

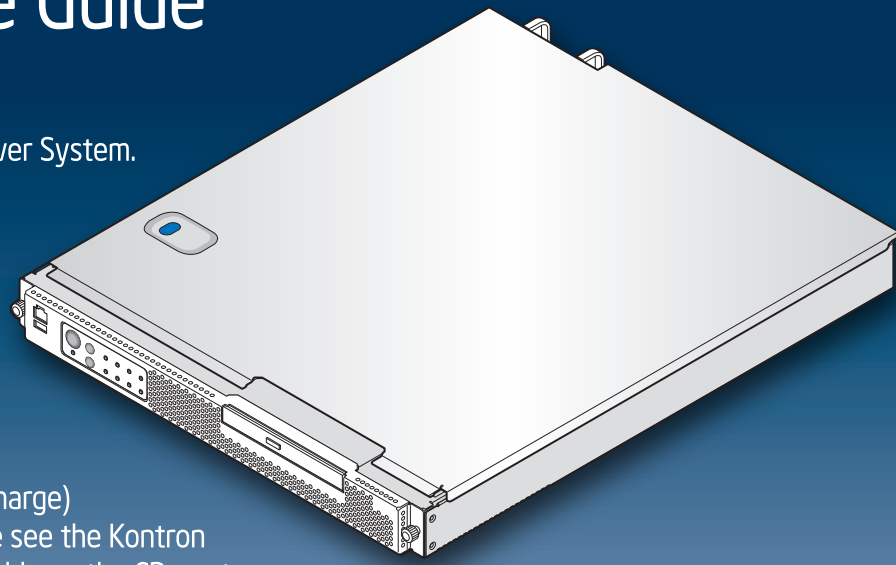
# Kontron Carrier Grade Server TIGW1U Hardware Reference Guide

Thank you for buying a Kontron Carrier Grade Server System. The following information will help you setup and install your Kontron Carrier Grade Server TIGW1U and service components.

This guide and other supporting documents are located on the web at <http://us.kontron.com/support>

If you are not familiar with ESD (Electrostatic Discharge) procedures used during system integration, please see the Kontron Carrier Grade Server TIGW1U Product Guide, available on the CD or at <http://us.kontron.com/support>

Read all cautions and warnings first before starting your server platform integration.



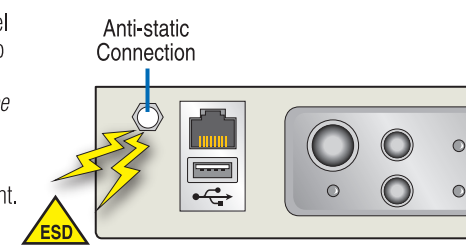
## Minimum Hardware Requirements

To avoid integration difficulties and possible board damage, your system must meet the following minimum requirements:

- Processor: Dual-Core Intel® Xeon® Processor 5100 Series or Quad-Core Intel® Xeon® Processor 5400 Series with compatible heat sink.
- Memory: Minimum of one 512 MB, 240-pin DDR2 533/667 MHz FB DIMM (populating in pairs is recommended).
- For power requirements, see the Kontron Carrier Grade Server TIGW1U Technical Product Specification.

