StarTech.com

Hard-to-find made easy®

Rugged crash cart adapter

NOTECONS02X



*actual product may vary from photos

DE: Bedienungsanleitung - de.startech.com
FR: Guide de l'utilisateur - fr.startech.com
ES: Guía del usuario - es.startech.com
IT: Guida per l'uso - it.startech.com
NL: Gebruiksaanwijzing - nl.startech.com
PT: Guia do usuário - pt.startech.com

For the latest information, technical specifications, and support for this product, please visit www.startech.com/NOTECONS02X.

Manual Revision: 09/10/2018

FCC Compliance Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, 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 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

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by StarTech.com could void the user's authority to operate the equipment.

Industry Canada Statement

This Class B digital apparatus complies with Canadian ICES-003.
Cet appareil numérique de la classe [B] est conforme à la norme NMB-003 du Canada.

CAN ICES-3 (B)/NMB-3(B)

Use of Trademarks, Registered Trademarks, and other Protected Names and Symbols

This manual may make reference to trademarks, registered trademarks, and other protected names and/or symbols of third-party companies not related in any way to StarTech.com. Where they occur these references are for illustrative purposes only and do not represent an endorsement of a product or service by StarTech.com, or an endorsement of the product(s) to which this manual applies by the third-party company in question. Regardless of any direct acknowledgement elsewhere in the body of this document, StarTech.com hereby acknowledges that all trademarks, registered trademarks, service marks, and other protected names and/or symbols contained in this manual and related documents are the property of their respective holders.

Table of contents

Product diagram 1

Introduction 2

About the rugged crash cart adapter 2

Packaging contents 2

System requirements 2

Installation 3

Install the software on a laptop running Windows 3

Install the software on a computer running Mac OS 3

Connect the crash cart adapter 4

About the LED indicators 4

Server keyboard and mouse LED 4

Server VGA LED 5

User console link and activity LED 5

Using the crash cart adapter 5

About the toolbar 5

Move or detach the toolbar 6

About the toolbar status information 6

Toolbar options 6

About the Zoom menu 7

About the Video menu 8

About the File Transfer menu 10

About the Keyboard menu 11

About the Mouse menu 11

About the Toolbar menu 12

Troubleshooting 13

Technical support **15**

Warranty information **15**

Product diagram



Link and activity LED

VGA LED

Keyboard and mouse LED



USB connector

15-pin VGA connector

Introduction

About the rugged crash cart adapter

You must install the provided software on the laptop to be able to use the crash cart adapter. You don't need to make any changes to the server(s) being controlled.

You don't need to start or shut down the software before you unplug the crash cart adapter. You can connect or disconnect the adapter at any time.

Packaging contents

- 1 x rugged crash cart adapter
- 1 x USB A to mini-B cable
- 1 x USB software key
- 1 x quick start guide

System requirements

Laptop requirements

- USB 2.0-enabled laptop computer
- 20 MB of available hard drive space
- 24-bit capable display
- One of the following operating systems:
  - Windows® 7 (32-bit and 64-bit)
  - Windows 8 (32-bit and 64-bit)
  - Windows 8.1 (32-bit and 64-bit)
  - Windows Vista® (32-bit and 64-bit)
  - Windows XP (32-bit and 64-bit)
  - Windows Server® 2008 R2
  - Windows Server 2003 (32-bit and 64-bit)
  - Mac OS 10.6 and later (tested up to 10.10)
  - Linux® 2.6.*x* to 3.13*x* (32-bit and 64-bit)

Server requirements

- VGA-enabled video card
- USB keyboard and mouse support

Operating system requirements are subject to change. For the latest requirements, please visit www.startech.com/NOTECONS02X.

Installation

Install the software on a laptop running Windows

1. Disconnect the crash cart adapter and cancel any **Add New Hardware** dialog windows.
2. Insert the provided USB software key and run the **setup.exe** installation program.
3. Follow the on-screen instructions to complete the installation.
4. Use the provided USB A to mini-B cable to connect the crash cart adapter to a USB port on your laptop. You don't need the other server connections at this time.
5. A **Found New Hardware** dialog window should appear. Windows locates the device driver files and automatically installs them. This is a one-time step that you won't need to complete again.
6. Open the main application and begin to use the crash cart adapter.

