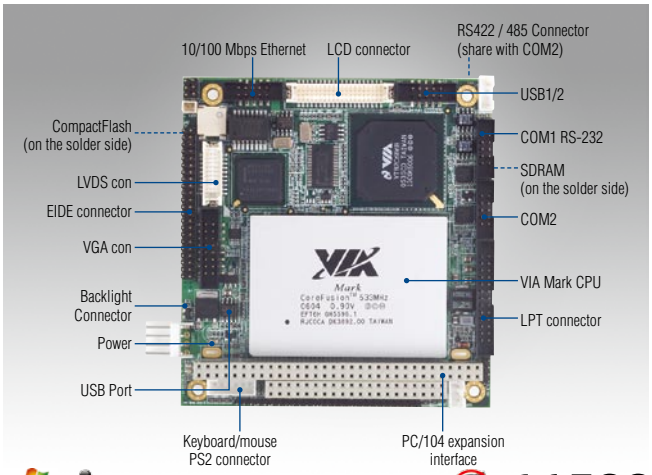
PCM-3375

VIA Mark CoreFusion™ PC/104 SBC, CRT, LVDS, TTL, LAN, USB, COM, CFC



Features

- VIA Mark CoreFusion™ 533 MHz Processor
- PC/104 96x90 mm standard dimension
- 24-bit TFT LCD/36-bit LVDS support
- 10/100 Mbps Fast Ethernet

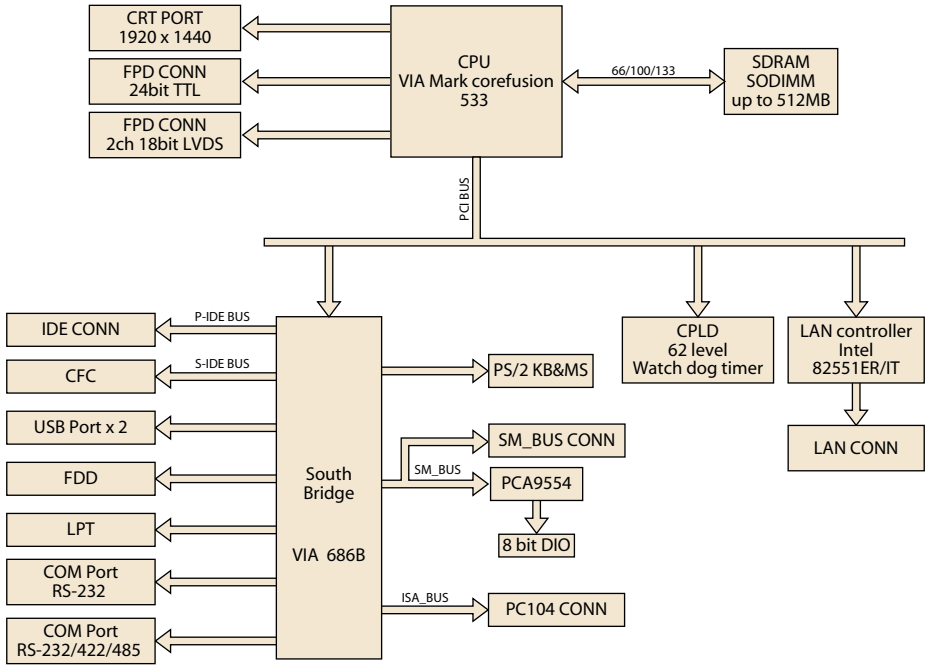
Software APIs: Watchdog, H/W Monitor, GPIO, Backlight On/Off

Utilities: BIOS flash, Monitoring

Specifications

Processor System	CPU	Embedded low-power onboard VIA Mark 533 MHz processor
	Frequency	533 MHz
	L2 Cache	64 KB
	System Chipset	VIA MARK 533MHz + VIA 686B
	BIOS	Award 2-Mbit
Memory	Technology	PC/100/133 SDRAM
	Max. Capacity	512 MB
	Socket	1 x 144-pin SODIMM
Display	Chipset	VIA MARK 533 MHz
	VRAM	Up to 32 MB frame buffer shares the system memory
	Graphic Engine	Integrated ProSavage4 Graphics with 2D/3D/Video Controllers Optimized Shared Memory Architecture (SMA) Full internal AGP 4 x performance
	LVDS	1 x dual channel 18-bit LVDS up to 1600 x 1200 with 256 gray shade support
	CRT	Supports up to 1920 x 1440
	TTL LCD	1 x 24-bit TTL up to 1600 x 1200
	Dual Display	CRT+LVDS, CRT+TTL
Ethernet	Speed	10/100 Mbps
	Controller	Intel 82551ER
	Connector	Box header
Watchdog Timer		Output System reset Programmable 62 level timer
Storage	CompactFlash	Compact Flash socket (Type I)
	IDE	1
	Floppy	1 (UDMA 33)
	SPI Flash	1
Internal I/O	USB	2 x USB 1.1, Open HCI compliant
	Serial	1 RS-232, 1 RS-232/422/485
	IDE	1 (UDMA 33)
	Parallel (LPT)	1
	FDD	1
	SMBUS	1
	KB/Mouse	1
	GPIO	8-bit general purpose input/output
	IrDA	1 x 115 kbps SIR, IrDA 1.0 compliant
Expansion	PC/104 slot	1
Power	Power Type	AT
	Power Supply Voltage	5V only to boot up (12 V is optional for LCD inverter and add on card)
	Power Consumption (Typical)	+5 V @ 1.94 A
	Power Consumption (Max, test in HCT)	+5 V @ 2.06 A
	Power Management	APM 1.2
	Battery	Lithium 3 V/210 mAH
Environment	Operation	0 ~ 60° C (32 ~ 140° F) (operation humidity: 40° C @ 85% RH non-condensing)
	Non-Operation	-40° C ~ 85° C and 60° C @ 95% RH non-condensing
Physical Characteristics	Dimensions (L x W)	96 x 90 mm (3.8" x 3.5")
	Weight	0.162 kg (0.357 lb) (with heat-sink)

