

# Industrial Motherboards



AIMB-744



AIMB-742



AIMB-741



AIMB-740

## Selection Guide

Specification		Pentium® 4/Celeron® Industrial ATX Motherboard			
		AIMB-744	AIMB-742	AIMB-741	AIMB-740
Processor System	CPU	Intel® Pentium® 4/ Celeron® Socket 478	Intel® Pentium® 4/ Celeron® Socket 478	Intel® Pentium® 4/ Celeron® Socket 478	Intel® Pentium® 4/ Celeron® Socket 478
	Max. Speed	3.2 GHz/2.4 GHz	3.2 GHz/2.4 GHz	3.06 GHz/2.4 GHz	3.06 GHz / 2.4 GHz
	L2 Cache (Depend on CPU)	256,512 KB / 128 KB	256,512 KB / 128 KB	256,512 KB / 128 KB	256,512 KB / 128 KB
	Chipset	Intel 875P + 6300ESB	Intel 865G + ICH5	Intel 845E + ICH4	Intel 845GV + ICH4
Bus	BIOS	Award 4 Mb FWH	Award 4 Mb FWH	Award 4 Mb FWH	Award 4 Mb FWH
	FSB	400/533/800 MHz	400/533/800 MHz	400/533 MHz	400/533 MHz
	AGP	1 (AGP 8X)	1 (AGP 8X)	1 (AGP 4X)	N/A
	PCI	2 (PCI-X 64-bit /66MHz) 4 (PCI 32-bit /33MHz)	5 (32-bit / 33 MHz)	5 (32-bit / 33 MHz)	5 (32-bit / 33 MHz)
Graphic	ISA	N/A	2	2	2
	Controller	N/A	Chipset integrated	N/A	Chipset integrated
	VRAM		Share system memory up to 64 MB		Share system memory up to 64 MB
LCD	N/A		N/A		
Ethernet	Interface	10/100/1000Base-T	10/100/1000Base-T or 10/100Base-T	10/100/1000Base-T or 10/100Base-T	10/100/1000Base-T or 10/100Base-T
	Controller	Intel 82547/82541 (GbE)	Intel 82547/82541 (GbE), Intel 82562/82551 (FE)	Intel 82541 (GbE), Intel 82562/82551 (FE)	Intel 82541 (GbE), Intel 82562/82551 (FE)
	Connector	RJ-45 x 2	RJ-45 x 2	RJ-45 x 2	RJ-45 x 2
	Disable from BIOS	Yes	Yes	Yes	Yes
Memory	Technology	Dual channel DDR 266/333/400 SDRAM support ECC	Dual channel DDR 266/333/400 SDRAM	DDR 200/266 SDRAM, support ECC	DDR 200/266/333 SDRAM
	Max. Capacity	4 GB	4 GB	2 GB	2 GB
	Socket	184-pin DIMM x4	184-pin DIMM x4	184-pin DIMM x2	184-pin DIMM x2
SATA	Max. Data Transfer Rate	150 MB/Sec.	150 MB/Sec.	N/A	N/A
	Channel	2	2		
EIDE	Mode	ATA 100/66/33	ATA 100/66/33	ATA 100/66/33	ATA 100/66/33
	Channel	2 (Max. four devices)	2 (Max. four devices)	2 (Max. four devices)	2 (Max. four devices)
I/O Interface	VGA	N/A	1	N/A	1
	USB	4 (USB 2.0 compliant)	Max: 8 (USB 2.0 compliant)	Max: 6 (USB 2.0 compliant)	Max: 6 (USB 2.0 compliant)
	Serial	2 (RS-232)	2 (RS-232)	2 (RS-232)	2 (RS-232)
	Parallel	1 (SPP/EPP/ECP)	1 (SPP/EPP/ECP)	1 (SPP/EPP/ECP)	1 (SPP/EPP/ECP)
	FDD	1	1	1	1
	PS/2	2 (keyboard and mouse)	2 (keyboard and mouse)	2 (keyboard and mouse)	2 (keyboard and mouse)
	LAN	1 (for L, G versions) 2 (for G2 version)	1 (for VE, VG versions) 2 (for E2, G2 versions)	1 (for E, G versions) 2 (for E2 version)	1 (for VE, VG versions) 2 (for E2 version)
	OBS (Hardware Monitor)	Yes	Yes	Yes	Yes
	Audio	Line-Out, Mic-In	Line-Out, Mic-In	Line-Out, Mic-In	Line-Out, Mic-In
	Watchdog Timer	Output	Interrupt, system reset	Interrupt, system reset	Interrupt, system reset
Interval		Programmable, 1~255 sec/min	Programmable, 1~255 sec/min	Programmable, 1~255 sec/min	Programmable, 1~255 sec/min
Miscellaneous	Advantech SNMP-1000	Yes	Yes	Yes	Yes
	Solid State Disk	N/A	Compact Flash socket (optional)	Compact Flash socket (optional)	Compact Flash socket (optional)
Reference Page		1-2	1-4	1-6	1-8

