PCA-6741

STPC Consumer II 133 SBC with CPU/VGA/Ethernet/SSD/32 MB SDRAM

Labels: multi-port, EIDE, FDD, parallel, 32MB SDRAM, CRT, 10/100Base-T Ethernet (RJ45), COM2, COM1, COM2(RS-232), AT power, STPC Consumer II, DOC2000, PC/104, PS/2 keyboard/mouse
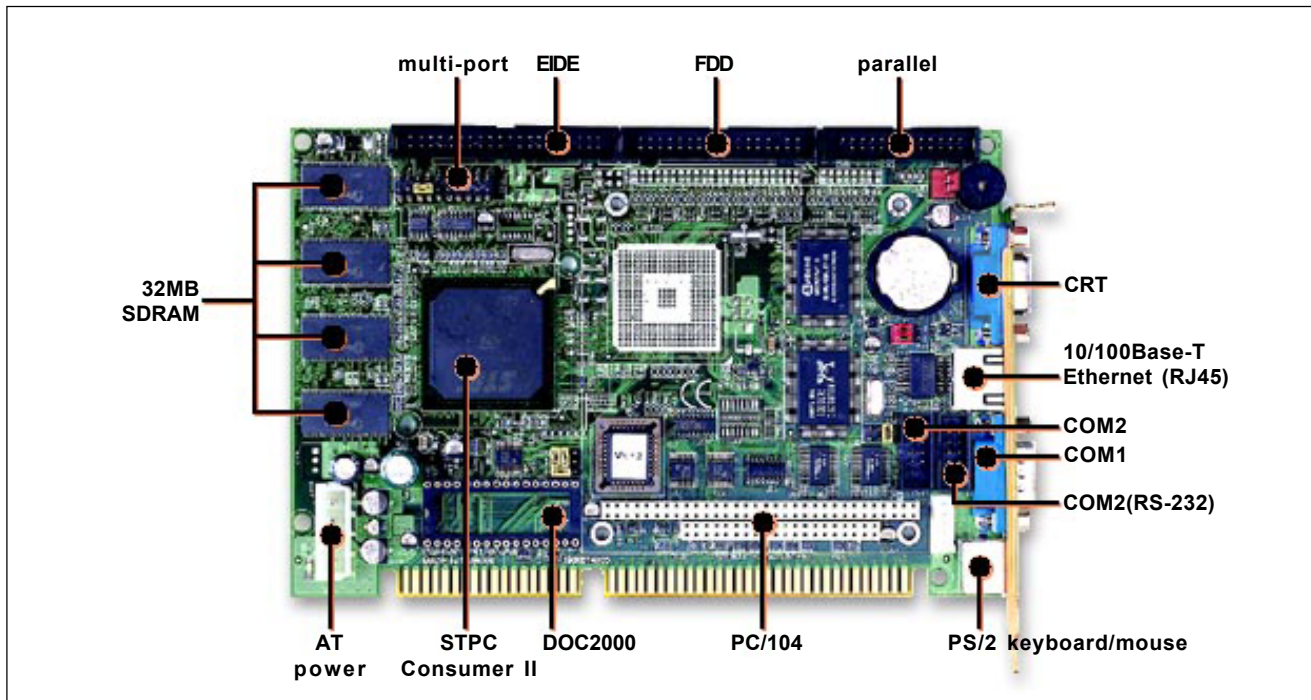
Introduction

Advantech's new PCA-6741 is a Half-sized ISA bus SBC with an on-board, embedded low power 133 MHz STPC Consumer II processor. Other on-board features include a VGA controller and 10/100 Mbps PCI Ethernet interface. A PC/104 expansion connector is provided, as is optional SSD support for both DOC and CompactFlash™ Type I/II. 62-level watchdog timer and jumperless on-line setup is also supported.

SBC with STPC Consumer II Processor Available Now

With this board, system engineers will now be able to upgrade their 386-based systems to 486 level without as many worries, partially because a 486 level STPC Consumer II processor is mounted directly on board. Mounting CPUs directly on board eases the configuration and installation process because there is no need to set any jumpers for speed or voltage differences between various CPUs. In addition to ease of configuration, the STPC Consumer II 133 MHz low-power CPU has been specially designed to work well in environments with temperatures of up to 60°C without need of a fan. Eliminating the CPU fan from a system significantly reduces MTBF worries and increases application possibilities.

