Express-HRR

Extreme Rugged™ COM Express® Type 6 Computer-on-Module with Intel® Core™ i7/i5/i3 processor and QM67 Chipset

EXTREME RUGGED

Features

- Quad/dual core Intel® Core™ i7/i5/i3 Processor
- Intel® QM67 Chipset
- Up to 16GB ECC 1333Mhz DDR3 memory in two SODIMM sockets
- Three Digital Display Interfaces (DDI) for DisplayPort /HDMI/DVI/SDVO
- Seven PCIe x1, one PCIe x16 (Gen2) for graphics (or general purpose x8/4/1)
- Two SATA 6 Gb/s, two SATA 3 Gb/s, Gigabit Ethernet, eight USB 2.0
- COM Express® COM.0 R2.1 Type 6 Pinout
- Extended Temperature: -40°C to +85°C
- 50% Thicker PCB for high vibration environments

Choose Ampro by ADLINK™ Express-HRR for…

A modular and power efficient solution for extreme rugged and mobile environments.

Description

The Ampro by ADLINK™ Express-HRR is a COM Express® Type 6 module with quad/dual-core 2nd Generation Intel® Core™ i7/i5/i3 Processor. The Express-HRR is designed Extreme Rugged to support the extremes of shock, vibration, humidity, and temperature.

Specifications

Core System

CPU	2nd Generation Intel® Core™ i7, 32 nm process, BGA type
	Intel® Core™ i7-2715QE 2.1 GHz (3.0 GHz Turbo), 6MB L3 cache, 45W
	Intel® Core™ i7-2655LE 2.2 GHz (2.9 GHz Turbo), 4MB L3 cache, 25W
	Intel® Core™ i7-2610UE 1.5 GHz (2.4 GHz Turbo), 4MB L3 cache, 17W
	Intel® Core™ i5-2515E 2.5 GHz (3.1 GHz Turbo), 3MB L3 cache, 35W
	Intel® Core™ i3-2340UE 1.3 GHz, 3MB L3 cache, 17W
	Intel® Celeron® 847E 1.1 GHz, 2MB L3 cache, 17W
	Intel® Celeron® 807UE 1.0 GHz, 1MB L3 cache, 10W
Memory	Dual channel ECC 1333 MHz DDR3 memory up to 16 GB in dual SODIMM sockets
BIOS	AMI EFI with CMOS backup in 16 Mb SPI flash
Hardware Monitor	Supply voltages and CPU temperature
Debug Interface	XDP SFF-26 extension for ICE debug
Watchdog Timer	Programmable timer range to generate RESET
Expansion Busses	PCI Express x16 (Gen2) bus for discrete graphics solution or general purpose PCI Express (2 x8 or 1 x8 with 2 x4)
	8 PCI Express x1: Lanes 0/1/2/3/4/5/6 are free, lane 7 is occupied by GbE
	LPC bus, SMBus (system), I2C (user)

Multi I/O

Chipset	Integrated on QM67
USB	Supports up to eight ports USB 2.0
SATA	Two SATA 6 Gb/s, two SATA 3 Gb/s with support for RAID 0,1,5,10

LAN

Chipset	Intel® Gigabit LAN PHY WG82579LM
Speed	10/100/1000 Mbps Ethernet

Video

Integrated in Processor	HD Graphics 3000 at 650-1300 MHz
Integrated Video	DirectX 10.1 and OpenGL 3.0
Feature Support	Intel® Clear Video HD Technology
	Advanced Scheduler 2.0, 1.0, XPDM support
	DirectX Video Acceleration (DXVA) support for full AVC/VC1/ MPEG2 hardware decode
VGA Interface	Analog VGA support with 300 MHz DAC
	Analog monitor support up to QXGA (2048 x 1536) and VGA hot plug
LVDS Interface	Dual channel 18/24-bit LVDS
Digital Display Interface	Three DDI ports supporting HDMI / DVI / DisplayPort or SDVO

Audio

Chipset	Integrated on Intel® PCH QM67
Audio Codec	Implemented on carrier board

Super I/O

Connected to LPC bus on carrier if needed

TPM

Chipset	Atmel AT97SC3204
Type	TPM 1.2

Power Specifications

Input Power	AT mode (12 V +/- 5%) and ATX mode (12 V and 5 Vsb +/- 5%)
Power States	Supports S0, S1, S3, S4, S5
Power Consumption	TBD
Smart Battery Support	Yes