Industrial Motherboard 1

Industrial VGA Card 2

Industrial Motherboard Chassis 3

Full-sized CPU Cards 4

Industrial Computer Chassis 5

Industrial Computer Peripherals 6

# AIMB-744

**Socket 478 Pentium® 4/Celeron®  
Industrial ATX Motherboard with  
64-bit PCI-X/AGP/Dual Gigabit LAN  
(400/533/800 MHz FSB)**

**NEW**



## Features

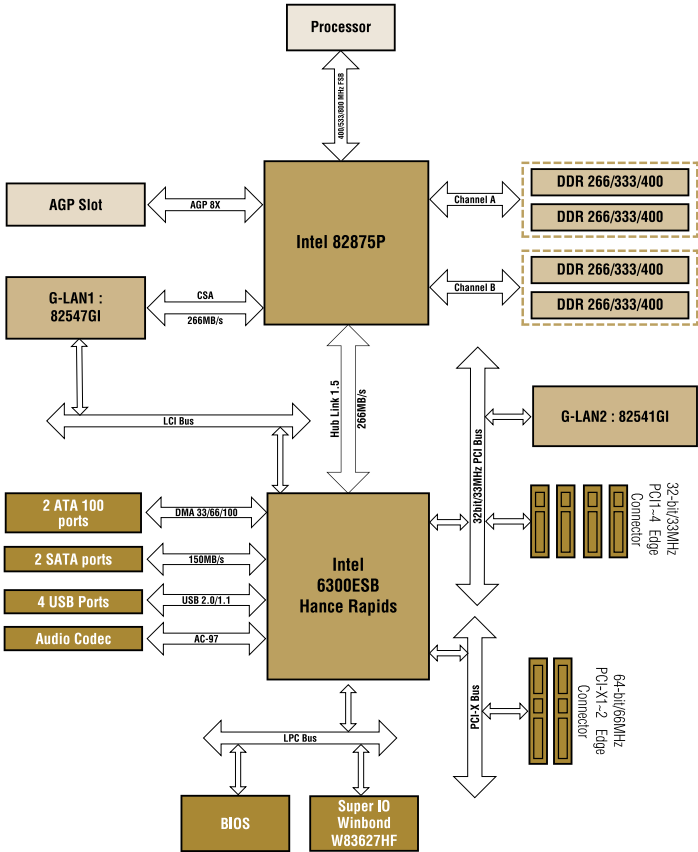
- Industrial grade motherboard with long life support
- Supports up to 2 Serial-ATA devices
- Supports Dual Channel DDR 400 SDRAM
- Intel® 875P chipset 400/533/800 MHz FSB
- 64-bit, 66MHz PCI-X
- Supports 10/100/1000Base-T Ethernet
- 4 USB 2.0 ports
- CMOS automatic backup & restore prevents accidental loss of BIOS setup
- 1 AGP slot / 2 PCI-X slots / 4 PCI slots
- Compatible with Advantech's 1U, 2U, 4U, 5U and 7U chassis

