

ALi Corporation



ALi Corporation (also known as **Acer Laboratories Incorporated** or **Acer Labs Inc.**, and commonly known as **ALi**) is a major designer and manufacturer of [embedded systems integrated circuits](#), and a former manufacturer of [personal computer](#) integrated circuits. It is based in Taiwan, and is a subsidiary of the [Acer](#) group.

The company was founded in 1987, its president is Teddy Lu. Part of ALi including the personal computer integrated circuits business was spun off as ULi Electronics Inc. in June 2003. ULi was acquired by [Nvidia](#) in 2006 for \$52 million.

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Products

Chipsets

80X86 Chipsets

Chipset	Part Numbers	South Bridge	Release Date	Processors	Bus Type	Max. <u>FSB</u>	Memory Types	Max. Memory Bus	Max. Memory	Max. Cache	<u>PCI</u>
	M1209			386SX	ISA		FPM				None
	M1217			386SX	ISA		FPM				None
	M1419	M1421		386DX Socket 1 Socket 2	ISA		FPM				None
	M1429	M1431		386DX Socket 2 Socket 3	VES A						None
	M1439	M1445		Socket 3	PCI						2.0
FINALi 486	M1489	M1487		Socket 3	PCI	50 MHz	EDO	50 MHz	128MB	1MB	2.0

Pentium Chipsets

Chipset	Part Numbers	South Bridge	Release Date	Processors	Max. <u>FSB</u>	Memory Types	Max. Memory Bus	Max. memory	Max. cache	Max. cacheable RAM	<u>Parity/ECC</u>	<u>PCI</u>	<u>AGP</u>
ALADDiN	M1451	M1449		Socket 4	66 MHz	FPM	66 MHz	1 GB	1MB	512MB	Yes	2.1	No
ALADDiN II	M1521	M1523		Socket 7	66 MHz	FPM EDO BEDO SDRA	66 MHz	1 GB	1MB	512MB	Yes	2.1	No

Model	Part Number	South Bridge	Release Date	Processors	FSB	Memory Type	Memory Bus	Max Memory	Parity/ECC	Cache	IGP	
ALADDiN I V ^[1]	M153 1	M1533		Socket 7	83 MHz	FPM EDO SDRAM	100 M Hz	1 GB 1M B	512MB	Yes	2.1	No
ALADDiN I V+ ^[1]	M153 1B	M1533/M1543		Socket 7	83 MHz	FPM EDO SDRAM	100 M Hz	1 GB 1M B	512MB	Yes	2.1	No
ALADDiN V ^[2]	M154 1	M1543/M1543C		Super Socket 7	100 MHz	FPM EDO SDRAM	100 M Hz	1 GB 1M B	1GB	Yes	2.1	2x
ALADDiN V+ ^[2]	M154 2	M1543/M1543C		Super Socket 7	100 MHz	FPM EDO SDRAM	100 M Hz	1 GB 1M B	1GB	Yes	2.1	2x
ALADDiN 7	M156 1	M1535D		Super Socket 7	100 MHz	SDRAM	100 M Hz	1 GB 1M B	1GB		2.1	No

Slot 1 and Socket 370 Chipsets

Chipset	Part Numbers	South Bridge	Release Date	Processors	FSB	Memory Type	Memory Bus	Max Memory	Parity/ECC	Cache	IGP
ALADDiN PRO II	M16 21	M1543/M1543C		Pentium II	66/100 MHz	EDO, SDRAM	66 - 100 MHz	2 GB	Yes	2.1	2x No
ALADDiN TNT	M16 31	M1535/M1535D		Pentium II, Pentium III, Celeron	66/100/133 MHz	EDO, SDRAM	66 - 133 MHz	1.5 GB	ECC	2.2	2x NVIDIA TNT2
CyberBLADE	M16	M1535		Mobile Pentium	66/100/133 MHz	EDO, SDRAM	66 -	1.5 GB	ECC	2.2	2x Trident CyberBlade

ALADDiN 32M i1 II/Pentium III 33 MHz AM 133 MHz GB 2 ade 3D

ALADDiN M16 M1535/ PRO 4 41 M1535D Pentium II, Pentium III, Celeron 66/100 MHz EDO, SDR AM 66 - 133 MHz 1.5 GB ECC 2. 2 4x No

CyberALA M16 M1535D DDiN 44 + Pentium II, Pentium III, Celeron 66/100/133 MHz SDR AM, DDR 100/133 MHz z SDRAM, 200/266 MHz z DDR 3 GB ECC 2. 2 4x Trident CyberBlade XP