Note: You don't need to restart your computer to complete the installation.

Install the software on a computer running Mac OS

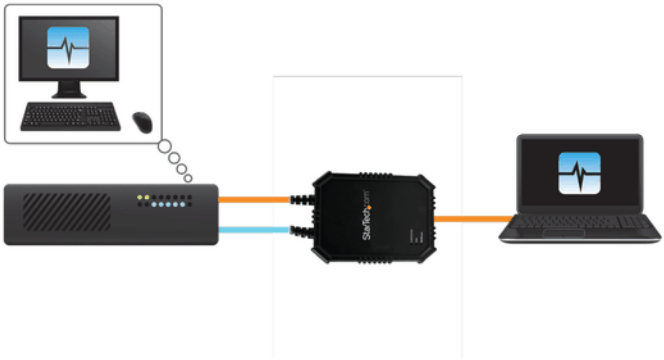
1. Disconnect the crash cart adapter.
2. Insert the provided USB software key.
3. Double-click the **MacOSX-install.dmg** file.
4. After a short delay to verify the disk image, a window opens and displays the application and a link to **/Applications**. Drag and drop the main application onto the /**Applications** link.
5. To use the application, double-click **/Applications**.
6. Use the provided USB A to mini-B cable to connect the crash cart adapter to an available USB port on your laptop. You don't need the other server connections at this time.
7. Open the main application and begin to use the crash cart adapter.

Note: You don't need to restart your computer to complete the installation.

Connect the crash cart adapter

After you install the drivers and software for the crash cart adapter onto the laptop, you can plug the adapter into the server.

- Connect the attached VGA cable and the USB type A to mini-B cable into the desired server. For DVI-I (analog) computer systems, use a DVI to VGA cable adapter (for example, StarTech.com ID DVIVGAMF).



About the LED indicators

If none of the LED indicators are illuminated, it means that the USB crash cart adapter isn't receiving power from either of the USB connections. When the USB crash cart adapter is being operated in normal conditions, either one of the USB ports can provide enough power to operate the crash cart adapter.

Note: The USB keyboard and mouse emulation is always active, even if the laptop USB is disconnected.

Server keyboard and mouse LED

LED behavior	Scenario
Solid light	The emulated USB keyboard and mouse are working as expected.

Blinks for a brief time	The emulated mouse is moving or an emulated key is being pressed.
Blinking constantly	A problem with the USB connection to the server is occurring. For example, the server is disconnected or the host's operating system isn't enumerating the USB device.

Server VGA LED

LED behavior	Scenario
Solid light	A valid VGA video signal is being received.
No light	Nothing is connected or the system has entered power-saving mode.
Blinking	You're trying to use an unsupported video mode or there is a problem with the video signal.

Note: Regardless of the video input status, the server VGA LED won't illuminate until the adapter has been connected to the application software at least once.

User console link and activity LED

LED behavior	Scenario
Solid light	A good connection to the laptop is established.
Blinking constantly	The USB connection to the laptop is lost or ignored, or was never established.
Blinks for a brief time	Video data is being sent to the laptop.

Using the crash cart adapter

When the crash cart adapter is connected, the real-time video from the attached host computer is displayed and centered in the main window.

About the toolbar

There is a toolbar displayed along the top edge of the window. You can hide, detach, or drag the toolbar onto the other three edges of the window. This toolbar includes

a number of shortcuts and displays some status information. All of the functions included in the toolbar are also available in the drop-down menus located across the top of the screen.

Move or detach the toolbar

Do one of the following:

- To detach the toolbar, drag the handle on the top-left edge of the screen. When the toolbar is detached, click the red **X** or circle to close the toolbar.
- To move the toolbar, drag the handle on the top-left edge of the screen. When you drag or move the toolbar, you can leave it on the top or bottom edge of the screen if you're in horizontal mode, or on the left or right edges of the screen if you're in vertical mode.

About the toolbar status information

When the system is running, the system statistics are displayed on the far-right side of the toolbar. The first number that is displayed is the USB bandwidth in bits per second. When no motion is detected by the hardware video compression, no bits are sent. "Noisy" video cards and ongoing video animations cause a constant stream of USB traffic.

