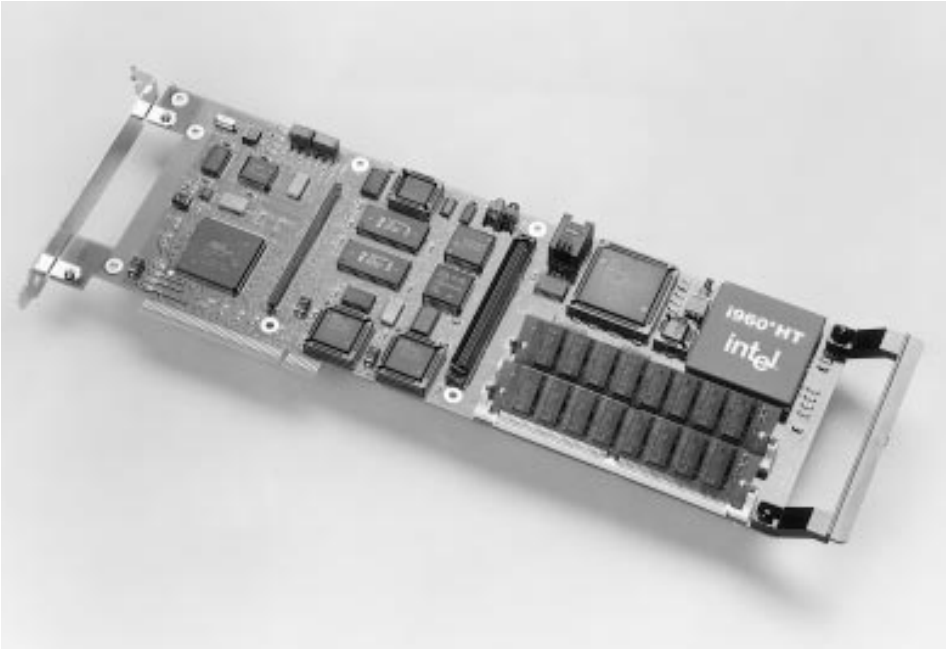
PCI-913 Intelligent PCI Add-in Boards

- i960® HD66 RISC Superscalar Microprocessor Operating at 33 MHz Local Bus Frequency
- 2 to 64 Mbytes of Interleaved Fast Page Mode DRAM Located in Two Angled, Field Upgradeable SIMM Sockets (A Version) or 2 to 128 Mbytes of DRAM in Four Upright SIMM Sockets (B Version)
- 1 or 2 Mbytes of Sectored, In-Circuit Programmable Flash ROM
- Console Serial Port
- Eight Status LEDs
- Squall II Module Interface
- Extended Squall II Module Interface (IIE and IIET)
- Two 32-Bit Counter/Timers
- PCI-to-i960 Processor Bridge Device With Two DMA Channels, Mailboxes, and Doorbell Registers
- Breeze Development Environment*
  – MON960 Debug Monitor
  – Cyclone System Services



The PCI-913 is a full length Intelligent PCI Add-in Board that expands system processing power by off loading I/O tasks from the host processor. The PCI-913 cards can be used as processing engines for a wide range of applications from telecommunications and networking to machine control and robotics. Driven by the i960 HD66 Superscalar RISC Microprocessor, the I/O boards support Cyclone's Squall II, IIE and IIET I/O Modules.

The PCI-913 has the Cyclone Breeze Development Environment resident in the Flash ROM. The Breeze Development Environment accelerates the time to develop an embedded system by taking the risk out of building and testing boot ROMs; providing a resident debug monitor; providing an automatic boot user application feature; and reducing the amount of hardware level programming involved with the System Services calls. The host development station communicates to the target PCI-913 via the serial console port or the PCI bus.

Cyclone also provides board support packages for pSOSystem* and Tornado*/ VxWorks*. PCI-913 boards can be ordered with pSOSystem or VxWorks boot ROMs factory loaded into the Flash ROM.

SQUALL II MODULE INTERFACE

The Squall II Module interface provides I/O expansion and flexibility by allowing users to add different I/O interfaces to the PCI-913. Cyclone Microsystems has various off-the-shelf modules available which are listed below.

The Squall II Module interface, an open domain specification, is an enhanced set of the i960 microprocessor's data, address, and control signals. If custom or unique I/O is required, users can build their own modules or contact Cyclone Microsystems for customized modules and boards.