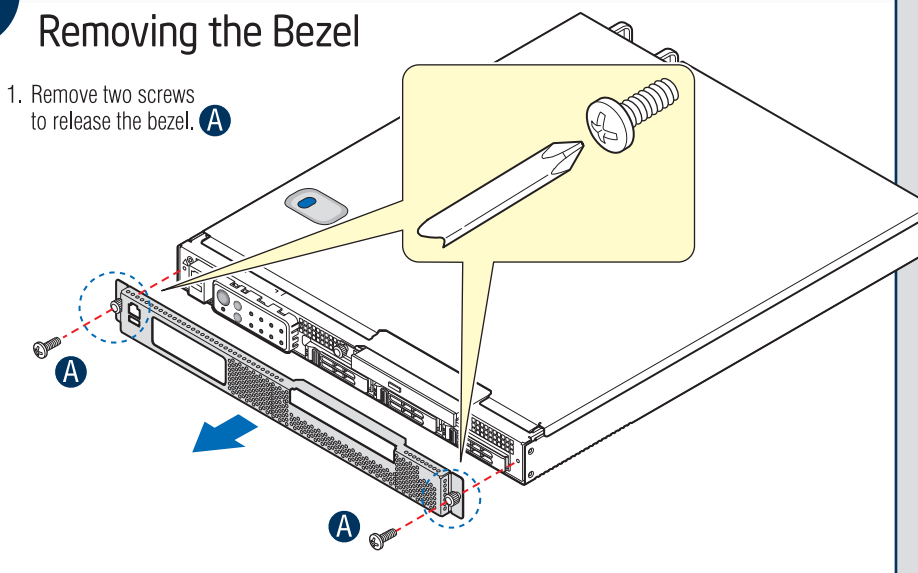
## 1 Attaching Your Ground Strap

You must remove the bezel to access the ground strap attachment point. If the bezel is installed, see Step 2 at right. Attach ground strap to anti-static connection point.



## 2 Removing the Bezel

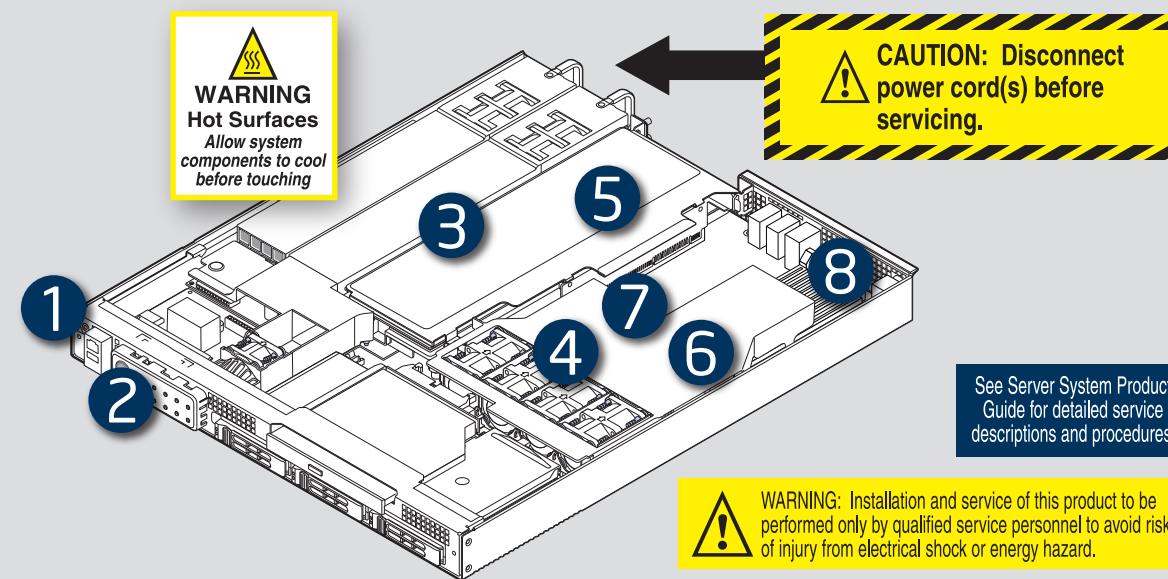
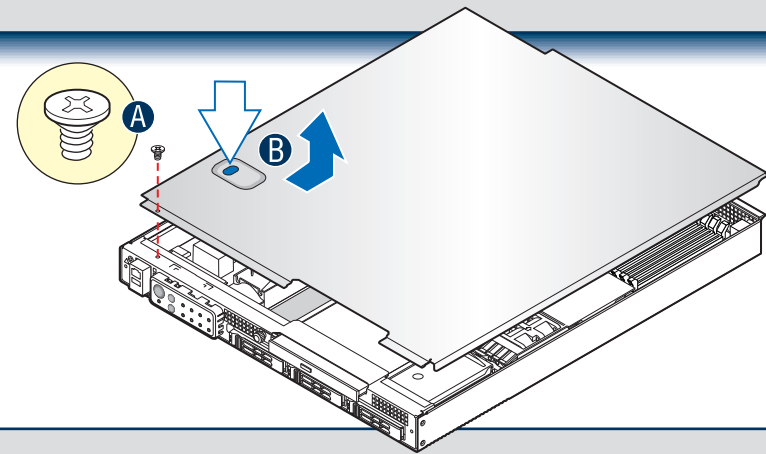
1. Remove two screws to release the bezel.