The next two numbers in the toolbar indicate the achieved frame rates for the hardware and software components respectively. The hardware information is measured in Hz and range from 1 to 85 Hz, but is typically 30 or 60 Hz. The software information is measured in fps (frames per second) and is limited to a maximum of 60 fps. The software information that is displayed varies depending on what processes the other software on your laptop is running.

Toolbar options



1. Click to change the orientation of the tool bar to vertical or horizontal.
2. Click to immediately exit the pocket console application.
3. Click to fine-tune the video picture.
4. Click to open the video-related settings screen.
5. Click to take a screen shot and save it as a PNG, JPG, or BMP file.
6. Click to record (video capture).
7. Click to loop record (video capture).
8. Click to play previously recorded video.

9. Click to pause the playback.

10. Click to make a movie (.avi file) out of a previously recorded video.

11. Click to switch between full-screen and window mode.

12. Click to go to 100% zoom or the largest zoom possible.

13. This number represents the current zoom percentage.

14. The disk control (file transfer) icon.

15. The keyboard status (a red **X** indicates that there is an issue). Click to open the special keys screen.

16. The USB mode that the keyboard is in.

17. The caps lock indicator (green if active). Click to simulate pressing the Caps Lock button.

18. The Num Lock indicator.

19. The Scroll Lock indicator.

20. Click to send Ctrl+Alt+Del to the server.

21. The status area that displays the USB bandwidth, and hardware and software frame rates.

About the Zoom menu

The Zoom menu includes a number of options that you can use to set the zoom percentage and resize the window accordingly. For example, if the attached server is running at XGA resolution (1024 x 768) and you select 50% zoom, the main window is set to a size of approximately 512 x 384.

Note: Not all of the zoom options are possible because laptop screens are too small for the larger zoom percentages. In those cases, the software resizes the screen to the largest window possible.

The following options are available in the Zoom menu:

- **Center the window on the screen**. This option is useful when the window is off of the edge of the screen.
- **Turn on full-screen mode**. This option is ideal for smaller screens. To stop running full-screen mode, click the icon again. If the toolbar is disabled when you enter full-screen mode, a smaller toolbar with only the full-screen and quit options is displayed. This smaller toolbar floats and can be moved, but it can't be hidden.
- **Locate the toolbar along the left or right vertical edge**. This option is useful if your laptop features a widescreen display (for example, 16:10 aspect or 1280 x 800), as it provides more usable screen height.

The following are some things to note when using some of the options available in the Zoom menu:

- This program doesn't enlarge video, it only shrinks it. As such, text mode (720 x 480 or similar) won't be enlarged to fill your screen.
- The toolbar is automatically disabled when you select a zoom percentage below 50%. When you zoom out and return to a larger screen size, you need to manually enable the toolbar.
- Unusable parts of the window are displayed in grey. This happens because the video is scaled by an integer factor of 1/16 and because of other rounding issues.

About the Video menu

The following options are available in the Video menu:

- **Auto fine-tune picture**. Select this option to automatically adjust the sampling phase of the video. This option makes the picture sharper and reduces USB traffic. The picture will freeze for about one second while the calibration is performed.
- **Video Settings**. Includes the following options:
    - **Picture Positioning**. Use the four arrows to fine-tune the position of the video image, similar to the centering controls found on video monitors. The adjusted values are automatically used whenever this same video mode is displayed again. To automatically center the video image within the program window, click **Auto**. To save your changes, click **Save**.
    - **Sampling Phase (Sharpness)**. Use this option to override the automatic phase adjustment. To apply auto phase again, click **Auto**. The numbers shown under the slider represent the phase (angle) of the control. To save your changes, click **Save**.
    - **Noise Filters**. The hardware uses two filters to reduce USB traffic and improve picture quality. The first Noise filter helps to remove speckle noise. This filter doesn't usually display a visual effect, except when you move the mouse at high values, some pixels may be left behind. The second Flatness filter converts regions that are nearly all of the same color to the same color to aid with compression. At higher values, color banding is much more visible. By default, both filters are enabled and set to 1. You can override these settings and also save customized settings that apply to all of the video modes. To save your changes, click **Save**.
    - **Color Brightness**. Move the sliders to fix dark or over-saturated colors. To automatically adjust the color, click the **Auto** button. To return to the default factory settings, click the **Default** button.

