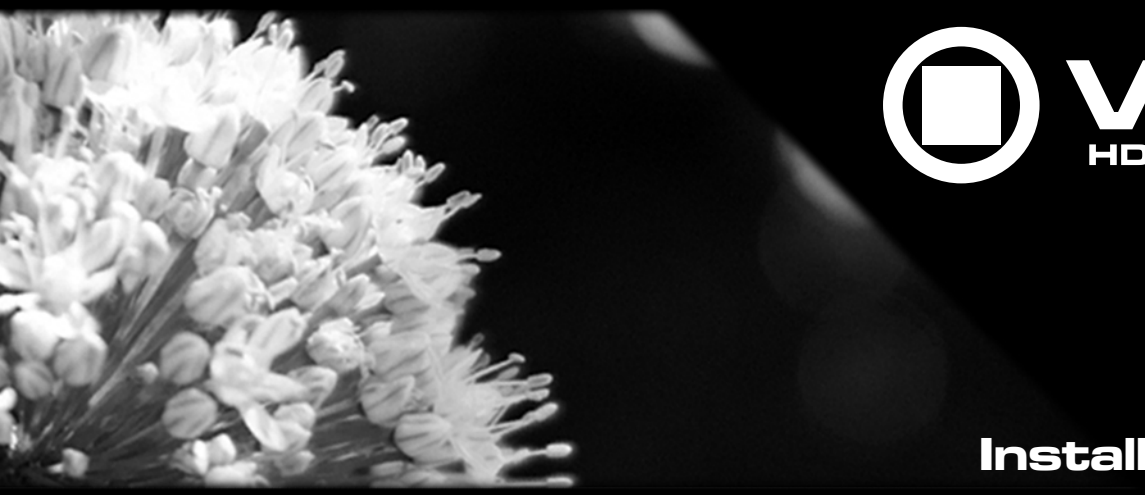

VCube
HD VIDEO SYSTEM

Installation Guide

8

MERGING
AUDIO FOR THE NETWORKING AGE

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Installation Guide v8.x

Installation Guide v8.x : Contents

1 Introduction 6
- Thank you! 6
- Scope 6
- Windows 10 - IMPORTANT! 6

2 VCube Overview 8

3 For Users Performing Upgrades 9

4 System Requirements 10
- VCube Native 10

5 PC Setup 11
- Motherboard Drivers and Utilities 11
- Configuration Guides 11
- Display Settings 11
- Power Management 12
- Aero graphics 12
- Indexing 12
- Other Applications 12
- Recommended options 12
- Video Hardware 12

6 Sync Board and Video Card Installation 13
- Sync Board 13

7 VCube Software Installation 15
- Installation Overview: 15
- Driver Signing 15
- Running the Installer 16

8 VCube Software Registration 19

9 Troubleshooting 20

10 Lost or Stolen Merging Technologies Security Keys 21

11 Contacting Merging 22
- International Office: 22
- UK: 22
- USA: 22

12 Index 23

Installation Guide

Document: VCube™ Installation Guide 8.0 - rev4

Date: 10th July 2019

1 Introduction

Thank you!

Congratulations on your purchase of the **VCube** Highdefinition 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 be included in our user support list.

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

Please also subscribe to the User Forum at:

http://forum.merging.com/

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.

Windows 10 - IMPORTANT!

> **Note:** Merging **strongly recommends** you **defer feature updates** in Windows 10. Windows 10 users should never update to Beta Windows versions or install major new updates before making sure they are supported by Merging. Please refer to our Windows 10 Configuration Guide:
>
> https://confluence.merging.com/display/PUBLICDOC/Windows+10+Configuration

Details about the recommended Windows 10 Defer Update setting

https://confluence.merging.com/display/PUBLICDOC/Windows+10+Defer+Updates

Windows 10 users can run on the **Windows 10 Creator** update (**1703**), **Fall Creator** (**1709**), **Spring Creator** (**1803**) or **Anniversary** (**1607**).

> **Note:** Users installing VCube v8 with a Pyramix v12 Masscore system, may update to any of the following Windows 10 versions.

