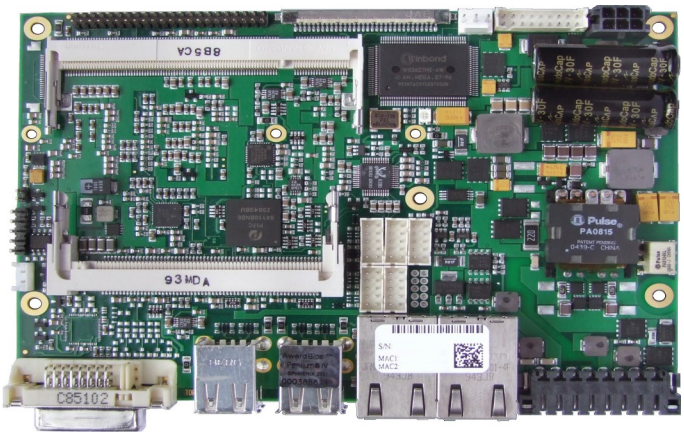
Embedded Solutions

3.5 - Inch SBC

ADLGS45HDS - Intel® Core™ 2 Quad / Core™ 2 Duo / Celeron® PGA478

Features

- Supports Intel® PGA478 Celeron® / Core™ 2 Duo / Core™ 2 Quad
- Intel® GS45 / ICH9M-E Chipset
- Up to 8GB DDR3-1066MHz DRAM (4GB x 2)
- 2x 10/100/1000Mbit LAN Controllers
- DVI Interface Onboard
- 4x SATA 3Gb/s with RAID 0/1/5/10 Support
- 8x USB2.0 Ports
- 4x RS232 Ports
- SM-Bus Interface
- RTC and Watchdog Timer
- 6 Channel High Definition Audio
- Hardware Monitoring
- Integrated Trusted Platform Module (ITPM)
- PCIe v1.1 - 4 x1 or 1 x4 Lanes with ADL35PCIE
- Onboard mini-PCI socket



Ordering Information

Item Codes	Part#	Description
ADLGS45HDS	2944xx	3.5-inch, GS45 chipset PGA478 socket
Processor Options		
PGA478-Q9100	2944xx	Intel Core2 Quad Q9100, 2.26GHz, 12MB L2, 1066FSB
PGA478-T9400	2944xx	Intel Core2 Duo T94100, 2.53GHz, 6MB L2, 1066FSB
PGA478-T3100	2944xx	Intel Celeron T3100, 1.9GHz, 1MB L2, 800FSB
Cooling Options / Accessories		
ADLGS45HDS-SPREADER	294xxx	Heat Spreader for ADLGS45HDS
ADL35-BBHS	294152	Large Heat Sink Set for ADLxxxHD
ADL35-LFAN	294154	Large Fan for ADL35-BBHS
ADL35-SOSET	294156	Tall stand-off for ADL35-BBHS
ADL35PCIE		PCIe 4x riser for 3.5-inch SBC
ADLGS45HDS-CK		Standard Cable Kit for ADLGS45HDS
Memory		
DDR3-DRAM2048-1333	997506	DDR3-1333MHz 2GB Standard Temperature
DDR3-DRAM4096-1333	997507	DDR3-1333MHz 4GB Standard Temperature
DDR3-DRAM2048-1333-EX	997516	DDR3-1333MHz 2GB Extended Temperature
DDR3-DRAM4096-1333-EX	997517	DDR3-1333MHz 4GB Extended Temperature

*More options may be available, please contact our Sales office *

Description

The ADLGS45HDS is based on the Small Form Factor (SFF) Intel® GS45 Express (Cantiga™) chipset. Built on the 45nm process, the ADLGS45HDS sets a superior performance standard in an embedded 3.5-inch form factor. The ADLGS45HDS utilizes a PGA478 socket that supports Intel Celeron, Intel Core 2 Duo and the Intel Core 2 Quad processors to provide exceptional horsepower for most applications. The Intel® GS45 Express GMCH coupled with the Intel® ICH9M-E I/O controller hub offers an impressive list of high performance features that makes full-size board makers nervous.