The STPC Consumer-II integrates a standard 5th generation x86 core, a Synchronous DRAM controller, a VGA/SVGA CRT controller with graphics subsystem, a video pipeline, and support logic including PCI, ISA, and IDE controllers to provide a single, consumer-oriented, PC-compatible subsystem on a single device.

Features

- On-board 133 MHz STPC Consumer II processor (fanless)

- On-board VGA display

- 62-level watchdog timer, jumperless on-line setup supported

- Supports wake on LAN, wake on ring (modem)

- SSD support for DOC 2000

- Optional CompactFlash Type I/II socket

- Supports CMOS data backup functions

- PC/104 connector supports face-up installation

Your ePlatform Partner

ADVANTECH

Specifications

- **CPU**: Embedded low power STPC Consumer II 133MHz processor (provides fanless operation)

- **BIOS**: 2 Mbit Flash BIOS, supports Plug & Play, APM

  -Supports Ethernet Boot ROM
  -Supports boot from CD-ROM
  -Supports boot from DOC
  -Supports boot from CompactFlash

- **Chipset**: STPC Consumer II (on-chip)

- **System memory**: Onboard 32 MB SDRAM and one optional SDRAM SODIMM socket, max up to 64 MB

- **PCI IDE interface**: One Enhanced IDE interface that supports 2 IDE devices PIO mode 3,4 with bus mastering up to 14 MB/sec.

- **Floppy disk drive interface**: Supports up to two FDDs (360 KB/ 1.2 MB/720 KB/1.44 MB/2.88 MB)

- **Parallel port**: One parallel port, supports EPP/ECP

- **IR port**: One 115 kbps IrDA compliant serial infrared

- **Serial ports**:

  2 serial ports : COM1 (RS-232), COM2 (RS-232/422/485) (PCA-6741F-0CA2)

  2 serial ports : COM1, 2 (RS-232) (PCA-6741L-0CA2)

- **Watchdog timer**: 62-level timer interval, setup by software or jumperless selection, generates system reset or IRQ11 (standard)

SVGA/VGA Interface

- **Chipset**: Consumer II embedded

- **Display type**: Supports CRT

- **Resolution:** CRT monitor resolution up to 1280 x 1024 x 8bit @ 75HZ

Ethernet Interface

- RealTek™ RTL 8139C chip
  -PCI Ethernet controller, IEEE 802.3 protocol compatible
  -Supports 10/100 Mbps Ethernet
  -Wake on LAN (via ATX power supply)
  -RJ-45 connector equipped

Power Management

- Supports APM

Solid State Disk

- Supports DOC 2000 and CompactFlash™ type I/II (optional)

Keyboard/Mouse connector

- 6-pin Mini-Din header connector for keyboard and PS/2 mouse

PC/104 Interface

- Supports PC/104 expansion (PCA-6741F-0CA2 only)

Mechanical and Environmental Specifications

- **Power requirements:** Maximum: 5.0 V @ 4.6 A
  Typical: +5.0 V @ 1.39A
  (w/32MB SDRAM, DOS mode)

- **Operating temperature**: 0 ~ 60°C (32 ~ 140°F)

- **Size**: 185 mm x 122 mm

- **Weight**: 0.27 Kg (0.59 lbs)

Ordering Information

❑ **PCA-6741F-0CA2:**
   Consumer II 133 ISA bus half-sized CPU card with 32 MB SDRAM/VGA/LAN/DOC/RS422/RS485/PC104

❑ **PCA-6741L-0CA2:**
   Consumer II 133 ISA bus half-sized CPU card with 32 MB SDRAM/VGA/DOC

Optional Accessories

❑ **MBPC-641:**
   4-slot IPC chassis with backplane & 65 W power supply

❑ **IPC-644-80:**
   4-slot IPC chassis with backplane & 80 W power supply

❑ **IPC-6806S:**
   6-slot IPC chassis with backplane & 100 W power supply

❑ **PCA-6114-B:**
   14 slot ISA passive backplane

❑ **PCA-6108-0B1:**
   8 ISA slot passive backplane

❑ **PCA-6106-B:**
   6 ISA slot passive backplane

❑ **PCA-6104-0C1:**
   4 ISA slot passive backplane

Note: All features and specifications are subject to change without notice.

