

FANLESS EMBEDDED COMPUTER for Point Of Sale Terminal and E-Kiosk

POS401

CELERON / PENTIUM 4 - 1.8GHz to 2.1GHz FANLESS COMPUTER

Features

- Soldered onboard Pentium 4 / Celeron D CPU, 1.8Ghz to 2.1Ghz
- Soldered on-board 512MB DDR Memory, expandable to 1.5Gbytes DDR Memory using SODIMM socket
- 10/100Base-T Ethernet Interface
- Cash Draw port for up to 2 Cash draw
- 4 serial ports, 4 USB 2.0 ports, 256 Bytes EEPROM, 64-bit unique electronic ID, Integrated Audio
- 2.5" 40Gbytes Hard Drive or CF Flash Disk
- Operated from +12V DC-IN
- Less than 4 second boot up time
- Over 200,000 hours MTBF
- 5 year product availability guarantee
- Supports DOS, Windows 98, NT, 2000, XP, CE, QNX, pSOS, Linux, VxWorks

Applications

e-Kiosks
Point Of Sale Terminal
Electronics Advertising

(4)RS232

LAN

Cash Draw Port



Technical Data

System

CPU	Pentium 4 CPU processor 1.8Ghz / 2.1Ghz with 512 KB L2 cache, or 1.8Ghz/2.1Ghz Celeron CPU with 256K L2
SYSTEM MEMORY	256Mbytes ~ 1.5Gbytes DDR Memory,
CHIPSET	Intel 845GV CHIPSET
BIOS	Customized embedded BIOS on 256KB flash memory
FLASH DISK	Supports CompactFlash™ card Type II up to 6Gbytes
WATCHDOG TIMER	Software enable/disable/programmable up to 120 sec.
BUS EXPANSION	PCI BUS on High density connector

I/O

Main I/O	K/B & Mouse, 4 x RS-232 (optional RS485) Optional Relay contact, A/D & D/A, Video Capture
USB	4 USB 2.0 ports
AUDIO	AC'97 2.1 compliant with adaptor board
ETHERNET	10/100BASE-T, Optional 1000Base-T
DIGITAL I/O	Cash draw port control up to two cash draws

Display

CHIPSET	Integrated 2D/3D w/ Mpeg 2 / AC-3
MEMORY SIZE	8/16/32MB UMA Frame Buffer using system memory
RESOLUTION	Support up to 2048 x 1536 @ 60Hz
LCD INTERFACE	With adaptor option

Mechanical and Environmental

POWER CONSUMPTION (W/256MBYTES)	Typical: 12V @ 2.6 A [1.8Ghz Celeron CPU] 12V @ 3.1 A [1.8Ghz P4 CPU]
DIMENSION (L X W)	7.5" x 7.5" X 3.1" form factor
OPERATING TEMPERATURE	-25°C ~ 55°C (on selected models)
OPERATING HUMIDITY	0% ~ 90% relative humidity, non-condensing

Description

POS401 is designed to meet the current and future demands of high performance, low power, small form factor and secure embedded computing solutions. The EP401 can significantly simplify the design of the embedded computer system for fast time to market and lower development cost and risk. The POS401 utilizes embedded components to ensure the long term product support for over 5 years. **Optional non-tantalum capacitor version available upon request.**

The Shortest path from ideas...to product.

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Features Description

CPU

POS401 supports low power Intel Pentium 4 class processor and Celeron D processor up to 2.1Ghz with 400Mhz FSB
L2 Cache - 512K L2 cache on P4, 256K L2 cache on Celeron D processor
P4 CPU speed available - 1.8Ghz, 2.1Ghz
Celeron D CPU speed available - 2.1Ghz, 1.8Ghz

Chipset

Intel 845GV Embedded CHIPSET with 400Mhz FSB

E-Kiosk

Point Of Sale Terminal (POS) and Other optional Features

The POS401 was designed with features suitable for E-Kiosk and POS applications; It has optional Dual Hard drive for redundancy, Video Capture port, Cash Draw port, 4 serial ports and second Video Interface (LCD/LVDS/CRT). The EP401 with 1.8Ghz Celeron CPU can be operated without fan. The 1.8Ghz CPU with 256Mbytes ~ 1.5Gbytes DDR Memory and powerful Video Interface can play DVD/Mpeg 4 Video stream at over 30fps and still has plenty of processing power to handle other tasks

BIOS

(4 second bootup time)

BIOS designed for embedded applications with 4 second boot up time, CMOS setup is stored on eeprom to prevent system failure due to battery loss. The Embedded BIOS can be customized with customer's features

Video

Integrated Graphics Display with 3D set up and Render Engine
DVD Multimedia Accelerator, MPEG2, AC-3
CRT mode up to 2048 X 1536 @ 60Hz
3D Graphics Rasterization with 200Megapixel/sec Fill rate
Integrated 350Mhz RAMDAC
Optional second Video interface (LCD/LVDS/CRT) on adaptor board. Capable of driving 25ft Video cable using CAT 5 cable

Memory

Soldered onboard 256Mbyte/512Mbytes DDR memory
Expandable to 1.5Gbytes DDR Memory with SODIMM

Audio

Integrated AC'97 2.1, Mic in, Line in, Line out, 2W amplifier stereo output

Storage

Integrated PCI-bus Enhanced Ultra DMA/33/66/100 Synchronous IDE interface
Single or Dual 2.5" Hard drives
Compact Flash socket Type II for on-board flash disk up to 6Gbytes

COM1 - COM4

RS-232, 16C550 compatible, 115K baud max

LAN

10/100 Base-T using Intel Fast Ethernet controller

USB

Four USB 2.0 ports

BUS Expansion

PCI BUS available on high density connector for additional features

Other Embedded Features

Electronic ID
Cash Draw port for POS applications
Voltage monitoring reset circuit
System Management Bus (SMBus)
Power management logic support
Programmable Watch Dog Timer 2s to 120s
Intelligent thermal management with independent micro-controller
CMOS setup data stored on Serial EEPROM to support batteryless boot capability
128 Bytes EEPROM available for OEM use
ESD protection on serial ports: 15,000V
MTBF 200,000 Hours

Ordering Information

POS401-18CA	ULTRA LOW POWER 1.8GHZ INTEL CELERON CPU, 256KB L2 CACHE, 0°C TO 45°C OPERATING TEMPERATURE, 256MBYTES DDR MEMORY
POS401-18CB	ULTRA LOW POWER 1.8GHZ INTEL CELERON CPU, 256KB L2 CACHE, 0°C TO 45°C OPERATING TEMPERATURE, 512MBYTES DDR MEMORY
POS401-18CC	ULTRA LOW POWER 1.8GHZ INTEL CELERON CPU, 256KB L2 CACHE, 0°C TO 55°C OPERATING TEMPERATURE, 512MBYTES DDR MEMORY
POS401-18CD	ULTRA LOW POWER 1.8GHZ INTEL CELERON CPU, 256KB L2 CACHE, 0°C TO 55°C OPERATING TEMPERATURE, 1GBYTES DDR MEMORY
POS401-21CD	LOW POWER 2.1GHZ INTEL P4 CPU, 512KB L2 CACHE, -25°C TO 55°C OPERATING TEMPERATURE, 1GBYTES DDR MEMORY
POS401-18CE	ULTRA LOW POWER 1.8GHZ INTEL CELERON CPU, 256KB L2 CACHE, -25°C TO 55°C OPERATING TEMPERATURE, 1GBYTES DDR MEMORY
OTHER	CONTACT TORONTO MICROELECTRONICS INC. FOR MORE INFORMATION ON OTHER CPU AND MEMORY OPTIONS