- **Color Offset Adjustments**. Move the sliders to fix black levels in the image. To automatically adjust the levels, click the **Auto** button. To return to the default factory settings, click the **Default** button.

- **Save PNG snapshot**. Select this option to take a screen shot of the current window contents and save it as a PNG, JPG, or BMP file. Screen shots are always stored at full resolution and contain the whole screen.
- **Capture Video Mode details**. Select this option to view the current video mode settings used on the server and to save the settings information to a text file.
- **DDC**. Select this option to set the default maximum video resolution on the USB crash cart adapter.
- **Video Capture**. Includes the following options:
  - **Record**. Select to capture the current display until you stop recording or until the user-defined period is reached (functions only when the NOTECONS02X is connected). To specify a destination folder where the recorded files are stored, click the **Record** button or click **Video** > **Record**. Make sure that you have read and write access to your destination folder or an error message will be displayed when you try to save files to the folder. After choosing your destination folder, set the maximum record time (1 to 3600 seconds). Values outside the 1 to 3600 range are automatically reset to 1 or 3600. To stop recording, click the **Record** button again or click **Video** > **Record**. **Note:** The Playback/Pause, Make a Movie, and File Transfer features are disabled while you're recording.
  - **Loop Record**. Select the Loop Record option to continuously capture the latest video until the user-defined period is reached (functions only when the NOTECONS02X is connected). To specify a destination folder where the recorded files are stored, click the **Loop Record** button or click **Video** > **Loop Record**. Make sure that you have read and write access to your destination folder or an error message will be displayed when you try to save files to it. After choosing your destination folder, set the maximum record time (1 to 3600 seconds). Values outside the 1 to 3600 range are automatically reset to 1 or 3600. If the pre-set time is *Y* seconds, the final record time could be in the range of *Y* to 2*Y* seconds. To stop recording, click the **Loop Record** button again or click **Video** > **Loop Record**. **Note:** The Playback/Pause, Make a Movie, and File Transfer features are disabled while you're recording.
  - **Playback/Pause**. Select the Playback/Pause function to view recorded or loop-recorded files. This option is available regardless of whether the NOTECONS02X is connected or not. To view a video file, click the **Playback** button or click **Video** > **Playback**. Select a folder that contains the record files made by NOTECONS02X. Choose the playback frame rate (30 is recommended for Windows and 60 is recommended for Mac and Linux systems). The lower

the frame rate is, the slower the video is replayed, which may mean that you can see more details. **Note:** The Record, Loop Record, Make a Movie, and File Transfer features are disabled during playback.

- **Make a Movie**. Select the Make a Movie option to create an .avi file from previously recorded or loop-recorded files. This option is available regardless of whether the NOTECONS02X is connected or not. To create an .avi file, click the **Movie** button or click **Video** > **Make Movie**. Select a folder that contains the record files made by NOTECONS02X. Select an output resolution for the .avi file. If the recording was created using a resolution larger than the chosen output resolution, the output video may look squashed. **Note:** The Record, Loop Record, Playback, and File Transfer features are disabled when you select the Make a Movie option.

About the File Transfer menu

File transfer works like a removable USB drive, but instead of a real drive, it creates a disk image on the host computer that stores the files. Only one computer at a time may access the image. Similar to what happens when you plug in a USB drive, when the disk image is created, the target computer can read and write to the disk image but the host computer can't. The virtual USB drive can be used by any program or operating system without requiring special drivers.

Disk images are dynamic. For example, if you create a 10 GB disk and copy a 1 MB file, it uses only 1 MB plus overhead. **Note:** Large images are less efficient and may take up more space when copying many small files.

Disk images that use the VHD format are compatible with Microsoft Windows and can be mounted by Windows Explorer.

ISO CD-ROM and DVD images can also be used for read-only storage, meaning that you can install an operating system without burning a real CD.

You can also drag-and-drop files onto the video window to automatically copy files and create a temporary image.

To open the **Disk Control** screen, click the **disk** icon on the toolbar.

The following options are available in the File Transfer menu:

- **Browse**. Click to open an existing image file (supports dynamic VHD files and ISO images).
- **New**. Click to create a new disk image (you will be prompted to specify your desired size).
- **Insert**. Click to connect a disk image to a target computer. If there isn't a disk image loaded, a temporary one will be created. Temporary images are deleted when the program is closed.
- **Eject**. Click to remove the disk image from the target computer.

