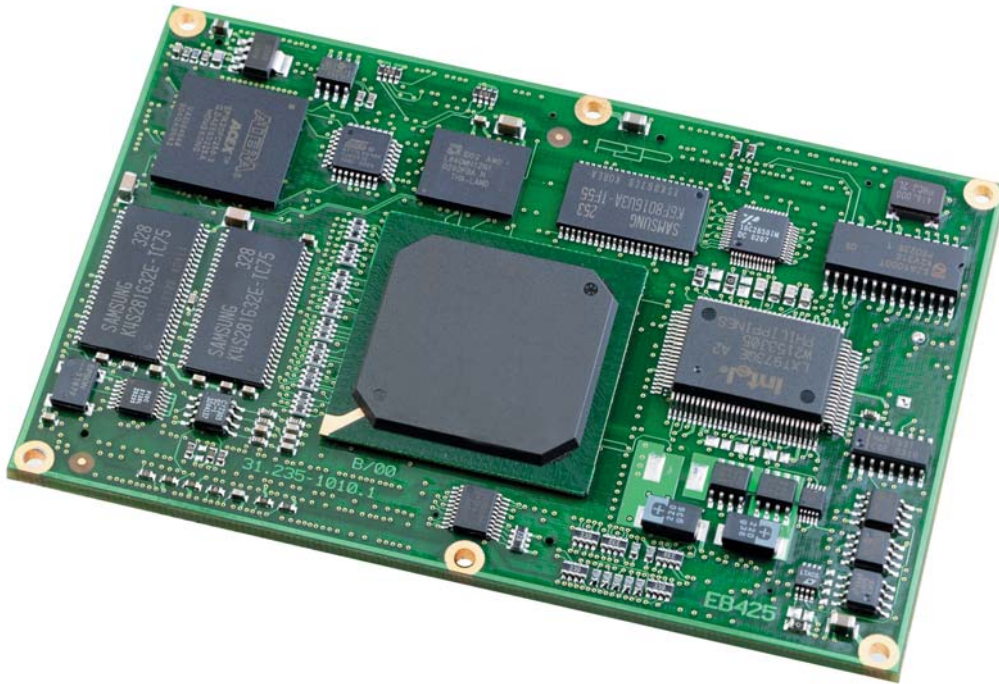


EB420

Intel® XScale® Technology



Powerful

Performant

Competitive

E²Brain™ is a highly application oriented platform for advanced computer modules.

- Accelerate time-to-market by taking advantage of ready-to-run Computer-On-Modules.
- System design is made easy by deploying a sophisticated processor module.
- The EB420 provides a well-balanced combination of computing and communication performance for embedded control and communication applications.

E²BRAIN

Product Overview

The EB420 as a feature optimized Computer-on-Module focus on computing performance and networking bandwidth at an excellent price-performance ratio.

Performant

Based on the effective Intel XScale IXP420 processor, the EB420 delivers enhanced computing and communication performance. The module feature dual Fast Ethernet, PCI, LPC, I²C, USB device and 2 (4) serial interfaces. Watchdog, real-time clock and a CompactFlash interface round out the comprehensive feature set and qualify the module for use in hard real-time applications.

Versatile

The EB420 is perfectly tailored for networked embedded control applications. Minimal power consumption and heat dissipation make the EB420 a perfect computing engine for use in power-conscious, deeply embedded control and communication systems.

Effective

As a complete Computer-on-Module, the EB420 covers required system functionality to a high degree. Deployment of the module is made easy by focussing on industry standard interfaces, processor specific know-how is not required ! Board support packages for VxWorks and Linux are integrated with all drivers for the EB420 onboard devices and interfaces, thus reducing the software effort to pure application development rather than device driver integration.

Processor

Intel IXP420 @ 266MHz with 2 integrated NPEs (Network Processor Engines), based on Intel XScale architecture

Memory

32/64MB soldered SDRAM
4/8MB soldered Flash
64kBit EEPROM for user settings

Additional onboard devices

Real time clock w. backup by auxiliary power supply, watchdog

System Interface

PCI 32 bit address/data, 33/66 MHz, PCI transfer rate up to 264 MB/sec.
Universal signaling voltage (3,3V, to fit in 3,3V or 5V bus)
LPC (Low Pin Count) interface (no DMA) for I/O extensions
I²C, JTAG/BDM interface
2 Terminal ports (Rx/Tx)
Utility port (LEDs, Reset, Abort)
CompactFlash (IDE) interface

I/O Interface

Two Fast Ethernet Interfaces 10/100Base-Tx with autosensing
2 serial interfaces (16550 compatible)
USB 1.1 device interface

Software Support

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

Power Consumption

typ. 2W at 3.3V (266MHz, 8MB Flash, 64MB SDRAM)

Common

Mechanical Conformance: E²Brain Module Specification Rev. 02
Dimensions: 115 mm x 75 mm (E²Brain card size)
Temperature Ranges: 0 °C to + 70 °C
Operation Humidity Range: 93% RH at 40 C, non-condensing
(acc. to IEC 60068-2-78)
Weight: 55g
MTBF: ca. 308,100 h (acc. MIL-HDBK-217F)

Product	Description	Order No.
EB420	E ² Brain module with Intel IXP420 @ 266MHz, 32MB SDRAM, 4MB Flash, 2 serial ports	29474
EB420	E ² Brain module with Intel IXP420 @ 266MHz, 64MB SDRAM, 8MB Flash, 4 serial ports	29475
EB425-EVALKIT	Evaluation kit for EB420/425 containing a EB425 module, carrier board, power supply, preinstalled Linux BSP and documentation	27310
KIT-EB425	EB420/425 documentation on CD-R ¹	27306
VXW-BSP-EB425	EB420/425 VxWorks Board Support Package for development with Tornado V2.2	27308
LIN-BSP-EB425	EB420/425 Linux Board Support Package	27309
Note:	1) Kits downloadable free of charge from the Internet	

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