Adbc7517

- **Eight core processor**
- **Linux or VxWorks**
- **ECC support**
- **Bootable via Flash, SPI, or SD/SDHC**
- **RoHS compliancy**
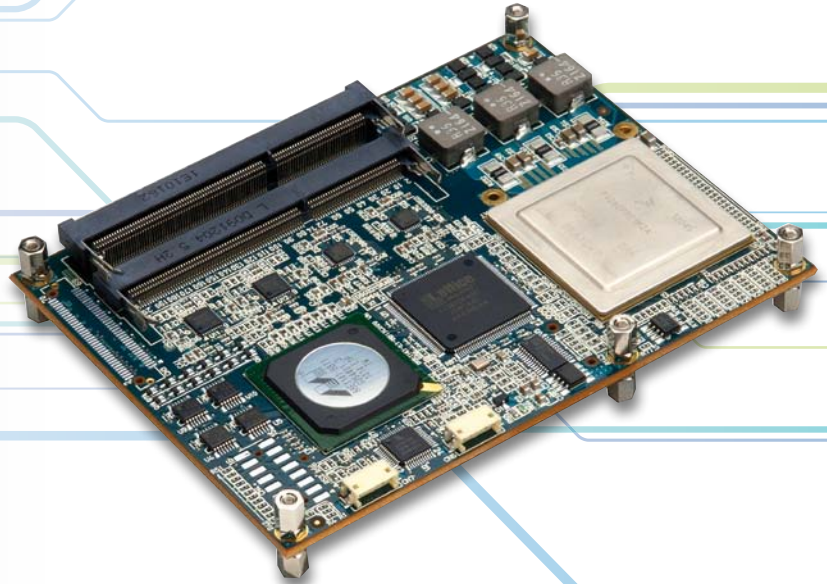
FEATURES

Multicore Processor – Eight cores means applications running on the Adbc7517 can support multiple operating environments or processes running concurrently.

ECC Memory – The Adbc7517 comes with DDR-3 memory which supports Error Code Correction (ECC) and increases reliability and accuracy in data receiving and transmitting.

COM Express Form Factor – The standard COM Express form factor provides flexibility and upgrade or expansion capabilities at minimal cost and effort.

Low Power Design – The Adbc7517 has a low power profile (12V at under 6.5A) which allows applications to take advantage of the to take advantage of the capability and performance of a rich platform, that is exceptionally power efficient.

- **Medical**
- **Transportation**
- **Semiconductor**
- **Communications**
- **Industrial machinery**

The Adbc7517 is part of Eurotech's COM Express module product line based on Freescale's QorIQ processor family. With a long list of very powerful capabilities, the Adbc7517 is ideal for applications in the medical, memory testing, robotics, or networking industries which might require extensive DSP or numerical data-crunching.

Designed with the P4080 processor, the Adbc7517 supports eight cores, which can either be consolidated and managed with one operating system or used to run multiple OS environments for the most flexibility in application processing such as DSP.

The Adbc7517 also packs a powerful set of I/O such as quad UART channels, three PCIe ports, three Gigabit Ethernet ports, and four USB 2.0 ports. These are all integrated onto a low power, COM Express design giving OEMs a solution with the optimum combination of power, performance, and size.

The Adbc7517 is available in several configurations and supports a standard Eurotech carrier board. Eurotech also offers services for those applications that require a custom design.

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System Architecture

PROCESSOR	• Freescale™ P4080 8-core CPU @ 1.5GHz • L1 cache: 32KB/core for data and 32kB/core for instruction • L2 cache: 128KB/core • L3 cache: 2MB (shared)
OPERATING ENVIRONMENT	• VxWorks • Linux
RAM MEMORY	Up to 4GB dual channel DDR3-1333 SO-DIMM with ECC
FLASH MEMORY	• 128MB bootable NOR flash • 1GB bootable NAND flash
SERIAL EEPROM	2KB
NETWORK	1x 10/100/1000 BASE-T Ethernet interface
SPI	1x bootable SPI Flash ROM (optional on carrier board)
SECURE DIGITAL	1x bootable SD/SDHC card (optional on carrier board)
PCI EXPRESS	• 1x PCI Express (x4) Base 1.1 • 2x PCI Express (x2) Base 1.1
USB	4x USB 2.0 ports
UART	4x UART interfaces
I2C	1x I2C interface
eLBC	P4080 local bus (available for 8-bit SRAM or EEPROM)
WATCHDOG TIMER	125ms - 16s to reset board at time out
TEMPERATURE MONITOR	Monitoring ability for: • CPU internal temperature • PCB surface temperature
REAL TIME CLOCK	Equivalent to RTC-8564 (based by VCC_RTC power)
AURORA DEBUG	Optional
JTAG	Optional
PHYSICAL	• Basic COM Express at 125 x 95 mm • PICMG COM.0 R1.0COM Express Module Basic Spec Rev 1.0 • RoHS compliant
POWER	• Supply voltage: 12.0V±5%, SBY±5% (via COM Express connector) • Consumption current: 12V up to 6.5A and SBY up to 200mA
TEMPERATURE	Operating: 0ºC to +50ºC
ORDERING INFORMATION	Coming soon

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