- **Anniversary (1607)**
- **Creator (1703)**
- **Fall Creator (1709)**
- **Spring Creator** (**1803**)
- **October Update** (**1809**)

As well as the **Meltdown** and **Spectre** Windows updates.

Note: The Windows 10 **Zombieload** update is supported as of **Pyramix v12**.

Warning: Windows 10 May 2019 Update **1903/19H1** is **NOT** supported.

Users wishing to apply Windows updates may refer to the Merging list of validated Compatible Windows updates:

https://confluence.merging.com/pages/viewpage.action?pageId=25755762

For MassCore systems, once the update to Windows October Update has been completed follow the Pyramix v12 and MassCore installation Guide.

Note: Users wanting to update Windows 10 to another version **must** follow the procedures documented here:
https://confluence.merging.com/display/PUBLICDOC/Windows+Configuration+Guide

Select the appropriate document according to your current Windows 10 version.

Note: As of **v8** VCube supports the **Windows 10 1809 October** update. **N.B.** earlier versions of VCube will not work on a Windows 10 October Update system.

Defer Updates - Recommended

Merging recommends that you set Windows updates to defer for 180 days, in this way you retain control of what is installed on your Windows 10 system.

Details about the recommended Windows 10 Defer Update setting

https://confluence.merging.com/display/PUBLICDOC/Windows+10+Defer+Updates

Users performing an update from Windows 7 to Windows 10 should proceed in this way:

https://confluence.merging.com/display/PUBLICDOC/Updating+Windows+7+to+Windows+10+Anniversary+1607

For VCube v8 Native users

VCube Native users may use the **Windows 10 Anniversary** (**1607**) update, **Creator** update (**1703**), **Fall Creator** (**1709**), **Spring Creator** (**1803**), or **October Update** (**1809**)

Turnkey Systems

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.

Items included with VCube:

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

3 For Users Performing Upgrades

Note: VCube v8 keys are required to run VCube v8. Users running MassCore will need a new Mass-Core version (RTX64 - 3.6) that requires the RTX 3.0 key.

Note: Windows 7 64-bit Professional and Windows 10 64-bit Professional are the only operating systems supported.

VCube

We recommend uninstalling any previous version of VCube before installing VCube 8.x.

- From the Windows Control Panel select **Programs and features**.
- Remove the installed version of VCube.
- Reboot the PC.

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/pcconfig

Other Components

- **Graphics Card**: As of Pyramix 12, Ovation 8 and VCube 8, Merging strongly recommends using a dedicated graphic card rather than onboard graphics. Most particularly when the following are required:
  - Multiple display outputs.
  - OpenGL UI plugins (Flux, Izotope, ...)
  - Working with video, or when your workflow places high demands on graphics.

Please refer to the PC Specifications for all details:

http://www.merging.com/pages/pcconfig

https://confluence.merging.com/display/PUBLICDOC/Graphic+cards+recommendations

(v8 recommendations will follow.)

- We recommend disks should be formatted as **NTFS** volumes with 64kB block sectors for audio. For video 128kB block sectors are desirable.
- **DVD/CD-ROM** combo drive or better
- Multiple 19" or larger monitors highly recommended.
  Minimum resolution 1280x1024
- 3 button mouse

VCube Native

Certified Operating System

- **OS**: We recommend and certify **VCube Version 7.x** under **Windows 7 Professional 64-bit** and **Windows 10 Professional 64-bit**.

5 PC Setup

Motherboard Drivers and Utilities

Motherboard drivers should be updated to current versions.

Motherboard Utilities should **NOT** be installed.

