

**VCube**  
HD VIDEO SYSTEM

**Installation Guide**

**VI**

No part of this documentation may be reproduced in any form whatsoever or be stored in any data retrieval system without prior written permission of the copyright owners.

This documentation is supplied on an as-is basis. Information contained within this documentation is subject to change at any time without notice and must not be relied upon.

All company and product names are <sup>™</sup> or Registered Trademarks <sup>®</sup> of their respective owners. Windows 7 and Windows 8 are trademarks of Microsoft Corporation.

Merging Technologies makes no warranties express or implied regarding this software, its quality, performance, merchantability or fitness for a particular purpose. The software is supplied "as is" you, the purchaser, are assuming the entire risk of the results of using this Merging Technologies software.

In no circumstances will Merging Technologies, its owners, directors, officers, employees or agents be liable to you for any consequential, incidental or indirect loss or damages including loss of time, loss of business, loss of profits, loss of data or similar resulting from the use of or inability to use the Merging Technologies hardware and or software or for any defect in the hardware software or documentation.

© Copyright Merging Technologies Inc. 2017. All rights reserved

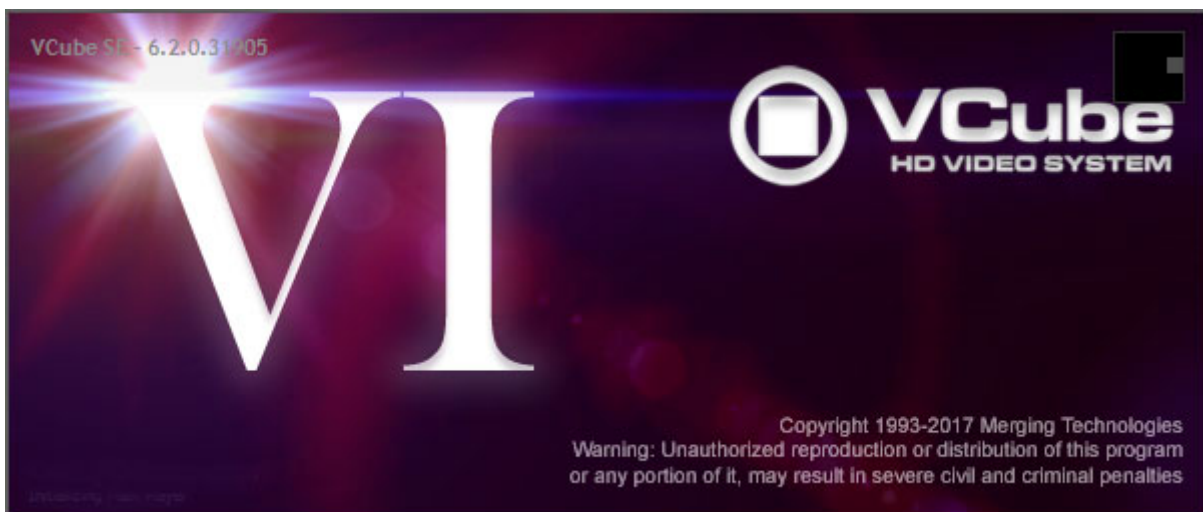


# Installation Guide

# Installation Guide : Contents

1 Introduction	6
Thank you!	6
Scope	6
2 VCube Overview	7
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	11
Aero graphics	11
Indexing	11
Other Applications	11
Recommended options	11
Video Hardware	11
6 Sync Board and Video Card Installation	12
Sync Board	12
7 VCube Software Installation	14
Installation Overview:	14
Driver Signing	14
Running the Installer	15
8 VCube Software Registration	18
9 Troubleshooting	19
10 Lost or Stolen Merging Technologies Security Keys	20
11 Contacting Merging	21
International Office:	21
UK:	21
USA:	21
12 Index	22

# Installation Guide



Document: VCube™ Installation Guide 6.2 - rev2

Date: 30th January 2017

# 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.

**Important!** Before installing the Merging Technologies software for the first time OR as an update please run **Windows Update** and accept any updates marked as **Important**.

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)

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.



## 3 For Users Performing Upgrades

**Note:** New V6 Keys have been issued for VCube V6.2 users. Be aware that V5 keys will only work with the Beta versions of VCube 6.

**Note:** Windows 7 64-bit is the only operating system supported.

### VCube

We recommend uninstalling any previous version of VCube before installing VCube 6.2.