## 3 Removing the Top Cover

1. Remove the shipping screw.
2. Push blue locking button, slide cover rearward, then lift up and remove.

**CAUTION:** This unit must be operated with the top cover installed to ensure proper cooling.



**WARNING Hot Surfaces**  
Allow system components to cool before touching.

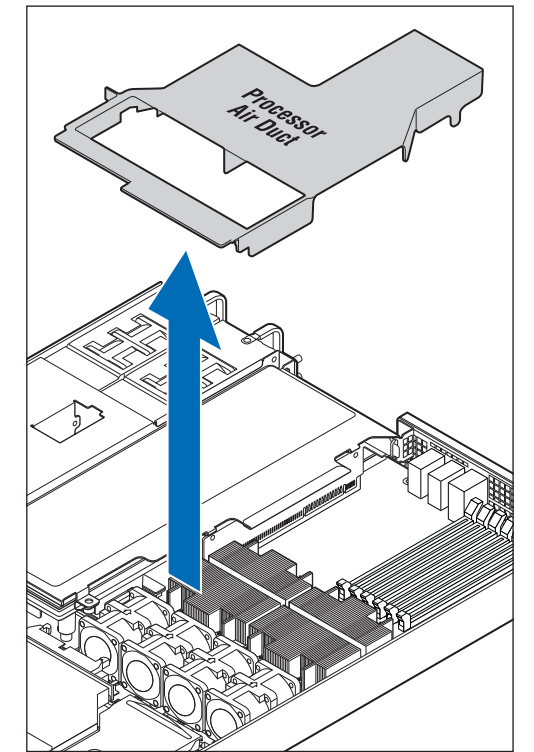
**CAUTION: Disconnect power cord(s) before servicing.**

See Server System Product Guide for detailed service descriptions and procedures.

**WARNING:** Installation and service of this product to be performed only by qualified service personnel to avoid risk of injury from electrical shock or energy hazard.

## 4 Removing the Processor Air Duct

1. Lift air duct straight up and remove.



### Warning

Read all caution and safety statements in this document before performing any of the instructions. Also see the Kontron Server Board and Server Chassis Safety Information document at: <http://us.kontron.com/support> for complete safety information.

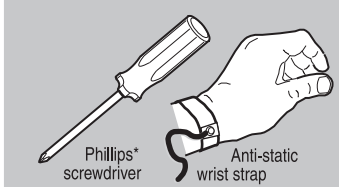
### Warning

Installation and service of this product should only be performed by qualified service personnel to avoid risk of injury from electrical shock or energy hazard.

### Caution

Observe normal ESD (Electrostatic Discharge) procedures during system integration to avoid possible damage to server board and/or other components.