CE FCC

## Specifications

Processor System	CPU (0.13 & 0.09 micron)	Intel Pentium 4	Intel Celeron	
	Max. Speed	3.06 GHz (533 FSB) 3.2 GHz (800 FSB) * Vcore 1.75V CPU (Willamete) Cache512/256 KB128 not supported	2.4 GHz	
	L2 Cache	512/256 KB	128 KB	
	Chipset	Intel® 875P + 6300ESB		
	BIOS	Award 4 Mb FWH		
Bus	Front Side Bus	400/533/800 MHz		
	AGP	AGP 3.0 with 4X and 8X, 0.8 V and 1.5 V, 1 slot		
	PCI	32-bit/33 MHz, 4 slots		
	PCI-X	64-bit/66 MHz, 2 slots		
Memory	Technology	Dual Channel DDR266/333/400 SDRAM with ECC support		
	Max. Capacity	4 GB		
	Socket	184-pin DIMM x 4		
Ethernet	Interface	10/100/1000Base-T		
	Controller	LAN 1: Intel 82547GI (Gigabit, CSA) LAN 2: Intel 82541GI (Gigabit)		
	Connector	RJ-45 x 2		
SATA	Max. Data Transfer Rate	150MB/Sec.		
	Channel	2		
EIDE	Mode	ATA 100/66/33		
	Channel	2 (Max. 4 devices)		
I/O Interface	USB	4 (USB 2.0 compliant)		
	Audio	2 (LINE-Out and MIC-In)		
	Serial	4 (RS-232, 2 ports and 2 onboard pin headers)		
	Parallel	1 (SPP/EPP/ECP)		
	FDD	1		
	PS/2	2 (Keyboard and Mouse)		
Watchdog Timer	Output	Interrupt, system reset		
	Interval	Programmable 1~255 sec.		
Power Requirement	Typical	Pentium 4 3.2 GHz, 4 GB DDR 266/333/400 SDRAM		
		+3.3 V	+5 V	+12 V
		8.13 A	0.57 A	5.29 A
Environment	Temperature	Operating	Non-Operating	
		0~60 °C (32~140F), depends on CPU's speed	-20~70 °C (-40 ~ 158 °F)	
Physical	Dimensions	304.8 x 243.8 mm (12" x 9.6")		

Block Diagram



Industrial Motherboard 1

Industrial VGA Card 2

Industrial Motherboard Chassis 3

Full-sized CPU Cards 4

Industrial Computer Chassis 5

Industrial Computer Peripherals 6

Ordering Information

Part Number	Fast Ethernet LAN	Gigabit LAN
AIMB-744L-00A1	--	--
AIMB-744G-00A1	--	Single
AIMB-744G2-00A1	--	Dual

Packing List

▪ FDD cable	x1	1700340640
▪ IDE HDD cable	x2	1701400452
▪ Serial ATA HDD data cable	x2	1700071000
▪ Serial ATA HDD power cable	x2	1703150102
▪ ATX 12V power converter cable	x1	170304015K
▪ COM port cable kit	x1	1701090401
▪ Jumper pack	x1	9689000068
▪ I/O port bracket	x1	1962015680
▪ Startup manual	x1	--
▪ Utility CD	x1	--

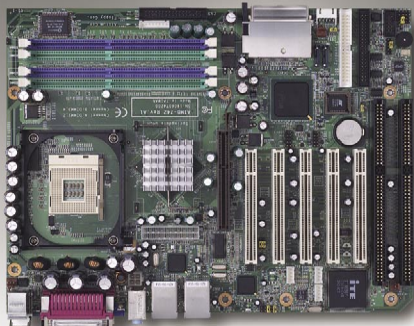
Accessory Options

▪ CPU cooler for Pentium 4 up to 2.8 GHz, for 1U chassis	1759214200
--	------------

