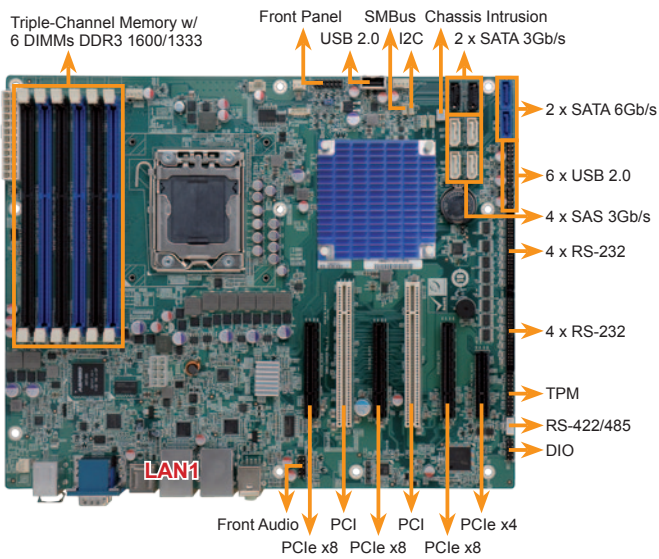# IMBA-C604EN

*ATX Server Board Supports 32nm LGA1356 Intel® Xeon® E5 Series up to 8 Cores CPU with Intel® C604, DDR3, VGA, PCIe Gen 3.0, SAS 3Gb/s, SATA 6Gb/s, COMs and Audio*
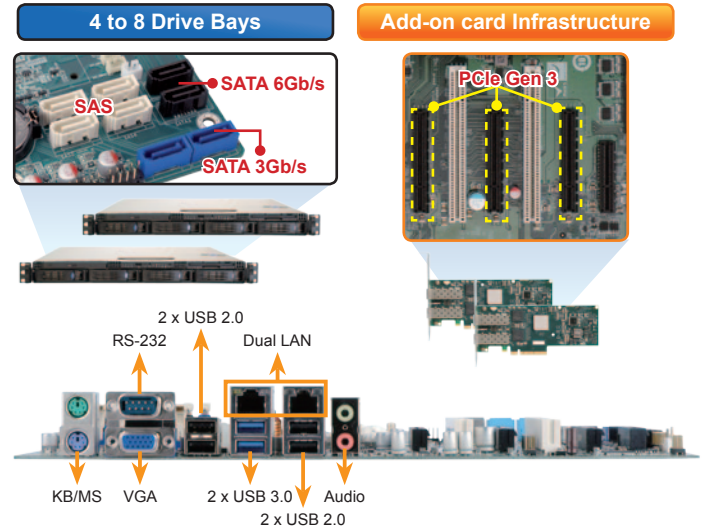


Triple-Channel Memory w/ 6 DIMMs DDR3 1600/1333 — Front Panel USB 2.0 — SMBus I2C — Chassis Intrusion 2 x SATA 3Gb/s

2 x SATA 6Gb/s
6 x USB 2.0
4 x SAS 3Gb/s
4 x RS-232
4 x RS-232
TPM
RS-422/485
DIO
LAN1

Front Audio — PCI — PCI — PCIe x4
PCIe x8 — PCIe x8 — PCIe x8

## Benefits of the entry-level server board IMBA-C604EN with universal processor

1. Storage application fulfill 4 to 8 driver bay needed
2. Rich serial ports fulfill multiple communication devices
3. Multiple expansion slots by PCIe and PCI interfaces for high speed add-on card infrastructure

