

# Intel® Carrier/Industrial Grade Server (NEBS-3 and ETSI Certified) Intel® TIGI2U (2Ux20"D)

Configuration Guide System / Spares / Accessories List Rev 2.8.2

A reference guide to assist customers and the field in ordering these servers, accessories and spares

~Subject to Change Without Notice~

TIGI2U

INFORMATION IN THIS DOCUMENT IS PROVIDED IN CONNECTION WITH INTEL® PRODUCTS. NO LICENSE, EXPRESS OR IMPLIED, BY ESTOPPEL OR OTHERWISE, TO ANY INTELLECTUAL PROPERTY RIGHTS IS GRANTED BY THIS DOCUMENT. EXCEPT AS PROVIDED IN INTEL'S TERMS AND CONDITIONS OF SALE FOR SUCH PRODUCTS, INTEL ASSUMES NO LIABILITY WHATSOEVER, AND INTEL DISCLAIMS ANY EXPRESS OR IMPLIED WARRANTY, RELATING TO SALE AND/OR USE OF INTEL PRODUCTS INCLUDING LIABILITY OR WARRANTIES RELATING TO FITNESS FOR A PARTICULAR PURPOSE, MERCHANTABILITY, OR INFRINGEMENT OF ANY PATENT, COPYRIGHT OR OTHER INTELLECTUAL PROPERTY RIGHT. Intel products are not intended for use in medical, life saving, life sustaining applications.

Intel may make changes to specifications and product descriptions at any time, without notice.

Intel server boards, server chassis, and processors may contain design defects or errors known as errata, which may cause the product to deviate from published specifications. Current characterized errata are available on request.

Intel, Intel Xeon, Pentium, and the Intel logo are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries.

\*Other names and brands may be claimed as the property of others.

Copyright © 2007, Intel Corporation

## **Document Table of Contents**

| l.   | CHANGE HISTORY             | 4  |
|------|----------------------------|----|
| II.  | INTRODUCTION               | 5  |
| III. | PRODUCTION SKUS            | 6  |
| IV.  | PRODUCTION SPARES LIST     | 9  |
| ٧.   | RACK MOUNTS                | 11 |
| VI.  | DOCUMENTATION              | 13 |
| \/II | BASE SYSTEMS CONFIGURATION | 14 |

3/22/2007 v 2.8.2 3 of 15

# I. Change History

| Revision | Date       | Comments                                      |
|----------|------------|---|
| 1.0      | 7/14/2005  | Original version.                             |
| 2.0      | 9/15/2005  | Added details for CPU ordering                |
| 2.1      | 9/17/2005  | Clarification of air filter use, added riser. |
| 2.2      | 9/20/2005  | Clarification of Rail kit application         |
| 2.3      | 10/10/2005 | Clarification of Boxed CPU ordering.          |
| 2.4      | 11/09/2005 | Corrected heatsink order code                 |
| 2.5      | 2/12/2006  | Updates for RoHS conversion                   |
| 2.6      | 5/1/2006   | Updates for RoHS CPU                          |
| 2.7      | 5/18/06    | Updates for Pb-free CPU                       |
| 2.8.1    | 10/17/2006 | Revised for CPU-integrated SKUs               |
| 2.8.2    | 03/22/2007 | Updated Logo and Trademarks                   |

3/22/2007 v 2.8.2 4 of 15

#### II. Introduction

TIGI2U is the 3rd generation of the 2Ux20"D Intel® Telecom and Industrial Grade Rack Server. The new TIGI2U platform is uses the Intel® Xeon® Processor with 2M cache.

TIGI2U is a NEBS-3 and ETSI certified product which is suited for a host of applications in the telecom Central Office and industrial environment. The server is targeted to OSS (Operations System and Support), Billing, Provisioning, Softswitch, Media Server, Wireless and Unified Messaging, Call Center and many other applications. It can also support manufacturing, industrial, utility and even military applications where a rugged, highly reliable server is required for harsh environments such as dust, high altitude, fire hazard, earthquake propensity, and high ambient temperatures.

To assure long-life support of the CPUs, and to simplify procurement for customers, production SKUs which include two CPUs and two heatsinks already integrated, are being added. The production SKUs which do not include CPUs are being EOL'd. It is recommended that customers migrate to the CPU-integrated SKUs.

3/22/2007 v 2.8.2 5 of 15

#### III. Production SKUs

Intel® Carrier-Industrial Grade Servers
Production TIGI2U Server (AC Supply) - Product Code TLIA2201
Production TIGI2U Server (DC Supply) - Product Code TLID2201

Both the AC SKU (TLIA2201) and the DC SKU (TLID2201) are model 1 SKUs (Include 2 units of CPU, and 2 units of heat sink, but no memory, no hard drive or plug-in adapters are provided). Those components must be ordered separately (refer to THOL document - see section VI - Documentation). Also, see section VII - Production SKU Configuration, for a list of components included in each Production model 0 SKU.

