



**Great River Technology**

6121 Indian School Rd. NE Ste 141  
Albuquerque, NM 87110  
www.greatrivertech.com

**Windows MATRIX SDK/API Install Guide**  
**For use with Windows Vista/XP/2000**  
**Matrix series products**

**Rev -**  
**August 18, 2008**



---

## Table of contents

---

<b>TABLE OF CONTENTS .....</b>	<b>2</b>
<b>OVERVIEW.....</b>	<b>3</b>
<b>INSTALLATION STEPS.....</b>	<b>4</b>
<b>INSTALLED FILES AND DIRECTORIES.....</b>	<b>7</b>
ARINC818 / FCAV INSTALL.....	8
<i>ARINC818 / FCAV Products Applications .....</i>	<i>8</i>
HOTLINK II VIDEO OR DATA (HL2V) INSTALL.....	9
<i>Hotlink II Video (HL2V) Products Applications .....</i>	<i>9</i>
SDK ONLY INSTALLED FILES .....	10
<b>START MENU GROUP .....</b>	<b>11</b>

---

## Overview

---

This document will outline the steps necessary to install the software and documentation for the MATRIX Series cards.

Both the ARINC818 and HL2V products are covered.

This is applicable to Windows Vista//2000/XP

This document describes the software and documentation installation only. After this installation, refer back to the Quick Start to determine your next step. Refer to the User's Manual for instructions on how to use the test applications. If you purchased the SDK for your card, refer to the SDK API User's Manuals for detailed information on custom programming using the SDK API.

---

## Installation Steps

---

### 1. Install the Hardware

Turn off PC power and install the Matrix PCIe card into an available PCIe slot that is 4 lanes or bigger.

2. Turn on PC and during windows startup, a new drive will probably be detected. If so, hit “Cancel” as it is not required to step through the setup Wizard.



Click on “Cancel”

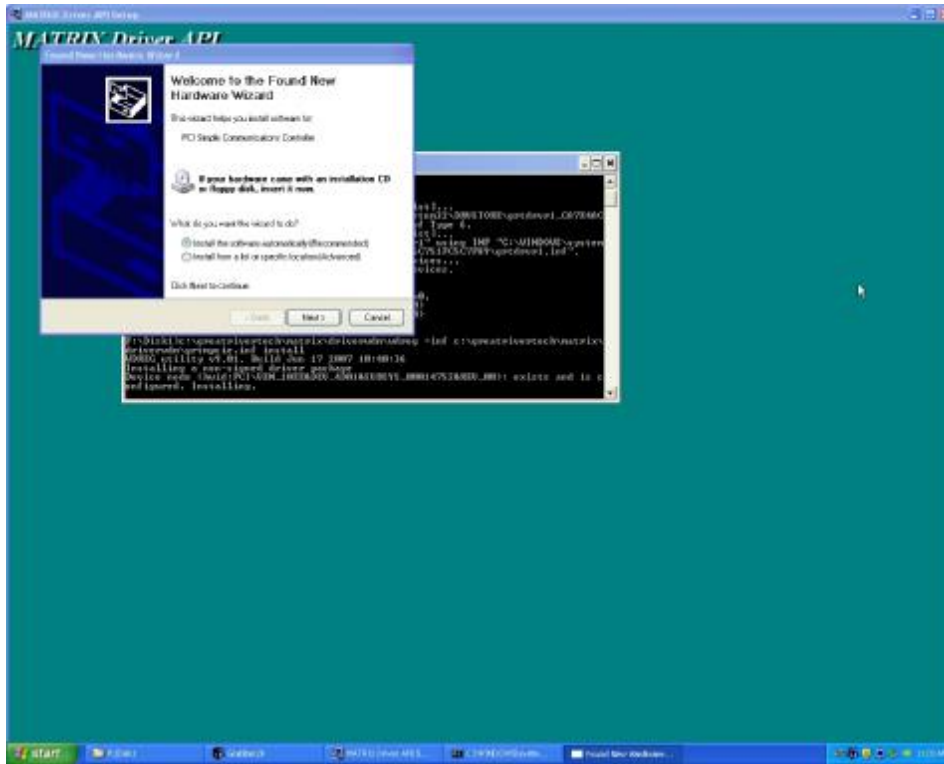
**You must be logged in as an administrator for the following step !**

### 3. Install the software

Install the software by inserting the supplied CDROM into the drive on your PC. Run “SETUP.EXE” from this disk if it does not auto start. Follow the instructions on the screen to install all of the files to the specified directory

The drivers will be installed with a batch file and the screen should appear similar to below. Please wait until all drivers have been installed and initialized.