**4 to 8 Drive Bays**



SAS — SATA 6Gb/s — SATA 3Gb/s

**Add-on card Infrastructure**



PCIe Gen 3

2 x USB 2.0
RS-232 — Dual LAN



KB/MS — VGA — 2 x USB 3.0 — Audio
2 x USB 2.0

## Specifications

- **CPU**
  LGA1356 socket supports Intel® Xeon® E5-14xx, E5-24xx series processor with up to eight cores
- **System Chipset**
  Intel® C604
- **Memory**
  Triple-channel memory architecture (2 DIMMs per channel), 240-pin 1600/1333 MHz DDR3 SDRAM ECC UDIMMs or non-ECC RDIMMs/LRDIMMs supported (system max. 48GB UDIMMs or 96GB RDIMMs or 192GB LRDIMMs)
- **BIOS**
  UEFI BIOS
- **Ethernet**
  Dual Intel® 82574L PCIe controller
- **Graphics Engine**
  ASPEED AST1300
  PCIe VGA/2D controller, 1920x1200@60Hz 32bpp
- **Display Output**
  Driver form AST1300
- **Super I/O**
  Fintek F81866
- **Audio**
  Realtek ALC662 HD audio codec (Line-out, Mic)
- **I/O Interface**
  9 x RS-232                2 x SATA 3Gb/s (RAID 0/1/10/5 support)
  1 x RS-422/485            2 x SATA 6Gb/s (RAID 0/1/10/5 support)
  1 x PS/2 KB/MS            4 x SAS 3Gb/s (RAID 0/1/10 support)
  2 x USB 3.0 (on rear I/O) 11 x USB 2.0 (4 on rear, 6 by pin header, 1 by type A)
- **Front Panel**
  1 x Front panel connector (power LED, HDD LED, speaker, power button, reset button)
- **Front Audio**
  2 x 5-pin header
- **TPM**
  1 x TPM connector (2x10 pin)
- **SMBus**
  1 x 4-pin wafer
- **I2C**
  1 x 4-pin wafer
- **Expansions**
  3 x PCIe x8 slot
  1 x PCIe x4 slot
  2 x PCI slot
- **Watchdog Timer**
  Software programmable supports 1~255 sec. system reset
- **Digital I/O**
  8-bit Digital I/O (8-bit GPIO is for programming I/O)
- **Fan Connector**
  1 x 4-pin CPU fan connector
  2 x 4-pin system connector
  1 x 3-pin system fan connector
- **Power Supply**
  ATX/AT power supply
- **Power Consumption**
  12V@1.08A, Vcore@2.46A, 3.3V@0.61A, -12V@0.15A, 5V@2.33A
  (Intel® Xeon® 1.40GHz 28 GB DDR3 w/ECC memory)
- **Operating Temperature**
  -10°C ~ 60°C
- **Storage Temperature**
  -20°C ~ 70°C
- **Operating Humidity**
  5% ~ 95%, non-condensing
- **Dimensions:** 244 mm x 305 mm
- **Weight:** GW: 1200g/NW: 700g

One Key Recovery — iEi symantec.

DDR3 1600 | 6 DIMMs x6 | SUPERSPEED USB 3.0 | SERIAL ATA 6Gb/s SATA 6Gb/s | SAS 3Gb/s | 10 COM

Native PCIe Gen.3 | RAID

## Features

1. Supports high-performance LGA1356 Intel® Xeon® E5 CPU with up to eight cores
2. Support Triple-Channel memory technology, two DDR3 1600/1333MHz DIMM slots per channel up to 48GB UDIMMs, 96GB RDIMMs or 192GB LRDIMMs
3. Integrated PCI Express Gen 3 for improved bandwidth and connectivity support up to 24 lanes at 8GT/s
4. Intel® Matrix RAID supports 0/1/10/5 for SATA and 0/1/10 for SAS hard drive interfaces
5. VGA display output driver form on-board IC via AST1300 for all Xeon® E5-2400 series CPU
6. IEI One Key Recovery solution allows you to create rapid OS backup and recovery

## Packing List

| | |
|---|---|
| 1 x IMBA-C604EN single server board computer | |
| 1 x I/O shielding (P/N: 45014-0039C0-00-RS) | 1 x Mini jumper pack |
| 4 x SATA cable (P/N: 32000-062800-RS) | 1 x Utility CD |
| 1 x One Key Recovery CD | 1 x QIG |

## Ordering Information

| Part No. | Description |
|---|---|
| IMBA-C604EN-R10 | ATX server board supports 32nm LGA1356 Intel® Xeon® E5 series up to 8 cores CPU with Intel® C604, DDR3, VGA, dual Intel® PCIe GbE, PCIe Gen 3.0, SAS 3Gb/s, SATA 6Gb/s, SATA 3Gb/s, USB 2.0, COM, HD Audio and RoHS |
| 19800-003100-300-RS | Dual-port USB cable with bracket |
| 32205-001800-200-RS | Quad port RS-232 cable without bracket, 400/400/400/400 mm |
| 32102-000100-100-RS | SATA power cable |
| CF-1356A-RS | High performance LGA1355/LGA1356 cooler kit, 1U chassis compatible, 95W |
| TPM-IN01-R11 | 20-pin Infineon TPM module, software management tool, firmware V3.17 |