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GT-690

Introduction :

The GT-690 is a full featured, industrialized, single board computer with a high-frequency Intel Pentium IIIR, or Celeron R processor that brings advanced CPU technology and processing power to the latest ISA/PCI (PICMG) applications and to older ISA systems. The 440BX AGPset built in to the single board computer is the most efficient and reliable way to upgrade existing ISA systems to Pentium III technology. The GT-690 uses the PICMG form factor with socket 370 to fit in PGA and FC-PGA processor from Intel. The PICMG design contains two gold leaf edge connectors compatible with PCI and ISA connectors to allow all peripherals to interface with the processor. This lets the GT-690 take advantage of the high pin density and strict electromechanical criteria imposed on PCI and ISA connectors. The ISA bus is buffered by using 48 mA drivers to ensure reliable operation for backplanes with more than five ISA slots.

The GT-690 single board computer is further enhanced by the CHIPS 69000 Graphics Accelerator to deliver the most advanced graphics and video support available. The 69000 supports a wide variety of monochrome and color Single-Panel, Single-Drive (SS) and Dual-Panel, Dual-Drive (DD), standard and high resolution, passive STN and active matrix TFT LCD, and EL panels. With HiQColor technology, up to 256 gray scales is supported on passive STN LCD. Up to 16.7M different colors can be displayed on passive STN LCD and up to 16.7M colors on 24 bit active matrix LCD.

The GT-690 combines the many features needed for system operation into one compact single board computer, including 10/100 TX LAN adapter, Ultra/DMA IDE drive controllers, high performance serial ports, enhanced parallel port, and the latest BIOS features. Additional enhancements to the GT-690 include two USB ports and a programmable watchdog timer. Three dual in-line memory module (DIMM) sockets support up to 768MB of synchronous DRAM (SDRAM) memory. An internal 64-bit second level (L2) cache supports 128/256k of memory. The L2 cache speed is half the CPU core frequency. The Celeron L2 cache equals 128k running at full CPU core.

The 440BX AGPset in the GT-690 incorporates the latest microprocessor technology from Intel to provide the increased bandwidth needed to operate your system bus at speeds up to 100MHz.

The 440BX AGPset is a two-chip set comprised of the Intel 82443BX (PAC) host bridge and the Intel 82371EB (PIIX4E) I/O subsystem. The 64-bit main memory interface in the PAC provides optimized support for SDRAM at 100 and 66/60MHz. The PIIX4E is a PCI Rev 2.1 compliant PCI-ISA bridge that supports 3.3V and 5V 33MHz PCI operations. Like the PAC, the PIIX4E chip includes Desktop Power

Management support, enhanced DMA controller and an integrated IDE controller with Ultra DMA/33 support. In addition, it provides USB host interface support for two USB ports and a System Management Bus (SMB) with support for DIMM Serial PD.

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Specification :

- **Bus Type:**
  PICMG Standard

- **CPU:**
  Zip Socket 370 to support different level CPU Up to Intel Pentium III 800MHz

- **System Memory:**
  16MB to 512MB maximum
  Supports 3 banks 168-pin DIMM socket
  PC-100 Compatible

- **System BIOS:**
  AWARD BIOS

- **System Chipset:**
  82443BX Host Bridge Controller
  82371EB PCI/ISA/IDE Accelerator
  Supports 66/100 MHz FSB

- **Super I/O:**
  WINBOND 83977

- **Real Time Clock:**
  SGS M48T86 PCI (or compatible)
  256 bytes of battery-backed RAM
  On-chip lithium battery
  with 10 years data retention

- **VGA Chipset:**
  C&T; 69000

- **VGA Memory:**
  2MB SDRAM for the graphics/video frame buffer

- **VGA Resolution:**
  Supports Flat-panel resolutions up to 640x480, 800x600, 1024x768
  Supports non-interlace CRT monitors, 1024x768 64K colors

- **Disk-on-chip:**
  Socket for M-system disk on chip

- **Networking:**
  Intel 82559 with wake-on-lan function

- **IDE HDD Interface:**
  One enhanced IDE interface, supports 2 IDE devices
  PIO Mode 4 and Ultra DMA/33 supported

- **Floppy Disk Interface:**
  Supports up to two floppy disk drivers 3.5" &/or 5.25"

- **Parallel Port:**
  Enhanced bi-directional EPP/ECP/SPP parallel port

- **Serial port:**
  Two RS232, 16C550 compatible, FIFO buffer

- **Watchdog Timer:**
  Can generate a system RESET, timer interval is 0~63sec (14 level)

- **Keyboard & Mouse Connectors:**
  Two 6-pin Mini_Din connectors are located on the mounting bracket for keyboard & mouse
  One Single 5-pin header connector for external keyboard interface

- **USB:**
  Dual USB connectors at rear panel via separate cable and bracket assembly (optional)

- **Operating Temperature:**
  32° to 140° F (0° to 60° C)

- **Power Requirement:**
  +5V typical current draw: 6-10A
  +5V maximum current draw: 8-18A
  +12V maximum current draw: 600mA
  -12V maximum current draw: 200mA

- **Board Size:**
  337mm x 121mm

- **VGA Connector:**
  One DB-15 VGA connector for CRT
  monitor One 2x22 pin header for Fat-panel

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Ordering Information :

- Pentium III Socket 370 PICMG full size CPU Card
- With Cable Set, User's Manual, Export Packing

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