

## EX DIMM Processor & Memory Module

The EX DIMM module uses the DSTni EX processor and combines it with a set of SRAM and Flash memory. The EX DIMM uses the industry standard DIMM socket which allows the user to easily plug the EX DIMM into their base board and keep the more expensive processor and memory component separate. Most of the peripherals of the DSTni EX chip are brought out to the DIMM pins.

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The EX DIMM is a fast, cost-effective way to add a high performance DSTni EX chip and memory to your design. The DIMM module has all the processor, memory and watchdog functions built-in so all you need to do is design the remainder of your application. The peripherals of the DSTni EX chip are brought to the DIMM pins so that the base board can use place the external connectors and transceivers where needed.

The EX DIMM contains the EX chip, one megabyte of external SRAM, 256K on-chip SRAM, two megabytes of parallel flash, four megabits of serial flash, and two kilobytes of EEPROM.

The EX DIMM also has a watchdog timer and required crystal / oscillator circuitry for the EX processor.

The 2x Ethernet, 2x CAN, USB, 4x Serial, SPI, I2C port are all available on the DIMM connector. The DSTni EX development board uses the EX DIMM module as the main processor and most of the peripherals and pins of the DIMM are brought out onto the development board.

The EX DIMM board is part of a family of DIMM boards. The DIMM pins are defined so that the user or Grid Connect can design many different processor DIMMs in the future.

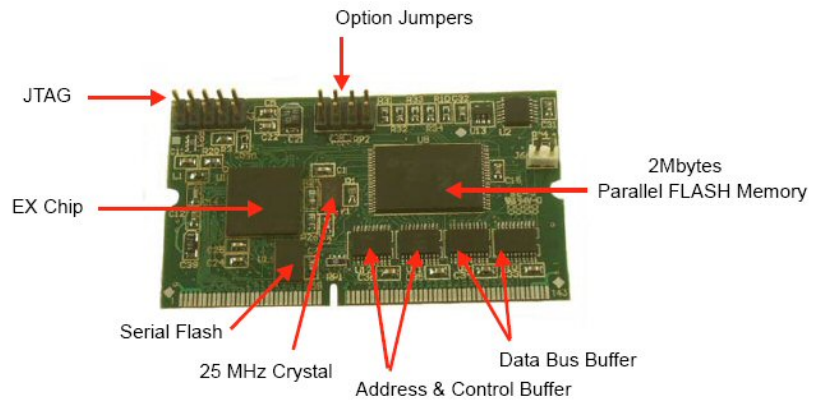
## EX DIMM

### Processor & Memory Module

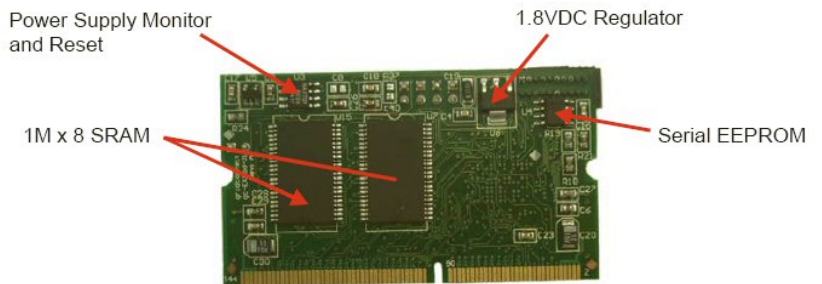
#### Features

- SOC 16 bit 30MIPs Processor
- 144 pin SO DIMM connector (gold plated)
- 25-128Mhz software controlled PLL
- Intel/AMD x186 compatible
- On Chip Memory and Peripherals
  - 256K bytes SRAM (on-chip)
  - 2x 10/100M Ethernet MACs
  - 1x 10/100M Ethernet PHY
  - 4x UARTs rates up to 920K
  - SPI, I2C
  - 2x CAN controllers
  - 1x USB 1.1 host/slave controller
  - 3 timers, 1 watchdog timer
  - 4 DMA channels
  - JTAG, break point, trace registers (Connector on DIMM)
  - Interrupt controller
- 2M byte Parallel Flash
- 1M byte Parallel SRAM
- 4M bits serial Flash
- 2K byte EEPROM
- +3.3V operation
- Small board 1.5" x 2.66"
- Wide temperature range -40 to 70 degrees C
- Includes DSTni OS royalty free operating system

#### EX DIMM Diagram of components (front)



#### EX DIMM Diagram of components (back)



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#### Part Numbers:

GC-DIMM-EX-01

EX DIMM Module