- **View Files**. Click to open the Disk Image Viewer window to view the directory tree view and file list for the currently selected directory. You can drag-and-drop files onto the file list to copy them.
    - To access the option to extract the entire directory to a location on your connected host computer, right-click a directory in the left pane.
    - To access the option to create a new directory and to extract, delete, and add file operations, right-click in the right pane.
- **Add files**. Select this option to open up a file dialog to quickly add files. If no disk image is loaded, a temporary one is created.
- **Extract all**. Select this option to open a file dialog to extract the entire contents of the image to the host PC.
- **Read and Write speed**. Click to view the current data transfer rate.
- **Disk Size**. Click to view the size of the disk image currently inserted.
- **Prevent Removal**. Displays a **1** to indicate that removal may damage file contents. Make sure you eject the device from the operating system first.

About the Keyboard menu

Most of the keystrokes are forwarded directly to the connected host computer, however, some special key combinations, such as Ctrl+Alt+Del, are blocked by the computer's operating system. To view a dialog box with common special key sequences that you can send manually, click on the **Keyboard** icon or click **More special keys**.

There are check boxes at the bottom of the keyboard menu for each of the meta keys (both left and right). When selected, the key-down event is sent. When the check box is unselected, the key-up event is sent. This means that you can use the check boxes to compose complex sequences not shown on this screen. To unselect all of the check boxes, click the **Reset** button.

To 'hotplug' the USB going to the host keyboard and mouse, click **Simulate Hotplug (reset)**. Hot plugging simulates unplugging the USB cable and immediately reconnecting it, and completely resets the USB keyboard and mouse emulation.

Note: When you initiate hot plugging, the keyboard and mouse aren't available until the device driver on the host computer reinitializes the emulated keyboard and mouse. During this time, a red X is shown on the keyboard icon on the toolbar.

About the Mouse menu

The options available in the Mouse menu effect the emulated USB mouse.

The following options are available in the Mouse menu:

- **Disable mouse entirely**. Although in most cases you need to use the laptop

pointing device (for example, a touch pad), if you have a standard USB mouse, you may want to connect it directly to the server instead of the laptop. The laptop screen and keyboard are still used in this configuration, but the mouse emulation is not, which avoids accidental touches on the laptop touchpad being registered as a click. This setup is also recommended when you use NOTECONS02X with USB KVM switches. USB KVM products generally can't understand the USB mouse emulation device because of its advanced use of the HID (Human Interface Device) standard. When you disable the mouse entirely, the mouse cursor is shown as a circle with a line through it to remind you that clicks aren't effective in that window.

- **Swap Buttons**. To swap the order of the buttons so that the left and right buttons are reversed, select this option. This setting is useful for people who control the mouse with their left hand. Your laptop remembers this setting and may also swap buttons to suit your preferences. It's not always clear how many swaps are needed and which layer is doing the swapping. As such, you should experiment with this option to achieve the settings that you want.
- **Captured Mouse mode**. In Absolute Mouse mode, you can move the laptop mouse around the window and click as necessary. In Relative Mode, the mouse doesn't move until you click once on the desktop. This "captures" the mouse and subsequent clicks and motions are sent to the controlled host computer. To release the captured mouse, without pressing any of the buttons, make a circle gesture with the mouse in either clockwise or counter-clockwise direction. If you have a keyboard, you can also press **Alt**+**Ctrl**+**Shift** at the same time to release the captured mouse.
- **Mac OS X Scaling**. By default, this mode is enabled and applies a special adaptive scaling factor to maintain perfect alignment when using NOTECONS02X with Mac OS X computers.
- **Motion reporting mode**. Use this submenu to view the current mouse motion reporting mode. You can also use this submenu to force the system into relative mode. Any BIOS system that uses the USB mouse probably won't support absolute mode. Similarly, programs that run in DOS with the BIOS converting USB events into legacy PS/2 mouse events won't be able to understand absolute mouse events. The USB laptop console will drop down to relative mode when the host computer indicates that it doesn't support absolute mode (there is a way to do this over USB protocol). You can also force relative mode, which causes a USB hotplug event and is internally remembered by the USB laptop console itself. If the host computer doesn't correctly implement the USB HID specification, you may need to force Relative mode.