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                                          ┌─────────┐
                                          │   CRT   │
                                          └─────────┘
                                               │
              ┌──────────┐                ┌──────────────┐   ┌──────────────┐
  ┌────────┐  │ COMPACT  │  ┌──────┐      │    STPC      │   │ Main Memory  │
  │ISA x 1 │  │  FLASH   │  │ STPC │◄─────│              │◄─►│144P SODIMM*1 │
  └────────┘  └──────────┘  │ IDE  │ IDE BUS│ CONSUMER II │   │on board 32M │
                  ▲         └──────┘      └──────────────┘   └──────────────┘
  ┌──────────┐   │                               │
  │ Ethernet │                                   │
  │ 10/100M  │        PCI BUS                     │
  │RTL8139C  │                                    ▼
  └──────────┘                          ┌──────────────┐   ┌───────────────┐
                                         │  SUPER I/O   │──►│ Parallel Port │
                                         │  W83977F-A   │   └───────────────┘
                                         └──────────────┘   ┌───────────────┐
                                                │        ──►│  Serial Port  │
                        ISA BUS                 │           └───────────────┘
                                                ▼           ┌───────────────┐
  ┌──────────┐  ┌──────────────┐  ┌──────────────┐       ──►│   Keyboard    │
  │DOC - 2000│  │ Watch Dog    │  │  PnP BIOS    │          └───────────────┘
  └──────────┘  │ 0~62 Sec.    │  │  2MB         │          ┌───────────────┐
                └──────────────┘  │  APM 1.0     │       ──►│    Mouse      │
                                  └──────────────┘          └───────────────┘
                                                            ┌───────────────┐
                                                         ──►│    Floppy     │
                                                            └───────────────┘
                                                            ┌───────────────┐
                                                         ──►│      IR       │
                                                            └───────────────┘
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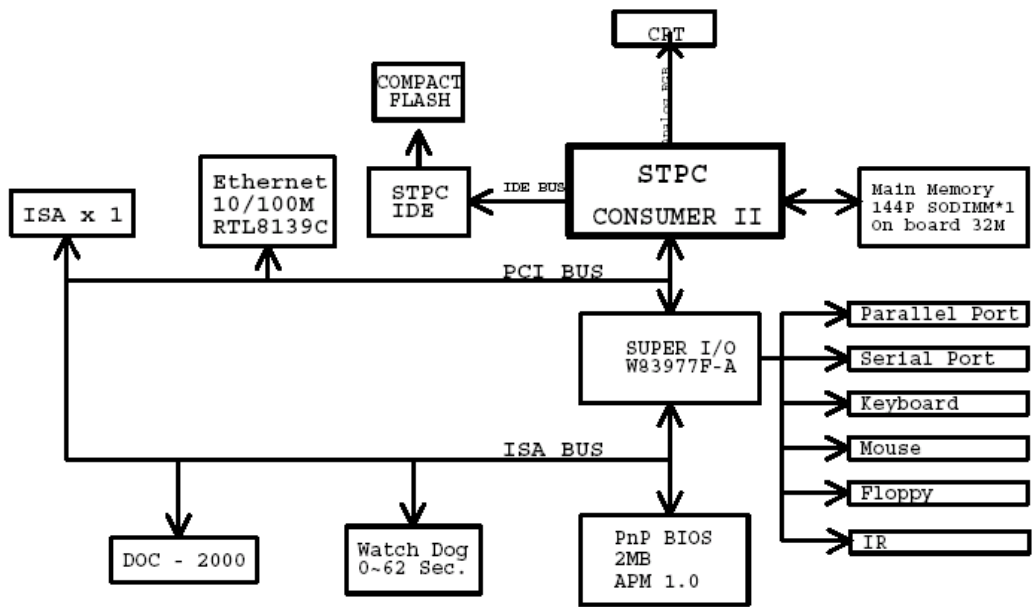
PCA-6741 System block diagram