# AIMB-742

**Socket 478 Pentium® 4/Celeron®  
Industrial ATX Motherboard with AGP/  
Dual Gigabit LAN (400/533/800 MHz FSB)**

**NEW**



## Features

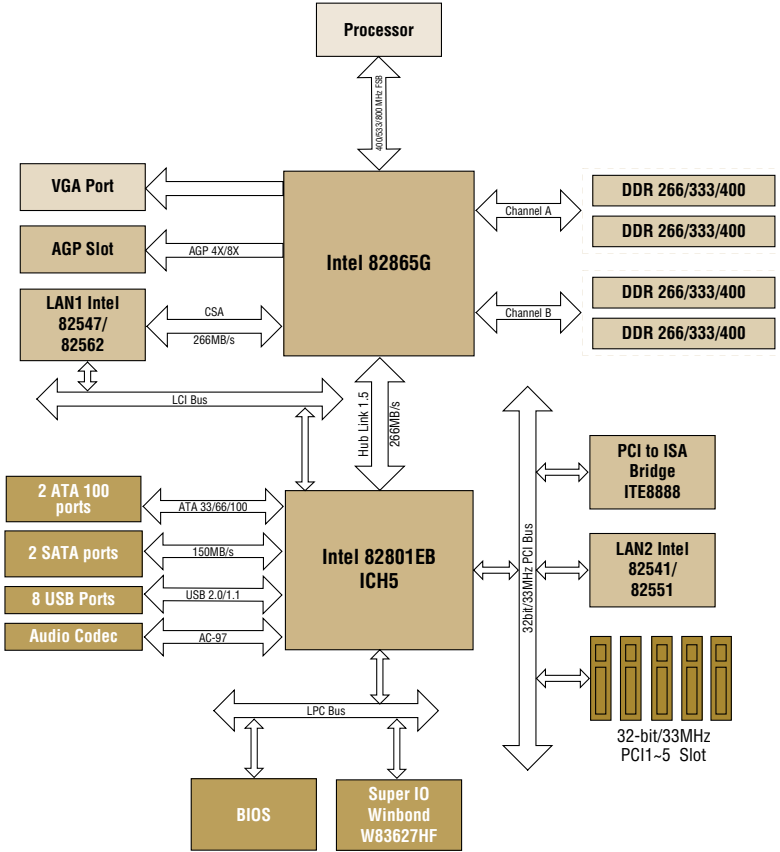
- Industrial grade motherboard
- Supports up to 2 SerialATA devices
- Supports dual channel DDR 400 SDRAM
- Intel® 865G chipset 400/533/800 MHz FSB
- Onboard AGP 8X slot
- Supports 10/100Base-T Ethernet or 10/100/1000Base-T Ethernet
- 8 USB 2.0 ports
- CMOS automatic backup and restore to prevent accidental data loss of BIOS setup
- 1 AGP slot / 2 ISA slots / 5 PCI slots (1 shared with ISA slot)
- Compatible with Advantech's 1U, 2U, 4U, 5U and 7U chassis

