

Installation Guide

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Firmware, Add-ons, and Printer Installation Guide for Compaq T1000xT1010 Thin Client Products

***Abstract:** This guide provides step-by-step instructions for installing the following Compaq T1000/T1010 Thin Client products:*

- *Compaq Thin Client Manager Firmware Upgrade*
- *Add-ons (software and printer drivers)*
- *A printer*

Before attempting to install these products, network administrators and other server users should read this document and all related documentation in their entirety.

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Firmware, Add-ons, and Printer Installation Guide for Compaq T1000xT1010 Thin Client Products
Installation Guide prepared by Marketing Services, CPCG

First Edition (February 2001)

Introduction

This document provides installation procedures to install the Thin Client Manager (TCM) Remote Administrator Tool Firmware Upgrade, the Add-ons (software and printer drivers), and printer for the Compaq T1000/T1010 Thin Client products.

Target Audience

This guide is for users with experience installing management software in a distributed computing environment, who should also possess the following:

- A basic working knowledge of Microsoft Windows NT 4.0 and Windows 2000
- Familiarity with Compaq servers, desktops, workstations, and portables
- A working knowledge of network management concepts, including TCP/IP and SNMP

Proceed through this installation guide in a systematic step-by-step manner to accurately build the initial installation. This guide may also be used for future reference to specific areas or for reinstalling specific components.

Document Conventions

This document specifies the actions for installing the Firmware Upgrade, the Add-ons, and Printer and uses the following conventions:

- Each section discusses the actions associated with a specific phase of the installation process.
- Menu options are represented in this manner: **File** → **Open**.
- The text you enter or click in a display is shown in a **bold** font in brackets, such as [**Next**], [**Click**], [**Tab**], [**Button**], and [**Finish**].
- Notes and important information are emphasized as follows:

IMPORTANT: Read this important information.

Note: Please read this note for extra information.

Pre-Installation Requirements

Before installing the Firmware Upgrade, the Add-ons, and the printer, verify that your environment meets the hardware and software requirements described in the following sections.

Hardware Requirements

Compaq T1000 or Compaq T1010 Thin Clients

Software Requirements

Microsoft Windows CE Software

Network Requirements

- Microsoft Windows network
- Properly-installed TCP/IP network
- Native Simple Network Management Protocol (SNMP) agent

For information on installing TCP/IP and SNMP, refer to *Deploying TCP/IP and SNMP on Compaq Systems* in the Deployment section of the *Compaq Insight Manager ActiveAnswers* solution at:

<http://vcmpoapp02.compaq.com/ActiveAnswers/Global/en/solutions.1108/default.asp>

Overview of Installation Process

The installation process is comprised of the following three components:

- TCM Firmware Upgrade
- Add-ons (software and printer drivers)
- Printer

Firmware Upgrade

Thin Client Manager Firmware Upgrade

Prerequisites

- Windows NT 4.0/Windows 2000 Server
- TCP/IP and SNMP services installed
- Thin Client Manager installed
- Firmware files loaded on server

To Set Up the Thin Client Manager Remote Administrator Tool Firmware Upgrade:

IMPORTANT: T1000/T1010 Thin Clients should be powered ON and connected to the network.

To Use the TCM Firmware Upgrade from the Windows NT 4.0/Windows 2000 Server:

1. Start **Thin Client Manager**.
2. Select **Utilities** → **Upload/Download** → **Download Firmware**.

To Download/Upgrade Firmware:

1. Select **Client** (you may select one or more clients).

2. When “Enter Firmware Path” is displayed on the screen, select [**Browse Button**].
3. Select [**OK**].

To Download Client Manager:

Note: Message displayed is “Download Firmware Request(s) Complete.”

1. Select [**OK**].
 - The firmware is downloaded to the T1000/T1010.
 - T1000/T1010 reads file into memory.
 - T1000/T1010 erases flash.
 - T1000/T1010 reboots.
 - T1000/T1010 is now set to defaults, with the new firmware installed.
2. Configure the T1000/T1010 with settings for your network.

