

VCube
HD VIDEO SYSTEM

Installation Guide

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Installation Guide

IMPORTANT NOTICE:

Please read the following information very carefully before attempting any installation. Failure to comply with the precise instructions may result in damage to your Merging hardware. Please read this entire section of the manual carefully before installation.

STATIC DANGER NOTICE:

Please note that the Mykerinos and Mykerinos-X boards contain delicate electronic components that can be damaged or even destroyed when exposed to static electricity. Take all necessary precautions not to discharge static electricity when touching any of the Mykerinos components.

INFORMATION FOR THE USER:

Mykerinos, Mykerinos-X and their daughter cards comply with the following specifications:

EMC Emissions

EN 55022 : 1994 /A1 : 1995 /A2 : 1997 Class A ITE emissions requirements (EU)

FCC 47 CFR Part 15 Class A emissions requirements (USA)

EMC Immunity

EN 50082-1: 1992 EMC residential, commercial and light industrial generic immunity standard.

FCC Notice

This product has been tested and found to comply with the limits for a Class A digital device, pursuant to 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.

These limits are designed for providing 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 contained in this manual, may cause harmful interference to radio and television communications. However,

there is no guarantee that interference will not occur in a particular installation.

Note: Connecting this device to peripheral devices that do not comply with CLASS A requirements or using an unshielded peripheral data cable could also result in harmful interference to radio or television reception. The user is cautioned that any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment. To ensure that the use of this product does not contribute to interference, it is necessary to use shielded I/O cables.

CE Notice

Such a  marking is indicative that this system's devices meet the following applicable technical standards:

- EN 55022 – "Information Technology Equipment - Radio disturbance characteristics Limits and methods of measurement"
- EN 50082-1: 1992 – "Electromagnetic compatibility – Generic immunity standard Part 1: Residential, commercial, and light industry"

This product is classified for use in a typical Class A commercial environment, and is not designed or intended for use in other EMC environments. The user of this product is obliged for proper use and installation of the product and for taking all steps necessary to remove sources of interference to telecommunications or other devices.

Hardware Warranty Information

This product is warranted to be free of defects in materials and workmanship for a period of one year from the date of purchase. Merging Technologies, Inc. extends this Limited Warranty to the original purchaser.

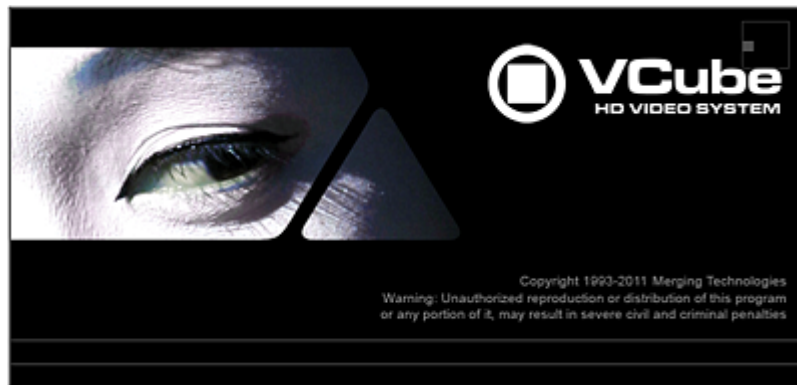
In the event of a defect or failure to conform to this Limited warranty, Merging Technologies, Inc. will repair or replace the product without charge within sixty (60) days. In order to make a claim under this limited warranty, the purchaser must notify Merging Technologies, Inc. or their representative in writing, of the product failure. In this limited warranty the customer must upon Merging Technologies, Inc. request, return the product to the place of purchase, or other local designation, for the necessary repairs to be performed. If the consumer is not satisfied with the repair, Merging Technologies, Inc. will have the option to either attempt a further repair, or refund the purchase price.

This warranty does not cover: (1) Products which have been subject to misuse, abuse, accident, physical damage, neglect, exposure to fire, water or excessive changes in the climate or temperature, or operation outside maximum rating. (2) Products on which warranty stickers or product serial numbers have been removed altered or rendered illegible. (3) The cost of installations, removal or reinstallation. (4) Damages caused to any other products.

