26730
EB8245-EVALKIT	Evaluation kit for EB8245, contains EB8245 (256MB SDRAM, 8MB Flash), evaluation carrier board, power supply, cabling, pre-installed Linux BSP, CD-ROM with documentation and Linux software	26821
DMSO-128	SODIMM 128MByte SDRAM 144-pin PC133	24050
DMSO-256	SODIMM 256MByte SDRAM 144-pin PC133	23362
KIT-EB8245	EB8245 documentation on CD-R <sup>1</sup>	25939
VXW-BSP-EB8245	VxWorks Board Support Package for WindRiver Workbench	25941
LIN-BSP-EB8245	Linux Board Support Package, distribution independent package with cross toolchain and root file system	25942
Note:	1) Kits downloadable free of charge from the Internet	

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