Do not try to click through the Install wizard. This will all complete on it’s own.

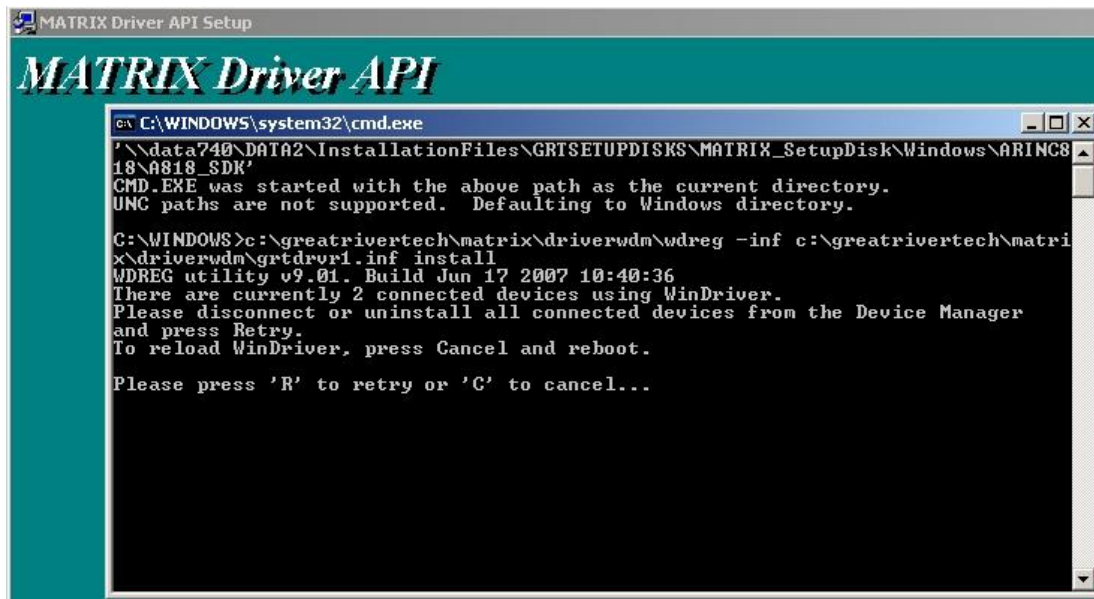


**Figure 1 :** Typical driver install screen. No interaction is required !

On some PC's or if you are upgrading or re-installing the Matrix drivers, you will get a screen that looks like the figure below.

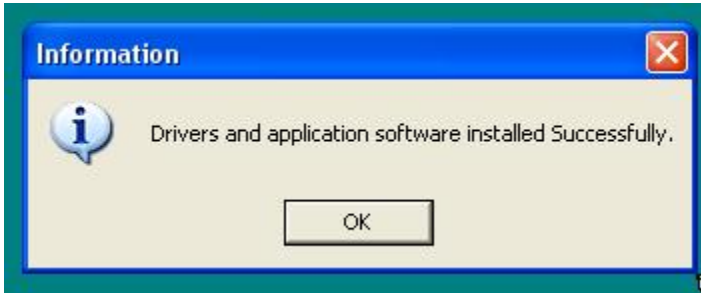
This screen prompts the user for input.

Always press the 'C' key for Cancel as this will re-install the correct driver.



Once the install is completed, the following screen will appear showing success.

No re-boot is required unless you already have this product installed and are upgrading.  
If that is the case, please re-boot the PC to reload the new Kernel drivers



**Write application to call the API or Run the Test Application**

Write your application software to use functions in the API and control the EFC PCI card or run the Test Applications in the C:\EFCAPI directory.

