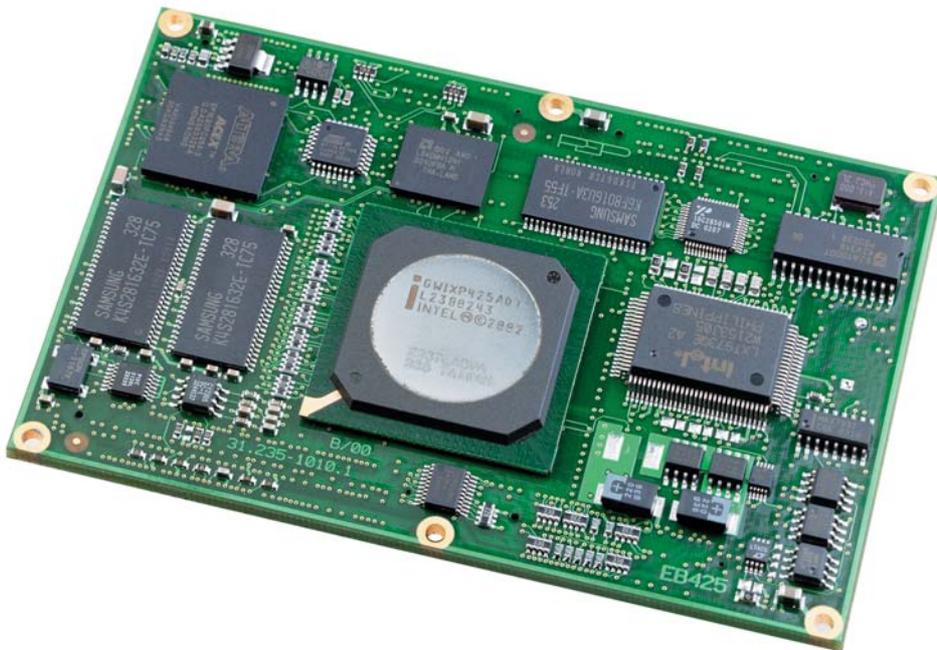# EB425
Intel® XScale® Technoloy

Performant

Versatile

Effective

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

➤ Accelerate time-to-market by taking advantage of ready-to-run SystemOnModules.

➤ Ease system design with sophisticated processor modules.

➤ The EB425 delivers excellent computing and communication performance for embedded control applications.

E²BRAIN

Product Overview

Enhanced performance and connectivity, minimal power consumption and heat dissipation. Does your embedded computer design requires all that ? The EB425 is the answer !
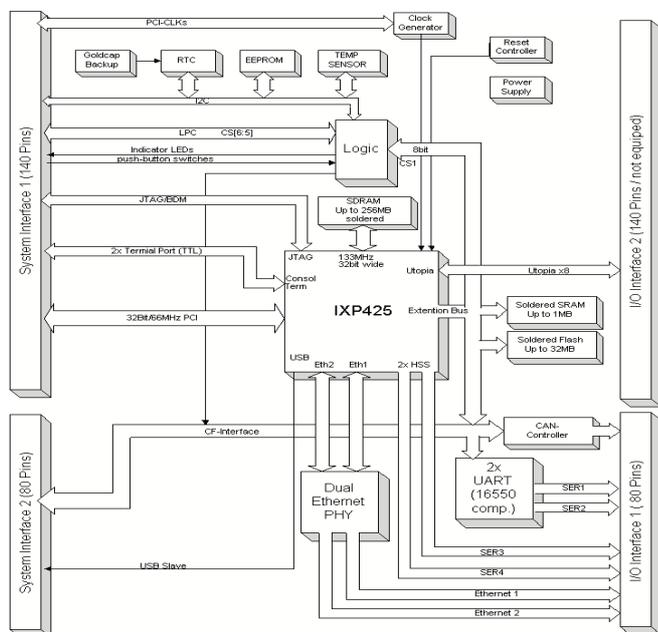
Performant
Built around the high-performance Intel IXP425 processor, the EB425 delivers excellent computing and communication performance.

Versatile
The EB425 offers a comprehensive set of features and interfaces perfectly tailored to all kind of embedded applications.

Effective
The extremely low power consumption and heat dissipation eases system design a lot. As a complete ComputerOnModule, the EB425 covers required system functionality to a high degree.

Processor
Intel IXP425 @ 533MHz with 3 integrated NPEs (Network Processor Engines), based on Intel XScale archictecture

Memory
Up to 256MB soldered SDRAM
Up to 32MB soldered Flash
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, SJA1000 CAN controller, temperature sensor

System Interface
PCI Master/Agent interface, 32 Bit address/data/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 only), Utility port (LEDs, Reset, Abort), CompactFlash (IDE) interface

I/O Interface
Two Fast Ethernet Interfaces 10/100Base-Tx with autosensing
2 synchronous high-speed serial ports
2 asynchronous serial interfaces (16550 compatible)
CAN (L2) interface (SJA1000 controller)
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. 2.8W at 3.3V (533MHz, 8MB Flash, 64MB SDRAM)

Common

Mechanical Conformance:	E²Brain Module Specification Rev. 0.0
Dimensions:	115 mm x 75 mm (E²Brain card size)
Temperature Ranges:	0 °C to + 70 °C (standard)
	-40 °C to +85 °C (extended; optional)
Operation Humidity Range:	93% RH at 40 C, non-condensing (acc. to IEC 60068-2-78)
Weight:	58g
MTBF:	ca. 308,100 h (acc. MIL-HDBK-217F)

Product	Description	Order No.
EB425	E²Brain module with Intel IXP425 @ 533MHz, 64MB SDRAM, 8MB Flash, 1MB SRAM, 4 serial ports, CAN interface	27304
EB425	E²Brain module with Intel IXP425 @ 266MHz, 32MB SDRAM, 4MB Flash, 2 serial ports	27305
EB425-E2	E²Brain module with Intel IXP425 @ 533MHz, 64MB SDRAM, 8MB Flash, 1MB SRAM, 4 serial ports, CAN interface, extended temperature range (-40 °C to +85 °C)	27307
EB425-EVALKIT	Evaluation kit for EB425 containing a EB425 module, carrier board, power supply, preinstalled Linux BSP and documentation	27310
KIT-EB425	EB425 documentation on CD-R ¹	23706
VXW-BSP-EB425	VxWorks Board Support Package for development with Tornado V2.2	27308
LIN-BSP-EB425	Linux Board Support Package for development with SYSGO ELinOS Embedded Linux	27309
Note:	1) Kits downloadable free of charge from the Internet	

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