Embedded Solutions

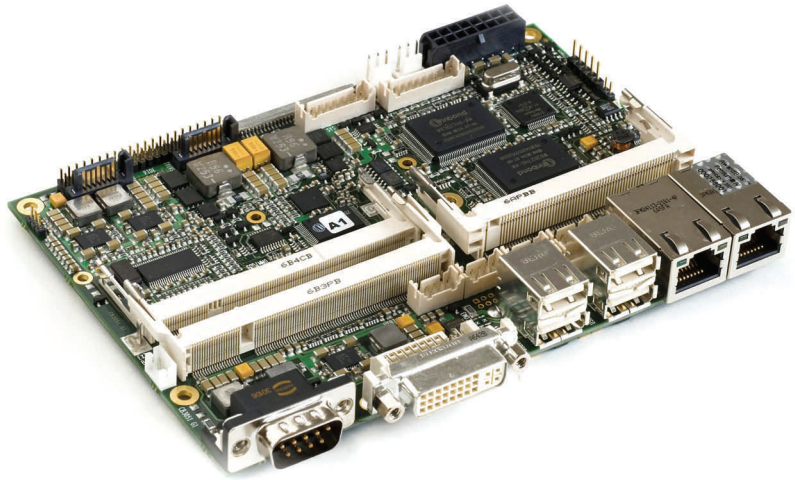
3.5-inch

ADL945HD

Intel Celeron M / Core Duo / Core 2 Duo: 1.07GHz - 2.16GHz

Features

- Intel Celeron M / Core Duo / Core 2 Duo
- 1.07GHz to 2.16GHz
- 945GME / ICH7R Chipset
- Up to 4GB DDR2 - 667MHz SDRAM (2GB x2)
- Hardware Monitoring
- Power Management
- 8x USB 2.0
- Onboard Digital Video Interface (DVI/LVDS)
- 10/100MB and 1GB Ethernet LAN Controllers
- Mini-PCI socket
- 3.5-inch form factor
- 2x SATA 300
- ATX Power Control
- Dedicated Resistive Touch Screen
- SM/I2C Bus
- Windows 7, Windows 8, Linux Compatible
- 16 GPIO Interface
- AC97 Sound



RoHS COMPLIANT

Ordering Guide

Item Code	Part #	Description
ADL945HD-423CM	294110	SingleCore 1.07GHz, 1M cache
ADL945HD-440CM	294111	SingleCore 1.86GHz, 1M cache
ADL945HD-U2500	294112	DualCore 1.2GHz, 2M cache
ADL945HD-L2400	294113	DualCore 1.66GHz, 2M cache
ADL945HD-T2500	294114	DualCore 2GHz, 2M cache
ADL945HD-T7400	294115	DualCore 2.16GHz, 4M cache
ADL945HD-L7400	294116	DualCore 1.5GHz, 4M cache
Thermal Solution		
ADL945HD-Spreader	294845	Thermal plate added to board for chassis mount
Standard DDR2 RAM		
DDR2-DRAM512	TBD	DDR2-667MHz 512MB Standard Temperature
DDR2-DRAM1024	996050	DDR2-667MHz 1GB Standard Temperature
DDR2-DRAM2048	996150	DDR2-667MHz 2GB Standard Temperature
Extended Temperature DDR2 RAM		
DDR2-DRAM512-EX	TBD	DDR2-667MHz 512MB Extended Temperature
DDR2-DRAM1024-EX	996051	DDR2-667MHz 1GB Extended Temperature
DDR2-DRAM2048-EX	996151	DDR2-667MHz 2GB Extended Temperature
Options		
ADL35-COMOPT	294000	Additional com port added

Description

The ADL945HD is based on the Intel® Core™2 Duo / Core™Duo / Core™Solo Processors, with clock speeds up to 2.16GHz, and the Intel® 945GME / ICH7R chipset. The Intel® Generation 3.5 graphics engine is integrated into the chipset, along with the Intel® Graphics Media Accelerator 950 (Intel® GMA 950), and can drive either a CRT/DVI and/or LVDS LCD.

The memory is added by way of two SODIMM200 sockets and can accept up to four Gigabytes of DDR2 DRAM. The ADL945HD power management incorporates ACPI/APM functions. The standard ADL945HD also incorporates EIDE, SATA, 4x Onboard External USB 2.0, 4x Internal USB 2.0, 4x RS232 COM ports, PS/2 Keyboard and Mouse, AC97 Sound, separate 10/100Mbit and Gigabit Ethernet LAN, and more.

ADL Embedded Solutions offer highly effective active and passive cooling solutions based on proven thermal data and mounting techniques; resulting in the least possible mechanical board stress. Please contact your Sales Engineer for detailed information on cooling solutions to fit your needs.