CE FCC

## Specifications

Processor System	CPU	Intel Pentium 4	Intel Celeron	
	Max. Speed	3.06 GHz (533 FSB), 3.2 GHz (800 FSB) * Vcore 1.75V CPU (Willamete) Cache512/256 KB128KB not supported	2.4 GHz	
	L2 Cache	512/256 KB	128KB	
	Chipset	Intel® 865G + ICH4		
	BIOS	Award 4 Mb FWH		
Bus	Front Side Bus	400/533/800 MHz		
	AGP	AGP 3.0 with 4X and 8X, 0.8V and 1.5V, 1 slot		
	PCI	32-bit/33 MHz, 5 slots (1 shared with ISA slot)		
	ISA	16-bit/8 MHz, 2 slots		
	Memory	Technology	dual channel DDR266/333/400 SDRAM	
Max. Capacity		4 GB		
Socket		184-pin DIMM x 4		
Graphic	Controller	Chipset integrated VGA controller		
	VRAM	Dynamically shared system memory up to 64 MB		
Ethernet	Interface	10/100Base-T or 10/100/1000Base-T		
	Controller	LAN 1: Intel 82562EZ (FE); Intel 82547GI (Gigabit, CSA) LAN 2: Intel 82551QM (FE);82541GI (Gigabit)		
	Connector	RJ-45 x 2		
SATA	Max. Data Transfer Rate	150MB/Sec		
	Channel	2		
EIDE	Mode	ATA 100/66/33		
	Channel	2 (Max. 4 devices)		
I/O Interface	VGA	1		
	USB	Max. 8 (USB 2.0 compliant), 4 ports on board		
	Audio	2 (LINE-Out and MIC-In)		
	Serial	2 (RS-232)		
	Parallel	1 (SPP/EPP/ECP)		
	FDD	1		
	PS/2	2 (Keyboard and Mouse)		
Watchdog Timer	Output	Interrupt, system reset		
	Interval	Programmable 1~255 sec.		
Miscellaneous	Solid State Disk	1 Type I/II CompactFlash socket (Optional, upon request)		
Power Requirement	Typical	Pentium 4 3.2 GHz, 4 GB DDR 266/333/400 SDRAM		
		+3.3 V	+5 V	+12 V
		9.26 A	0.43 A	5.42 A
Environment	Temperature	Operating	Non-Operating	
		0 ~ 60 °C (32 ~ 140 °F), depends on CPU's speed	-20 ~ 70 °C (-4 ~ 158 °F)	
Physical	Dimensions	304.8 x 228.6 mm (12" x 9")		

Block Diagram



Ordering Information

Part Number	Fast Ethernet LAN	Gigabit LAN
AIMB-742VE-00A1	Single	--
AIMB-742E2-00A1	Dual	--
AIMB-742VG-00A1	--	Single
AIMB-742G2-00A1	--	Dual

Packing List

▪ FDD cable	X 1	1700340640
▪ IDE HDD cable	X 2	1701400452
▪ Serial ATA HDD data cable	X 2	1700071000
▪ Serial ATA HDD power cable	X 2	1703150102
▪ ATX 12V power converter cable	X 1	170304015K
▪ COM port cable kit	X 1	1701090401
▪ Jumper pack	X 1	9689000068
▪ I/O port bracket	X 1	1962015680
▪ Startup manual	X 1	--
▪ Utility CD	X 1	--

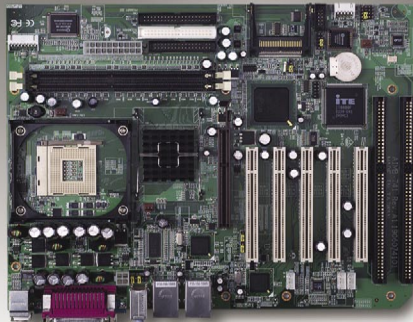
Accessory Options

▪ CPU cooler for Pentium 4 up to 2.8 GHz, for 1U chassis	1759214200
--	------------