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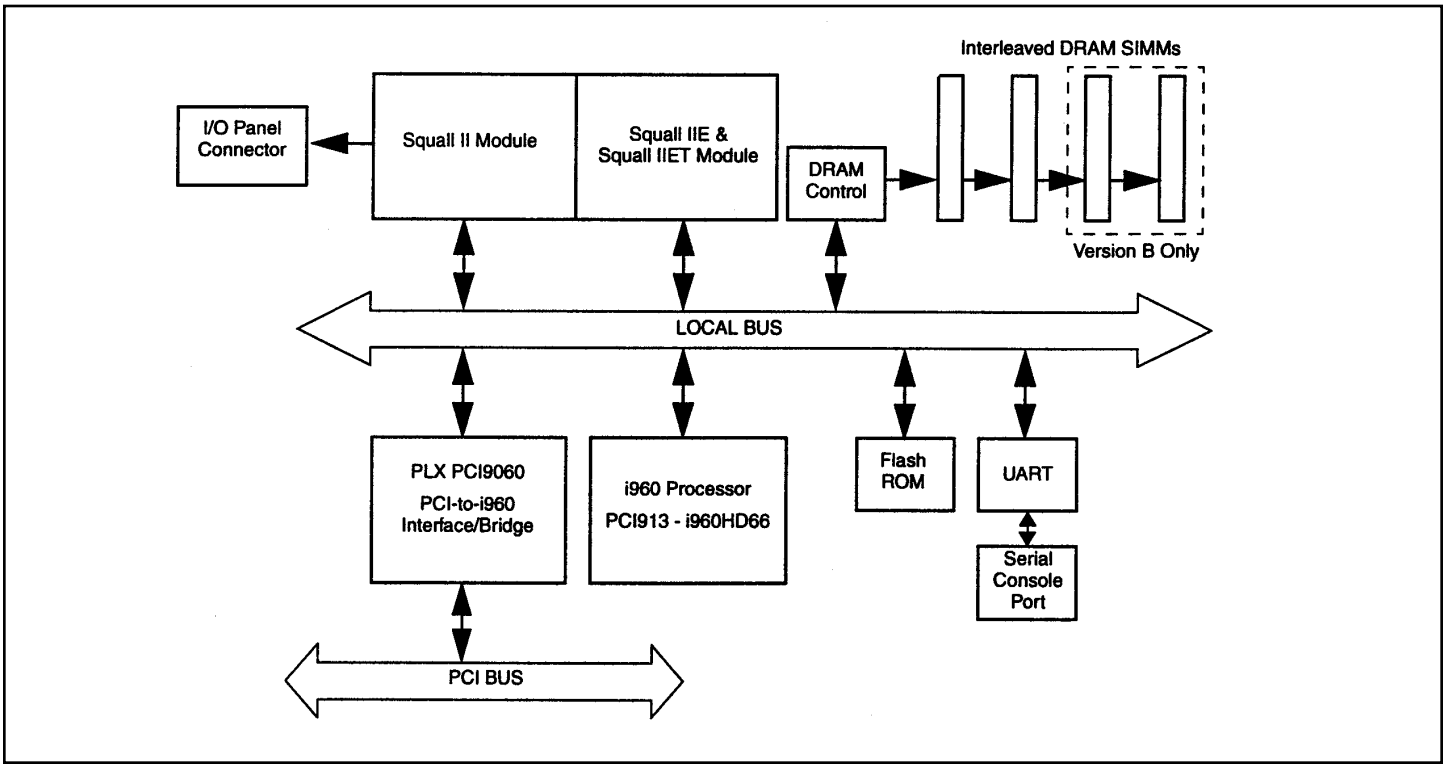

SQ01 82596CA Ethernet Coprocessor
SQ05 10BaseT Ethernet (Big Endian)
SQ06 100BaseT4 Ethernet
SQ09 100BaseTx Ethernet
SQ10 53C710 SCSI-2 (Fast) Coprocessor
SQ11 53C720 SCSI-2 (Fast & Wide) Coprocessor
SQ13 UltraSCSI (Fast-20 Wide)
SQ20 Two High Speed Serial Ports (RS-422)
SQ32 ATM/OC-3 Interface
SQ33 ATM/T1 Interface
SQ40 20-Bit Differential Input Port with FIFO

EXTENDED SQUALL II MODULE (IIE & IIET) INTERFACE

A second expansion connector has been added for users whose expansion I/O does not conform to the standard 12 square inch Squall II Module. The Squall IIE Module provides 26 square inches for user I/O circuitry. Electrically, the Squall IIE and Squall IIET are identical to the Squall II interface. However, a different connector is used allowing more flexibility in the board to board spacing.

The 12mm spacing of the Squall IIE Module allows the entire assembly to reside in a single PCI card slot. One Squall II or one Squall IIE Module can be placed on a PCI-911 series board.

The Squall IIET (Extended & Tall) uses 18mm board to board spacing allowing the concurrent use of both a Squall II and Squall IIET Module. This format, however, forces the Squall IIET Module into the adjacent PCI slot using a total of two PCI slots.

STATUS LEDs

Eight user programmable LEDs are provided for diagnostic or user defined applications.