# HPERC-IBR-MH

*Rugged System with 3rd Gen Intel® Core™ i7 Processor and MIL-DTL-38999 Connectors*

## Features

- SWaP efficient sealed SFF system
- VITA 75 mount with passive cooling
- Intel® Core™ i7 dual or quad core processor
- Soldered DDR3L 8GB, up to 16GB RAM
- Quad Gigabit Ethernet
- Available GPGPU on 16-lane 3rd Generation PCI Express
- Simple user expansion and configuration
- Rugged temperature: -40°C to +70°C
- Dual independent displays (DVI/VGA)
- Tested to MIL-STD-810G and MIL-STD-461F standards; IP67 rating
- OS support: VxWorks 6.9, Ubuntu, Windows® 7 and WES7



## Specifications

### Core System

#### CPU
Intel® Core™ i7-3517UE 1.7GHz, dual-core
Intel® Core™ i7-3612QE 2.1GHz, quad-core

#### Chipset
Intel® QM77 Express Chipset

#### GPGPU
MXM NVIDIA GeForce GT 745M / GTX 950M with 2GB 128-bit GDDR5 (optional)

#### Memory
16GB DDR3L-1333 ECC
8GB soldered down, 8GB SODIMM

#### BIOS
AMI EFI

#### Expansion Busses
MXM (3rd Generation PCIe x16)
PCI/104 Express® Type 2 (PCIe Gen2)
PCI Express Mini Card (PCIe Gen2)

### Standard I/O

#### Video
1x VGA, 2x DVI (only 2 display outputs supported concurrently)

#### Audio
1x amplified stereo output
1x stereo input

#### LAN Chipset
4x Intel® I210 Ethernet controller

#### LAN Speed
10/100/1000 Mbps

#### USB
6x USB 2.0

#### Serial
7x RS-232/422

#### GPIO
8x digital IO

# Specifications

## Internal Storage

Removable SATA: 2x 2.5” SLC/MLC SSD on SATA 6 Gb/s (up to 1 TB)
RAID: Supports RAID 0/1
Removable: 1x SDHC - SLC (up to 64 GB)

## Security

TPM: Atmel AT97SC3204-U1A190
Secure Erase: Software triggered

## Power

Input: 10-36VDC
Performance: P-States 0-16 (Speedstep & Turbo)
S-States S3, S4

## Thermal

Internal Transfer: Passive conduction to body

### Storage Temperature

-55°C to +85°C

### Ambient Temperature

-40°C to +70°C at 1 atm air
Heatsink (free air convection)
VITA 75.21 mount

## Environmental

### Immersion

IEC 529 - IP-67

### Salt Spray

RTCA/DO-160G, Section 14, Category S

### Altitude

0 to 50K ft.

### Humidity

95% at +60°C non-condensing

### Shock

MIL-STD-810G - 516.6 Procedures I and V

### Vibration

MIL-STD-810G - 514.6 Procedure I
Categories 4, 9, 11, 21

### EMI/EMC

MIL-STD-461F

### Temperature

MIL-STD-810G - 501.5 Procedure II
MIL-STD-810G - 502.5 Procedure 1 and 2

## Mechanical

### Form Factor

VITA-75 Finned Passive Convection

### Dimension

304.8(L) x 150(W) x 101.95(H) mm (with mounting brackets)