# AIMB-741

## Socket 478 Pentium® 4/Celeron® Industrial ATX Motherboard with AGP/ Dual LAN (400/533 MHz FSB)

**NEW**



### Features

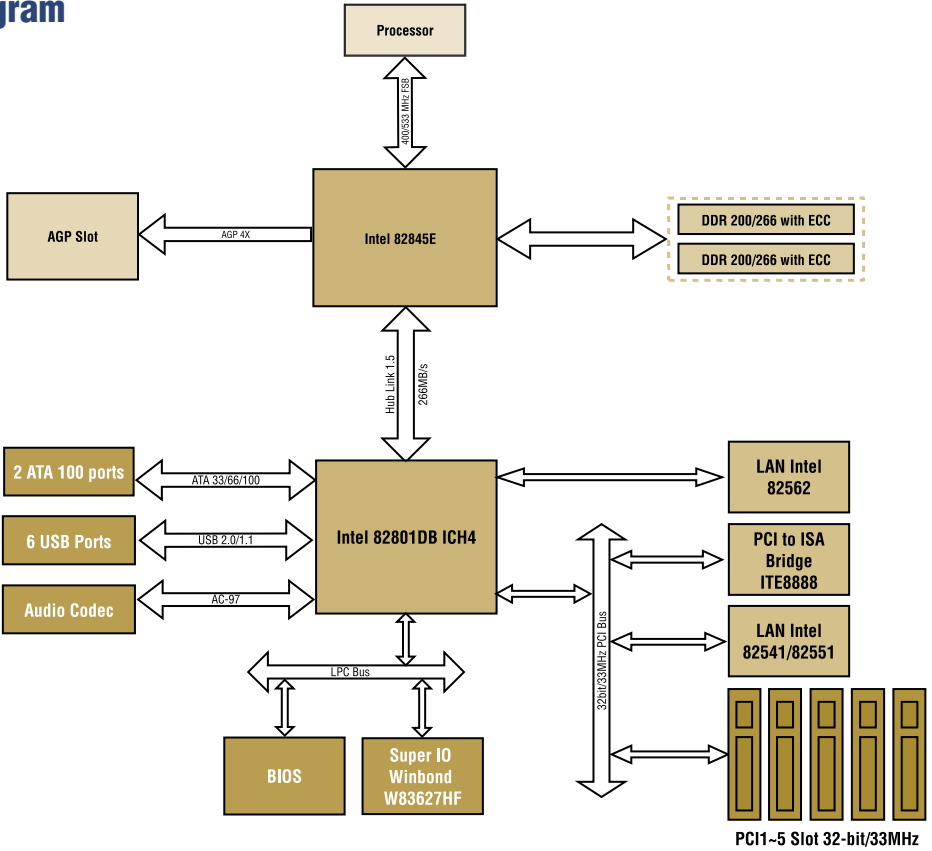
- Industrial grade motherboard with long life support
- Socket 478 Pentium 4/Celeron up to 3.06/2.4 GHz
- Intel® 845E chipset 400/533 MHz FSB
- Onboard AGP 4X slot
- Supports 10/100Base-T Ethernet or 10/100/1000Base-T Ethernet
- 6 USB 2.0 ports
- CMOS automatic backup and restore to prevent accidental data loss of BIOS setup
- 1 AGP slot / 2 ISA slots / 5 PCI slots (1 shared with ISA slot)
- Compatible with Advantech's 1U, 2U, 4U, 5U and 7U chassis

CE FCC

### Specifications

Processor System	CPU (0.13 & 0.09 micron)	Intel Pentium 4	Intel Celeron	
	Max. Speed	3.06 GHz (533 FSB)	2.4 GHz	
	L2 Cache	512/256 KB	128KB	
	Chipset	Intel® 845E + ICH4		
	BIOS	Award 4 Mb FWH		
Bus	Front Side Bus	400/533 MHz		
	AGP	AGP 2.0 with 2X, and 4X, 1.5V only, 1 slot		
	PCI	32-bit/33 MHz, 5 slots (1 shared with ISA slot)		
	ISA	16-bit/8 MHz, 2 slots		
Memory	Technology	DDR 200/266 SDRAM with ECC support		
	Max. Capacity	2 GB		
	Socket	184-pin DIMM x 2		
Ethernet	Interface	10/100Base-T or 10/100/1000Base-T		
	Controller	LAN 1: Intel 82562 (FE); Intel 82541 (Gigabit) LAN 2: Intel 82551 (FE) (82541 upon request)		
	Connector	RJ-45 x 2		
EIDE	Mode	ATA 100/66/33		
	Channel	2 (Max. 4 devices)		
I/O Interface	USB	Max. 6 (USB 2.0 compliant), 4 ports on board		
	Audio	2 (LINE-Out and MIC-In)		
	Serial	2 (RS-232)		
	Parallel	1 (SPP/EPP/ECP)		
	FDD	1		
	PS/2	2 (Keyboard and Mouse)		
Watchdog Timer	Output	Interrupt, system reset		
	Interval	Programmable 1~255 sec.		
Miscellaneous	Solid State Disk	1 Type I/II CompactFlash socket (Optional, upon request)		
Power Requirement	Typical	Pentium 4 3.06 GHz, 2 GB DDR 200/266 SDRAM		
		+3.3 V	+5 V	+12 V
		5.95 A	0.86 A	4.52 A
Environment		Operating	Non-Operating	
	Temperature	0 ~ 60 °C (32 ~ 140 °F), depends on CPU's speed	-20 ~ 70 °C (-4 ~ 158 °F)	
Physical	Dimensions	304.8 x 228.6 mm (12" x 9")		