Reference the SDK API "User's Manual" for examples and function descriptions.

---

## **Installed files and Directories**

---

The following files will be installed to your harddrive.

**Default install directory:**

**C:\GreatRiverTech\Matrix**

This Directory will contain the files from the install.  
See the following information for each install type

## ARINC818 / FCAV Install

**Docs** directory contains all user manuals and support documents

**DriverWDM** directory contains setup files and driver. Do not use these files unless directed by tech support

**Header** directory contains header files for use with MatrixA818Test application. These headers support ARINC818 and FCAV

**Video** directory contains test images for loading into the Matrix Card memory. These test images can be transmitted

Root application directory contains the following list of applications shown below

### ARINC818 / FCAV Products Applications

Directory	Filename	Description
C:\GreatRiverTech\Matrix	MatrixA818Test.exe	Gravity 64 specific FCAV test application  <i>NOTE: This application is not supported and is for demonstration purposes only.</i>
C:\GreatRiverTech\Matrix	HOSTMatrix.ini	Gravity 64 specific FCAV test application initialization file. This file shows the driver number to open and can be changed for multiple instances of the Test Application for multiple Gravity64 FCAV cards.
C:\GreatRiverTech\Matrix	MatrixDiag.exe	Diagnostics application for .for Matrix products. This application is typically not used, but is very useful for technical support and debugging

## Hotlink II Video or Data (HL2V) Install

**Docs** directory contains all user manuals and support documents

**DriverWDM** directory contains setup files and driver. Do not use these files unless directed by tech support

Root application directory contains the following list of applications shown below

**Video** directory contains test images for loading into the Matrix Card memory. These test images can be transmitted

Name	Size	Type	Date Modified
Docs		File Folder	8/18/2008 7:31 AM
DriverWDM		File Folder	8/18/2008 7:31 AM
HEADERS		File Folder	8/18/2008 7:31 AM
Video		File Folder	8/18/2008 7:31 AM
hostmatrix.ini	1 KB	Configuration Settings	8/14/2008 3:52 PM
MatrixAPI8Test.exe	2,612 KB	Application	8/14/2008 3:52 PM
MatrixDiag.exe	236 KB	Application	8/8/2008 2:49 PM
Uninst.isu	39 KB	unInstallShield Log File	8/18/2008 7:31 AM

### Hotlink II Video (HL2V) Products Applications

Directory	Filename	Description
C:\GreatRiverTech\Matrix	HL2VRcvr.EXE	Hotlink II Video Receiver test application <i>NOTE: This application is not supported and is for demonstration purposes only.</i>
C:\GreatRiverTech\Matrix	HL2VXmit.EXE	Hotlink II Video Transmitter test application <i>NOTE: This application is not supported and is for demonstration purposes only.</i>
C:\GreatRiverTech\Matrix	HL2V_RCVR.PARAM	Hotlink II Video Receiver Application Executable initialization file. Contains control register value
C:\GreatRiverTech\Matrix	HL2V_XMIT.PARAM	Hotlink II Video Transmit Application Executable initialization file. Contains control register value

**SDK Only Installed files****Note: Installed only with optional SDK.**

<b>Directory</b>	<b>Filename</b>	<b>Description</b>
C:\GreatRiverTech\Matrix \Code	GRTM_API.H	C/C++ Header file for usage of the MATRIX API.
C:\GreatRiverTech\Matrix \Code	GRTM_API.LIB	C/C++ link library file for usage of the MATRIX API. This file must be included in the C/C++ project for linking to the exported API functions.
C:\GreatRiverTech\Matrix \Code	modGRTM_API.bas	Visual Basic module file to be included in any Visual Basic project that calls the MATRIX API.
C:\GreatRiverTech\Matrix \Code\Examples	Example File directories for each product line installed	Example source code

---

## Start Menu Group

---

Once MATRIX setup is complete, the Windows Start menu Programs will contain a new item called GreatRiverTech >> Matrix.

The installed applications will be in this menu area as shown below.

Note: Sample below is for the ARINC818/ FCAV product installation. The menu items will be different for each product line. Refer to the product user manual for more details



**Matrix applications  
and start menu**