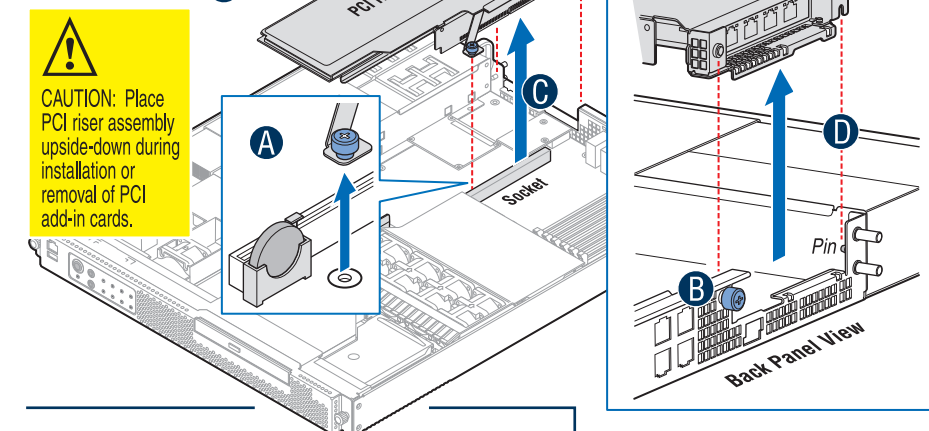
### Tools Required



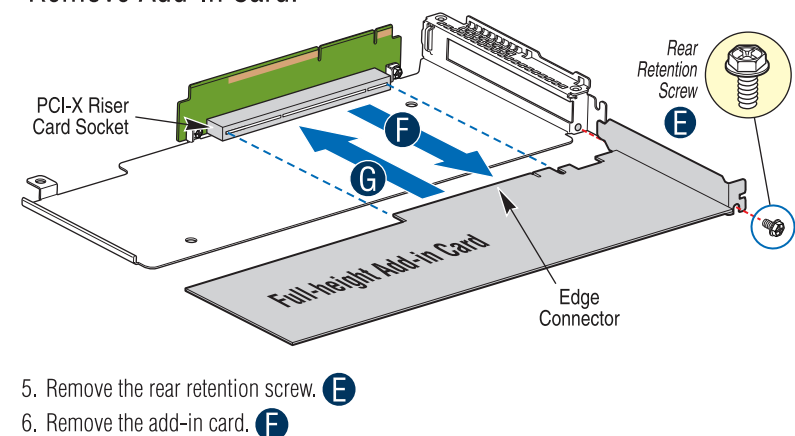
## 5 Replacing/Installing a PCI Add-in Card

### Remove the Riser Assembly:

1. Loosen blue captive screw securing the PCI riser assembly to the server board.
2. Loosen blue captive thumbscrew on the back panel.
3. Lift riser assembly straight up and remove.
4. Note location of "fork" and "pin". These must align when re-installing the riser assembly.



### Remove Add-In Card:



5. Remove the rear retention screw.
6. Remove the add-in card.

### Install Add-in Card:

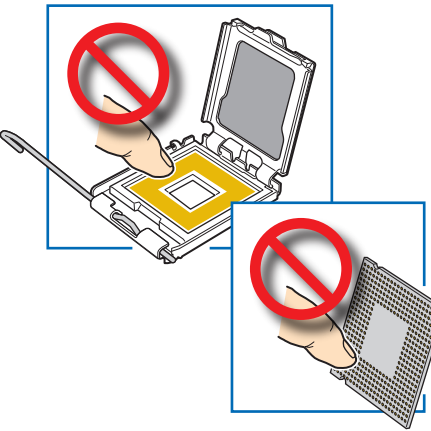
7. If the add-in card slot was empty, push out the add-in card filler panel, then reverse the previous steps to complete installation of an add-in card.

**IMPORTANT NOTE:** Make sure the add-in card edge connector seats correctly into the riser card socket.

**CAUTION:** Observe normal ESD precautions when installing add-in cards.

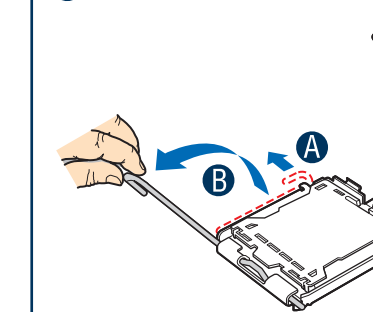
## 6 Install the Processor(s)

**Caution:** When unpacking a processor, hold by the edges only to avoid touching the contacts.



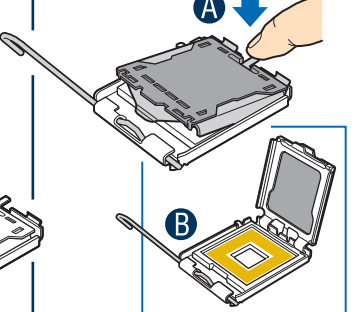
### A. Open the Socket Lever

- A Push the lever handle down and away from the socket to release it.
- B Pull the lever and open all the way.



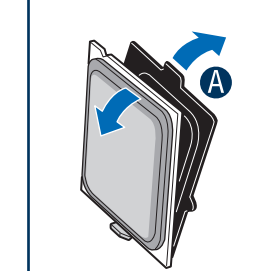
### B. Open the Load Plate

- A Push the rear tab with your finger tip to bring the front end of the load plate up slightly.
- B Open the load plate as shown.



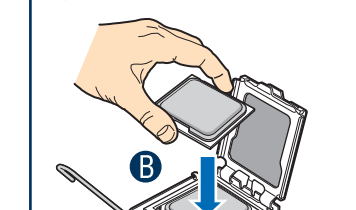
### C. Remove the Processor Protective Cover

- A Take the processor out of the box and remove the protective shipping cover.