ADL Embedded Solutions GmbH, Eiserfelder Straße 316 D-57080 Siegen, Germany P. +49 (0) 271 250 810 0 F. +49 (0) 271 250 810 20
e-mail: sales@adl-europe.com; web: www.adl-europe.com

ADL Embedded Solutions Inc., 4411 Morena Blvd., Suite 101 San Diego, CA 92117-4345 P. +1 858 490-0597 F. +1 858 490-0599
e-mail: sales@adl-usa.com; web: www.adl-usa.com

Embedded Solutions

3.5-inch

Technical Specifications

Feature	Function	Options / Remarks
CPU	Intel Celeron M / Core Duo / Core 2 Duo	
Soldered (or Socket Name)	Soldered	
2nd Level Cache	1024KB / 2048KB / 4096KB	Celeron M = 1MB, Core Duo = 2MB, Core 2 Duo = 4MB
FSB	533MHz / 667MHz	423CM, 440CM, U2500=533MHz; L2400, L7400, T2500,T7400 = 667MHz
CPU-Clock	1.07 GHz, - 2.16GHz	423CM - 1.07GHz, 44CM - 1.86GHz; U2500 - 1.2GHz, L2400 - 1.66GHz, T2500 - 2.0GHz; L7400 - 1.5GHz, T7400 - 2.16GHz
North Bridge	Intel 945GME	
South Bridge	Intel ICH7R	
Super IO1 / Super IO2	Windbond 83627HG / Winbond W83627HG	
Hardware Monitoring	SuperIO1 + SuperIO2	
Memory 200pin DDR2 SODIMM	2x SODIMM200, 1.8V / DDR2	Max. 4096MB
Speed max	DDR2 667MHz	Processor Dependent
Video Controller	Graphics Media Accelerator 950 (Intel GMA950)	Integrated into the Intel 945GME
Video BIOS	Intel IEGD	
Video Memory	Max. 8MB UMS / max. 224MB DVMT	
CRT (Analog VGA)	Optional	DVI to VGA converter required for VGA
CRT resolution	2048 x 1536 max.	
DVI/HDMI/DisplayPort	DVI	
LCD LVDS 18/24/36/48	18/36 - BIT LVDS	
LCD resolution	1600 x 1200 max.	
BIOS	Phoenix-Award 6.1	
BIOS Chip	FWH	
Power Management APM/ACPI	APM / ACPI supported	
Speedstep / AMT	Speedstep supported	
Selectable fixed frequency	Yes	
Powerstates S0/S1/S3/S4/S5	S0, S1, S4, S5 supported	
Controller and Codec	945GME / Realtek ALC6555 (HDA)	
Support for 2/6/8 channel (2.0/5.1/7.1)	Up to 5.1 HDA	2 channel, 6 channel
Analog In Line/CD/AUX/Mic1/Mic2/PCBeep	Analog In, Mic1, Mic2, PC Beep	
Analog Out Line/Monoout	Analog Out	
Digital In/Out (GPIO)	16 Digital In and 16 Digital Out	
LAN1 / LAN2 Controller	LAN1 - Intel ICH7R 82562 Phy / LAN2 - Intel82573E	
10/100/1000 Mbit	LAN1, 10/100Mbit, / LAN2 - 10/100/100Mbit	
Bootoption RPL/PXE/WOL	LAN1 / LAN2 - RPL/PXE/WOL supported	
ISA Bus / PCI Bus / mini-PCI	No / No / Yes	Other PCI options may be available
PCIe x1 / x4 / x16	No	
ATA primary/secondary	Primary ATA	
PIO 0/1/2/3/4 - DMA33/66/100/133	All speeds supported except DMA133	80-conductor ribbon required for DMA66/100
SATA Channels	2	1.5Gb / 3.0Gb supported
CompactFlash / Solid State Disk	No / No	Off-board options available
Boot HD/FDD/CDROM/FD/ZIP/USB	All devices listed are supported	
USB-Channels	8	USB 1.1/2.0/Host, (USB8: Touch)
COM1/2: TTL/RS232/RS485/RS422	TTL and RS232 compatible	RS232 is standard. TTL is a soldered option
COM3/4: TTL/RS232/RS485/RS422		
Parallel Interface(s)	No	
PS/2 Keyboard/Mouse	Yes/Yes	
Floppy Interface FCC/LPT	No	
Touch Controller ELO resistive	Yes	Ordering option
Watchdog	Yes	
Supply Voltage	+5V and +5V Suspend (12V for fans)	
Power Consumption (typ)	TBD	
Power Suspend	TBD	
UPS/Pb-Batt	No	
Operating Temperature	-25° - 70° C	
Extended Temperature	On request (-40° - 85° C)	
Storage Temp.	-20° - 70° C	
MTBF	>169,000 Hours	Calculation method: MIL-HDBK-217F
Weight	345g (approximate weight)	Board weight will slightly vary depending on model
Dimensions	5.8" x 4" (147mm x 102mm)	3.5-inch form Factor

ADL Embedded Solutions GmbH, Eiserfelder Straße 316 D-57080 Siegen, Germany P. +49 (0) 271 250 810 0 F. +49 (0) 271 250 810 20
e-mail: sales@adl-europe.com; web: www.adl-europe.com

ADL Embedded Solutions Inc., 4411 Morena Blvd., Suite 101 San Diego, CA 92117-4345 P. +1 858 490-0597 F. +1 858 490-0599
e-mail: sales@adl-usa.com; web: www.adl-usa.com