- 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/pconfig>

### Other Components

- **Graphics Card:** The recommended graphics cards are the **ATI FIREPRO** series of PCIe graphics cards. **NVidia** graphics cards are **NOT** compatible with MassCore.
- 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
- SXGA 17" monitor or better. Multiple 19" monitors highly recommended.  
**Minimum resolution 1280x1024**
- 3 button mouse

### *VCube Native*

#### Certified Operating System

- **OS:** We recommend and certify **VCube Version 6.x** under **Windows 7 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:

<http://www.merging.com/resources/img/support/Windows%20Configuration%20guide.pdf>

### *Configuration Guides*

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. In the Windows 7 environment we strongly recommend turning **OFF** the Aero feature for maximum performance.

A Merging Windows configuration guide is available with recommendations here:

<http://www.merging.com/resources/img/support/Windows%20Configuration%20guide.pdf>

### *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.

### *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*

Merging supports Blackmagic design Video Cards thru the DeckLink SDK. This covers: **DeckLink**, **UltraStudio** and **Intensity** product lines. Only **Decklink Studio 4K** has been validated so far. The **DeckLink Studio monitor** is known to 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 10.5. Please download and install from:

<https://www.blackmagicdesign.com/support>

## 6 Sync Board and Video Card Installation

### IMPORTANT NOTICE:

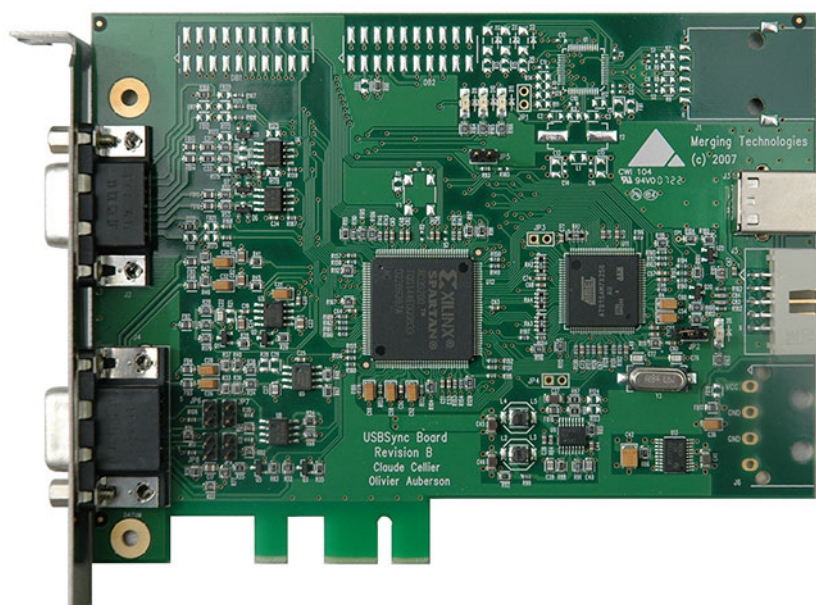
Please read the following information very carefully before attempting installation. Failure to comply with the precise instructions may result in damage to your hardware. Please read the entire chapter carefully before installation.

### 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.
- 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 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:** 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. The update can take as long as one hour. This delay is caused by Microsoft. An extra re-boot 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: 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.

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:** 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>