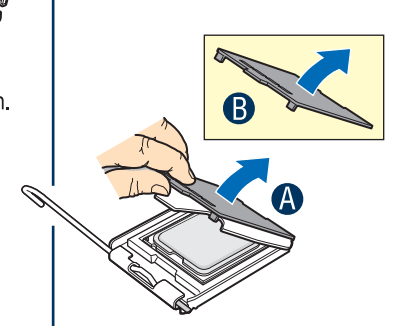
### D. Install the Processor

- A Orient the processor with the socket so that the processor cutouts match the socket notches.
- B Install the processor as shown.



### E. Remove Socket Protective Cover

- A Grasp the socket protective cover tab and pull away from the load plate as shown.
- B Remove the socket protective cover and store for future use.



### F. Close Load Plate and Socket Lever

- A Close the load plate all the way as shown.
- B With your finger, push down on the load plate as shown.
- C Close the socket lever and ensure that the load plate tab engages under the socket lever when fully closed.

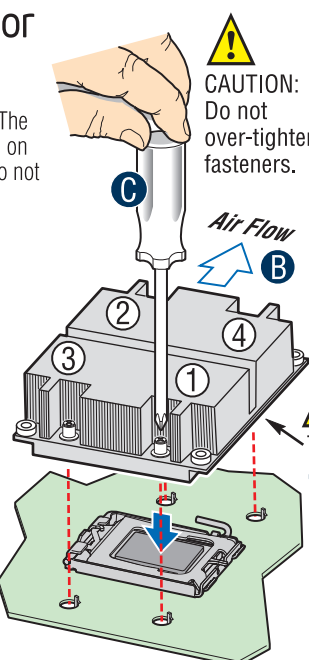


## 7 Installing the Processor Heat Sink(s)

**CAUTION:** Use gloves to avoid sharp edges. The heat sink has thermal interface material (TIM) on the underside of it. Use caution so that you do not damage the thermal interface material.

1. If this is a new heat sink, remove the protective film on the TIM if present.
2. Align heat sink fins to the front and back of the chassis for correct airflow. Airflow goes from front-to-back of chassis.
3. Using a #2 Phillips\* screwdriver, finger-tighten each fastener diagonally, according to the numbers shown.
4. Securely re-tighten each fastener again in the same order as performed in Step 3.

**Note:** Heat sink styles may vary.



## 8 Installing Memory

### Memory Configurations and Population Order:

Memory Type: Minimum of one 512 MB, DDR2 FB DIMM 533/667 MHz compliant 240-pin DIMM.

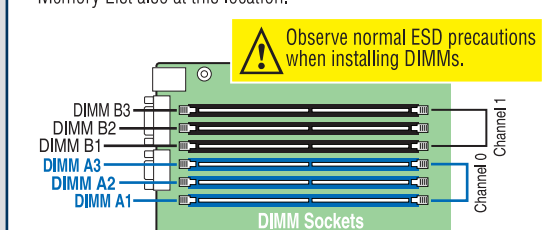
Populate DDR2 FB DIMMs in pairs in the following order: A1-B1, A2-B2, and A3-B3. For best performance, Intel® recommends installing memory in pairs.

If installing only one DIMM, you must use slot A1.

DIMMs in each pair must be identical with respect to size, speed, and organization.

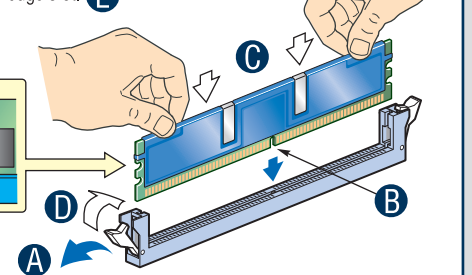
**Note:** Memory sizing and configuration is supported only with qualified DIMMs approved by Kontron. For additional memory configuration information, see the Server Board TPS or the TIGW1U Product Guide on the resource CD or at <http://us.kontron.com/support>

For a list of supported memory components, see the S5000PHB Tested Memory List also at this location.



### To Install DIMMs:

1. Open both DIMM socket levers.
2. Note location of alignment notch.
3. Insert DIMM making sure the connector edge of the DIMM aligns correctly with the slot.
4. Using both hands, press down evenly and firmly on both sides of the DIMM until it snaps into place and the levers close.



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