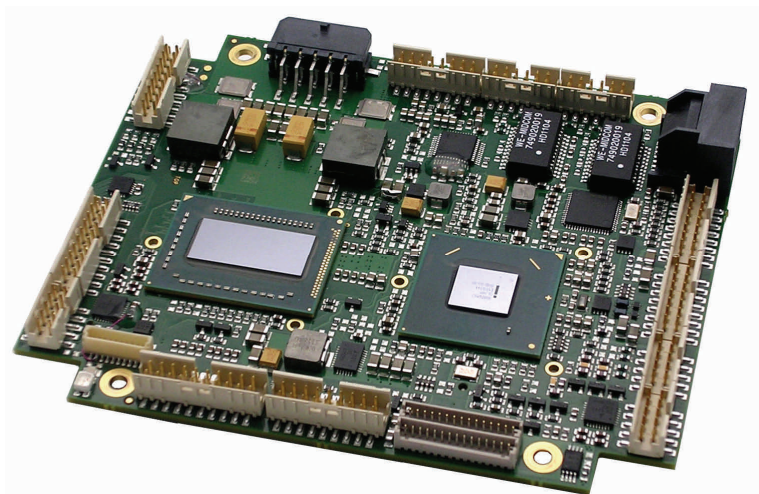# ADLQM67PC - Intel Core i7 Quad, 2.1 GHz- 3 GHz

Features

- Intel® Core™ i7 Gen2 Quad 2.1GHz - 3GHz

- Intel® QM67 PCH

- Up to 8GB DDR3-1333 DRAM SoDIMM204

- Type 1 Bottom-Stacking PCIe/104 V2.01 with Gen2 protocol (2.5 to 5 GT/s)

- 2x SATA 600 Ports with RAID

- 2x 10/100/1000 Mbit Ethernet LAN Port

- 2x RS232 COM Ports, 8x USB2.0 Ports

- Separate Onboard VGA, LVDS, HDMI / DVI, Display Port

- Dual Independent Displays

- Hardware Monitor with API

- ADL-SST (System Sensor Technology)

- Watchdog Timer

- Windows XP, XPe, Windows 7, Windows Embedded Standard 7, Windows Embedded Compact 7

- Linux Compatible

- Discrete 16bit GPIO Port

- 7.1 HD Audio with SPDIF In/Out

- 4.5" x 3.8" (115mm x 96mm) PCI/104-Express v1.0a Form Factor

RoHS COMPLIANT

Ordering Information

PCIe/104 Board

Item Code	Part #	Description
ADLQM67PC-2715QE	292600	Intel Core i7 2.20GHz Quad Core, 4M Smart Cache
*Other processors available - contact Sales for requirements		

Memory

Item Code	Part #	Description
DDR3-DRAM2048-1333	997506	DDR3-1333MHz 2GB Standard Temperature
DDR3-DRAM4096-1333	997507	DDR3-1333MHz 4GB Standard Temperature
DDR3-DRAM8192-1333	997508	DDR3-1333MHz 8GB Standard Temperature
DDR3-DRAM2048-1333EX	997516	DDR3-1333MHz 2GB Extended Temperature
DDR3-DRAM4096-1333EX	997517	DDR3-1333MHz 4GB Extended Temperature
DDR3-DRAM8192-1333EX	997518	DDR3-1333MHz 8GB Extended Temperature
*Other speeds available - contact Sales		

Options and Accessories

Item Code	Part #	Description
ADL-ET	290000	Extended Temp Screen (-40º to +85º C)
ADLQM67PC-CK	292520	Standard Cable kit for ADLQM67PC
STANDOFF-MSS	293406	.6" (15.24mm), PC/104 M3, Precision Milled Stand-Offs
STANDOFF-1"M3	293436	1" (25.4mm), PC/104 M3, Precision Milled Stand-Offs
ADLCOM-ISOL1	299941	Galvanically Isolated RS232 COM
ADLCOM-ISOL2	299942	Galvanically Isolated RS485 COM
ADLPCIe-PCI	299940	PCIe to PCI bridge adapter board

Thermal Solutions

Item Code	Part #	Description
ADLQM67PC-SP0600	292612	0.600" Heat Spreader
ADLQM67PC-SP1000	292614	1.000" Heat Spreader
Stand-Off p/n's 293406 or 293436 are recommended for use with the above thermal solutions		
ADLQM67PC-FANSINK	292610	Heatsink / Fan combo

Description

The ADLQM67PC features first Quad core processor available in PC/104 form factor. The 2nd generation Intel Core™ i7 processor incorporates Intel's latest embedded two-chip platform. This 2nd generation i7 processor integrates Intel's HD Graphics 3000 engine with AVX (Advanced Vector Extensions) as well as the memory controller functions of a traditional GMCH. The QM67 Platform Controller Hub (PCH) provides PCI-Express I/O bandwidth at twice the speed (5 GT/s) of previous i7 or Core 2 Duo platforms.

The ADLQM67PC is ideal for rugged applications where high processor performance is critical. It brings unparalleled performance to applications such as radar and sonar processing, image signal processing, tactical command and control, surveillance and reconnaissance, transportation and railway.

