

# Installation Guide

## Wyse® X90 and X90e Mobile Thin Clients Flash and Memory Upgrade Kit

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**WYSE**  
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## Ordering Information

For availability, pricing, and ordering information in the United States and Canada, call 1-800-GET-WYSE (1-800-438-9973) or visit us at <http://www.wyse.com>. In all other countries, contact your sales representative.

## FCC Statement

This equipment has been tested and found to comply with the limits for either Class A or Class B digital devices, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Shielded interconnect cables and shielded AC power cable must be employed with this equipment to insure compliance with the pertinent RF emission limits governing this device. Changes or modifications not expressly approved by the system's manufacturer could void the user's authority to operate the equipment.



### Caution

Modifications made to the product, unless expressly approved by Wyse Technology, could void the user's authority to operate the equipment.

## Regulatory Compliance for Wyse Products

### Basic EMC and Safety Requirements

Wyse appliances are compliant with the regulatory requirements in the regions listed below.

U.S.A. - FCC Part 15 (class B)

Canada - CAN/CSA-C22 No. 60950

Europe - EN 55022 (class B), EN 61000-3-2 (class A), EN 61000-3-3, EN 90650-1:2000+ALL

## Canadian DOC Notices

### Class A

This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la classe A prescrites dans le Règlement sur le brouillage radioélectrique édicté par le Ministère des Communications du Canada.

### Class B

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la classe B prescrites dans le Règlement sur le brouillage radioélectrique édicté par le Ministère des Communications du Canada.

## Device Power Supply

Use only the external power supply that comes with your mobile thin client. For power and voltage ratings, see the serial number label or regulatory label on your device. For power adapter replacement, contact your Wyse Service Representative. For proper replacement compare the labels on both mobile thin client and power adapter to ensure that their voltages match.



### Warning

Use of any other power adapter may damage your mobile thin client or the power adapter. The damage caused by an improper power adapter is not covered by warranty.

## Battery Information

The model H12V mobile thin client, products X90 and X90e, contains an internal button cell battery replaceable by Wyse or one of our Authorized Service Centers. For service, visit <http://www.wyse.com/serviceandsupport/service/service.asp>.



### Warning

There is a risk of explosion if the battery is replaced by an incorrect type. Always dispose of used batteries according to the instructions accompanying the battery.

Perchlorate Materials - Special Handling May Be Required under California Code of Regulations, title 22. (Only required within the U.S.A.)

The model H12V mobile thin client, products X90 and X90e, contains a user-replaceable battery pack. The battery is designed to work with your Wyse mobile thin client. Do not use a battery from other mobile thin clients or laptop computers with your mobile thin client. Replace the battery only with a compatible battery purchased from a Wyse Authorized Service Center. For service, visit <http://www.wyse.com/serviceandsupport/service/spares.asp>.



### Caution

Misuse of the battery pack may increase the risk of fire or chemical burn. Do not puncture, incinerate, disassemble, or expose the battery to temperatures above 65°C (149°F). Keep the battery away from children. Handle damaged or leaking batteries with extreme care. Damaged batteries may leak and cause personal injury or equipment damage.

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# Contents

About this Guide	1
Finding the Information You Need in this Guide	1
Wyse Technical Support	1
Wyse Online Community	1
Related Online Resources Available at Wyse	1
Getting Started	2
Kit Warranty	2
Kit Contents	2
Required Tools and Materials	3
Installing the Upgrade Kit	4
Verifying the Mobile Thin Client's Operation	7
Attaching the Upgrade Serial Label	10
Figures	11

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# Wyse® X90 and X90e Mobile Thin Clients Flash and Memory (RAM) Upgrade Kit Installation Guide

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## About this Guide

This guide describes how to install the 1-GB or 2-GB flash and 2-GB RAM Upgrade Kit in a Wyse X class mobile thin client. The information in this document is intended for users of the following mobile thin client products:

- X90
- X90e

## Finding the Information You Need in this Guide

You can use either the Search window or Find toolbar to locate a word, series of words, or partial word in an active PDF document. For detailed information on using these features, refer to the Help in your PDF reader.

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## Wyse Technical Support

To access Wyse technical resources, visit <http://www.wyse.com/support>. If you still have questions, you can submit your questions using the [Wyse Self-Service Center](#) (on the Wyse.com home page, go to **Support | Knowledge Base | Home** tab) or call Customer Support at 1-800-800-WYSE (toll free in U.S. and Canada). Hours of operation are from 6:00 A.M. to 5:00 P.M. Pacific Time, Monday through Friday.