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Installation Guide



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1 Introduction

Thank you!

Congratulations on your purchase of the **VCube** Highdef Video System
You have joined a worldwide community of users who have already discovered the Merging Technologies advantage.

Note: IMPORTANT! - The first thing you need to do is register your software to acquire your Ovation key(s) and to be included in our user support list.

<http://www.merging.com/register/>

Please also subscribe to the User Forum at:

<http://www.merging.com/forum/>

Scope

This document is intended to get you up and running with VCube as quickly as possible. For more detailed information about Ovation, Pyramix and VCube please see the PDF User Guides which are installed with the software.

If you have purchased VCube as an integrated (Turnkey) system, the installation information in this guide will be redundant, since these systems come with all hardware and software pre-installed. If you are configuring your own system, please refer to the following instructions.

2 VCube Overview

VCube is a hard-disk based video player / recorder solution designed specifically for use in audio post production and anywhere where high quality playout is required. VCube can operate as a standalone unit, or as part of a multi-system network, fully integrated with Pyramix or Ovation, through standard Ethernet. Like Pyramix it offers sync to PAL, NTSC, 24fps Film and all the HDTV frame rates. VCube can also be controlled via the 9-pin Sony P2 protocol by any third-party DAW system, as well as controlling any 9-pin controllable VTR for capturing. VCube fully supports the Merging Technologies Virtual Transport technology.

The integrated video editor with multi-track, multi-layer features enables the VCube user to remove, add or trim Media Files imported from a Composition (VCube native or OMF AAF, MXF and Apple XML are optional). VCube is able to mix different formats in the same Timeline. It is only necessary to specify the output format. All video Clips will be resized to this format in real time. Therefore it is possible to play out an HD file on a standard SD output... VCube is an open solution that can import OMF, AAF, MXF and Apple XML Compositions. VCube XE and SE are also able to convert, and render Media. A password protected watermark feature allows the administrator to tag both video and graphic outputs. The administrator can also protect VCube settings with a second password.

VCube will be your Swiss Army Knife in the video jungle.

Note: VCube is currently supplied with RGBA, RGB, YUY2, DV25, MJPEG codecs and OMF is provided as a Timeline exchange format. Please see below for optional hardware, codecs and exchange formats.

VCube Versions

VCube is available in LE, XE and SE software and card set versions and as SD, HD and HD-2K turnkey systems. LE is a basic player, XE is a player allowing rendering and SE is a player/recorder. The VCube LE/XE/SE Pro versions are shipped with our USBSync board to give TimeCode chase and Sync support on non-turnkey systems.

Software and Card Sets

VC-LE

Video Player for Editing, Screening, Scoring ADR, Live events and Audio-post.

VC-XE

Video Player for Job preparation, Finalisation Conversion and Transcoding.

VC-SE-SD

SD Video Player/Recorder for Ingest, Editing and VTR Replacement.

VC-SE-HD

HD Video Player/Recorder for Ingest, Editing and VTR Replacement.

VC-LE/XE/SE Pro

VCube LE/XE/SE versions with the MTUSBSync card for TimeCode and Sync.

Turnkey Systems

VC-SD

SD Video Player/Recorder for Editing, Screening, Scoring ADR, Live events and Audio-post.

VC-HD

HD Video Player/Recorder for Editing, Screening, Scoring ADR, Live events and Audio-post.

VC-HD-2K

HD-2K Video Player/Recorder for Editing, Screening, Scoring ADR, Live events and Audio-post.

Items included with VCube:

- Installation Media with VCube software.
- Sentinel or HASP USB security dongle. The security dongle authorizes both the VCube application and any optional features.
- This Installation Manual
- An appropriate video card
- Video card breakout cable.

If you have purchased VCube as an integrated (Turnkey) system, the installation information in this guide will be redundant, since these systems come with all hardware and software pre-installed. If you are configuring your own system, please refer to the following instructions.