In addition to the wide range of rugged and harsh environment applications in which the ADLQM67PC can excel, it also supports a healthy set of features. The ADLQM67PC has a discrete 16-bit digital I/O port as well as separate VGA, LVDS, HDMI and Display Port interfaces. The ADLQM67PC also has 2x RS232 COM ports, 2x SATA 6Gb/s with RAID support, 8x USB2.0, two bootable Gigabit Ethernet LAN, HDA 7.1, and type 1 bottom-stacking PCIe/104 V2.01 supporting Gen2 throughput of 5 GT/s are just a few of the available features.

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.

Embedded Solutions

Technical Specifications - ADLQM67PC-2715QE

FEATURE	FUNCTION	REMARKS	OPTIONS
CPU			
CPU Classes	Intel Core i7	Generation 2	i7 - Dual / Quad Core
CPU Option / Performance (GHz) / Intel Smart Cache	2715QE / 2.1 GHz Quad Core / 6MB	Turbo to 3.0 GHz	Other CPU speeds available. Please discuss your requirements with your sales engineer.
Max. No. of Cores	4C / 8T	Up to 8 threads	
Soldered (or Socket Name)	Soldered		
FSB	On-chip	FSB only applicable with separate GMCH	
Chipset			
North Bridge (GMCH)	Intel Core i7	GMCH functions on-chip	
South Bridge (ICH)	Intel BD82QM67 PCH		
Super IO1	SMSC SCH3114		
Hardware Monitoring	Super IO	Intel DTS Support	
Memory			
Type	SODIMM204-1,5V / DDR3		
Size max (MB)	8192MB		
Speed max	DDR3 1333 MHz		
Graphic			
Controller	Intel Core processor integrated		
Video BIOS	Intel Extreme BIOS		
Memory	max. 512MB DVMT		
CRT	VGA port onboard		
CRT resolution	2048x1536		
DVI/HDMI/DisplayPort	DVI/HDMI and DisplayPort ports onboard		
LCD LVDS 18/24/36/48	18 / 24 - Bit supported		
LCD resolution	Max 1920 x 1200 DVI, HDMI		
BIOS			
Manufacturer	AMI Aptio		
Power Management APM/ACPI	APM/ACPI		
Speedstep/AMT	Speedstep supported		
Powerstates S0/S1/S3/S4/S5	S0/S1/S4/S5		
Audio			
Controller and Codec	QM67 / Realtek ALC889 (HDA)		
Support for 2/6/8 channel (2.0/5.1/7.1)	2/6/8 channel		
Analog In Line/CD/AUX/Mic1/Mic2/PCBeep	Line-In/Mic1/Mic2/PCBeep		
Analog Out Line/Monoout	Analog Line-Out		
Digital In/Out	S/PDIF In/Out		

Data subject to change without notice.

Technical Specifications - ADLQM67PC-2715QE

FEATURE	FUNCTION	REMARKS	OPTIONS
LAN			
LAN1 Controller	Intel 82579LM Phy	Jumbo Frame Support	
LAN1 10/100/1000	10/100/1000 Mbit		
LAN1 Diskless Boot option RPL/PXE/WOL	RPL/PXE/WOL		
LAN2 Controller	Intel 82574L Phy	Same features as LAN1	
Buses			
PCI	--		Please call for options
PCIe x1 / x4 / x16	PCIe/104 (PCIe v2.0) - 4 x1 and (1 x16 or 1 x8 and 2 x4)	2.5 / 5 GT/s, Type 1 PCIe signaling	
Specials/Options			
ATA/SATA Interfaces			
ATA primary/secondary	None		
SATA Channels	2		
SATA RAID Levels 0/1/5/10	0/1		
1.5Gbs/3.0Gbs/6.0Gbs	1.5 Gb/s / 3.0 Gb/s / 6.0 Gb/s	Intel Storage Manager - IDE / AHCI / RAID	
Onboard Compact Flash / Solid State Disk	None		
USB Interfaces			
Boot HD/FDD/CDROM/FD/ZIP	HD/FDD/CDROM/FD/ZIP		
USB-Channels	8		
Protocols - USB 1.1/2.0/Host/Device	1.1/2.0/Host		
Serial Interfaces			
COM1&2: TTL/RS232/RS485/RS422	RS232		
COM3&4: TTL/RS232/RS485/RS422	--		
RS232 max Speed	RS232 - 250kbps	SP3244EER1-L	
Parallel Interfaces			
LPT Uni/ECP/EPP/FDC	--		
Specials/Options	16-Bit GPIO	Discrete port	
Interfaces			
PS/2 Keyboard/Mouse	Yes		
Floppy Interface FDC	--		
Watchdog	Yes		
Power Supply			
Supply Voltage	5V , 12V, 5V Suspend		
Power Normal (typical)*	TBD		
UPS/Pb-Batt	None		
Cooling	passive / active		
Operating Temperature (ambient)	TBD	ADL Embedded Solutions thermal solution recommended	
Extended Temperature	TBD	Requires ADL-ET and Approved Thermal solution	
Storage Temp.	-40 to 85 °C		
Dimensions	4.5" x 3.8" (115mm x 96mm)		

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