Board Diagram



Ordering Information

Part No.	CPU	Chipset	CRT	TTL	LVDS	LAN	USB 1.1	RS-232	RS-422/485	LPT	FDD	CF	KB/MS	PC/104 connector	Thermal Solution	Operating Temp.	Embedded OS
PCM-3375F-L0A1E	VIA Mark 533 MHz	VT82C686B	Yes	24-bit	2 x 18-bit	1 FE	2	1	1	Yes	Yes	Yes	Yes	Yes	Passive	0 ~ 60° C	Win CE (optional)

Packing List

Part No.	Description	Quantity
	PCM-3375 SBC	
	Startup Manual	
	Utility CD	
1703060053	KB/Mouse Y-cable EXT cable	x 1
1700060202	KB/Mouse Y-cable (2 PS/2)	x 1
9681000044	26-34-pin FDD adapter	x 1
1701160150	VGA cable	x 1
1701100202	Ethernet RJ-45 connector conversion cable 20 cm	x 1
1701440504	IDE (HDD) cable 44P/44P/44P	x 1
1700100250	COM port cable 25 cm	x 1
1700260250	LPT port cable	x 1
1701260125	FFC cable for slim FDD	x 1
9660104000	PC/104 screw and copper post package	x 1

Optional Accessories

Part No.	Dexcription
165313222B	PC/104 connector 64pin (Long pin)
165312022B	PC/104 connector 40pin (Long pin)

Embedded OS

Embedded OS	Part No.	Description
WinCE 6.0	2070001582	CE60 Pro Mark 2 Com V1.0 ENG
Win XPE	2070001577	XPE FP2007 VIA (VT8606_82C686B) V3.0 ENG
	2070003555	VT8606 Group V3.0 CHS (668.89 MB)
	2070006889	XPE FP2007 PCM-3375 V3.01 ENG

Value-Added Software Services

Software API: An interface that defines the ways by which an application program may request services from libraries and/or operating systems. Provides not only the underlying drivers required but also a rich set of user-friendly, intelligent and integrated interfaces, which speeds development, enhances security and offers add-on value for Advantech platforms. It plays the role of catalyst between developer and solution, and makes Advantech embedded platforms easier and simpler to adopt and operate with customer applications.

Software APIs

Control

GPIO

General Purpose Input/Output is a flexible parallel interface that allows a variety of custom connections. It allows users to monitor the level of signal input or set the output status to switch on/off a device. Our API also provides Programmable GPIO, which allows developers to dynamically set the GPIO input or output status.

SMBus

SMBus is the System Management Bus defined by Intel® Corporation in 1995. It is used in personal computers and servers for low-speed system management communications. The SMBus API allows a developer to interface a embedded system environment and transfer serial messages using the SMBus protocols, allowing multiple simultaneous device control.

I²C

I²C is a bi-directional two wire bus that was developed by Philips for use in their televisions in the 1980s. The I²C API allows a developer to interface with an embedded system environment and transfer serial messages using the I²C protocols, allowing multiple simultaneous device control.

Monitor

Watchdog

A watchdog timer (WDT) is a device that performs a specific operation after a certain period of time if something goes wrong and the system does not recover on its own. A watchdog timer can be programmed to perform a warm boot (restarting the system) after a certain number of seconds.

Hardware Monitor

The Hardware Monitor (HWM) API is a system health supervision API that inspects certain condition indexes, such as fan speed, temperature and voltage.

Hardware Control

The Hardware Control API allows developers to set the PWM (Pulse Width Modulation) value to adjust fan speed or other devices; it can also be used to adjust the LCD brightness.

Display

Brightness Control

The Brightness Control API allows a developer to interface with an embedded device to easily control brightness.

Backlight

The Backlight API allows a developer to control the backlight (screen) on/off in an embedded device.

Power Saving

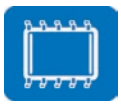
CPU Speed

Make use of Intel SpeedStep technology to reduce power power consumption. The system will automatically adjust the CPU Speed depending on system loading.

System Throttling

Refers to a series of methods for reducing power consumption in computers by lowering the clock frequency. These APIs allow the user to lower the clock from 87.5% to 12.5%.

Software Utilities



BIOS Flash

The BIOS Flash utility allows customers to update the flash ROM BIOS version, or use it to back up current BIOS by copying it from the flash chip to a file on customers' disk. The BIOS Flash utility also provides a command line version and API for fast implementation into customized applications.

Embedded Security ID

The embedded application is the most important property of a system integrator. It contains valuable intellectual property, design knowledge and innovation, but it is easily copied! The Embedded Security ID utility provides reliable security functions for customers to secure their application data within embedded BIOS.

Monitoring

The Monitoring utility allows the customer to monitor system health, including voltage, CPU and system temperature and fan speed. These items are important to a device; if critical errors happen and are not solved immediately, permanent damage may be caused.

eSOS

The eSOS is a small OS stored in BIOS ROM. It will boot up in case of a main OS crash. It will diagnose the hardware status, and then send an e-mail to a designated administrator. The eSOS also provides remote connection: Telnet server and FTP server, allowing the administrator to rescue the system.

Flash Lock

Flash Lock is a mechanism that binds the board and CF card (SQFlash) together. The user can "Lock" SQFlash via the Flash Lock function and "Unlock" it via BIOS while booting. A locked SQFlash cannot be read by any card reader or boot from other platforms without a BIOS with the "Unlock" feature.