

# Advance™ Accelerator card Installation guide

---

## Introduction

Thank you for purchasing an Advance accelerator card from ClearSpeed Technology plc.

Before installing, read through this Installation Guide to ensure that the installation goes smoothly. This document applies to both the Advance X620 Accelerator card (PCI-X interface) and the Advance e620 Accelerator card (PCIe interface).

We recommend that the card is installed by a competent IT professional. If you are unsure about any aspect of the installation, please seek expert advice.

## Package contents

The Advance accelerator card package contains:

- the Advance card,
- a disposable antistatic wrist strap,
- a replacement short mounting bracket required for some systems,
- OPTIONAL: a CD-ROM containing the software and documentation for the card.

This guide gives you pre-installation advice and explains how to install the card.

## Before you start

To install the Advance X620, you need a system with:

- A suitable PCI-X slot. For best performance, use a 133 MHz PCI-X slot.
- Minimum airflow across the heatsinks of 500 LFM or 2.5 m/s.

To install the Advance e620, you need a system with:

- A suitable PCIe slot. For best performance, use a PCIe slot with x8 mechanical and x8 electrical interfaces.
- Minimum airflow across the heatsinks of 500 LFM or 2.5 m/s.

**Caution:** The card can be damaged by static electricity. Observe these precautions for handling electrostatic sensitive devices.

Whenever you remove the card from your computer, please make sure that:



- You always have the antistatic wrist strap on;
- You always put the card back in its packaging.
- Do not let your clothing touch any electronic parts.

ClearSpeed Technology assumes no responsibility for any damage or injury that results from failure to follow these instructions or from failure to observe safety precautions.

## 1 Software installation

Before you install the card you should first install the runtime software and the diagnostic tools. The CD-ROM contains the software and drivers for all the supported platforms. Before installing the software, please check the ClearSpeed customer support web site for any updates:

<http://support.clearspeed.com/downloads/>

The software installation instructions and other useful documentation can be found on the CD-ROM or the documents page:

<http://support.clearspeed.com/documents/>

## 2 Card-handling procedures

Static electricity can severely damage this equipment. Handle the card and any other device in your system with extreme care and avoid unnecessary contact with the system components on the main card.

When installing the card it is important that you observe the following:

- Only remove the card from the antistatic packaging when you are ready to install it.
- Always make sure you have the enclosed wrist strap connected to the chassis before removing the card from its antistatic packaging.
- Always hold the card by its edges and avoid touching its circuitry or edge connector.
- Always work on a correctly grounded antistatic surface to avoid possible damage to the card from static discharge.
- Always have the power supply switched off and unplugged when working with the computer system.

## 3 Installation instructions

**Caution:** Before installing the Advance card, ensure that any switches on the card are set to the OFF position. For more information on the position of the switches, refer to the Advance Accelerator Board User Guide.

If at all possible avoid using a riser card. Although PCI riser cards are commonly used, they will generally violate PCI specifications for the length of signal traces. For more information see the Advance Accelerator Board User Guide which can be found on the ClearSpeed customer support site:

<http://support.clearspeed.com/documents/>

You may need to refer to the manufacturer's instructions to help you to:

- Open the computer system
- Identify the PCI-X or PCIe slots

To install the board, follow these procedures:

1. Make sure the system and all other peripheral devices connected to it have been powered down and unplugged.
2. Ensure that the system is securely grounded.
3. Open the system-unit cover.
4. Tighten the adhesive side of the wrist strap firmly around your wrist to ensure good contact with your skin.
5. Identify a suitable slot as follows:
  - a) For a PCI-X slot, the slot type and speed are printed next to the slot, for example, "pcix-133". If you are unsure about which is the PCI-X slot, consult the motherboard manual to help you identify it.
  - a) For a PCIe slot, first identify the x8 or x16 mechanical slots on your motherboard. If these are not marked on the motherboard, consult the motherboard manual to help you identify it. You must also check that the slot provides a minimum of x8 electrical connection. For more information on compatible slot options, refer to the Advance Accelerator Board User Guide.
6. Release the locking mechanism (screw or clip) and the bracket. Refer to the manufacturer's instructions, if necessary.
7. Remove the protective cover from the Advance card's edge connector.
8. Align the card above the slot then press down firmly until it is completely seated in the slot.