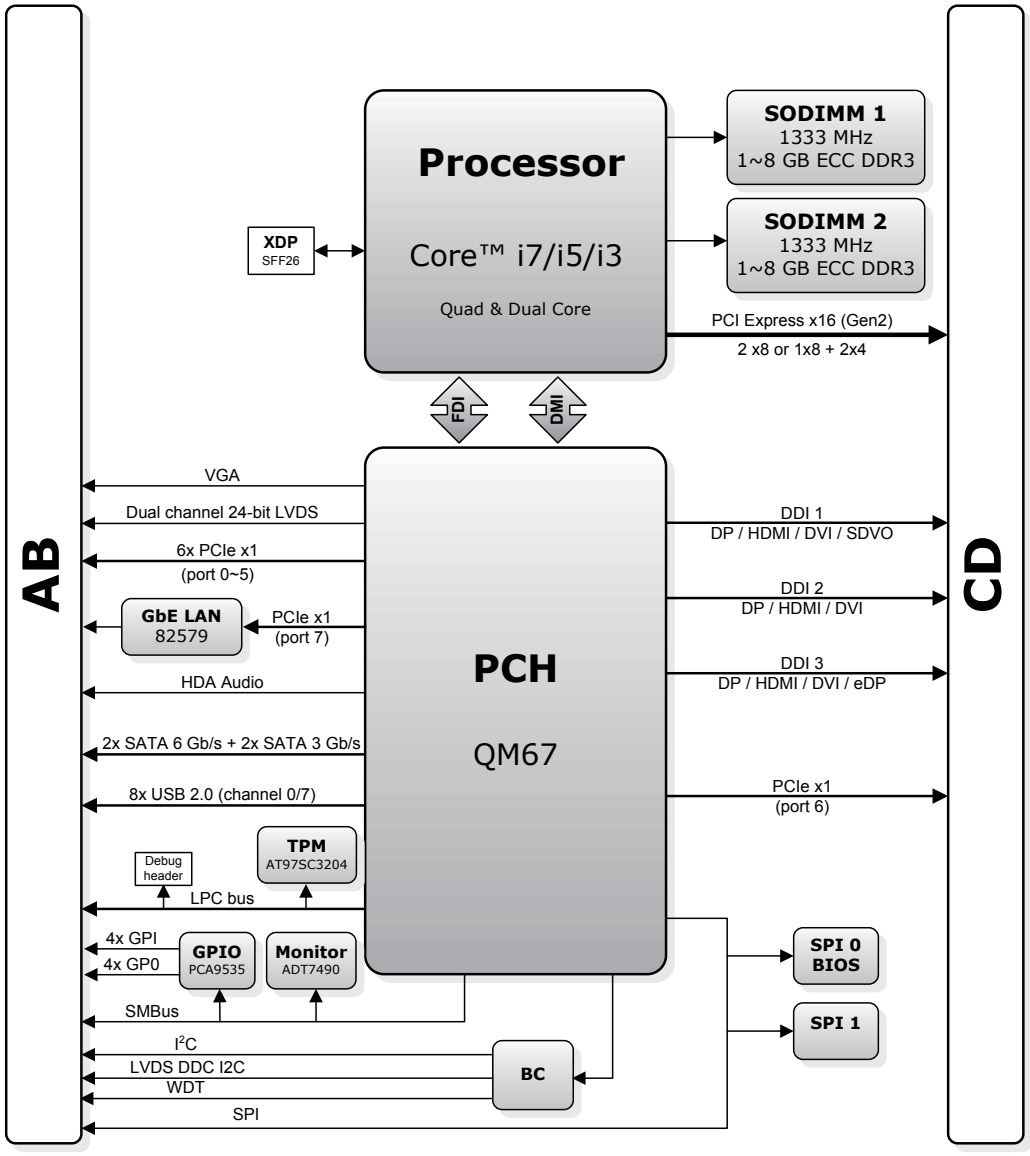
Mechanical and Environmental

Size	COM Express Basic, 125 mm x 95 mm
Board Thickness	0.093" (2.3mm)
Operating Temp. Standard	-20°C to 70°C
Operating Temp. Extended	-40°C to 85°C (not available for Core™ i7-2715QE)
Storage Temp.	-55°C to 85°C
Humidity	90% at 60°C non-condensing
Shock	50G peak-to-peak, 11ms duration, MIL-STD-202G Method 213B
Vibration	Operating: 11.96 Grms, 50-20,000 Hz, each axis, MIL-STD-202G Method 214A
Compatibility	PICMG COM Express COM.0 R2.1 Type 6
Certifications	CE, FCC, HALT

Operating Systems

Standard Support	Windows 7, Linux
Extended Support (BSP)	WES 2009/7, WEC 7, Linux, VxWorks 6.9, QNX 6.5, AIDI Library

Functional Diagram



Ordering Information

Modules

Model Number	Description/Configuration
Express-HRR-i7-R-2715QE	Extreme Rugged COM Express Type 6 module with Intel® Core™ i7-2715QE Quad Core processor 2.1GHz 45W with QM67 chipset (Ext. Temp. not available)
Express-HRR-i7-R-2655LE	Extreme Rugged COM Express Type 6 module with Intel® Core™ i7-2655LE Dual Core processor 2.2GHz 25W with QM67 chipset
Express-HRR-i7-R-2610UE	Extreme Rugged COM Express Type 6 module with Intel® Core™ i7-2610UE Dual Core processor 1.5GHz 17W with QM67 chipset
Express-HRR-i5-2515E	Extreme Rugged COM Express Type 6 module with Intel® Core™ i5-2515E Dual Core processor 2.5GHz 35W with QM67 chipset
Express-HRR-i3-R-2340UE	Extreme Rugged COM Express Type 6 module with Intel® Core™ i3-2340UE ULV Dual Core processor 1.3GHz 17W with QM67 chipset
Express-HRR-R-847E	Extreme Rugged COM Express Type 6 module with Intel® Celeron® 847E LV Dual Core processor 1.1GHz 17W with QM67 chipset
Express-HRR-R-807UE	Extreme Rugged COM Express Type 6 module with Intel® Celeron® 807UE ULV Single Core processor 1.0GHz 10W with QM67 chipset
Express-HRR-i7-L-M8G	Starterkit with 2x 4GB DDR3 ECC RAM, non-ETT, cable kit, Software (no CPU module and heatsink included)
Express-HRR-i7-L-M4G	Starterkit with 2x 2GB DDR3 ECC RAM, non-ETT, cable kit, software (no CPU module and heatsink included)

Accessories

Heat Spreaders

HTS-HRR-BTF	Heatspreader for Express-HRR with through hole standoffs for top mounting

Passive Heatsinks

THSH-HRR-BTL	Heatsink for Express-HRR with through hole standoffs for top mounting

Active Heatsinks

THSF-HRR-BTL-CU	Heatsink with FAN for Express-HRR with through hole standoffs for top mounting

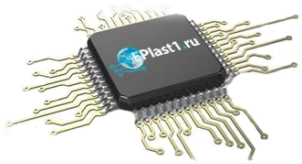
Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits,General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

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