Your Advantage Integrity Accessory Kit contains the software needed to convert a standard Thermal Advantage Q Series™ system into a database system. In addition to the software components, a database server is required.

**Database Server Requirements**

The following are the requirements for the Advantage Integrity database system:

- **Minimum Hardware Specifications:**
  - ≥ Intel® Pentium® III Xeon™, 1.0 GHz processor
  - ≥ 512 MB memory
  - ≥ 80 GB hard drive
  - ≥ 24X CD-ROM
  - 3 Com or Intel® 10/100TX PCI Ethernet NIC network card

- **Windows® 2000 Server** software (English version) with Service Pack 2

- **Oracle9i™ Standard Edition** (or Enterprise Edition) database software with the appropriate number of named user licenses.

- The **Database Server** must be dedicated to the TA Instruments system and not be used as a server for other databases or any other type of servers such as file server, print server, etc.

- Available **DDS/4 Tape Drive** for database back-up.

- Available **database archiving device**. DVD+RW is highly recommended due to its portable format and direct random access (DRA) capability. DVD+RW allows archived data to be read directly from the DVD without the need to restore the entire archive back into the database server. It is not recommended that the selected archive device reside on the database server due to database performance issues during “DVD burning.” Therefore, the archive device must reside on another computer, which has access to the TA database.

*(continued)*

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Database Server Requirements (continued)

- Prior to the installation visit, the customer must install the Oracle® database server on their company network (if a networked configuration is desired) and ensure that the computer is visible on network. **Network connection** must be available in the location where the TA controller will be installed prior to installation. TA Field Service Representative must have access to the appropriate MIS/IT personnel during installation to resolve any networking issues. (If you’re supplying your own server, consult the installation guidelines in the document entitled – “TA Instrument Oracle Database Server Installation Instructions,” PN 925007.000.)

- Service installation should not be scheduled until the database server is connected and visible on your company network. Verification of setup will be required. If you are supplying your own controller, then it too must be connected and visible on your company network following the network addressing described in this document.

- Any needed Static IP addresses should be obtained from your IT department and taken out of the company’s list of assignable addresses.
Integrity System Configurations

Choose from four possible system configurations when setting up and installing the TA Instruments Advantage Integrity system. See the following descriptions for each type:

**Configuration #1 (Standard)**

This standard system configuration (see the figure to the right) involves the connection of all the components (TA Controller PC, Oracle Server PC, and Integrity-licensed Instruments) in a private network environment. In this configuration, the following IP addressing will be used for the TA Controller PC and Server PC:

- **IP Address:** 172.23.191.X  
  (X = 1-254, non conflicting)
- **Subnet Mask:** 255.255.224.0

**Configuration #2**

As an alternative to the standard configuration, you may find it desirable to place the database server on the company network and the instruments on a private network. The TA Controller PC would be used to access both the server and the instruments. See the figure to the right for a schematic of this type of configuration. In this case, the server should be connected to your company network prior to TA Instruments service installation.

- **Oracle Database Server**—The networking address for this Server PC may be setup using either DHCP or static IP addressing.
- **TA Controller PC**—Controller with 2 NIC Boards. (The two NIC boards should not be set to the same subnet.)
  - **NIC #1** to access the instruments. The following IP addressing will be used on the TA Controller PC: IP Address: 172.23.191.X (X=1-254, non conflicting); Subnet Mask: 255.255.224.0.
  - **NIC #2** to access the company network. IP addressing setup the same way as the Server PC [DHCP or static (in the proper range and subnet)]
- **Integrity Instrument(s)**—The standard IP addressing is used (172.23.191.X).

**NOTE:** This configuration requires a second Ethernet card in the controller computer that will be connected to the network. (Only one Ethernet card is supplied with Controllers supplied by TA Instruments.) Each NIC must be on a different subnet.
**Configuration #3**

As another alternative, you may find it desirable to place all of the devices on the company network and then connect the instruments to the controller via a virtual network. See the figure to the right for a schematic of this type of configuration. In this case, the server should be connected to your company network prior to TA Instruments service installation.

- Oracle Database Server – The networking address for this Server PC may be setup using either DHCP or static IP addressing.
- TA Controller PC - Controller with 1 NIC Board with two static IP addresses. "IP #1 to access the instruments. “ IP Address: 172.23.191.X (X=1-254, non conflicting); Subnet Mask: 255.255.224.0. "IP #2 to access the company network.” IP addressing setup the same way as the Server PC (in the proper range and subnet).
- Integrity Instrument(s) – The standard IP addressing is used (172.23.191.X).
- All devices are connected to the company network.

**Configuration #4**

In this configuration, all of the Advantage Integrity components are connected directly to the company network. Use of this configuration is only plausible if your company network addresses are compatible with our class limitations. The Q Series instruments use a real-time operating system that is sensitive to address classes. If your company network uses any of the three blocks of network address reserved for private internets (non-routable) as defined by RFC 1918 certain subnet restrictions apply; the address and subnet mask must define a range of addresses that is entirely within that block of non-routable addresses. If this condition is not met by your company network, then the instruments cannot be setup to be accessible by your entire company network. In addition, the Q Series instruments require the use of a static IP address, they will not work with DHCP.

In this configuration, you must first set up the system like configuration #3 (see above). This will allow you to communicate with the instruments and change their network.