To access international support, visit <http://www.wyse.com/global>.

## Wyse Online Community

Wyse maintains an online community where users of our products can seek and exchange information on user forums. Visit the Wyse Online Community forums at: <http://community.wyse.com/forums>.

## Related Online Resources Available at Wyse

Wyse mobile thin client features can be found in the datasheet for your specific model. Datasheets are available on the Wyse Web site. Go to <http://www.wyse.com/products>, click the *Wyse Thin Clients* link, click the link for your mobile thin client, and then click the *Download Datasheet* link.

Administrator and User documentation for your mobile thin client model are available at: <http://www.wyse.com/manuals>.

If you need to upgrade your operating system, contact Wyse Customer Support at: <http://www.wyse.com/support>.

Wyse Thin Computing Software is available on the Wyse Web site at: <http://www.wyse.com/products/software>.

## Getting Started

This section provides information about your flash and RAM kit warranty, kit contents, and required tools.

### Kit Warranty

The warranty on this kit assumes the remaining months of warranty of the mobile thin client in which it is installed, or for 90 days, whichever is greater. Installation of this kit will not void the factory warranty, however the user will be responsible for damage due to improper installation.

### Kit Contents

Included in the kit is a 1-GB or 2-GB flash module (with Microsoft® Windows® XP Embedded pre-loaded) and a 1-GB RAM module. See Figures 1 and 2 for your mobile thin client module type. See Figure 3 for the upgrade serial label that you will attach to your mobile thin client.

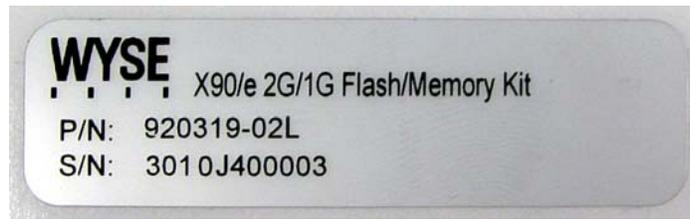
**Figure 1 Flash module types**



**Figure 2 RAM module types**



**Figure 3 Upgrade Serial Label**



## Required Tools and Materials

You will need the following recommended tools to install the kit:

- Small Phillips screwdriver
- Plastic alignment tools or equivalent

**Figure 4 Recommended tools**



### **Warning**

Flash and RAM modules may be susceptible to damage by Electro-Static Discharge (ESD). All industry-standard cautions should be followed to avoid ESD. Before you remove or install a modules, touch any metal part of the chassis and keep that contact with the chassis during the installation process.

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## Installing the Upgrade Kit

To install the 1-GB or 2-GB flash and 1-GB RAM Upgrade Kit in an X90 or X90e mobile thin client:

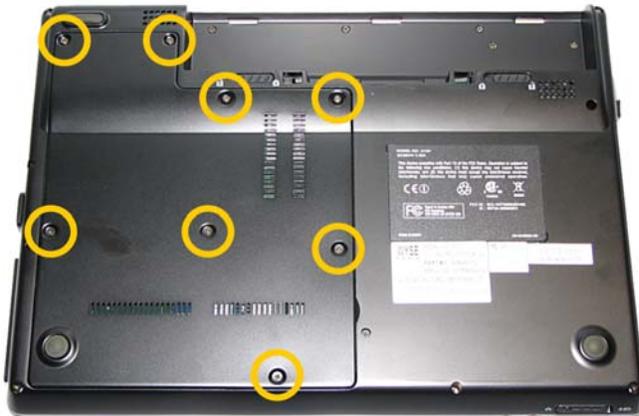
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 **Caution**

Follow all precautions listed in the Quick-Start Guide that came with your mobile thin client for disconnecting and reconnecting the mobile thin client.

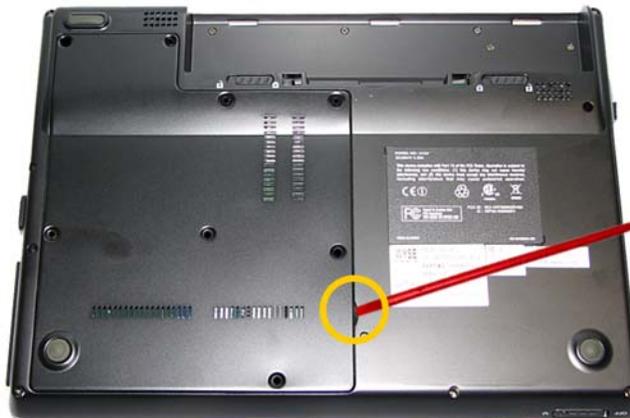
1. Perform a proper shutdown of the mobile thin client by closing all files and ending your session, and then press the power button to turn off the mobile thin client.
2. Unplug the power cord and power adapter, and remove any other cables from the mobile thin client prior to disassembly.
3. Position the mobile thin client face down, and then using a small Phillips screwdriver remove eight (8) screws from the bottom of the unit as indicated in Figure 5.