**Caution:** Do not force the card into the slot.

9. Ensure that neither the card, nor any of the components on it, can come into contact with any metallic part of the system.
10. Secure the card to the chassis by engaging the locking mechanism. Replace the system cover.
11. Power up the system. Note that the LEDs on the card may flash as the card is configured but should then remain off. If the LEDs are illuminated or flashing after the system has booted, refer to the Advance Accelerator Board User Guide for troubleshooting information.
12. Run the diagnostics tests as described in the software installation instructions.

*Note:* There are no user-configurable switch or jumper options. Changes to the existing configuration may impair operation of the card.

## 4 Troubleshooting

If you experience problems during installation and need further clarification, refer to the Advance Accelerator Card User Guide for more information. The User Guide is available from the ClearSpeed customer support site:

<http://support.clearspeed.com/documents/>

**ClearSpeed Technology, Inc.**  
3031 Tisch Way, Suite 200  
San Jose, CA 95128  
United States of America

Tel: +1 408 557 2067  
Fax: +1 408 557 9054

Email: [info@clearspeed.com](mailto:info@clearspeed.com)

Web: <http://www.clearspeed.com>

Support: <http://support.clearspeed.com>

**ClearSpeed Technology plc**  
3110 Great Western Court  
Hunts Ground Road  
Bristol BS34 8HP  
United Kingdom

Tel: +44 (0)117 317 2000  
Fax: +44 (0)117 317 2002

This product is protected by the following UK patents: 2341770, 2348980, 2348984, 2348974, 2348973, 2348971, 2391093, 2394815, 2390506 or international equivalents. Other patents pending.

1. Information and data contained in this document, together with the information contained in any and all associated ClearSpeed documents including without limitation, data sheets, application notes and the like ('Information') is provided in connection with ClearSpeed products and is provided for information only. Quoted figures in the Information, which may be performance, size, cost, power and the like are estimates based upon analysis and simulations of current designs and are liable to change.
2. Such Information does not constitute an offer of, or an invitation by or on behalf of ClearSpeed, or any ClearSpeed affiliate to supply any product or provide any service to any party having access to this Information. Except as provided in ClearSpeed Terms and Conditions of Sale for ClearSpeed products, ClearSpeed assumes no liability whatsoever.
3. ClearSpeed products are not intended for use, whether directly or indirectly, in any medical, life saving and/ or life sustaining systems or applications.
4. The worldwide intellectual property rights in the Information and data contained therein is owned by ClearSpeed. No license whether express or implied either by estoppel or otherwise to any intellectual property rights is granted by this document or otherwise. You may not download, copy, adapt or distribute this Information except with the consent in writing of ClearSpeed.
5. The system vendor remains solely responsible for any and all design, functionality and terms of sale of any product which incorporates a ClearSpeed product including without limitation, product liability, intellectual property infringement, warranty including conformance to specification and or performance.
6. Any condition, warranty or other term which might but for this paragraph have effect between ClearSpeed and you or which would otherwise be implied into or incorporated into the Information (including without limitation, the implied terms of satisfactory quality, merchantability or fitness for purpose), whether by statute, common law or otherwise are hereby excluded.
7. ClearSpeed reserves the right to make changes to the Information or the data contained therein at any time without notice.

© Copyright ClearSpeed Technology plc 2007. All rights reserved.

Advance is a registered trademark of ClearSpeed Technology plc

ClearSpeed, ClearConnect, Advance and the ClearSpeed logo are trade marks or registered trade marks of ClearSpeed Technology plc. All other brands and names are the property of their respective owners.