CyberALA M16 M1535D DDiN-T 44T + Pentium II, Pentium III, Pentium III Tualatin, Celeron 66/100/133 MHz SDR AM, DDR 100/133 MHz z SDRAM, 200/266 MHz z DDR 3 GB ECC 2. 2 4x Trident CyberBlade XP

ALADDiN M16 M1535D PRO 5 51 + Pentium II, Pentium III, Celeron 100/133 MHz SDR AM, DDR 100/133 MHz z SDRAM, 200/266 MHz z DDR 3 GB ECC 2. 2 4x No

ALADDiN M16 M1535D PRO 5T 51T + Pentium II, Pentium III, Pentium III Tualatin, Celeron 100/133 MHz SDR AM, DDR 100/133 MHz z SDRAM, 200/266 MHz z DDR 3 GB ECC 2. 2 4x No

Slot A and Socket A Chipsets

Chipset	Part Numbers	South Bridge	Release Date	Processors	FSB	Memory Types	Memory Bus	Max. memory	AGP	IGP
CyberMAGiK 1	M164 6	M153 5+		Mobile Athlon/Athlon XP/Duron	200/266 MHz	SDRAM, DDR	100/133 MHz SDRAM, 200/266 MHz DDR	3 GB	4x	Trident CyberBlade XP
MAGiK 1	M164 7	M153 5D+		Athlon , Athlon XP , Duron	200/266 MHz	SDRAM, DDR	100/133 MHz SDRAM, 200/266 MHz DDR	3 GB	4x	No

MAGiK 1	M164	M153	Athlon, Athlon XP, Duron	200/266 MHz	SDRAM	100/133 MHz SDRAM	3 GB	4x	No
MAGiK 2 ^[*]	M166	M156	Athlon, Athlon XP, Duron	200/266 MHz	SDRAM, DDR	100/133 MHz SDRAM, 200/266/333 MHz DDR		8x	No

[*] It was not implemented.

Socket 478 Chipsets

Chipset	Part Numbers	South Bridge	Release Date	Processors	FSB	Memory Types	Memory Bus	Max. memory	AGP	IGP
ALADDiN-P4	M167	M153		Pentium 4 , Celeron	400 MHz	SDRAM, DDR	100/133 MHz SDRAM, 200/266/333 MHz DDR	3 GB	4x	No
CyberALA DDiN-P4	M167	M153		Mobile Pentium 4/Celeron	400 MHz	SDRAM, DDR	100/133 MHz SDRAM, 200/266 MHz DDR	3 GB	4x	Trident CyberBlade XP2
A8XN	M168	M156		Pentium 4, Celeron	400/533 MHz	SDRAM, DDR	100/133 MHz SDRAM, 200/266/333/400 MHz DDR	3 GB	8x	No
A800N	M168	M156		Pentium 4, Celeron	400/533/800 MHz	SDRAM, DDR	100/133 MHz SDRAM, 200/266/333/400 MHz DDR	3 GB	8x	No

Socket 754/939/940 Chipsets

Chipset	Part Numbers	South Bridge	Release Date	Processors	HyperTransport	Memory Types	Memory Bus	Max. memory	AGP	PCI-e	IGP
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ALi M1687	M1687	M1563	Athlon 64 , Sempron	1600 MT/s	DDR	200/266/333 MHz DDR	4 GB	8x	No	No
ULi M1689	M1689	Integrated	Athlon 64 , Athlon 64 X2 , Sempron	2000 MT/s	DDR	266/333/400 MHz DDR	4 GB	8x	No	No
ULi M1695	M1695	M1567	Athlon 64, Athlon 64 X2, Sempron	2000 MT/s	DDR	266/333/400 MHz DDR	4 GB	8x	x16	No
ULi M1697	M1697	Integrated	Athlon 64, Athlon 64 X2, Sempron	2000 MT/s	DDR	266/333/400 MHz DDR	4 GB	No	x16	No

Southbridge Chips

Part Numbers	NB Interconnect	PATA	SATA	SATA RAID	PC I	USB	Audio	Ethernet
M1487	PCI	PIO 0/1/2/3/4			2.0	No	No	No
M1523	PCI	UDMA 33			2.1	No	No	No
M1523B	PCI	UDMA 33			2.1	2 x 1.0	No	No
M1533	PCI	UDMA 33			2.1	2 x 1.0	No	No
M1543	PCI	UDMA 33/66			2.1	2 x 1.0	No	No
M1543C	PCI	UDMA 33/66			2.1	3 x 1.0	No	No
M1535/M1535D	PCI	UDMA 33/66			2.2	4 x 1.0	AC'97 2.1	No
M1535+/M1535D	PCI	UDMA			2.2	6 x	AC'97	No