File Transfer Protocol (FTP) Firmware Upgrade

Prerequisites

- Windows NT 4.0/Windows 2000 Server
- Microsoft Internet Information Server
- TCP/IP services
- FTP server setup to accept Anonymous users (If needed, secure users can be setup.)
- Read and write access verified and granted for the FTP Root Directory

To Set Up the FTP Firmware Upgrade Directory:

1. In the FTP Root, create a directory for the firmware (such as, ...\\FTPRoot\\(Directory)).
2. Copy the firmware *.zip file to this new directory.
3. Unzip the firmware in the new directory.
4. This should create a new sub-directory with at least two files. (*.bin or *.CPQ and params.ini).

Note: Firmware upgrades can be obtained by contacting Compaq Technical Support for website login instructions.

T1000/T1010 FTP Terminal Settings

IMPORTANT: T1000/T1010 must be connected to the network.

To Set Up FTP Terminal Upgrade:

In Compaq Connection Manager:

1. Press [**F2**] Terminal Properties.

2. Select **Upgrade** [Tab].

Upgrade

1. Use Local FTP Information [**Button**].
2. Enter the Server Name: (IP Address is preferred or Server name).
3. In the Server Directory: Enter complete path from FTP Root, such as, \(\Directory\)(\New Sub-Dir).
4. Select [**Apply**].
5. Select [**Upgrade**].

Firmware Upgrade Warning

1. Select [**Start**]. The Firmware upgrade will start and perform the following actions.
 - T1000/T1010 reads file into memory.
 - T1000/T1010 erases flash.
 - T1000/T1010 reboots.
 - T1000/T1010 is now set to defaults with the new firmware installed.
2. Configure the T1000/T1010 with settings for your network.

XFER Firmware Upgrade

XFER Prerequisites

- Laplink parallel cable
- Workstation with Microsoft DOS or Windows 95/98

Note: XFER will not work under Windows NT.

- XFER program loaded on local workstation
- New firmware downloaded to local workstation (unzipped)

Note: Firmware upgrades and the XFER program can be obtained by contacting Compaq Technical Support for website login instructions.

Local Workstation Settings

- The file may have a *.BIN or *.CPQ extension; either will work.
- The firmware file will begin with M, L, or D.
- The file name may be more than eight characters. Rename the file to a standard DOS name size. Leave the extension the same.
- If you are having a problem using a DOS Window, boot just to DOS and try again.

To Set Up Local Workstation:

1. Connect the Laplink cable from the local workstation to the T1000/T1010.

2. Boot to MS/DOS or exit to MS/DOS Window.
3. At the DOS prompt, type: **C:\(Director)\Xfer (Drive):\ (Director)\(Filename.BIN).**
4. Press [**Enter**]. Download Utility will start: Message will display: "Waiting to download data."

Proceed to the next section to upgrade T1000/T1010 Firmware.

T1000/T1010 Firmware Upgrade

To Set Up the T1000/1010:

Note: Record current terminal settings, if needed. (This process will set all settings to Default.)

1. Power OFF the T1000/T1010. (Wait at least 5 seconds before turning on.)
2. Power ON the T1000/T1010.
 - The download will start.
 - T1000/T1010 reads file into memory and erases flash.
 - T1000/T1010 reboots.
3. Power OFF the T1000/T1010.
4. Disconnect the Laplink.
5. Reconnect the parallel peripheral. (Optional)
6. Power ON the T1000/T1010.
7. Configure the T1000/T1010 with settings for your Network.

IMPORTANT: Current products have a "wake-on" LAN feature that may require unplugging the power plug, since these units may be in a sleep mode. A complete power cycle is necessary for the terminal to see data coming in the port.

Flash Card Firmware Upgrade

Prerequisites

- Laptop with Windows 98 and PCMCIA Slots
- Windows 98 CD (Right click/Install (X:\win98\drivers\storage\ftl>trueffs.inf.)
- TFFS (True Flash File System) [Copy Tformat.exe to local drive.]
- Firmware files loaded on laptop (*.Bin or *.CPQ)

To Load Firmware Upgrade on Flash Card:

From the Laptop:

1. Insert the flash card in the PCMCIA slot. (Record the drive letter assigned to flash card, X:)
2. Exit to a MS/DOS Window.

