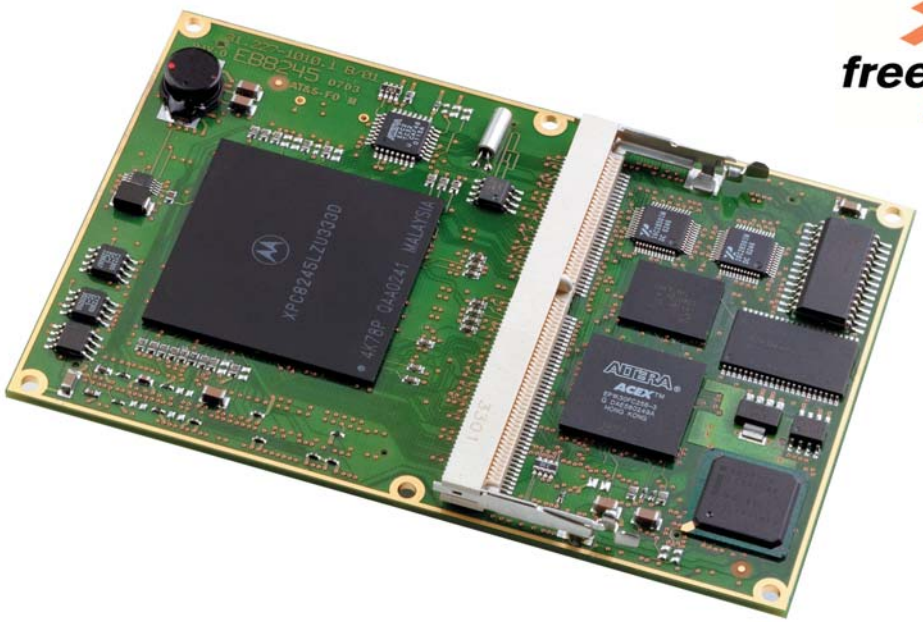
EB8245
MPC8245 PowerPC

freescale™ Enabled



E²BRAIN *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 todays fast moving Embedded Computer world. The highly application oriented E²Brain 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 ? E²Brain 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†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:	E²Brain Module Specification Rev. 0.2
Dimension:	115 mm x 75 mm (E²Brain 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	E²Brain PowerPC module with Freescale MPC8245 @ 330MHz, 8MB Flash, 1MB SRAM, 4 serial ports, CAN interface	25931
EB8245-E2	E²Brain 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 [1]	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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