**Figure 5 Removing bottom screws from access cover**



4. Using a flat edge tool, preferably plastic, insert its tip in the depressed area as shown in Figure 6 and carefully lift up the cover to remove.

**Figure 6 Lifting off the access cover**



5. To remove the existing flash module, depending on the type of module you have, you must either pull up the module in the direction as shown in Figure 7, or remove the two screws as shown in Figure 8. Rock the module carefully until free of the connector.

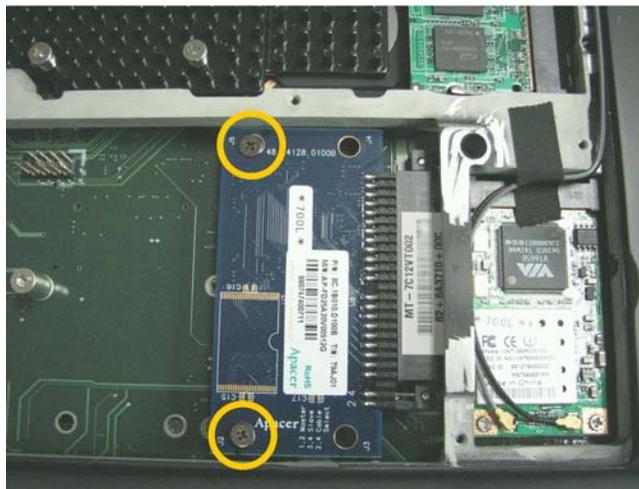
**⚠ Warning**

Flash and RAM modules may be susceptible to damage by Electro-Static Discharge (ESD). All industry-standard cautions should be followed to avoid ESD. Before you remove or install a modules, touch any metal part of the chassis and keep that contact with the chassis during the installation process.

**Figure 7 Removing an older-type flash module**



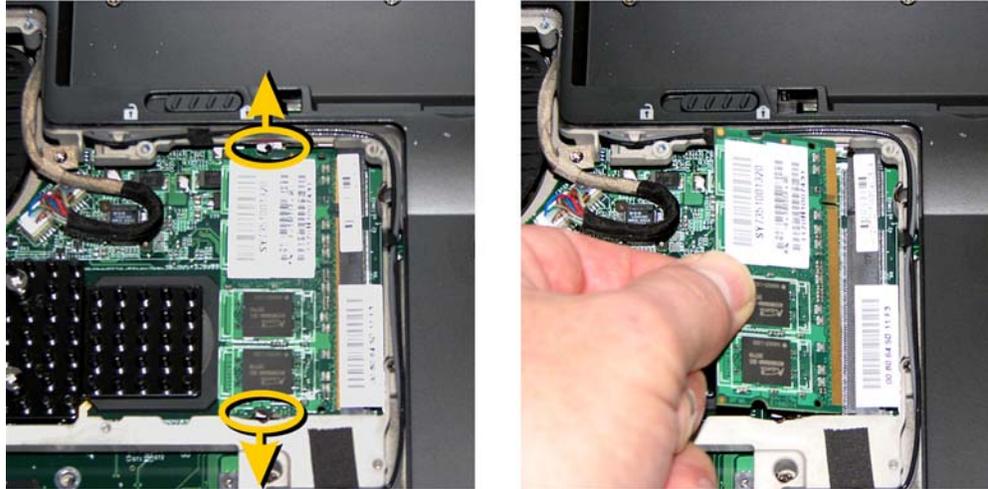
**Figure 8 Removing screws from newer-type flash module**



6. Install the new flash module in the reverse order of removing the old module.

7. To remove the existing RAM module, use your fingers to unlock the two locking clamps at either side of the module by pushing the clamps in the direction of the arrows shown, see Figure 9. The module should pop up from its socket. Lift out the RAM module.

**Figure 9 Removing the RAM module**



8. Insert the new RAM module into the connector of the original module, and then press down on the module so that the two locks will snap in place, securing the module.
9. Replace the access cover in the reverse order as shown in Figures 5 and 6.
10. Reconnect the power cord and power adapter.
11. Proceed to "Verifying the Mobile Thin Client's Operation."