The ADLGS45HDS takes advantage of these features by delivering high performance in a compact form factor. The Intel® graphics controller drives a two DVI-I or HDMI to 2048x1536 and/or an analog monitor to 2048 x 1536 resolution. Memory is added via an SODIMM204 socket that will accept up to 4GB of DDR3-1066 DRAM per bank. In addition to ACPI/APM functions, the ADLGS45HDS has the following features: 8x USB 2.0, 4x RS232/TTL COM ports, PS/2 Keyboard and Mouse, AC97 Sound, and 2x 10/100/1000MBit LAN. The ADLGS45HDS also comes equipped with 4 SATA 3GB/s ports with RAID 0/1 hardware RAID support . The ADLGS45HDS also offers expansion by way of an onboard mini-PCI Socket and custom PCI Express socket that can be used with special riser board ADL35PCIE to accommodate desktop style x1 or x4 PCIe boards..

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

Data subject to change without notice

ADL Embedded Solutions GmbH, Eiserfelder Straße 316 D-57080 Siegen, 101
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
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

Technical Specifications

FEATURE	FUNCTION	REMARKS	OPTIONS
Processor/CPU:	Intel® Celeron / Core™ 2 Duo / Core™ 2 Quad	Socket PGA478	Celeron T3100 1.9GHz Core™ 2 Duo T9400 2.53GHz Core™ 2 Quad Q9100 2.26GHz
L2-Cache:	1MB /6MB /12MB		Celeron: T3100 1MB Core™ 2 Duo: T9400 6MB Core™ 2 Quad Q9100 12MB
Front Side Bus:	800/1066 MHz	CPU dependent	Celeron® - 800MHz FSB Core™ 2 Duo: T9400 1066MHz Core™ 2 Quad Q9100 1066MHz
CPU-Clock:	1.9GHz — 2.53GHz		
Memory 204pin DDR3 SODIMM:	2GB – 4GB per bank (max 8GB)	800/1066MHz	
Video Controller:	Intel® GS45 integrated	Intel® Gen 5.0 integrated graphics engine	
Video Memory:	Max 128MB UMA / Max 352MB DVMT		
Video Interfaces:	2x DVI-I/HDMI, Analog CRT	Dual Independent display	
Video Channel 1:	2048 x 1536@60Hz		
Video Channel 2:			
Real Time Clock:	Yes	External Battery Required for RTC	
LAN-Controller(s):	ICH9M-E / 567 Phy and Intel® 82574L	10/100/1000Mbit	
AC97-Controller:	Intel® ICH9M-E	ALC889 Codec - Intel® HDA (2ch, 6ch.)	
SMBus-Controller:	Intel® ICH9M-E		
USB2-Controller:	8x USB 2.0 compliant		
Flash BIOS:	SPI-Flash		
BIOS:	Phoenix Award		
Power Management Control:	ACPI 3.0 / APM 1.2	S-States: S0, S1, S4, S5	
EIDE-Controller:	None		
Onboard Flash SSD:	--		
SATA Controller:	Intel® ICH9M-E	4 Ports SATA 3Gb/s	
SATA RAID:	Intel® ICH9M-E	SATA RAID Levels 0/1/5/10	
Hardware Monitor:	SMSC SCH3114 SuperIO		
Audio Output:	Line Out, SPDIF Out	5.1 Support	
Audio Input:	Line In, SPDIF In, MIC		
Keyboard:	PS/2-USB		
Mouse:	PS/2-USB		
COM1/COM2:	RS232		
COM3/COM4:	RS232		
LPT1:	--		
Floppy Disk:	--		
ISA-Bus:	--		
PCI-Bus:	PC/104-Plus V2.0	Mini-PCI socket	
PCI Express Bus	PCI/104-Express V1.1	4 x1 Lanes or 1 x4 Lane	Riser card slot onboard
Power Supply:	+5V, +12V, +5V Suspend ±5%	+12 for fans	
Power consumption:	T.B.D.		
Operating Temperature: **(typ. ambient)**	T.B.D.		
Dimensions:	146mm x 112mm (3.5-inch form factor)		

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ADL Embedded Solutions Inc., 4411 Morena Blvd., Suite
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