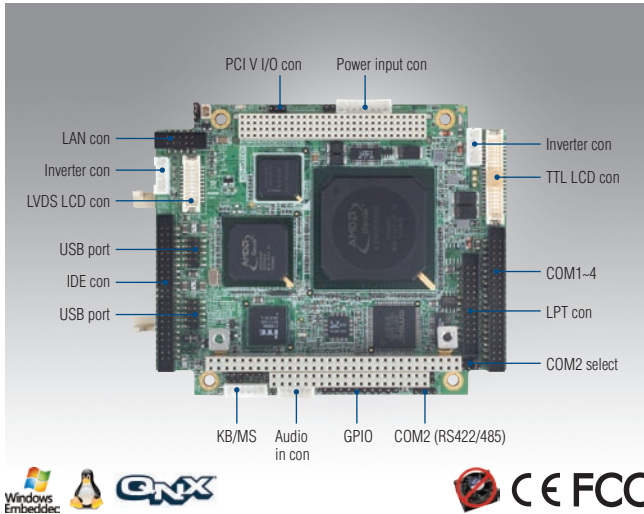


PCM-3353

AMD LX800 PC/104-Plus CPU Module



Features

- AMD low power LX800 500 MHz processor
- 24-bit TFT LCD interface, 18-bit LVDS LCD display
- PC/104-plus Expansion
- Supports up to 4 COM ports, 4 USB ports
- Supports Embedded Software API and Utility

Software APIs:

- SMBus
- H/W Monitor
- Watchdog
- GPIO
- Backlight On/Off

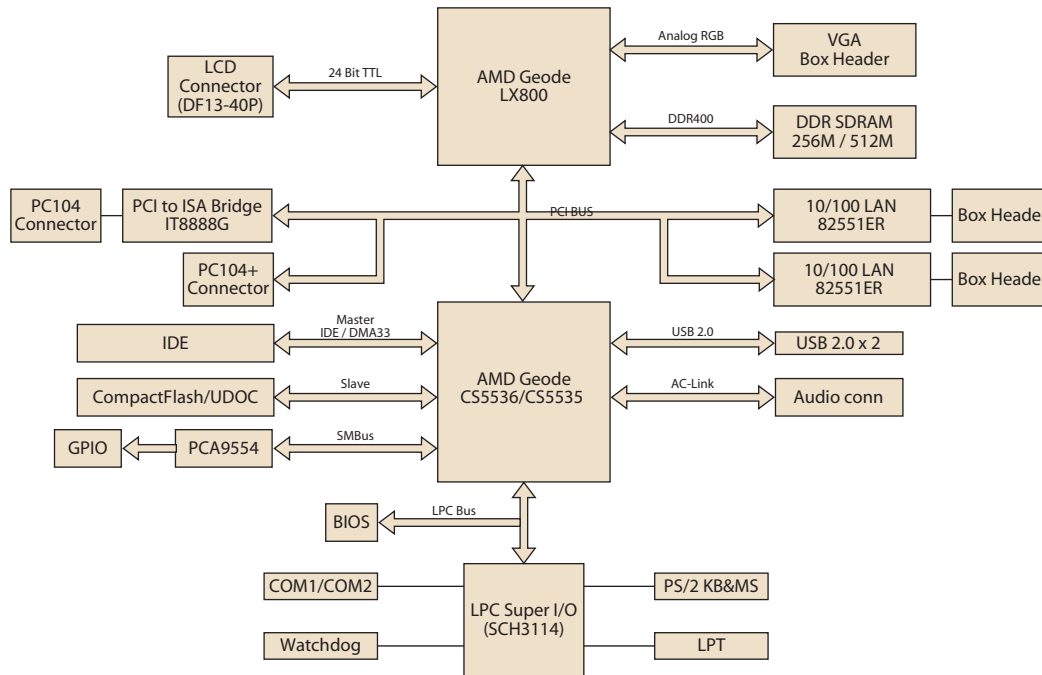
Utility:

- BIOS flash
- Monitoring

Specifications

Processor System	CPU	AMD Geode™ LX800, 500 MHz
	L2 Cache	128 KB
	Chipset	AMD Geode LX800
	BIOS	Award 4-Mbit
Memory	Technology	DDR 333/400 MHz
	Max. Capacity	1 GB
	Socket	1 x 200-pin SODIMM
SSD	CompactFlash	Card Type I
I/O Interface	LPT	1
	RS-232	3
	RS-232/422/485	1
	K/B	1
	Mouse	1
	USB	4 x USB 2.0
	Audio	AC97, Line-in, Line-out, Mic-in
EIDE	Mode	UDMA 33
	Channel	1
Expansion Slot	PCI/104-Plus	1
Ethernet	Speed	10/100 Mbps
	Controller	Intel 82551ER
	Interface	1 x RJ-45 by cable
Display	Controller	AMD Geode LX800
	VRAM	Optimized Shared Memory Architecture up to 64 MB system memory
	TTL LCD	1 x 24-bit TTL
	LVDS LCD	1 x 18-bit LVDS
Environment	Dual Simultaneous Display	CRT + TTL, CRT + LVDS
	Operating Temperature	0 ~ 60° C (32 ~ 140° F)
	Operating Humidity	0% ~ 90% relative humidity, non-condensing
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 (WinXP Idle Mode)	+5 V @ 1.35 A, +12 V @ 0.1 A
	Power Consumption: Max, Test in HCT	+5 V @ 1.51 A, +12 V @ 0.1 A
	Power Management	APM1.2
	Battery	Lithium 3 V / 196 mAH
Watchdog Timer	Output	System reset
	Interval	Programmable 1 ~ 255 sec
Physical Characteristics	Dimensions (L x W)	96 x 115 mm (3.8" x 4.5")
	Weight	0.162 kg (0.357 lb) (with heat-sink)

Board Diagram



Ordering Information

Part No.	CPU	Chipset	CRT	TTL	LVDS	LAN	USB2.0	RS-232	RS232/422/485	LPT/KB/MS	Audio	PC/104+ connector	Thermal Solution	Operating Temp.	Embedded OS
PCM-3353F-LOA1E	AMD LX800	CS5536	Yes	18/24-bit	18-bit	1 FE	4	3	1	Yes	Yes	Yes	Passive	0 - 60° C	Optional
	AMD LX800	CS5536	Yes	18/24-bit	18-bit	1 FE	4	3	1	Yes	Yes	Yes	Passive	-20 - 80° C	Optional
	AMD LX800	CS5536	Yes	18/24-bit	18-bit	1 FE	4	3	1	Yes	Yes	Yes	Passive	-40 - 85° C	Optional

Note: For wide temperature, please contact sales rep.

Packing List

Part No.	Description	Quantity
	PCM-3353 SBC	1
1700003491	AT Power cable	1
1700000918	Audio cable	1
1701400181	Four COM cable	1
1703040157	RS-422/485 COM cable	1
1703060053	Keyboard/Mouse cable	1
1700060202	Y cable (for KB/MS extension)	1
1701100202	Ethernet RJ-45 Conn. conversion cable	1
1700260250	LPT port cable	1
1701440350	IDE cable 44P/44P/44P	1
1700000898	VGA cable	1
1703100121	USB cable (bracket type with two USB ports)	2
	Startup manual	1
	CD-ROM (Manual, Driver, Utility)	1

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.

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.

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.

Power Saving



CPU Speed

Make use of Intel SpeedStep technology to reduce 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.