



### ADLS15HD - Intel Atom Z5xx 1.1GHz - 1.6GHz, US15W SCH

#### Features

- Intel Atom Z510 / Z530 Processor
- 1.1GHz - 1.6GHz
- Intel US15W System Controller Hub (SCH)
- FSB and Memory speeds up to 533MHz
- Up to 2048MB DDR2 SODIMM200
- Onboard Dual Gigabit Ethernet LAN ports
- Onboard DVI-D port up to 1600 x 1200 resolution
- 8x USB 2.0 Ports (4x internal headers)
- 2x RS232 COM Ports
- UDMA-100 Primary PATA Interface
- Mini-PCI socket
- Power Management
- Hardware Monitoring
- 24V Isolated (20-30VDC tolerant)
- Extended Temp Range Available



#### Ordering Information

Item Code	Part #	Description
ADLS15HD-11N	294310	3.5-inch Atom 1.1GHz CPU, No Touch Screen Support
ADLS15HD-16N	294360	3.5-inch Atom 1.6GHz CPU, No Touch Screen Support
<b>Standard Temp. (0°C to +70°C), DDR2-RAM (SODIMM200)</b>		
DDR2-DRAM512-6A	996926	DDR2 RAM 512MB for 945/Atom CPU, 200PIN 667MHz, 0°C to +70°C
DDR2-DRAM1024-6A	996026	DDR2 RAM 1024MB for 945/Atom CPU, 200PIN 667MHz, 0°C to +70°C
DDR2-DRAM2048-6A	996126	DDR2 RAM 2048MB for 945/Atom CPU, 200PIN 667MHz, 0°C to +70°C
<b>Extended Temp. (-40°C to +85°C), DDR2-RAM (SODIMM200)</b>		
DDR2-DRAM512-EX	996927	DDR2 RAM 512MB for 945/Atom CPU, 667MHz, -40°C to +85°C
DDR2-DRAM1024-EX	996027	DDR2 RAM 1GB, for 945/Atom CPU, 667MHz, -40°C to +85°C
DDR2-DRAM2048-EX	996127	DDR2 RAM 2GB, for 945/Atom CPU, 667MHz, -40°C to +85°C
<b>Thermal Solutions</b>		
ADLS15HD-Spreader	294835	Thermal plate added to board for chassis mount

\*More options may be available Contact our Sales Office\*

#### Description

The ADLS15HD 3.5-inch embedded single board computer is based on the Intel® Atom™ and the Intel® US15W (Poulsbo™) chipset. The Intel® Atom™ is a single core processor built on a 45nm process that boasts an impressive 2.64 watts TDP (CPU only). The Intel® Atom™ delivers the benefits of genuine Intel® architecture to small form factor and thermally constrained markets. The Intel® US15W System Controller Hub (SCH) incorporates all functions of legacy GMCH and ICH architectures into a single die.

The ADLS15HD takes advantage of these features by delivering high performance and low thermals in a compact 3.5-inch form factor. The Intel® graphics controller drives graphics up to 1600x1200@60Hz by way of onboard DVI-D and/or 18/24 bit LVDS LCD. Memory is added via an SODIMM200 socket that will accept up to 2GB of DDR2-400/533 DRAM. In addition to ACPI/APM functions, the ADLS15HD has the following features: EIDE, 8xUSB 2.0, 2xRS232 COM ports, PS/2 Keyboard and Mouse, AC'97 and HDA 5.1 Sound, and Dual Gigabit Ethernet LAN. The ADLS15HD has an isolated 24VDC input that is 20-30VDC tolerant for powering the board. The ADLS15HD also provides a built-in UPS (1 second std.) that will allow for a fast but safe shut-down.

ADL Embedded Solutions offer very effective active and passive thermal solutions designed for this product. Contact your sales representative for more information.

Data subject to change without notice



### Technical Specifications

Feature	Function	Options / Remarks
CPU	Intel Atom	Z510 / Z530
Soldered (or Socket Name)	Soldered	
2nd Level Cache	512KB	
FSB	400/533MHz	Determined by CPU selection
CPU-Clock	1.1GHz, 1.6GHz	Z510 = 1.1GHz, Z530 = 1.6GHz
North Bridge	Intel US15W SCH	Northbridge and Southbridge are incorporated into a single System Controller Hub (SCH)
South Bridge		
Super IO1	Windbond 83627HG	
Hardware Monitoring	Supported by SuperIO1	
Memory 200pin DDR2 SODIMM	SODIMM200, 1.8V / DDR2	Max. 2048MB
Speed max	DDR2 400/533MHz	Processor Dependent
Video Controller	Graphics Media Accelerator 500 (Intel GMA500)	Integrated into the Intel US15W SCH
Video BIOS	Intel IEGD	
Memory	Max. 8MB UMS / max. 256MB DVMT	
CRT	None	
CRT resolution	1600 x 1200 max.	
DVI/HDMI/DisplayPort	DVI-D	
LCD LVDS 18/24/36/48	18/24 - BIT LVDS	
LCD resolution	1600 x 1200 max.	
BIOS	Phoenix-Award	
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	SCH US15W / Realtek ALC885 (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	Digital In and Digital Out	
LAN1 / LAN2 Controller	Intel 82575 (Dual Ethernet Controller)	
10/100/1000 Mbit	LAN1, LAN2 10, 100, 1000 Mbit supported	
Bootoption RPL/PXE/WOL	LAN1, LAN2 RPL/PXE/WOL supported	
ISA Bus	No	
PCI Bus	Mini-PCI	Other PCI options 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	No	
CompactFlash / Solid State Disk	No	
Boot HD/FDD/CDROM/FD/ZIP	All devices listed are supported	
USB-Channels	8	USB 1.1/2.0/Host/Device (USB3)
COM1/2:	RS232	
COM3/4:	No	
Parallel Interface(s)	No	
PS/2 Keyboard/Mouse	Yes/yes	
Floppy Interface FCC/LPT	No	
Watchdog	Yes	
Supply Voltage	24V Isolated	20-30VDC tolerant
Power Normal (typ)	TBD	
Power Suspend	TBD	
UPS/Pb-Batt	Yes/Yes	
Operating Temperature	-25 to 70 °C	
Extended Temperature	On request	
Storage Temp.	-25 to 70 °C	
MTBF	>150,000 Hours	Calculation method: MIL-HDBK-217F
Dimensions	5.8" x 4" (147mm x 102mm)	3.5 inch form factor

Data subject to change without notice