## Verifying the Mobile Thin Client's Operation

To verify that the mobile thin client works properly:

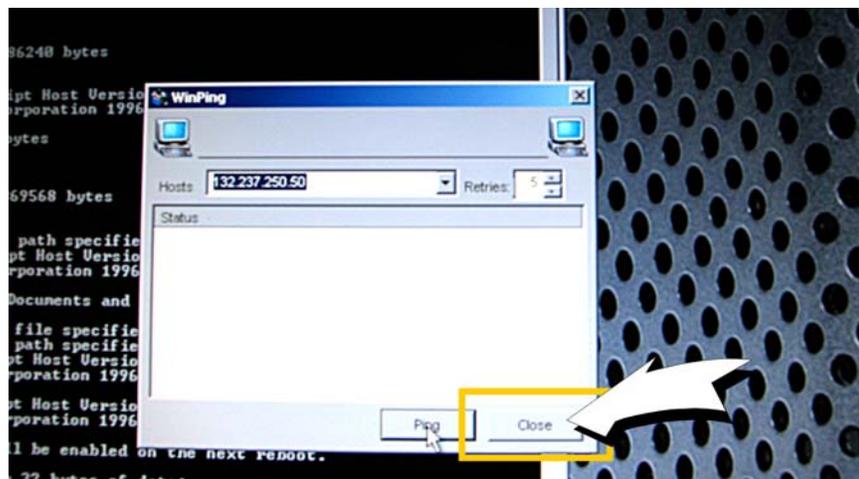
1. Reconnect the power cord and power adapter, and then press the power button on the mobile thin client to apply power.
2. After the mobile thin client restarts, close three windows that have opened on the screen by following these instructions:
  - a. Click **Close** to close the WinPing window, see Figure 10.



### Caution

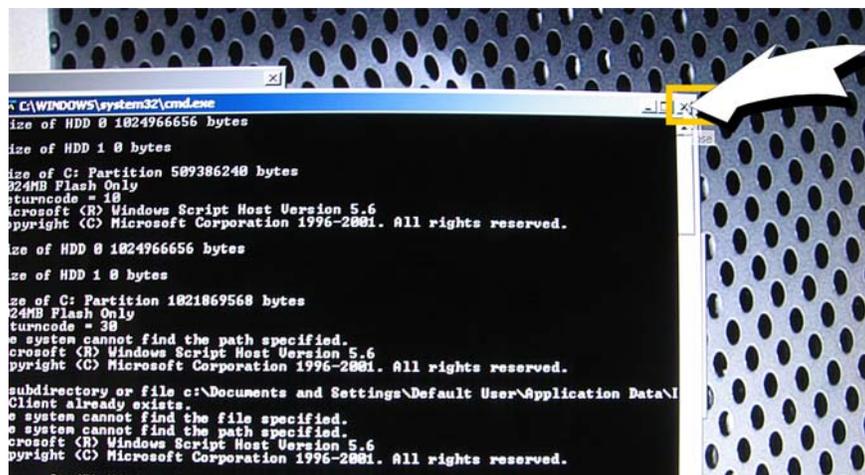
DO NOT click *Ping* or this test will fail.

Figure 10 Closing the WinPing window



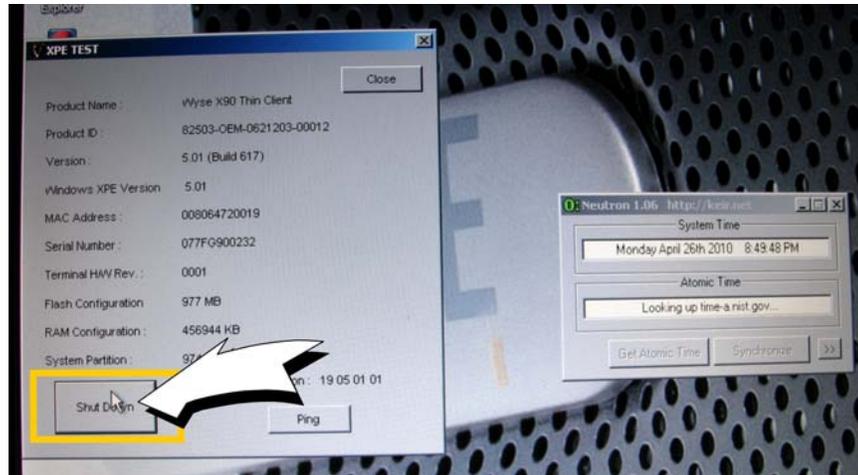
- b. Click on the **X** in the upper right corner of the DOS window, see Figure 11.