List of authorization keys provided as standard with VCube:

- VCube LE, XE or SE
- Virtual Transport Server
- TimeCode Support
- Machine Control Support
- Remote Control Support
- VCube IO SD SDI (VCube SE SD)

or

- VCube IO HD SDI (VCube SE HD)

Options

Hardware

Sync Board provided with dedicated breakout cable. Enables RS-422, LTC, MIDI input (MTC) and Bi-Phase input (option) to control or to be controlled by VCube

Software

- MXF
- AAF
- Apple XML
- Bi-Phase (requires the Sync Board hardware option)
- MPEG2/IMX
- DVCPRO (25/50)
- DVCPRO-HD (100)

3 For Users Performing Upgrades

Note: New V4 Keys have been issued for VCube V4 users. Be aware that V3 keys will only work with the Beta and Release Candidate versions of VCube 4.

VCube

We recommend uninstalling any previous version of VCube before installing VCube 4.

From the Windows Control Panel select **Programs and features** (Windows 7 or Vista) **Add or remove programs** (Windows XP).

Remove the installed version of VCube.

Note: Windows XP users must upgrade to **SP3**.

4 System Requirements

Wintel platforms tend to increase in number of cores, speed and performance at a tremendous rate. New and faster processors are released almost on a monthly basis. Therefore we have not included suggested Motherboard or Processor specifications here.

We maintain a list of up to date PC configurations in the Support Section of our website at:

<http://www.merging.com/pages/pconfig>

Other Components

- **Graphics Card:** The recommended graphics cards are the **ATI FIREPRO** series of PCIe graphics cards.
- We recommend disks should be formatted as **NTFS** volumes with 64kB block sectors.
- **DVD/CD-ROM** combo drive or better
- SXGA 17" monitor or better. Multiple 19" monitors highly recommended.
Minimum resolution 1280x1024
- 3 button mouse

Mykerinos Systems

Certified Operating Systems

- **OS:** We recommend and certify **VCube Version 4.0 and later** under **Windows 7 Professional (32-bit version)** and **Windows XP SP3 Professional (32-bit version)**.

Note: NEVER attempt to install VCube on Windows **NT Server**)

VCube Native

Certified Operating Systems

- **OS:** We recommend and certify **VCube Version 4.x** under **Windows 7 Professional**, and **Windows XP SP3 Professional**.
- VCube Native **ONLY** (versions from 3.x onwards) is certified to work under Windows 7 - 64bit. **N.B.** VCube Native is **NOT** certified for Windows XP64 or Vista64 versions.

5 PC Setup

Motherboard Drivers and Utilities

Motherboard drivers should be updated to current versions.

Motherboard Utilities should NOT be installed.

Display Settings

VCube requires a minimum display resolution of 1280x1024 in 256 colors which **MUST** be set to **small fonts** mode. In Windows 7 and Vista environments we strongly recommend turning **OFF** the Aero feature for maximum performance.

Power Management

N.B. As with other Digital Audio Workstations and Non-Linear Editors, we recommend setting the PC to an **Always On** Power management scheme. (In Windows XP: **Start > Settings > Control Panel** double-click **Power Options**. Choose **Always On** from the **Power Schemes** drop down list.) This allows the monitor to be turned off by the system but disables hard-disk spin down and Standby.

The Mykerinos and Mykerinos-X cards are **not** designed to support Standby modes.

Aero graphics

Windows 7 users should disable AERO themes for maximum performance.

Indexing

In the interests of better performance we recommend turning Indexing OFF for all Data drives in the system.

Other Applications

Like all real-time applications, VCube works best when there are no other unnecessary applications or services running.

Recommended options

Internet Connection (this will allow you to upgrade the software easily by connecting to our Web site, and to communicate queries or suggestions to Merging by Email).