+		33/66/100			1.1	2.1	
M1563	HyperTransport	UDMA 33/66/100/133			2.2	6 x AC'97 2.0 2.2	10/100Mbps
M1567	HyperTransport	UDMA 33/66/100/133	1.0 (1.5 Gbit/s)	0/1/JBOD	2.2	8 x AC'97 2.0 2.2	10/100Mbps
M1573 ^[*]	PCI Express	UDMA 33/66/100/133	1.0 (1.5 Gbit/s)	0/1/JBOD	2.3	8 x HD 2.0 Audio	10/100Mbps
M1575 ^[**]	PCI Express	UDMA 33/66/100/133	2.0 (3 Gbit/s)	0/1/0+1/5/JBOD	2.3	8 x HD 2.0 Audio	10/100Mbps
M1689 ^[***]	N/A	UDMA 33/66/100/133	1.0 (1.5 Gbit/s)	0/1/JBOD	2.3	8 x AC'97 2.0 2.2	10/100Mbps
M1697 ^[***]	N/A	UDMA 33/66/100/133	2.0 (3 Gbit/s)	0/1/0+1/5/JBOD	2.3	8 x HD 2.0 Audio	10/100Mbps

[*]Used with ATI Radeon [Xpress 200](#) chipsets (RS480, RX480)

[**]Used with ATI Radeon [Xpress 200](#) chipsets (RS482, RS485, RD480)

[***]Table shows the I/O capabilities of these single-chip chipsets, which do not have a physical "southbridge".



ALi M1541-based motherboard with AMD K6-2 300MHz processor.



ALi M1535 southbridge chip from a [Fujitsu](#) Lifebook P series laptop

VGA

- M3141
- M3143
- M3145A AliCat - PCI SVGA card, 2 MB [DRAM](#), external [RAMDAC](#), no [DDC](#) support - most likely S3 Trio64V+ compatible
- M3147V AliCat - PCI SVGA card, 2 MB ([S3](#) Trio 64V+ compatible ?)
- M3149 GUI Accelerator, 4MB
- M3151 GUI Accelerator, 8 MB



A M3147V VGA card

Video

- M3307 MPEG-I Video Controller
- M3309 MPEG-II Video w/ Software Audio Decoder
- M3321 MPEG-II Audio/Video Decoder
- M3325 Video/Audio Decoder
- M3327 CPU
- M3328 CPU
- M3329 CPU ([MIPS architecture](#))
 - A1 (216 pin)
 - B1 (216 pin)
 - C E1 (128 pin)
 - PF (parallel)
 - SF (serial)
- M3330 CPU

PC peripheral



An ALi M5617 USB Scanner Controller

- M5105, M5107, M5109, M5113, M5119 SuperIO chip
- M5123, M5125, M5132, M5135, M5140, M5145 SuperIO chip with KBC integrated
- M5253, M5271, M5273, M5622, M5633 [USB/Firewire](#) PCI chipsets
- M5281, M5283, M5619, M5621, M5636, M5637, M5642 PCI IDE
- M5455 PCI [AC'97](#) Sound
- M5623 (USB 2.0), M5617 (USB 1.1) USB Scanner controller
- M5632 USB Host-to-host
- M5634, M5651 USB Flash Disk controller, probably clone of Phison chips
- M5635 USB Cardreader
- M5661, M5667, M7101, M7107, M7108 digital audio player controller
- M5818 RTC chip, clone of Motorola MC146818

For embedded systems



ISA card with ALi M6117.

M6117 is a highly integrated, low voltage, single-chip implementation of the [Intel 386SX](#) compatible microprocessor plus ALi M1217 chipset. The M6117 provides a static 386SX core, DRAM controller, ISA bus logic, real time clock, keyboard controller, and power management unit.

M6032 is an 8051-based Microcontroller with Dual Data Pointers, UART, 32 I/O lines, 3 Timers/Counters, 6 Interrupts/2 priority levels, 256 Bytes IDATA RAM, 256 Bytes on-chip XRAM.

M6759 is an 8051-based Microcontroller with Dual Data Pointers, UART, 32 I/O lines, 3 Timers/Counters, 6 Interrupts/2 priority levels, 64 KB Flash ROM, 256 Bytes IDATA RAM, 256 Bytes on-chip XRAM.

See also

- [Comparison of AMD chipsets](#)
- [Comparison of ATI chipsets](#)
- [List of Intel chipsets](#)
- [Comparison of Nvidia chipsets](#)
- [List of VIA chipsets](#)