3. At the DOS prompt, type: C:\(Directory)\Tformat X: /S:C:\(Directory)\(Filename.xxx).
The firmware is downloaded to the flash card.
4. Stop services on the flash card when it is completed, and then remove the card.

To Install Firmware Upgrade on T1000/T1010:

From the T1000/T1010:

1. Power OFF the T1000/T1010.
2. Insert the newly created flash card in the PCMCIA slot.
3. Turn on the T1000/T1010.
 - T1000/T1010 writes to flash.
 - Firmware upgrade done.
4. Power OFF the T1000/T1010, and take the flash card out.
5. Turn ON the T1000/T1010. T1000/T1010 is now set to defaults, with the new firmware installed.
6. Configure the T1000/T1010 with settings for your network.

Note: Use a 4-MB Centennial Linear Flash PC Card (Centennial part# FL04M-20-11119-03) or an 8-MB Centennial Linear Flash PC Card (Centennial part# FL08M-20-11119-03).

The Tformat.exe program is on the Windows 98 CD. This Tformat.exe allows you to write files to a flash card.

Add-on Installation

Prerequisites

- Windows NT 4.0/Windows 2000 Server
- TCP/IP services installed
- SNMP services installed
- Thin Client Manager (TCM) installed
- Firmware files loaded on server

To Set Up TCM Add-On:

IMPORTANT: T1000/T1010 Thin Clients should be powered ON and connected to the network.

From the Windows NT 4.0/Windows 2000 Server:

1. Start Thin Client Manager.
2. Select **Utilities** → **Upload/Download** → **Download Firmware**.
3. Download/Upgrade Firmware.

1. Select **Client**. (Select one or more clients.)
2. Enter Firmware Path [Browse Button]. This is the path where the Add-on is located.
3. Select [OK].

Download Client Manager

Message displayed is “Download Firmware Request(s) Complete.”

1. Select [OK].
 - The firmware is downloaded to the T1000/T1010.
 - T1000/T1010 reads file into memory.
 - T1000/T1010 erases flash.
 - T1000/T1010 reboots.
 - T1000/T1010 is now set to defaults with the new firmware installed.
2. Configure the T1000/T1010 with settings for your network.

Printer Installation

ICA Printing

Prerequisites

- Windows NT 4.0/Windows 2000 Server
- TCP/IP printer services installed
- Citrix Metaframe installed
- Network printers setup and installed

T1000/T1010 ICA Terminal Settings

- T1000/T1010 setup with default settings
- ICA connection setup on the T1000/T1010

To Set Up an ICA Connection on T1000/T1010:

In Compaq Connection Manager

1. Select **Configure** [TAB].
2. Select **Add** [Button].

New Connection

1. Select **Citrix ICA Client** from drop-down menu
2. Select [OK].

Specify Connection Type

1. Select **Network Connection**.

2. Select **[Next]**—Default.

Select a Citrix Server

1. Select **Citrix Server** [Button]—Default.
2. Select your Citrix Server and **[Next]**.
3. Select a title for the ICA Connection. This will be the icon name in Compaq Connection Manager.
4. Type a name.
5. Select **[Next]**.

Specify an Application

Select **[Next]**.

Specify Login Information

1. If desired, you can specify the following login information:
 - User Name
 - Password
 - Domain
2. Select **[Next]**.

Select Windows Options

These options specify how the application will appear.

1. **256**—Default.
2. Select **[Next]**.

Compression, Encryption, and Sound

1. Use Printer Configuration Utility—Default.
2. Select **[Next]**.

Firewall Setting

Select **[Finish]**.

Network Printing T1000/T1010

To Set Up Network Printing on T1000/T1010:

In Compaq Connection Manager

1. Select **Connections**. [TAB].
2. Select your new ICA Icon.
3. Log in to your server.

In Desktop

Select **Start** → **Settings** → **Printers**. All of your network printers will be displayed.

Local Printing T1000/T1010

Prerequisites

- Local printer drivers installed
- Local printer attached to T1000/T1010

To Set Up Local ICA Printer on T1000/T1010:

In Compaq Connection Manager

1. Select **Connections** [TAB].
2. Select your new ICA Icon.
3. Log in to your server.

In Desktop

Select **Start** → **Programs** → **MetaFrame Tools** → **ICA Client Printer Configuration**.