6 Sync Board and Video Card Installation

IMPORTANT NOTICE:

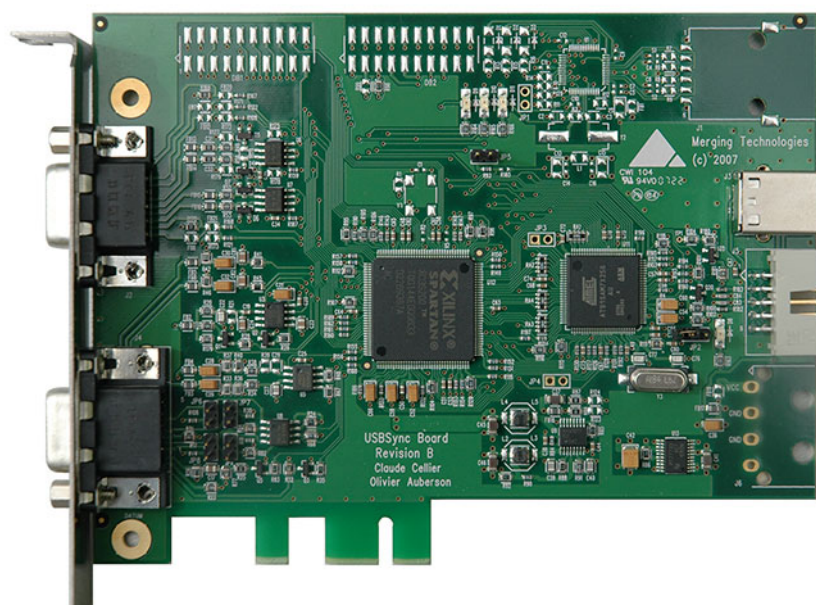
Please read the following information very carefully before attempting installation. Failure to comply with the precise instructions may result in damage to your hardware. Please read the entire chapter carefully before installation.

STATIC DANGER NOTICE:

Please note that the sync and video cards contain delicate electronic components that can be damaged or even destroyed when exposed to static electricity. Please take all of the necessary precautions when handling the video card and all other PC computer cards.

If you are in any doubt about your competence to install PC hardware please consult your Merging technologies Sales Partner.

Sync Board



The Sync Board hardware option enables RS-422, LTC, MIDI (MTC) input and optional Bi-Phase input to control or to be controlled by VCube.

Note: Please see also the documentation accompanying the Sync Board before attempting installation.

The PCI(e) slot is only used to support the board mechanically. The connection to the mother board is via a USB link. USB 1.1 is sufficient but a USB 2 socket can be used if available.

Inserting the Sync Board:

Make sure the computer is turned off (and unplugged) before installing the Sync Board.

- To avoid the possibility of static electricity damage to the PC or the Sync Board please use an anti-static strap to connect yourself to a known good earth.
- Remove the computer covers required to gain access to the peripheral slots.
- Identify a vacant PCI(e) slot. Remove the slot / bracket for the chosen PCI(e) slot.
- Insert the Sync Board into the PCI(e) slot.
- Fasten the mounting screw to secure the Sync Board back-plate to the PC frame.

- Identify a vacant USB socket and insert the 5-pin plug of the USB cable (supplied), the red wire being pin 1. (This leaves one half of the dual USB port free for another connection if required.)
- Insert the other end of the cable (10-pin) into connector on the Sync Card.

Inserting the Video Card

- Make sure the computer is turned off (and unplugged) before installing the video card.
- To avoid the possibility of static electricity damage to the PC or the video card please use an anti-static strap to connect yourself to a known good earth.
- Remove the computer covers required to gain access to the peripheral slots.
- Locate a free PCIe x4 slot. Remove a slot / bracket for the chosen PCIe slot.
- Insert the video card into the chosen PCIe slot.
- Fasten the card in place with the screw removed earlier.
- Replace the computer covers.

7 Mykerinos Installation

IMPORTANT NOTICE:

Please read the following information very carefully before attempting any installation. Failure to comply with the precise instructions may result in damage to your Merging hardware. Please read the entire chapter carefully before installation.

STATIC DANGER NOTICE:

Please note that the Mykerinos Audio Board contains delicate electronic components that can be damaged or even destroyed when exposed to static electricity. Please take all of the necessary precautions when handling the Mykerinos board and all other PC computer cards.

Mykerinos Card Installation

Note: Note: for multiboard installation care must be taken in the selection of the PC chassis components to ensure adequate thermal dissipation through sufficient fan air cooling.

