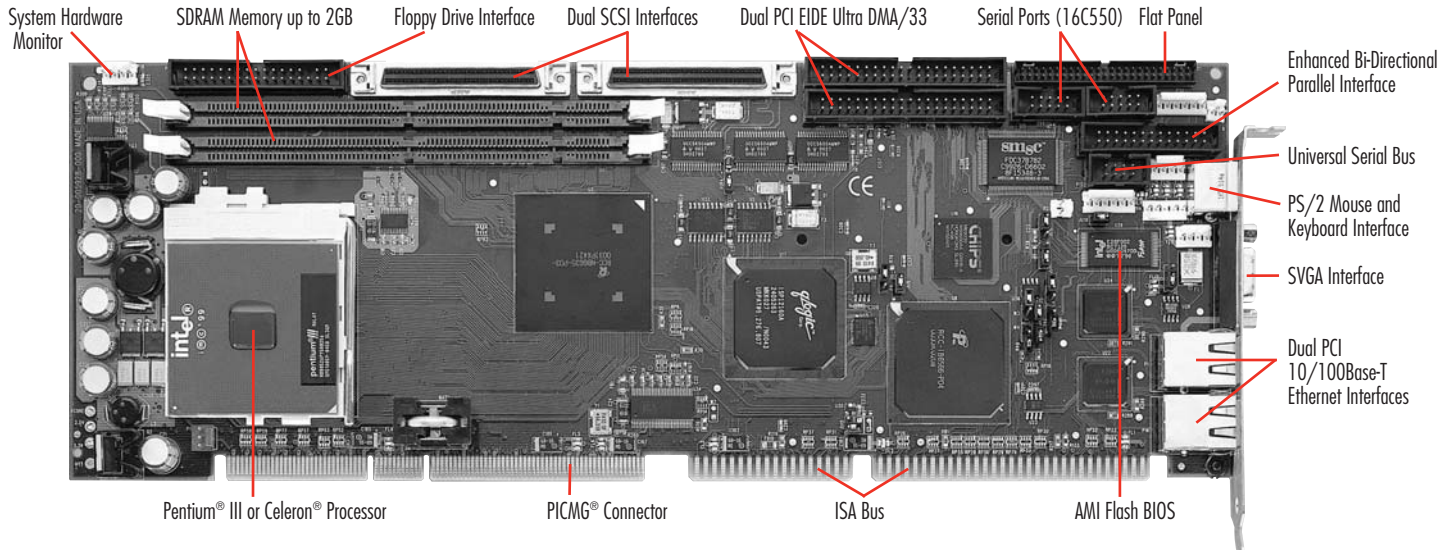


### ULE SINGLE BOARD COMPUTER



Designed to give you the faster performance and flexibility you need, the ULE has dual Ethernet, dual SCSI, video, SDRAM memory, and an Intel® Pentium® III or Celeron® processor. Additionally, the ULE supports Flat Panel and Compact Flash™. With all of these options on board, the ULE saves you slots and lets you take advantage of the SBC's flexible processor options.

#### PROCESSOR:

Intel® Pentium® III processor at 733MHz - 1.26GHz  
 Intel Celeron® processor at 850MHz - 1.2GHz  
 Processor Package: FC-PGA or FC-PGA2

#### CHIPSET:

The ServerWorks ServerSet™ III LE chipset supports a Front Side Bus bandwidth of 100MHz or 133MHz, with full support for ECC on the memory bus. Supports single-bit error correction, with multiple-bit error detection.

#### CACHE MEMORY (L2):

The Pentium III processor includes an integrated on-die, 256K or 512K 8-way set associative level two (L2) cache with a 256-bit wide bus. The processor also includes a 16K level one (L1) instruction cache and 16K L1 data cache. These cache arrays run at the full speed of the processor core.

For Celeron processors, a 128K or 256K unified, non-blocking second level (L2) cache improves performance by reducing the average memory access time and providing fast access to recently used instructions and data.

Celeron processors with 256K cache and all Pentium III processors implement the Advanced Transfer Cache architecture.

#### FRONT SIDE BUS:

The ServerWorks ServerSet III LE supports speeds of 100MHz or 133MHz. The Front Side Bus provides a path for transferring data between main memory/chipset and the microprocessor.