#### Note these restrictions:

- There are specific memory restrictions for DDR2 memory in this system.
  - Refer to the memory List document on <a href="http://support.intel.com/support/motherboards/server/tigi2u/compat.htm">http://support.intel.com/support/motherboards/server/tigi2u/compat.htm</a> for more details
- ❖ AC or DC Power cords are not provided. Customers must procure the power cords independently (for AC systems, order the NA - North American - power cord as indicated).
- ❖ Ensure customers have the appropriate technical support and contact before placing the first order.
- ❖ Riser Cards: The TIGI2U base configuration comes with two risers. One is a Full-height full-length and provides 3 slots of PCI-X 64/100 MHz. The second riser provides 3 slots of PCI-X 100/64 for Half-height, Half-Length boards. Each of these risers has a dedicated slot, and can not be swapped. A user would only need to order a spare Riser for maintenance support purposes.

3/22/2007 v 2.8.2 6 of 15

#### Special Note regarding Processors included:

Because the production SKUs of TIGI2U now includes two CPUs, customers will not be required to separately procure the CPUs and heatsinks needed for use with prior SKUs [TLIA0201 and TLID0201]. This also avoids customers having to procure either the Boxed or tray processors, or the heatsinks.

Intel will use N-0 stepping, or later, of the Intel® Xeon® Processor at 3.2GHz with 2M L2 cache (800MHz FSB) which is compatible with RoHS system shipping requirements.

#### Special Note regarding use of on-board RAID:

The TIGI2U server features the LSI Logic 53C1030 dual-channel SCSI adapter for RAID-on-motherboard (ROMB) functionality. The 53C1030 provides host-based RAID levels 0 and 1 for SCSI disk drives. While suitable for most applications, customers seeking enhanced RAID performance such as improved caching, memory and failover features may want to consider adapter-based solutions such as the zero-channel Intel® RAID Controller SRCZCRX or the Intel® RAID Controller SRCU42X PCI adapter.

3/22/2007 v 2.8.2 7 of 15

The production SKUs that can be ordered (see Appendix A for content of each SKU) are listed below. Non-RoHS product is no longer available. Products listed are RoHS compliant.

| PID Order<br>Code | Description  | MM#    | Minimum<br>Order<br>Size |
|-------------------|--|--------|--------------------------|
| TLIA2201          | Intel® Carrier Grade Server TIGI2U, 2U, Base 1. Includes 2 x Intel® Xeon® Processors at 3.2 GHz with 2M cache ; One 600-Watt AC, 3.3V R, CDROM RW, Advanced IMM, System Configuration Key, Dual Channel Ultra 320. | 883851 | 1                        |
| TLID2201          | Intel® Carrier Grade Server TIGI2U, 2U, Base 1. Includes 2x Intel® Xeon® Processors at 3.2 GHz with 2M cache; One 600-Watt DC, 3.3V R, CDROM RW, Advanced IMM, System Configuration Key, Dual Channel Ultra 320.   | 883815 | 1                        |

Power Cords are not included. For AC Power cords, order the power cord below. For DC Power cords, see your OEM or System Integrator. This power cord is RoHS compliant.

| PID        | MM#    | Comments  |
|------------|--------|---|
| PWRCABLEUS | 816324 | This AC power cable may be ordered by North America (NA) customers. International customers should procure their specific power cords directly. |

3/22/2007 v 2.8.2 8 of 15

## IV. Production Spares List

These are the Spares that may be ordered with this system. Spares may be used in AC or DC SKUs. All spares listed are RoHS. Non-RoHS spares are no longer available. RoHS spares are recommended for shipments into the European Union beginning July 1, 2006.