Inserting the Mykerinos Audio Board(s)

- Make sure the computer is turned off (and unplugged) before installing the Mykerinos board.
- To avoid the possibility of static electricity damage to the PC or the Mykerinos board(s) please use an anti-static strap to connect yourself to a known good earth.
- Remove the computer covers required to gain access to the peripheral slots.
- Locate a free PCI (Mykerinos) or PCI-e (Mykerinos-X) slot. Remove a slot / bracket for the chosen slot(s) (if needed)
- Insert the Mykerinos board(s) into the chosen slot(s)
- Ensure each Mykerinos is properly seated in the slot
- Fit any extra break-out connector brackets (if applicable)
- Fasten the mounting screw to secure the Mykerinos back-plate to the PC frame

Multi-board Installation

- For multiboard installation it is advisable to insert all Mykerinos boards in adjacent slots sharing the same PCI bus segment. Please refer to PC motherboard documentation.
- In order to enable multi-board operation, all Mykerinos cards in the PC must to be connected together using a special HDTDM ribbon cable with 30 pin plugs. This cable has to be plugged into the multi-pin connectors located on the top edge of the I/O daughter cards. Please contact your Merging Technologies Sales Partner for information on how to order the HDTDM ribbon cable.

Note: to reduce the risk of electro-magnetic interference being induced by other PCI cards into the highly sensitive Mic Preamp circuitry, systems equipped with Merging's **DUAL** (Analog + AES) daughtercard are best installed in a slot with no other card inserted in the immediately adjacent slot. (I.e. the component side of the card, which will be on the left looking from the front of a conventional PC chassis.)

8 VCube Software Installation

Note: You must have full Administrator Access to install VCube.

Installation Overview:

Note: Note: If you have purchased hardware options such as Mykerinos cards, the Sync Board and or an AJA video card, please install these first following the instructions in the accompanying documentation.

Installer

The VCube software uses an automated installer wizard which will install all necessary prerequisites. We use a unified installer package containing the current versions of Pyramix, VCube and Ovation. The initial installer screen offers the choice of Pyramix, VCube and Ovation. Choosing Ovation will also install Pyramix.

You may exclude the installation of any of the individual components in the wizard, if the device in question is not present on your machine or if you do not intend to use an item, by un-ticking the tick boxes next to the items listed in the wizard.

Note: The security dongle must be in place and the security keys entered before attempting to launch VCube

Driver Signing

Important! Before attempting to install the VCube software on a Windows XP system please check the following setting:

Start > Settings > Control Panel > System : Hardware

Click on the **Hardware** Tab, then click on **Driver Signing**. The **Driver Signing Options** dialog opens:



Windows Driver Signing Options dialog

Make sure the middle option **Warn** is selected.

Note: This dialog is not available in Windows 7 or Windows Vista. Vista is preset to **Warn**.

Running the Installer

Note: If you have a **SafeNet** dongle please remove this before installing VCube and replace it after installation is complete.

Note: The AJA video card drivers are installed automatically when the machine is re-booted after a fresh VCube software install. You should ALWAYS use the Merging Technologies versions of the AJA drivers and not those included with an AJA retail board or downloadable from the AJA website to avoid conflicting driver versions with VCube.

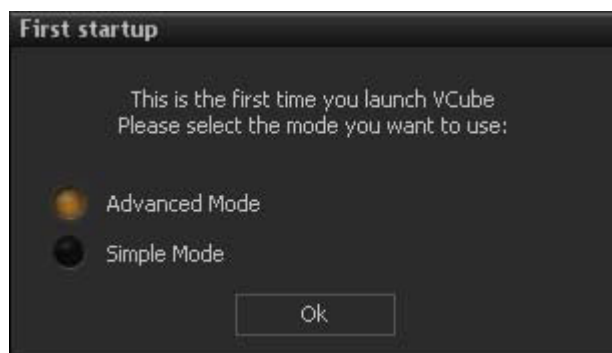
1. Insert the VCube installation media into a suitable drive/USB socket.
2. If the combined installer does not auto-run double-click on the USB stick icon
3. De-select any items you do not require.
4. Override any warnings about uncertified drivers during the installation process..
5. Reboot the PC manually if necessary (see below)

Note: If the installation appears to freeze for a long period please check that the **Driver Signing** warning dialogue is not hidden behind another Window. Installation will not continue until you click **OK** in this dialog.