To Configure the ICA Client Printer

Select **Printer** → **New**.

Add ICA Client Printer Wizard

1. Choose printer type and select [**Next**].
2. Choose printer port and select [**Next**].
3. Enter Printer Name and select [**Next**]—except Default or Rename.
4. Check Settings and select [**Finish**].

ICA Client Printer Configuration

When asked “Do you want to connect? [Y/N],” enter [**Yes**].

In Desktop

Select **Start** → **Settings** → **Printers**. All of the network printers will be displayed, including the new local printer.

RDP Printing

Prerequisites

- Windows 2000 Server
- TCP/IP printer services installed
- Network printers setup and installed

T1000/T1010 RDP Terminal Settings

- T1000/T1010 setup with default settings
- T1000/T1010 Terminal named

- RDP connection setup on T1000/T1010

To Name the T1000/T1010 Terminal:

In Compaq Connection Manager

1. Press [**F2**] for **Terminal Properties**.
2. Select **Network** [Tab].

Network

1. Enter the Terminal Name. Record the name or rename the terminal to something you will remember.
2. Select [**Apply**].
3. Select [**Close**].
4. Select [**Restart**].

To Set up RDP Connection on T1000/T1010:

In Compaq Connection Manager

1. Select **Configure** [Tab].
2. Select **Add** [Button].

New Connection

Select **Microsoft Remote Desktop Client** [**OK**] from drop-down menu.

WTS Connection Wizard

1. Enter Name. This will be the icon name in Compaq Connection Manager.

Note: This is the name of the Windows 2000 server. Entering the IP address of the server ensures that it connects.

2. Select [**Next**].
3. Specify login information. If desired, you can specify logon information.
 - Username
 - Password
 - Domain
4. Select [**Next**].
5. Desktop select [**Next**]—Default.
6. Check Information and select [**Finish**].

Network Printing T1000/T1010

To Set Up Network Printing on T1000/T1010:

In Compaq Connection Manager

1. Select **Connections** [TAB].
2. Select your new RDP Icon.
3. Connect [Button].
4. Log in to your server.

In Desktop

Select **Start** →**Settings** →**Printers**. All of your network printers will then be displayed.

Local Printing T1000/T1010

Prerequisites

- Local printer drivers installed on the server
- Local printer attached to T1000/T1010

To Set Up a Local RDP Printer on T1000/T1010:

In Compaq Connection Manager

1. Select **Connections** [TAB].
2. Select your new ICA icon.
3. Connect [Button].
4. Log in to your server.

In Desktop Computer

Select **Start** →**Settings** →**Printers**.

Printer

Add Printer Icon and click [Enter].

Add Printer Wizard

Select [Next].

Local or Network Printer

1. Select **Local Printer**.
2. Select **Automatically Detect Printer** [Next]—Default.

New Printer Detection

If desktop computer does not detect printer, click [Next].

Select the Printer Port

Note: The local printer port will show up as TS00? port. The Printer Description will show the name of the T1000/T1010 Thin Client.

Select [**Next**].

Add Printer Wizard

Select the printer [**Next**].

Name Your Printer

1. Select the Printer Name. Give the printer a name or accept defaults.
2. When asked, “Do you want this printer to be the Default Printer? (Y/N)” Select **Yes** and [**Next**].

Printer Sharing

If desired, you can share this printer with another T1000/T1010 user on the Network. Select [**Next**].

Location and Comment

Windows will show the following only if you share the printer:

- Location
- Comment

Select [**Next**].

Print Test Page

Select **Yes** and [**Next**].

All of the network printers will be displayed, including the new local printer.

LPD Printing

Prerequisites

- Windows NT 4.0/Windows 2000 Server
- TCP/IP printer services installed
- Telnet services installed
- Network printers setup and installed
- DOS Command Prompt—“net start lpdsvc”

T1000/T1010 TEC Terminal Settings

- T1000/T1010 setup with default settings
- TEC connection setup on a T1000/T1010

To Set Up a TEC Connection on T1000/T1010:

In Compaq Connection Manager

1. Select **Configure** and [Tab].
2. Select **Add** and [Button].

New Connection

Select **Terminal Emulation** and [**OK**] from drop-down menu.

