



APPLICATIONS

- Radar and sonar processing
- Image signal processing
- Tactical command and control
- Surveillance and reconnaissance
- Transportation and railway
- Portable medical devices, signage

FEATURES

- Gen3 Intel® Core™ i7-3517UE, 1.7 GHz (Turbo up to 2.80 GHz)
- Up to 8GB DDR3-1066/1333 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 7, Windows 8, Windows 10, 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
- Operating Range -25° to +70° C (-40° to +85° C available - call sales for details)

DESCRIPTION

The ADLQM67PC-3517UE is ideal for rugged applications where high performance / watt is critical.

The ADLQM67PC-3517UE features the 3rd generation Intel Core™ i7 processor that incorporate Intel's QM67 embedded two-chip platform. This 3rd generation i7 processor integrates Intel's HD Graphics 4000 engine with AVX2 (Advanced Vector Extensions) as well as the memory controller functions of a traditional GMCH. The 3rd generation Intel Core i7-3517UE processor has a 17W TDP and a higher performance/watt than any previous 2nd generation Intel Core embedded processor.

The ADLQM67PC-3517UE 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-3517UE can excel, it also supports a healthy set of features. The ADLQM67PC-

3517UE has a discrete 16-bit digital I/O port as well as separate VGA, LVDS, HDMI and Display Port interfaces. The ADLQM67PC-3517UE 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.

ADLSST System Sensor Technology Utility

The ADLSST System Sensor Technology v2.0 utility brings to the Linux environment the same type of CPU health monitor functions that have previously been readily available only in the Windows environment. Click [here](#) to download the drivers.

ADL Embedded Solutions, Inc. 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.



TECHNICAL SPECIFICATIONS - ADLQM67PC-3517UE

FEATURE	FUNCTION	REMARKS	OPTIONS
CPU			
CPU Classes	Intel Core i7	Generation 3 Intel Core Processor	i7 - 3517UE Dual Core
CPU Option / Performance (GHz) / Intel Smart Cache	3517UE / 1.7 GHz Dual Core / 4MB	Turbo to 2.80 GHz	Other CPU speeds available. Please discuss your requirements with your sales engineer.
Max No. of Cores	2C / 4T	Both CPU options support up to 4 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 IO	SMSC SCH3114		
Hardware Monitoring	Super IO	Intel DTS Support	
Memory			
Type	SODIMM204-1,5V / DDR3		
Size max (MB)	8192MB		
Speed max	DDR3 1600 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		

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TECHNICAL SPECIFICATIONS - ADLQM67PC-3517UE

FEATURE	FUNCTION	REMARKS	OPTIONS
LAN			
LAN1 Controller	Intel 82579LM Phy	9KB 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 / Parallel Interfaces / Interfaces			
COM1&2: TTL/RS232/RS485/RS422	RS232		
COM3&4: TTL/RS232/RS485/RS422	--		
RS232 max Speed	RS232 - 250kbps		
LPT Uni/ECP/EPP/FDC	--		
Specials/Options	16-Bit GPIO	Discrete port	
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)	-25° to 70° C	ADL Thermal Solution recommended	
Extended / Storage Temperature	-40° to 85° C	Requires ADL-ET and Approved Thermal Solution	
Dimensions			
	4.5" x 3.8" (115mm x 96mm)		
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ORDERING INFORMATION

ITEM CODE	PART #	DESCRIPTION
PCIe/104 Board		
ADLQM67PC-3517UE	292609	Intel Core i7 1.7 GHz Dual Core, 4MB Smart Cache
Memory		
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-DRAM-2048-1333-EX	997516	DDR3-1333MHz 2GB Extended Temperature
DDR3-DRAM-4096-1333-EX	997517	DDR3-1333MHz 4GB Extended Temperature
DDR3-DRAM-8192-1333-EX	997518	DDR3-1333MHz 8GB Extended Temperature
Other speeds available - contact Sales for information		
Options and Accessories		
ADL-ET	290000	Extended Temp Screen (-40° to +85° 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-ISO1	299941	Galvanically Isolated RS232 COM
ADLCOM-ISO2	299942	Galvanically Isolated RS485 COM
ADL-BRIDGE	299940	PCIe to PCI bridge adapter board
Thermal Solutions		
ADLQM67PC-SP0600*	292619	ADLQM67PC-3517UE 0.600" Heat Spreader
ADLQM67PC-FANSINK2*	292622	Heatsink/Fan Combo for ADLQM67PC-3517UE
ADLQMXXPC-BTMFS	292416	Low Profile Passive Heatsink
		*Stand-Off p/n's 293406 or 293436 are recommended for use with the above thermal solutions

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