WARNING: Certain computers do not shut down properly despite the reboot command issued by the installer but only perform a log off. In this case, please activate a full shut down manually.

6. Plug in the security USB dongle.
7. Enter the optional keys in MT Security Settings, if necessary.
8. Restart the PC.
9. Launch VCube.

- At the first launch a dialog will be displayed:



- Click on **OK**
- The Simple Mode has been designed to avoid inexperienced users destroying a correctly configured setup. But at this point, full access to settings is needed.

9 VCube Software Registration

The **VCube** software and its various software options are protected by an authorization key mechanism which uses a unique registration key number generated by Merging Technologies. Based on purchased software components, this key is unique to your security dongle or Mykerinos board serial number, your Company Name and your User name. Once you have registered your software you will be provided with this Key or Keys (depending on the chosen options).

In a multi-board system only one key is required for all connected boards. The master board validates the others.

If you did not receive this key, have lost it or would like to change the user and/or company name, please contact your Merging Sales Partner with your Mykerinos serial #, your User Name, your Company Name and the list of purchased software components. Usually, a key can be issued within one business day, after the verification of your personal data has been completed.

Entering your Key(s)

After the VCube installation process you will be prompted to enter your **Authorization Key**. If you click **Yes** the **MT Security Settings** dialog will be launched automatically, allowing the Key or Keys to be entered immediately. If you choose not to enter your Key at this point you can do so later by choosing one of the following procedures:

1. Double-click the file **YourPersonalKeyXXXXX.mtk**. This is attached to the email containing your Key(s).
2. Open the **MT Security Settings Control Panel** (Windows Task Bar **Start > Control Panel > MT Security Settings**), click the **Import Key** button and browse for your Key file called

YourPersonalKeyXXXXX.mtk

3. Open the **MT Security Settings Control Panel** (as above), in the **Registration** section select the board number corresponding to the serial number for your Keys or HASP Key for a dongle, click the **Enter Key** button and type your **User Name**, **Company Name** and **Key** then click **OK**. Repeat this step for each Keys listed in the email.

Changing or re-entering a Key

Should you need to subsequently change or re-enter a **Key**, follow the appropriate option above.

The key system is "smart". Only one key or set of keys is required regardless of the number of boards in a system. Any card can hold this key set as the authorization is processed based on a "Logical OR" of all keys present on any and all Mykerinos boards. Of course this Logical OR will only process keys with identical User Name and Company Name to the one entered in the key enabling window.

Keys

At any time you can check the serial number of your Security dongle or Mykerinos card(s) and the software options enabled in your system in the **MTSecurity** application.

10 Troubleshooting

Please visit regularly:

www.merging.com

for the latest Troubleshooting Guide and FAQ sections.

11 Lost or Stolen Merging Technologies Security Keys

(Sentinel / HASP USB Dongles)

The Merging USB Key carries all the value of your Merging software and the software licence authorization to use it. Please ensure you do not lose the USB key as Merging Technologies cannot be held responsible if this is lost or stolen.

If your USB key is lost or stolen then please make a claim on your insurance in the usual way just as you would for any other item you own. Merging will be happy to confirm the details and value of the software licence and USB key to your insurance company. If your USB key is lost or stolen and a different user should attempt to register for this key, Merging will notify you and the authorities in your country that an attempt has been made to register this stolen item.

If your USB key should become defective or is broken, please ensure this key is returned to merging after requesting and RMA (Return Merchandise Authorization.) Only after the receipt of this key in the Merging Offices will it be determined if it may be exchanged under warranty free-of-charge, or if the damage is outside the warranty scope. In which case only a modest fee to replace it with a new key will be charged (and not the entire value of the software.)

12 Contacting Merging

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Merging USA (Independent Audio)

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Portland,

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United States of America

Phone: +1 (207) 773 2424

Fax: +1 (207) 773 2422

For all documentation inquiries or suggestions for improvement:

<http://www.merging.com>

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