Block Diagram



Ordering Information

Part Number	Fast Ethernet LAN	Gigabit LAN
AIMB-741L-00A1	--	--
AIMB-741E-00A1	Single	--
AIMB-741E2-00A1	Dual	--
AIMB-741G-00A1	--	Single

Packing List

▪ FDD cable	X 1	1700340640
▪ IDE HDD cable	X 2	1701400452
▪ COM port cable kit	X 1	1701090401
▪ ATX 12V power converter cable	X 1	170304015K
▪ Jumper pack	X 1	9689000068
▪ I/O port bracket	X 1	1962015680
▪ Startup manual	X 1	--
▪ Utility CD	X 1	--

Accessory Options

▪ CPU cooler for Pentium 4 up to 2.8 GHz, for 1U chassis	1759214200
--	------------

# AIMB-740

## Socket 478 Pentium® 4/Celeron® Industrial ATX Motherboard with VGA/ Dual LAN (400/533 MHz FSB)

**NEW**



### Features

- Industrial grade motherboard with long life support
- Socket 478 Pentium 4/Celeron up to 3.06/2.4 GHz
- Intel® 845GV chipset 400/533 MHz FSB
- Onboard integrated VGA controller, shared memory architecture
- Supports 10/100Base-T Ethernet or 10/100/1000Base-T Ethernet
- 6 USB 2.0 ports
- CMOS automatic backup and restore to prevent accidental data loss of BIOS setup
- 2 ISA slots/ 5 PCI slots (1 shared with ISA slot)
- Compatible with Advantech's 1U, 2U, 4U, 5U and 7U chassis