Connection Information

Enter Connection Name and [**Next**]. This will be the icon name in Compaq Connection Manager.

Host Information

- Select **TCP/IP** and [Button].
- Select Hostname (IP address of server is preferred).
- Select [**Next**].

Automate Login Process

If desired, you can specify login information.

Select [**Next**].

Printer Port Settings

1. Select **Use Network Printer** and [**LPR**].
2. Enter LPD Hostname. This is the IP address of the server attached to the printer.
3. Check this box: **FormFeed Terminator**.
4. Select **Configure** [Button].

Network Printer (LPR) Options

1. Enter the Printer Name. This is the printer Share name on the server.
2. Select [**OK**].
3. Select [**Next**].

GUI Overrides

Select [**Finish**].

Network Printing T1000/T1010

To Set Up Network Printing on T1000/T1010:

In Compaq Connection Manager

1. Select **Connections** [TAB].
2. Select your new TEC Icon.
3. Select **Connect** [Button].
4. Log in to your Server.

Click the printer Icon and the information on the screen will be printed.

Local Printing T1000/T1010

Prerequisite

Local printer attached to T1000/T1010

To Set Up Local LPR Printer on a T1000/T1010:

In Compaq Connection Manager

1. Select **Connections** [TAB].
2. Select your new TEC Icon.
3. Select **Connect** [Button].
4. Log in to your Server.

File—Choose this selection.

Select **Printer Setup** [Click].

Terminal Emulation Setup

1. At **Via LPD**—uncheck this box.
2. Select **Parallel Cable on LPT1** from drop-down menu.
3. Select **[OK]**.

Click the printer Icon and the information on the screen will be printed.

Firmware and Add-on Upgrade

The introduction of Add-ons complicates the process of upgrading and downgrading software. It is no longer a simple matter of replacing the entire firmware content nor is it a simple matter of preserving user settings between upgrades. Now there is an extra dimension of synchronization between disparate software components, which must be managed across upgrades and downgrades.

It is no longer clear to continue calling the Compaq software product ‘firmware’ or ‘code.’ To be clearly understood, it is necessary to distinguish between Add-ons and what is left behind, which is called *Primer*. The main difference between Add-ons and the Primer is that you need the Primer before you can install the Add-on. (Just as you need primer paint before applying the color coating.) The combination of Primer and Add-on will be called *Padded*.

As an easy comparison, observe the old rules of upgrading/downgrading:

- If the firmware is newer or the same version, the user settings are preserved.
- If the firmware is older, the user settings are lost.

However, with Add-ons, the rules are adjusted and expanded as follows:

- If the Primer is newer or the same, all user settings and Add-on files are preserved.
- If the Primer is older, all user settings and Add-on files are lost.

- Installing a new Add-on will preserve existing user settings and any other different Add-ons.
- Replacing an Add-on with another of the same type depends as follows:
 - If the replacing Add-on is newer or the same, all user settings are preserved.
 - If the replacing Add-on is older, only the user settings specific to the Add-on are lost.
- Installing *Padded* code will depend as follows:
 - If the Primer and all Add-ons are new, newer or the same version, then user settings and existing Add-ons files are preserved.
 - If the Primer is newer or the same version and any one of the Add-ons is older, then only the user settings specific to the Add-on being replaced are lost.
 - If the Primer is older, then all user settings and Add-on files are lost. (It does not matter what version the Add-ons are.)

Installing Add-ons to V3.41 or older is invalid, and the software will prevent that from occurring.

Uninstall Rules

There is a new Add-on Icon in the Devices Tab under Terminal Properties. This applet is responsible for presenting Add-on inventory with versioning information for each Add-on, and also the ability to remove Add-ons.

Removing an Add-on also removes any user settings that were specific to the Add-on. Some visible user settings may not be completely removed, but rather are disabled to reflect that the feature is no longer supported. For example, if the RDP Client is removed, then the Printers Tab under Terminal Properties will become disabled.