Please refer to our Windows configurations guide for more details:

https://confluence.merging.com/display/PUBLICDOC/Windows+Configuration+Guide

Configuration Guides

Windows 10. Please see our **Windows 10 configuration guide** for our recommendations:

https://confluence.merging.com/display/PUBLICDOC/Windows+10+Configuration

Merging has a number of specific PC-configuration guides which are available on request. Tell us your system configuration modeled on our recommendations at:

http://www.merging.com/support/pc-config

so that we can send you the latest configuration guide. Please contact:

support@merging.com

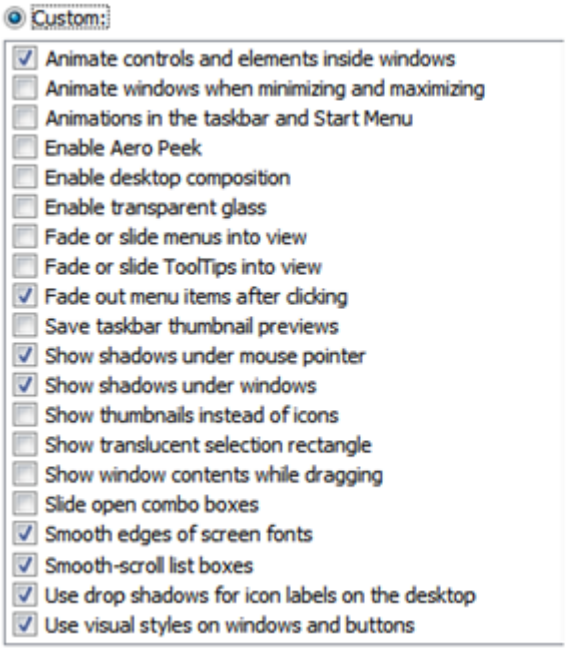
Display Settings

VCube requires a minimum display resolution of 1280x1024 in 256 colors which **MUST** be set to ***small fonts*** mode.

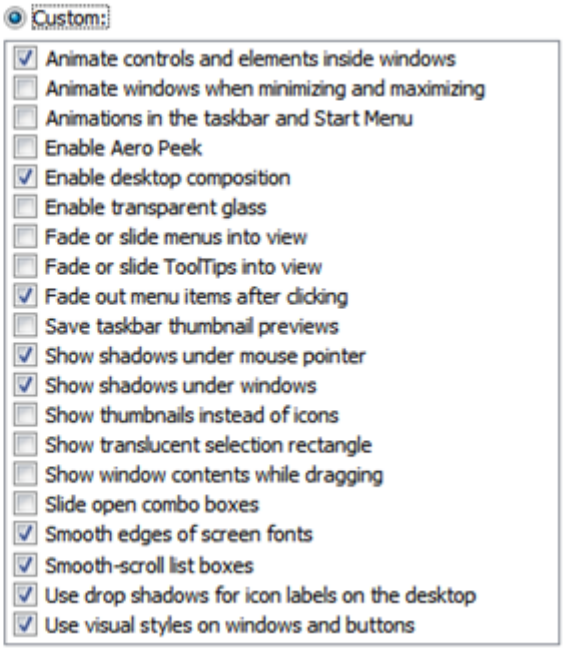
Windows Control Panel > System > Advanced System Settings opens the **System Properties** window. Select the **Advanced tab > Performance Settings** to open the **Performance Options window**. Choose the **Visual Effects** Tab:

Windows 7

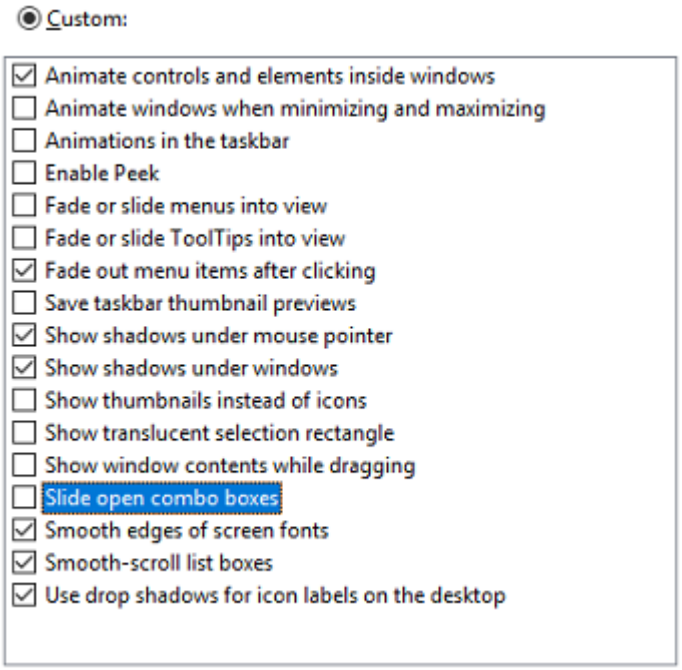
Onboard Graphics (Intel)



Dedicated Graphic Card



Windows 10



Power Management

N.B. As with other Digital Audio Workstations and Non-Linear Editors, we recommend setting the PC to the **High Performance** Power management scheme.