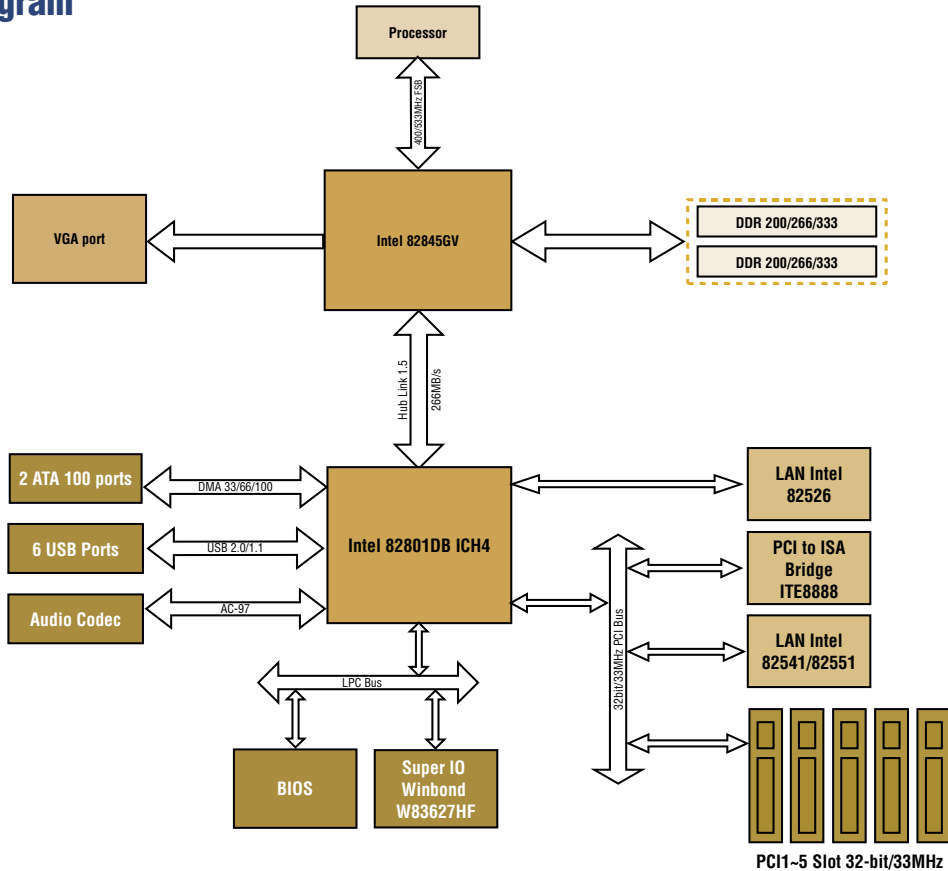
CE FCC

### Specifications

Processor System	CPU (0.13 & 0.09 micron)	Intel Pentium 4	Intel Celeron
	Max. Speed	3.06 GHz (533 FSB)	2.4 GHz
	L2 Cache	512/256 KB	128 KB
	Chipset	Intel 845GV	
	BIOS	Award 4 Mb FWH	
Bus	Front Side Bus	400/533 MHz	
	PCI	32-bit/33 MHz, 5 slots (1 shared with ISA slot)	
	ISA	16-bit/8 MHz, 2 slots	
Memory	Technology	DDR 200/266/333 SDRAM	
	Max. Capacity	2 GB	
	Socket	184-pin DIMM x 2	
Graphic	Controller	Chipset integrated VGA controller	
	VRAM	Dynamically shared system memory 8-64 MB	
Ethernet	Interface	10/100Base-T or 10/100/1000Base-T	
	Controller	LAN 1: Intel 82562 (FE); Intel 82541 (Gigabit) LAN 2: Intel 82551 (FE) (82541 upon request)	
	Connector	RJ-45 x 2	
EIDE	Mode	ATA 100/66/33	
	Channel	2 (Max. 4 devices)	
I/O Interface	VGA	1	
	USB	Max. 6 (USB 2.0 compliant), 4 ports on board	
	Audio	2 (LINE-Out and MIC-In)	
	Serial	2 (RS-232)	
	Parallel	1 (SPP/EPP/ECP)	
	FDD	1	
	PS/2	2 (Keyboard and Mouse)	
Watchdog Timer	Output	Interrupt, system reset	
	Interval	Programmable, 1~255 sec.	
Miscellaneous	Solid State Disk	1 Type I/II CompactFlash socket (Optional, upon request)	
	Typical	Pentium 4 3.06 GHz, 2 GB DDR 200/266 SDRAM	
Power Requirement		+3.3 V +5 V +12 V	
		4.23 A 1.35 A 4.17 A	
Environment		Operating	Non-Operating
	Temperature	0 ~ 60 °C (32 ~ 140 °F), depends on CPU's speed	-20 ~ 70 °C (-4 ~ 158 °F)
Physical	Dimensions	304.8 x 228.6 mm (12" x 9")	



**Block Diagram**



**Ordering Information**

Part Number	VGA	Fast Ethernet LAN	Gigabit LAN
AIMB-740VE-00A1	V	Single	--
AIMB-740E2-00A1	V	Dual	--
AIMB-740VG-00A1	V	--	Single
AIMB-740V-00A1	V	--	--

**Packing List**

▪ FDD cable	X 1	1700340640
▪ IDE HDD cable	X 2	1701400452
▪ COM port cable kit	X 1	1701090401
▪ ATX 12V power converter cable	X 1	170304015K
▪ Jumper pack	X 1	9689000068
▪ I/O port bracket	X 1	1962015680
▪ Startup manual	X 1	--
▪ Utility CD	X 1	--

**Accessory Options**

▪ CPU cooler for Pentium 4 up to 2.8 GHz, for 1U chassis	1759214200
--	------------