#### SCSI INTERFACES (DUAL):

The dual SCSI interface supports two concurrently operating channels using QLogic's ISPI2160A Dual Channel SCSI Controller, which supports SCSI operation up to 160MB per second. One channel is implemented as an Ultra3 LVD and the other as an Ultra Wide single-ended channel. Enable/disable SCSI termination with byte granularity is provided. Software drivers are available for most popular operating systems.

#### PCI 10/100BASE-T ETHERNET INTERFACES (DUAL):

The dual PCI Ethernet interfaces (Intel 82559) support 10/100Base-T via RJ-45 connectors on the board's I/O bracket. The interfaces are compliant with IEEE 802.3 and PCI Local Bus 2.1 Specifications. Link status and activity LEDs are on the I/O bracket. Software drivers are available for most popular operating systems.

#### PCI EIDE ULTRA DMA/33 INTERFACE (DUAL):

Dual high performance PCI Bus Master EIDE interfaces are capable of supporting two IDE disk drives each in a master/slave configuration. Supports Ultra DMA/33 with synchronous DMA mode transfers up to 33MB per second.

#### DRAM MEMORY:

The DRAM interface consists of two dual in-line memory module (DIMM) sockets and supports auto detection of memory up to 2GB of Synchronous DRAM (SDRAM) memory. The DIMM memory is PC-133 compliant, which means that it complies with IBM's PC133 SDRAM Registered DIMM Design specification. Uses industry standard 72-bit wide (ECC) gold finger DIMM modules in two 168-pin DIMM sockets.

#### BUS SPEEDS:

ISA	- 16-bit/8MHz
PCI	- 32-bit/33MHz
	- 64-bit/33MHz
	- 64-bit/66MHz
System/FSB	- 100MHz or 133MHz

#### BIOS (FLASH):

AMIBIOS 7.0 with built-in advanced CMOS setup for system parameters, peripheral management for configuring on-board peripherals, PCI-to-PCI bridge support, and PCI interrupt steering. Supports flash devices for BIOS upgrading via floppy interface. Custom BIOSs are available.

#### PCI LOCAL BUS INTERFACE:

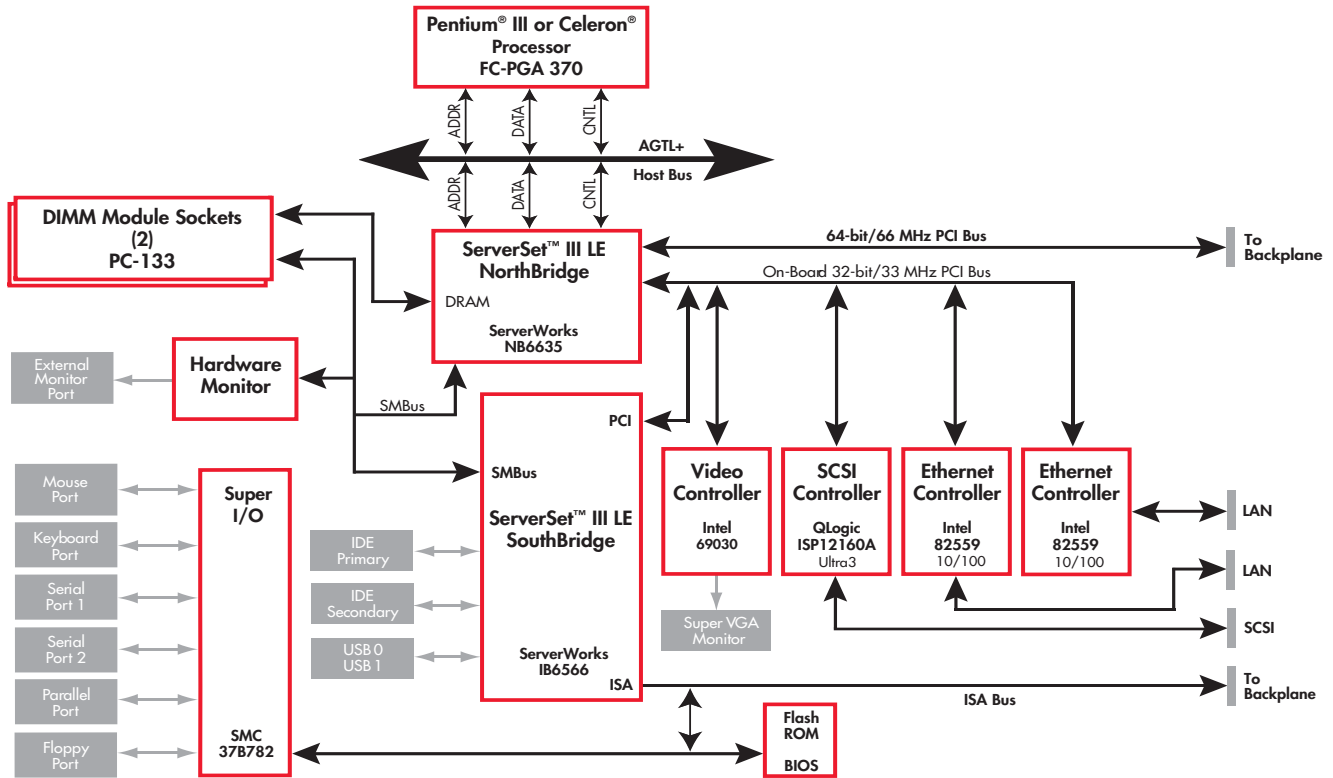
The ULE provides on-board Primary and Secondary PCI Bus interfaces. Both the Primary and Secondary PCI Bus interfaces provide a sixteen deep I/O cache and a four deep request queue for PCI to Memory cycles.

