



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
- Dedicated Resistive Touch Screen
- 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
ADLS15HD-11T	294410	3.5-inch Atom 1.1GHz, CPU with Touch Screen Support
ADLS15HD-16T	294460	3.5-inch Atom 1.6GHz CPU, with Touch Screen Support
Standard Temp. (0°C to +70°C), DDR2-RAM (SODIMM200)		
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
Extended Temp. (-40°C to +85°C), DDR2-RAM (SODIMM200)		
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
Thermal Solutions		
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 also supports ELO Resistive Touch Screen and 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 shutdown.

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	
Touch Controller ELO resistive	Yes	Ordering option
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

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