About the Toolbar menu

The options in this menu provide a more direct way to control the toolbar. Options include docking, floating, hiding, or showing the toolbar. A check mark next to the option indicates that it's the current state of the toolbar. The program remembers the state of the toolbar when you close the program and applies it when you reopen it. To restore the default settings for the toolbar, click **Restore default window layout**.

Troubleshooting

None of the NOTECONS02X lights are illuminated

One of the possible causes of this issue is that the adapter isn't receiving power from either of the USB connections.

Try the following action:

- Connect the device to other USB ports that you know are receiving power.

A black bar is appearing on the left or top of the image

Try the following actions:

1. Click **Video** > **Video Settings**.
2. Click the **Picture Positioning** arrows to move the image to the left or up until you can't see any black on the image.
3. To save your changes, click **Save**.

The LEDs on the user console are flashing or the software says NOTECONS02X isn't connected

This issue may be a result of the device drivers not being installed properly.

To verify that the device drivers are installed correctly on a computer running a version of Windows OS, complete the following steps:

1. Unplug NOTECONS02X.
2. Restart your system.
3. Plug in NOTECONS02X.

If the device drivers are installed correctly, a **Found New Hardware** message should appear.

A red X appeared over the keyboard icon in the toolbar

One of the possible causes of this issue is that the attached computer isn't handling the emulated USB keyboard and/or mouse. The attached computer may be disconnected or powered down, or the operating system may be halted. If any of those things are occurring, the keyboard and mouse won't work, as indicated by the red X.

Try the following actions:

- Click **Keyboard** > **Simulate Hotplug (reset)**.

The USB KVM switch isn't working

Try the following actions:

- Instead of using a direct connection to a server, try to disable the USB mouse emulation or force Relative Mouse Motion mode. Disabling the USB mouse emulation simplifies the USB profile presented to the KVM switch, and even the most basic USB implementation should be able to understand and support the keyboard and mouse in Relative Mouse Motion mode.

The toolbar is missing, the screen is always full screen, or the window is frozen or too big or small

Try the following actions:

- To restore the window positions and toolbar state, click **Toolbar** > **Window Layout**.

Technical support

StarTech.com's lifetime technical support is an integral part of our commitment to provide industry-leading solutions. If you ever need help with your product, visit **www.startech.com/support** and access our comprehensive selection of online tools, documentation, and downloads.

For the latest drivers/software, please visit **www.startech.com/downloads**

Warranty information

This product is backed by a two-year warranty.

StarTech.com warrants its products against defects in materials and workmanship for the periods noted, following the initial date of purchase. During this period, the products may be returned for repair, or replacement with equivalent products at our discretion. The warranty covers parts and labor costs only. StarTech.com does not warrant its products from defects or damages arising from misuse, abuse, alteration, or normal wear and tear.

Limitation of Liability

In no event shall the liability of StarTech.com Ltd. and StarTech.com USA LLP (or their officers, directors, employees or agents) for any damages (whether direct or indirect, special, punitive, incidental, consequential, or otherwise), loss of profits, loss of business, or any pecuniary loss, arising out of or related to the use of the product exceed the actual price paid for the product. Some states do not allow the exclusion or limitation of incidental or consequential damages. If such laws apply, the limitations or exclusions contained in this statement may not apply to you.

StarTech.com

Hard-to-find made easy®

Hard-to-find made easy. At StarTech.com, that isn't a slogan. It's a promise.

StarTech.com is your one-stop source for every connectivity part you need. From the latest technology to legacy products — and all the parts that bridge the old and new — we can help you find the parts that connect your solutions.

We make it easy to locate the parts, and we quickly deliver them wherever they need to go. Just talk to one of our tech advisors or visit our website. You'll be connected to the products you need in no time.

Visit www.startech.com for complete information on all StarTech.com products and to access exclusive resources and time-saving tools.

StarTech.com is an ISO 9001 Registered manufacturer of connectivity and technology parts. StarTech.com was founded in 1985 and has operations in the United States, Canada, the United Kingdom and Taiwan servicing a worldwide market.