Aero graphics

Disable AERO themes for maximum performance. (Windows 7 only.)

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).

Video Hardware

AJA Video cards are not supported on Windows 10.

Merging supports Blackmagic design Video Cards thru the DeckLink SDK. This covers: **DeckLink**, **UltraStudio** and **Intensity** product lines. Decklink Studio 4K, Decklink 4K Extreme and Decklink 4K Pro have been validated.

Note: The Decklink 8K Extreme Pro is not supported above 4K DCI / 25 fps

The **DeckLink Studio monitor** is known to be working but has no Video reference to ensure genlock. The recommended Blackmagic Design installer version is 10.3.7 and above, the latest version certified is 10.11.4. Please download and install from:

https://www.blackmagicdesign.com/support

6 Sync Board and Video Card Installation

IMPORTANT NOTICE:

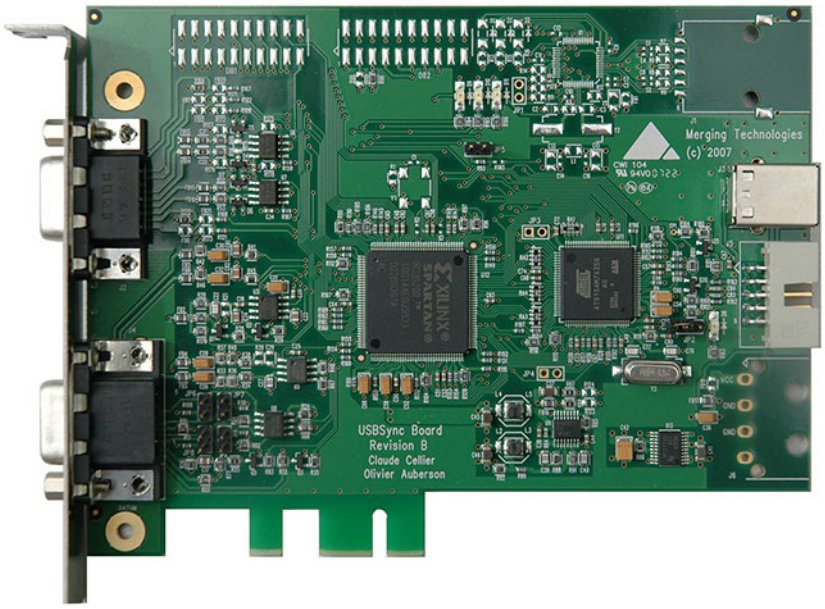
Please read the following information very carefully before attempting installation. Failure to comply with the precise instructions may result in damage to your hardware. Please read the entire chapter carefully before installation.

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.
- Indentify 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, x8 or x16 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 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 the Sync Board, or a 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.

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: For Windows 7 Users Only: The installer checks and verifies if the Windows updates KB3033929 and KB3123479 are present on the system and if not installed already (from running Windows Update manually or automatically) they will be installed for Windows 7. If the updates are required, please be patient.
Warning: When installing VCube there's a possibility that you may see a KB3033929 failed install message box, if this update is already installed. Please proceed with **Yes** to continue the installation in such a case.
The update can take as long as one hour. This delay is caused by Microsoft. An extra reboot is required once the updates are installed.
N.B. If the **Windows Update Service** is disabled, Windows cannot install any updates, one consequence will be that the MassCore NIC will not work. To check if the Service is running open the **Windows Control Panel**, go to **Administrative Tools > Services** and ensure that the **Windows Update** service is started and therefore running. If the Service is stopped it can be started manually by selecting it and choosing **Start** in the **Action** menu or from the right-click context menu.