**Primary PCI Interface:** The Primary PCI interface is 32 bits wide, runs at 33MHz and supports on-board SCSI, video and dual Ethernet interfaces.

**Secondary PCI Interface:** The Secondary PCI interface is 64 bits wide and runs at 33/66MHz. The interface is routed off board to drive PCMI® compliant PCI/ISA backplanes.



Dependable, always.



### SUPER VGA INTERFACE:

The Intel 69030 video interface has 4MB of on-chip memory and supports up to 1280 x1024 pixel resolutions. Software drivers are available for most popular operating systems.

### ADDITIONAL ULE FEATURES:

#### System Hardware Monitor:

- Provides monitoring of system voltages, temperature and fan speed.

#### Watchdog Timer:

- The software controlled watchdog timer monitors system activity and generates a reset pulse in the event of a timeout.

#### I/O Features:

- Two high-speed serial ports
- Enhanced bi-directional parallel interface
- Dual Universal Serial Bus (USB, Rev. 1.1)
- PS/2 mouse/keyboard interface
- Floppy drive interface

### MEAN TIME BETWEEN FAILURES (MTBF):

167,000 POH (Power-On-Hours) at 40° C., per Bellcore

### ULE APPLICATION CONSIDERATIONS:

#### Power Requirements:

+5V Typical	
9.85 Amps	1.26GHz
9.56 Amps	1.0GHz Rev. E-04 and later
8.7 Amps	1.0GHz Rev. C-02 and earlier
7.4 Amps	866MHz
6.7 Amps	733MHz
+12V @ 400 mAmps	
-12V @ <100 mAmps	

#### Temperature/Environment:

Operating Temperature:	0° to 60° C. for 866MHz and below
	0° to 45° C. for 1.0GHz
	0° to 50° C. for 1.26GHz
Storage Temperature:	-40° to 70° C.
Humidity:	5% to 90% non-condensing

#### Mechanical:

A low-profile (1.44" height) active cooling system is used on the ULE to insure reliable processor operation at elevated temperatures. Overall dimensions of the ULE, including the active cooling system, are 13.3" L (338mm) x 4.8" H (121.9mm) x 1.57" W (39.9mm).

### STANDARDS:

- IEEE P996, Personal Computer Bus Standard
- PCI Local Bus Specification 2.1
- PICMG® 1.0 Specification

### AGENCY APPROVALS:

- Designed for UL1950, CAN/CSA C22.22 No. 950-95, EN61000-6-2: 1999; EN55022: 1998, Class B EN61000-3-2: 1995/A2; 1998; EN6100-3-3; 1995

### ORDERING INFORMATION:

Model Name: ULE		CPU Speed
Model #		
Pentium® III		
5927-602-xM		1.26GHz
5927-407-xM		1.0GHz
5927-405-xM		866MHz
5927-403-xM		733MHz
Celeron®		
5927-211-xM		1.2GHz
5927-204-xM		850MHz

(xM = Memory)

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Intel® Applied Computing Platform Provider