ULTRA LOW POWER
SYSTEM ON MODULE

Gx10

PENTIUM CLASS SYSTEM ON MODULE - 200/300 MHz
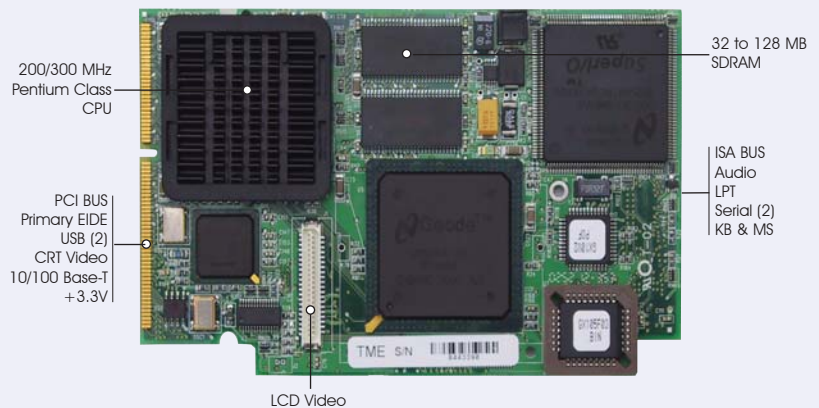
LCD   LAN   Audio

Features

- Ultra low power, fanless operation up to 300 MHz

- Over 250,000 hours MTBF

- 5 year product availability guarantee

- Soldered on-board SDRAM 64Mbytes / 128 MB

- CRT/LCD interface up to 4 MB display memory

- Compact flash socket up to 512 MB

- 10/100Base-T Ethernet interface

- 2 serial ports, dual USB, 256 Bytes EEPROM, 64-bit unique electronic ID

200/300 MHz Pentium Class CPU

PCI BUS Primary EIDE USB (2) CRT Video 10/100 Base-T +3.3V

32 to 128 MB SDRAM

ISA BUS Audio LPT Serial (2) KB & MS

LCD Video

Applications

- Robotic
- Medical
- Test & Measurement
- Transportation
- Avionics
- Mil/Aerospace
- e-Kiosks
- Industrial Automation
- Inventory Management
- Point Of Sale Terminal

Technical Data

System

CPU	Embedded NS Geode GX1 200 to 300 MHz low power processor (fanless)
SYSTEM MEMORY	Soldered on-board 64 or 128 MB SDRAM
CHIPSET	National NS Geode GX1 & CS 5530A
BIOS	Customized emdedded BIOS on 256 KB flash memory
SSD	Supports CompactFlash™ card up to 512 MB
BUS	PCI (33 MHz) / ISA (8.33 MHz)
POWER CONSUMPTION	Typical: 5 V @ 0.6 A [200 MHz CPU]
SIZE	4.742" x 2.910"
TEMPERATURE	-40°C ~ 85°C operating
OPERATING HUMIDITY	0% ~ 90% relative humidity, non-condensing

I/O

STANDARD I/O	EIDE (Ultra DMA33), 1 x K/B, 1 x Mouse, 2 x RS-232, 1 x LPT, 2 USB ports (USB 1.0 compliant)
NETWORK	10/100BASE-T (Intel 82559ER)

Display

CHIPSET	NS CS5530A
MEMORY SIZE	1-4 MB UMA share memory
RESOLUTION	Supports up to 1024x768 @ 16 bpp (60 Hz)
LCD INTERFACE	18-bit TFT panels up to SVGA resolution

Description

Gx10 is a complete computer system on a tiny module, all I/O, PCI BUS and ISA BUS signals are routed out to a high density connector so that OEM's can design a much simpler board with form factor and connectors to fit their own applications, such I/O connector board can be designed by TME in less than 4 weeks

tme

Toronto MicroElectronics Inc. 5149 Bradco Boulevard, Mississauga, Ontario, Canada. Tel: (905) 625-3203 Fax: (905) 625-3717

System on Module   Gx10

Features Description

CPU	Embedded low power NS GX1 200 Mhz to 300 MHz processor L1 Cache - 16 KB write-back data Five-stage pipelined integer unit Integrated Floating Point Unit (FPU) Memory Management Unit (MMU) Supports Intel's MMX instruction set extension for multimedia acceleration Core voltage - 1.8V - 2.0V Passive heatsink
Chipset	NS Geode GX1 CS5530A embedded chipset
System BUS	66/100 MHz system bus frequency PCI: 33 MHz (supports up to two PCI bus masters) ISA: 8.33 MHz
BIOS	Embedded BIOS with boot up time less than 6 seconds, built in video BIOS & TME extensions in 256 KB flash device programmable on-board
Memory	On-board memory banks support 3.3V SDRAM 32 to 128 MB (PC-100 and PC-133)
Flash / Disk Interface	Compact Flash socket for on-board flash disk up to 512 MB
Video Interface	Built-in video interface supports LCD and CRT display, LCD interface on 41-pin LCD connector for direct connection to many 640 X 480 and 800 X 600 TFT panel CRT video signals are brought to high density connector for connector on base board CRT resolution up to 1024x768@16-bit color, LCD resolution up to 800 X 600 2D Graphics Accelerator.
Network Interface	Intel 82559ER chipset IEEE 802.3u 100 BASE-T Fast Ethernet
Audio Interface	AC'97 V 2.1 Audio
EIDE Interface	Enhanced IDE interface supports up to two IDE devices. PIO Mode 4 transfers at up to 16 MB/sec. Support for Ultra DMA/33 synchronous DMA mode Transfers at up to 33 MB/sec
COM1-2 Interface	16450 and 16C550A compatible up to 1.5M baud
LPT Interface	Bi-directional/EPP/ECP compatible
USB Interface	Two USB ports
Other Embedded Features	Electronic ID APM (Advanced Power Management) for Legacy power management CMOS set up data stored on Serial EEPROM to support batteryless boot capability 128 Bytes EEPROM available for OEM use MTBF 250,000 Hours

Ordering Information

GX10L-20-1-C	GX10 WITH 200MHZ CPU, 64 MB SDRAM, VGA/LCD, AUDIO & LAN, -0°C TO +65°C OPERATING TEMPERATURE
GX10L-30-1-C	GX10 WITH 300MHZ CPU, 64 MB SDRAM, VGA/LCD, AUDIO & LAN, -0°C TO +65°C OPERATING TEMPERATURE
GX10L-20-1-E	GX10 WITH 200MHZ CPU, 64 MB SDRAM, VGA/LCD, AUDIO & LAN, -40°C TO +85°C OPERATING TEMPERATURE
GX10-20-1-C	GX10 WITH 200MHZ CPU, 64 MB SDRAM, -0°C TO +80°C OPERATING TEMPERATURE
GX10LC-20-1-C	GX10 WITH 200MHZ CPU, 128MB SDRAM, VGA/LCD, AUDIO & LAN, CF SOCKET, -0°C TO +65°C OPERATING TEMPERATURE
	CONTACT TME FOR OTHER CONFIGURATIONS