Note: This update is already embedded in Windows 10.

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

Driver Signing

There is no **Driver Signing Options** dialog in Windows 7 or Windows 10.

Windows throws up a warning dialog when unsigned drivers are installed. To avoid the necessity of clicking on **OK** several times you may wish to check the **Always Trust Drivers from Merging Technologies** box.

Running the Installer

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

Note: AJA (KONA Lhi) is no longer supported as of VCube 7.0 on Windows 10. Users on Windows 7 will have support but no further development or maintenance.
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.

Note: The BlackMagic video card drivers have to be downloaded from the BlackMagic website and installed separately.

https://www.blackmagicdesign.com/support

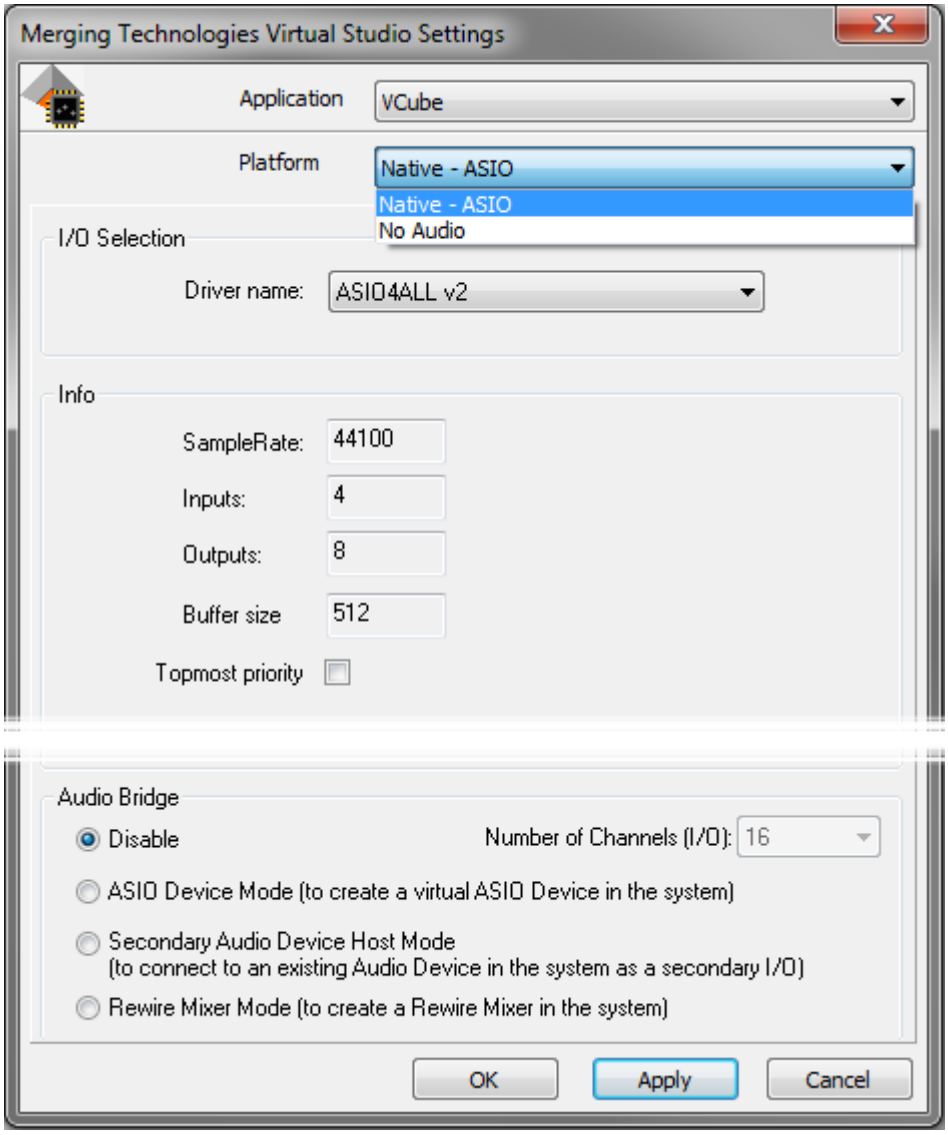
1. Insert the VCube installation media into a suitable drive/USB socket.
2. If the combined installer does not auto-run double-click on the USB stick icon
3. De-select any items you do not require.
4. Override any warnings about uncertified drivers during the installation process..
5. Reboot the PC manually 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 the VS3 Control Panel.