Figure 11 Closing the DOS window



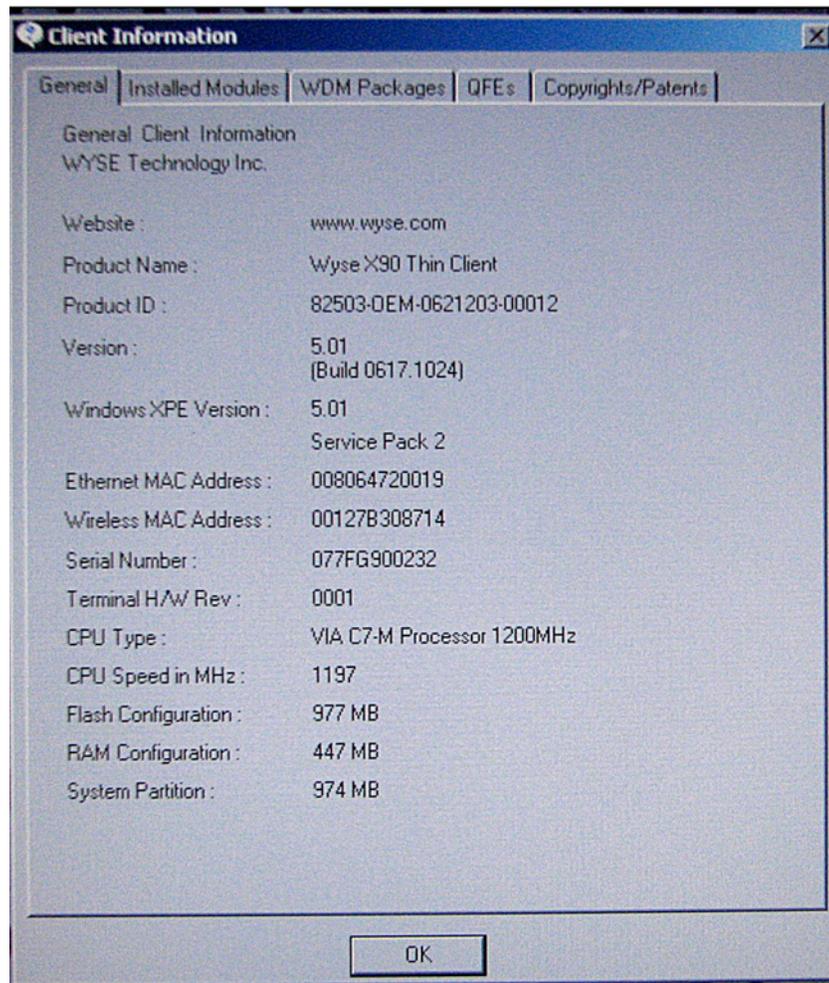
- c. Click **Shutdown** in the XPE TEST window to shutdown the mobile thin client, see Figure 12.

**Figure 12 Shutting down from the XPE TEST window**



3. Press the power button on the mobile thin client for it to restart.
4. From the desktop, click **Start | About** to open the Client Information window, see Figures 13.

Figure 13 Client Information



5. Verify that the **MAC address** and **Serial Number** matches the serial number and MAC address on the thin client.
6. Verify that the **RAM Configuration** is approximately **1984 MB**.
7. Verify that the **Flash Configuration** is less than **1024 MB** for a 1-GB flash upgrade and less than **2048 MB** for a 2-GB flash upgrade.
8. Click **OK** to close the Client Information window. The mobile thin client is ready for operation and setup by the Administrator.

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## Attaching the Upgrade Serial Label

The Wyse conversion kit is supplied with a serial label that must be attached to each mobile thin client. Attach the label as shown in Figure 14. Sufficient labels must be purchased for mobile thin clients to be upgraded.



### Caution

Failure to install the label may cause the mobile thin client to receive incorrect replacement parts if sent in for service.

**Figure 14 Attaching the Upgrade Serial Label**



# Figures

- 1 Flash module types 2
- 2 RAM module types 2
- 3 Upgrade Serial Label 3
- 4 Recommended tools 3
- 5 Removing bottom screws from access cover 4
- 6 Lifting off the access cover 4
- 7 Removing an older-type flash module 5
- 8 Removing screws from newer-type flash module 5
- 9 Removing the RAM module 6
- 10 Closing the WinPing window 7
- 11 Closing the DOS window 7
- 12 Shutting down from the XPE TEST window 8
- 13 Client Information 9
- 14 Attaching the Upgrade Serial Label 10

## **Installation Guide**

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