### Weight

3.91 kg

### IO Connectors

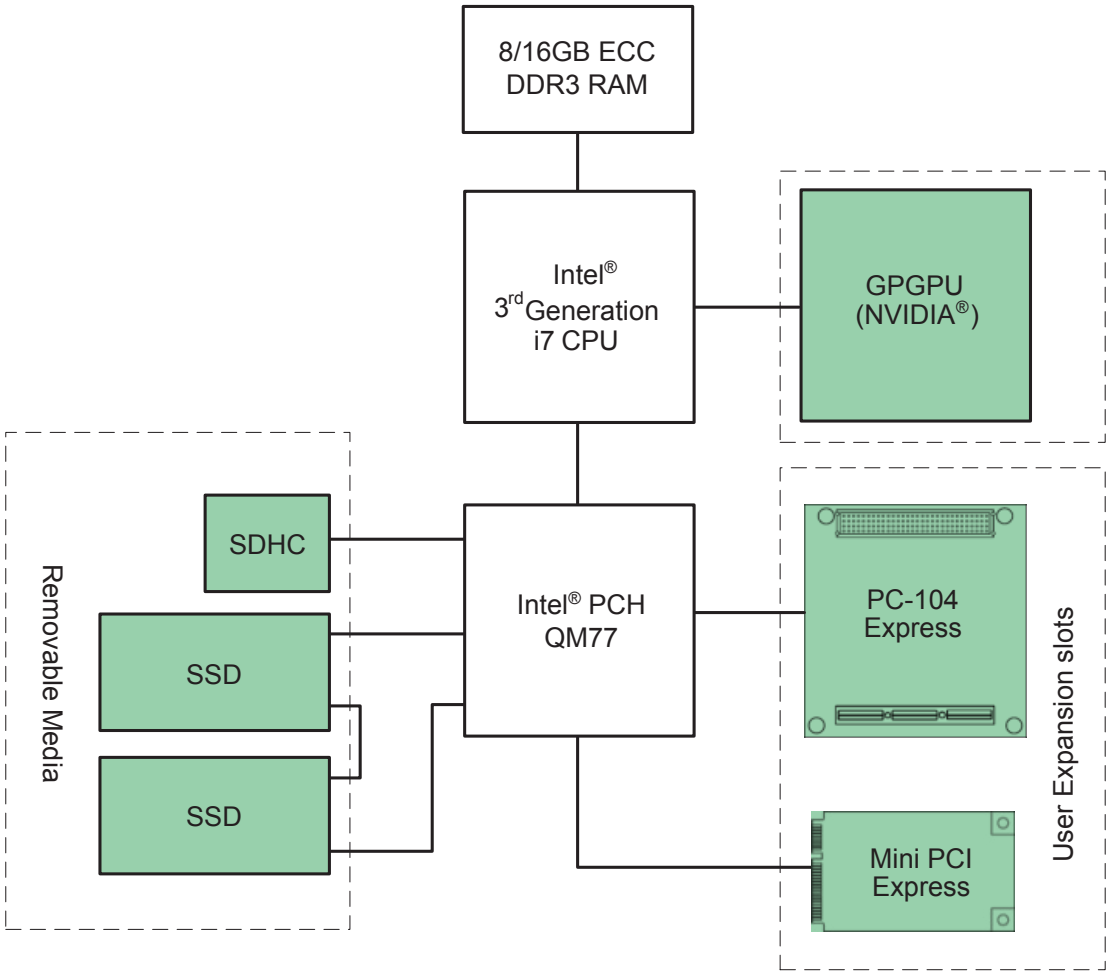
MIL-DTL-38999 (uniquely-keyed)

## Operating Systeml

### OS

Ubuntu 16.04
VxWorks 6.9.3.1 (Please contact ADLINK for other OS support)
Windows® 7 (64-bit)
WES 7 (64-bit/32-bit)

## Functional Diagram



# Ordering Information

- **HPERC-IBRMH-100XN**
  Finned-Convection, Intel® Core™ i7 3517UE, 16GB RAM
- **HPERC-IBRMH-B00XN**
  Finned-Convection, Intel® Core™ i7 3517UE, 8GB RAM
- **HPERC-IBRMH-300XN**
  Finned-Convection, Intel® Core™ i7 3612QE, 16GB RAM
- **HPERC-IBRMH-D00XN**
  Finned-Convection, Intel® Core™ i7 3612QE, 8GB RAM

### HPERC Accessories

- **HPERC-X-03**
  HPERC™ breakout cable kit including
  Amphenol MIL-STD Nkey & Akey I/O cables, and AC Adapter
- **M3N745M-JN-A**
  MXM NVIDIA GeForce GT 745M GPU card, with 2GB 128-bit GDDR5 memory (must be pre-assembled at ADLINK factory)
- **M3N950M-JN1A-A**
  MXM NVIDIA GeForce GTX 950M GPU card, with 2GB 128-bit GDDR5 memory (must be pre-assembled at ADLINK factory)

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