10. Launch the **VS3 Control Panel**. The VS3 Control Panel is a separate application. It can be found in **Start > All Programs > Merging Technologies > VS3 Runtime**. It must be used to select and set up the Audio Engine before launching VCube for the first time.



VS3 Control Panel

Application	In a system with a Pyramix in addition to VCube choose VCube from the drop-down list.
Platform	The drop-down list will contain options for all **ASIO** devices on the system and **No Audio**. Select the desired output **Audio Engine** from the list.
I/O Selection	Select the appropriate **Driver** from the drop-down list.

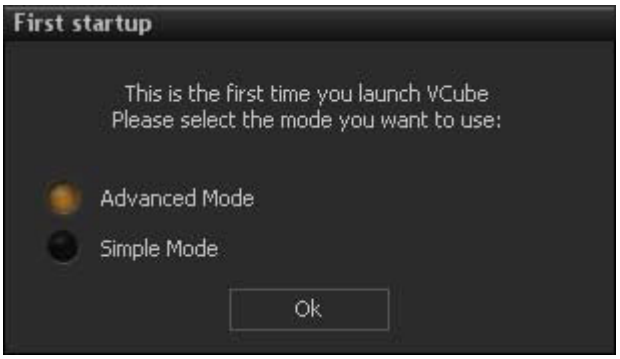
Note: The Blackmagic ASIO driver is **NOT** recommended. (ASIO buffer size issue.)

Info	Keep the default settings here.
Audio Bridge	If you are using an **ASIO device** choose **ASIO Device Mode**.

Click on **OK** to apply the settings and close the dialog. When the VS3 panel **Do you want to save routing?** dialog box appears, click on **OK**.

11. 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.

8 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, 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).

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 dongle 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 dongle number corresponding to the SafeNet Key, 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.

Keys

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

9 Troubleshooting

Please visit regularly:

www.merging.com

for the latest Troubleshooting Guide and FAQ sections.

Windows UAC

Recommendation

If not configured correctly, Windows Firewall can block communication. User Account Control should also be set to **Never Notify**.

Firewall

- Open the Windows **Control Panel**. Open the **System and Security** section and under **Windows Firewall** disable the Firewall for the **Public Network**.
- Go back to the Windows **Control Panel** and click on Windows **Firewall**. Click on **Change notification settings**. Ensure **Block all incoming connections, including those in the list of allowed programs** is **NOT** ticked.

User Account Control

- Open the Windows **Control Panel**. Open the **User Accounts** section and under **Change User Account Control Settings** move the slider down to **Never Notify**.

Antivirus

Recommendation

- Merging also recommends that any Antivirus software is properly configured so as to not interfere with the DAW. See this page for further details:

https://confluence.merging.com/display/PUBLICDOC/Antivirus+and+Merging+Technologies+Softwares

10 Lost or Stolen Merging Technologies Security Keys

(Sentinel 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.)

11 Contacting Merging

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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

Index

A

Aero graphics 12
Antivirus 20

B

Blackmagic Design 12

C

Changing or re-entering a Key 19
Contacting Merging 22

D

Display Settings 11
Dongle serial number 19
Driver Signing 15

E

Entering Keys 19

F

Firewall 20
First launch
  Single board system 19, 20

I

Import Key 19
Indexing 12
Introduction 6

K

Keys 19

M

MT Security Settings 19

N

Native Install 16

O

Other Applications 12

P

PC Setup 11
Power Management 12

R

Recommended options 12

S

SafeNet dongle 16
small fonts 11
Software Installation 15
Software Registration 19
System Requirements 10

T

Thank you 6
Troubleshooting 20

U

UAC 20
User Account Control 20

V

Video Hardware 12

W

Windows 10 6
Windows Firewall 20

Y

YourPersonalKey 19

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