PCM-3355

AMD LX800/LX600 PC/104 CPU Module

NEW

- TTL LCD
- VGA
- USB
- POWER IN
- SATA
- LAN
- LPT
- COM RS-232
- PC104
- PS2
- INVERTER
- RS-422/485
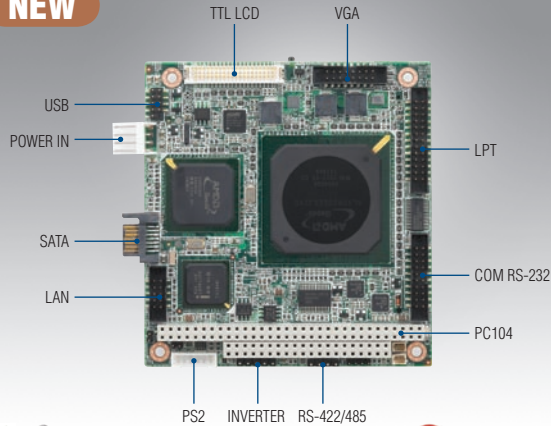
Features

- AMD low power LX800/500 MHz and LX600/366 MHz Processor
- 24-bit TFT LCD interface
- 96 x 90 mm standard dimension
- Supports two RS-232, one RS-422/485, and two USB 2.0 ports
- Supports Embedded Software API and Utility

Software APIs: Watchdog SMBus Brightness H/W Monitor Backlight On/Off

Utility: BIOS flash Monitoring

CE FCC

Specifications

Processor System	CPU	AMD Geode™ LX800, 500 MHz	AMD Geode™ LX600, 366 MHz
	L2 Cache	128 KB	128 KB
	Chipset	AMD Geode LX800/LX600 +CS5536	
	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	2	
	RS-422/485	1	
	K/B	1	
	Mouse	1	
	USB	2 x USB 2.0	
	Audio	-	
	GPIO	-	
SATA	Max. Data Transfer Rate	100 MB/s (Transfer from IDE)	
	Channel	1	
Expansion Slot	PC/104	1	
Ethernet	Speed	10/100 Mbps	
	Controller	Intel 82551QM	
	Interface	1 x RJ-45 by cable	
Display	Controller	AMD Geode LX800/LX600	
	VRAM	Optimized Shared Memory Architecture up to 64 MB system memory	
	TTL LCD	1 x 24-bit TTL	
	Dual Simultaneous Display	CRT + TTL	
Environment	Operating Temperature	0 ~ 60° C (32 ~ 140° F)	
	Operating Humidity	-40 ~ 85 degree and 60° C @ 95% RH 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 / 210 mAH	
Watchdog Timer	Output	System reset	
	Interval	Programmable 1 ~ 255 sec	
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
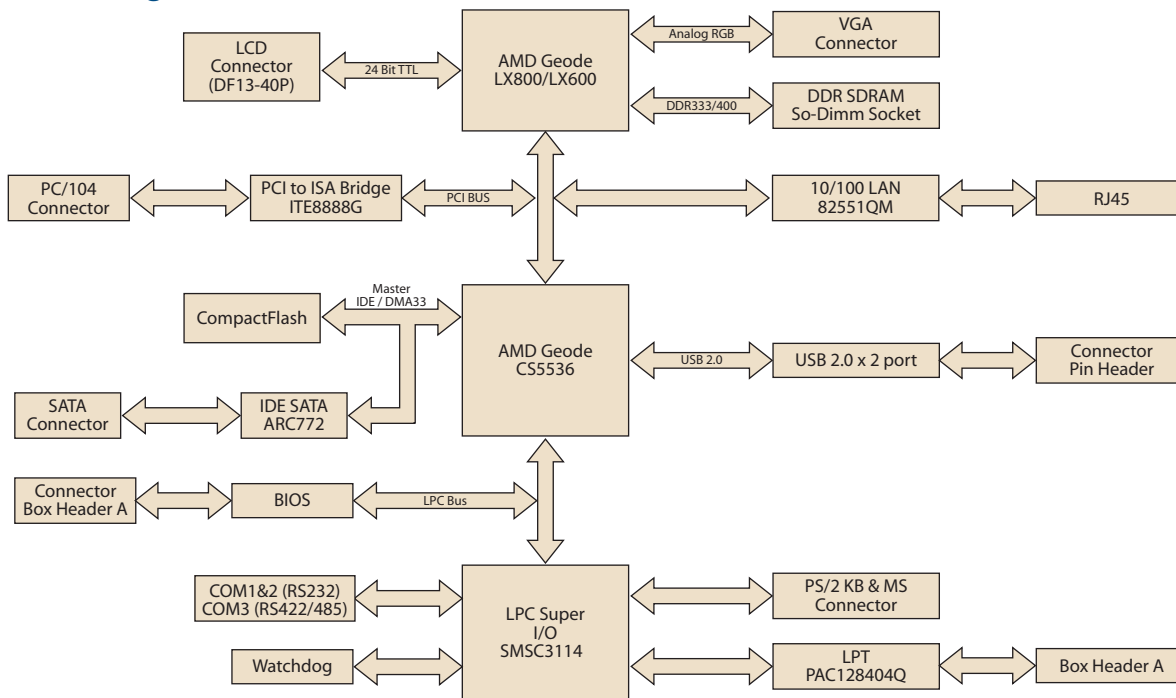
Ordering Information

Part No.	CPU	Chipset	Memory	TTL	SATA	LAN	USB2.0	RS-232	RS-422/485	LPT/KB/MS	Audio	PC/104 connector	Thermal Solution	Operating Temp.	Embedded OS
PCM-3355F-L0A1E	AMD LX800	CS5536	DIMM	24-bit	Yes	1 FE	2	2	1	Yes	-	Yes	Passive	0 ~ 60° C	Optional
PCM-3355L-J0A1E	AMD LX600	CS5536	DIMM	24-bit	No	1 FE	2	2	1	Yes	-	Yes	Passive	0 ~ 60° C	Optional
PCM-3355Z-512LA1E	AMD LX800	CS5536	512MB bundle	24-bit	Yes	1 FE	2	2	1	Yes	-	Yes	Passive	-20 ~ 80° C	Optional
PCM-3355Z2-512LA1E	AMD LX800	CS5536	512MB bundle	24-bit	Yes	1 FE	2	2	1	Yes	-	Yes	Passive	-40 ~ 85° C	Optional

Note: Wide temp version has been bundled with extended temperature grade memory module

Packing List

Part No.	Description	Quantity
	PCM-3355 SBC	1
1700008894	SATA cable	1
1703060053	Keyboard/Mouse cable	1
1700060202	Y cable (for KB/MS extension)	1
1700005158	Ethernet RJ-45 Conn. conversion cable	1
1700260250	LPT port cable	1
1701160150	VGA cable	1
1703100121	USB cable (bracket type with two USB ports)	1
1703040157	RS-422/485 COM cable	1
1701200220	RS-232 COM cable	1
	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 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
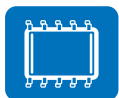
BIOS Flash

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.