| PID Order<br>Code | Description  | MM#    | Minimum<br>Order Size |
|-------------------|--|--------|-----------------------|
| TLIPWRDISBD       | TIGI2U POWER<br>DISTRIBUTION BOARD,<br>SPARE                                   | 880122 | 1                     |
| TLIDCPSU003       | TIGI2U DC P/S MODULE,<br>SPARE   | 880116 | 1                     |
| TLIACPSU003       | TIGI2U AC P/S Module,<br>SPARE   | 880110 | 1                     |
| TLI5VRISR03       | TIGI2U PCI-X Full-length<br>Full-height Riser BOARD,<br>5V with Bracket, SPARE | 880109 | 1                     |
| ADRLPRISER        | Low Profile PCI-X riser (three low profile PCI-X slots).                       | 861836 | 1                     |
| TLIFPIOLP03       | TIGI2U Front Panel IO<br>Board with LED PIPE,<br>SPARE                         | 880118 | 1                     |
| TLICBLMSC03       | TIGI2U Interconnect Cable, SPARE   | 880113 | 1                     |
| TLIBEZEL003       | TIGI2U BEZEL W/ INSERT,<br>SPARE   | 880112 | 1                     |
| TLISNKCLP03       | TIGI2U CPU HEATSINK<br>W/HARDWARE,SPARE  | 876481 | 1                     |
| TLIFANSET03       | TIGI2U Fan Assembly (SET of 4), SPARE  | 880117 | 1                     |
| TLICBLSCS03       | TIGI2U CABLES (BOTH<br>SCSI) SPARE   | 880114 | 1                     |
| TLICDCARR03       | TIGI2U CD-ROM ASSY, without DRIVE  | 880115 | 1                     |
| TLIBASBRD03       | TIGI2U TELCO<br>BASEBOARD, SPARE   | 880111 | 1                     |
| TLPBEZEL002       | TIPGPR2U, BEZEL<br>w/INSERT, SPARE   | 880164 | 1                     |
| TLPHDCARR02       | SCSI Hard Drive Carrier  | 880174 | 1                     |
| AXXRJ45DB9        | RJ45 to DB9 dongle converter kit   | TBD    | 10                    |
| TLPAIRFLT02       | Air filter, front bezel mount (see note below)                                 | 853658 | 1                     |

3/22/2007 v 2.8.2 9 of 15

Note: NEBS testing of TIGI2U is performed with no Air Filter used. The Air Filter spare is provided in the spares list, however, for NEBS applications, it is not recommended.

3/22/2007 v 2.8.2 10 of 15

#### V. Rack Mounts

Two sets of rack mounts and one set of Slide Rail Enabling Kit are offered with this product.

The first rack mount kit, TMLCMOUNT21, is a set of mounts, which is used for mounting TIGPR2U, TIGPT1U, NSI2U, and TIGI2U servers to a 2-post Central Office type 19" wide rack. These mounts are L-shaped brackets.

The second set of rack mount kits consist of two different styles. TMLPMOUNT51 is used for mounting TIGPR2U, TIGPT1U, NSI2U, and TIGI2U servers to a 2-post or 4-post 19" wide rack. These racks are considered standard EIA (universal hole spacing) racks. TMLPMOUNT52 is used for mounting these servers to a 2-post or 4-post 23" wide rack. These racks could be standard EIA (universal hole spacing) or ETSI (European) racks. Although the mounts are designed as rails, they are not sliding rails.

The third set is an enabling kit (not the actual mount), which can be used if customers intend to use sliding rails for their rack. In that case, customers can use the TMLPSLIDE01 kit, which has the appropriate hardware to be used with sliding rails such as Accuride rails model 305-A-LR. The sliding rails have to be procured independently by the OEM customers or end users. Note using slide rails may result in non-compliance with seismic zone 4 requirements of NEBS-3 certification. All other rack mounts are NEBS-3 and Seismic zone-4 certified. Installation instructions are included in the mount and spare kits.

| PID         | Description   | MM#    | Minimum<br>Order<br>Quantity |
|-------------|---|--------|------------------------------|
| TMLCMOUNT21 | Rack mount kit, 19inch 2 post<br>rack - "L" bracket - 1U & 2U   | 881904 | 1                            |
| TMLPMOUNT51 | Rack mount kit, 19inch 2 & 4 post rack, stop feature, universal EIA - 1U & 2U   | 881934 | 1                            |
| TMLPMOUNT52 | Rack mount kit, 23inch 2 & 4 post rack, stop feature, universal EIA/ETSI - 1U & 2U  | 881935 | 1                            |
| TMLPSLIDE01 | Rack mount slide rail kit, 19inch 4 post, (for use with Accuride Slide Rail #305-A-LR) Customer must separately purchase the Accuride Slide rail. | 881915 | 1                            |

3/22/2007 v 2.8.2 11 of 15

| TMLPMOUNT41 | 2/4 Piece19"Rack Mount kit | 881907 | 10 |
|-------------|----------------------------|--------|----|
|             |                            |        |    |

Although these mounts have been designed for industry standard racks, please consult with your Intel Field Application or Sales Engineer before selecting racks for these servers.

3/22/2007 v 2.8.2 12 of 15

#### VI. Documentation

#### Support.Intel.Com Users:

Product information including specifications, compatibility, user's guides, drivers, firmware, and software associated with the Intel® Carrier Grade Server TIGI2U is available from Intel® Customer Support.

Intel® Carrier Grade Server TIGI2U support web site: http://support.intel.com/support/motherboards/server/tigi2u/

IBL Users may find information about this product listed below.

On <a href="www.intel.com/ibl">www.intel.com/ibl</a>, click on <a href="Molecular:Networking/Communications">Networking/Communications</a>, then click on <a href="Telecom and Compute Products">Telecom and Compute Products</a>, then <a href="Carrier Grade Rack Mount Servers">Carrier Grade Rack Mount Servers</a>, then click on <a href="Telecom and Compute Products">Telecom and Compute Products</a>, then <a href="Carrier Grade Rack Mount Servers">Carrier Grade Rack Mount Servers</a>, then click on <a href="Telecom and Compute Products">Telecom and Compute Products</a>, then <a href="Carrier Grade Rack Mount Servers">Carrier Grade Rack Mount Servers</a>, then click on <a href="Telecom and Compute Products">Telecom and Compute Products</a>, then <a href="Carrier Grade Rack Mount Servers">Carrier Grade Rack Mount Servers</a>, then <a href="Carrier Grade Rack Mount Servers">Carrier Grade Rack Mount Servers</a>, then <a href="Carrier Grade Rack Mount Servers">Carrier Grade Rack Mount Servers</a>, then <a href="Carrier Grade Rack Mount Servers">Carrier Grade Rack Mount Servers</a>, then <a href="Carrier Grade Rack Mount Servers">Carrier Grade Rack Mount Servers</a>, then <a href="Carrier Grade Rack Mount Servers">Carrier Grade Rack Mount Servers</a>, then <a href="Carrier Grade Rack Mount Servers">Carrier Grade Rack Mount Servers</a>, then <a href="Carrier Grade Rack Mount Servers">Carrier Grade Rack Mount Servers</a>, then <a href="Carrier Grade Rack Mount Servers">Carrier Grade Rack Mount Servers</a>, then <a href="Carrier Grade Rack Mount Servers">Carrier Grade Rack Mount Servers</a>, then <a href="Carrier Grade Rack Mount Servers">Carrier Grade Rack Mount Servers</a>, then <a href="Carrier Grade Rack Mount Servers">Carrier Grade Rack Mount Servers</a>, then <a href="Carrier Grade Rack Mount Servers">Carrier Grade Rack Mount Servers</a>, then <a href="Carrier Grade Rack Mount Servers">Carrier Grade Rack Mount Servers</a>, then <a href="Carrier Grade Rack Mount Servers">Carrier Grade Rack Mount Servers</a>, then <a hr

If you can not access the documents using the links provided, please contact your FAE/FSE for assistance. If you require access to IBL, please contact your Intel Sales representative.

3/22/2007 v 2.8.2 13 of 15

# VII. Base Systems Configuration TIGI2U Production SKU Configuration

| Component                           | Configuration<br>AC | Configuration<br>DC |
|-------------------------------------|---------------------|---------------------|
| Chassis (NEBS-3 and ETSI certified) | 1                   | 1                   |
| Telecom Baseboard                   | 1                   | 1                   |
| (dual Xeon® 3.2GHz/2M cache, 800MHz | ·                   |                     |
| FSB) - CPUs not included            |                     |                     |
| FH-FL PCI-X Bracket                 | 1                   | 1                   |
| FH-FL PCI-X Riser                   | 1                   | 1                   |
| HH-HL PCI-X Bracket                 | 1                   | 1                   |
| HH-HL PCI-X Riser                   | 1                   | 1                   |
| AC power supply (600W)              | 1                   | -                   |
| DC power supply (600W)              | -                   | 1                   |
| Power Supply Filler Panel           | 1                   | 1                   |
| Power Cable                         | -                   | -                   |
| Slimline CD-ROM 24x                 | 1                   | 1                   |
| Server Deployment Toolkit (CD)      | 1                   | 1                   |
| Quick Start Guide                   | 1                   | 1                   |
| Memory                              | -                   | -                   |
| Hard Disk Drive                     | -                   | -                   |
| CPU                                 | 2                   | 2                   |
| Heatsink(s)                         | 2                   | 2                   |
| Rail mount kits                     | -                   | -                   |
|                                     |                     |                     |

Note: For either of these SKUs to be functional, one or more of the following is required:

Power cord, Memory, Hard Drive, OS

Each system could also require the following, depending on the configuration:
Additional Power Supply and Power cord, Rack mounts.

Optionally a USB Floppy can be used [no spare order code for this item].

3/22/2007 v 2.8.2 14 of 15

# This page left blank intentionally.

3/22/2007 v 2.8.2 15 of 15