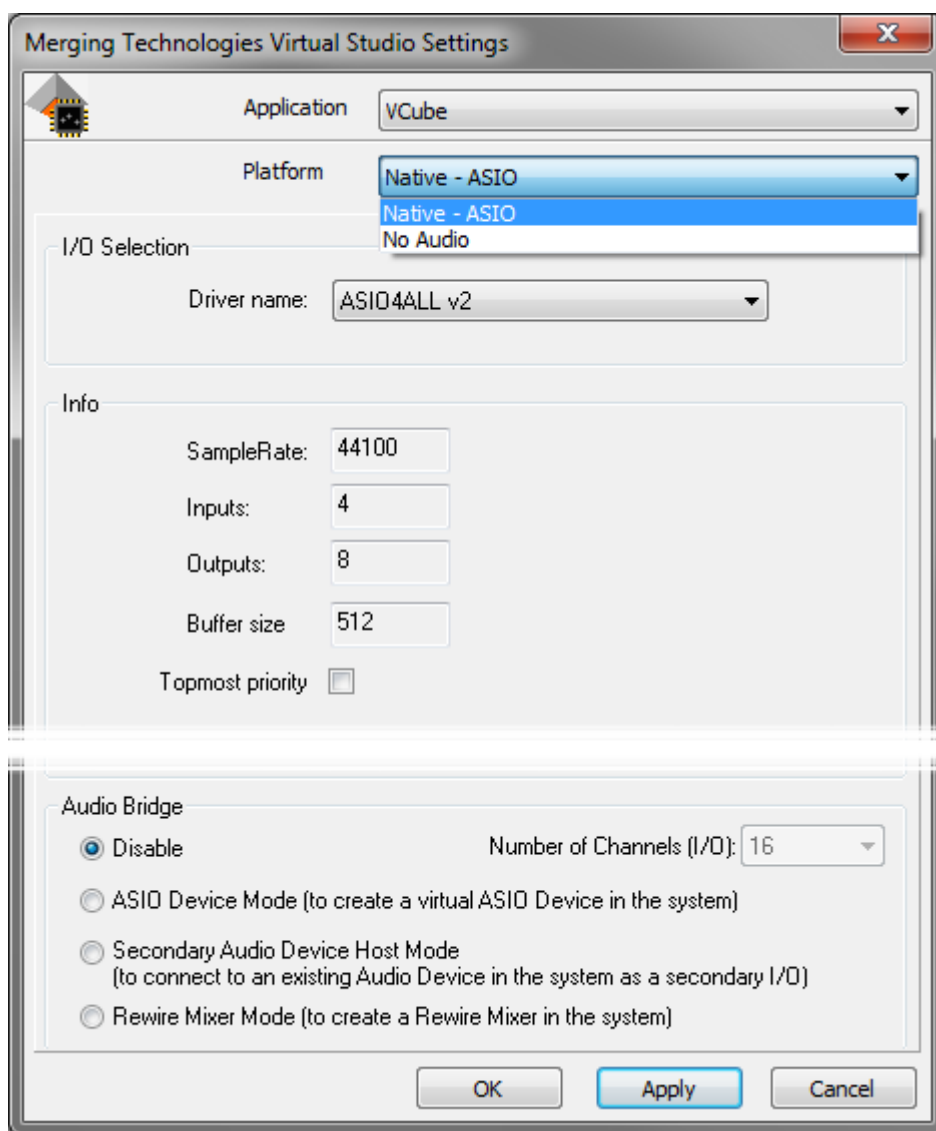
1. Insert the VCube installation media into a suitable drive/USB socket.
2. If the combined installer does not auto-run double-click on the USB stick icon
3. De-select any items you do not require.
4. Override any warnings about uncertified drivers during the installation process..
5. Reboot the PC manually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



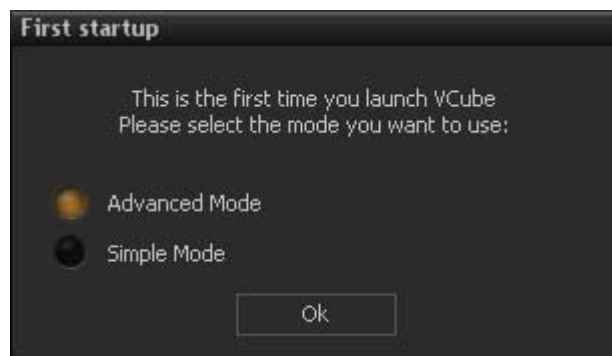
VS3 Control Panel

- 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, **Mass-Core RAVENNA** if installed and **No Audio**. Select the desired output **Audio Engine** from the list.
- I/O Selection** Select the appropriate **Driver** from the drop-down list.
- 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](http://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**.

## 10 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.)

## 11 Contacting Merging

### *International Office:*

**Merging Technologies S.A.**

**Le Verney 4**

**CH-1070 Puidoux**

**Switzerland**

**Phone: +41 21 946 0444**

### *UK:*

**Merging UK (Emerging Ltd)**

**23 Campbell Court**

**Campbell Road**

**Bramley**

**Hampshire**

**RG26 5EG**

**UK**

**Phone: +44 (0) 118 402 5090**

**Fax: +44 (0) 870 1231747**

**Email: sales@merginguk.com**

### *USA:*

**Merging USA (Independent Audio)**

**43 Deerfield Road**

**Portland,**

**ME 04101-1805**

**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 11

## B

Blackmagic Design 11

## C

Changing or re-entering a Key 18

Contacting Merging 21

## D

Display Settings 11

Dongle serial number 18

Driver Signing 14

## E

Entering Keys 18

## F

Firewall 19

First launch

Single board system 18, 19

## I

Import Key 18

Indexing 11

Introduction 6

## K

Keys 18

## M

MT Security Settings 18

## N

Native Install 15

## O

Other Applications 11

## P

PC Setup 11

Power Management 11

## R

Recommended options 11

## S

SafeNet dongle 15

small fonts 11

Software Installation 14

Software Registration 18

System Requirements 10

## T

Thank you 6

Troubleshooting 19

## U

UAC 19

User Account Control 19

## V

Video Hardware 11

## W

Windows configuration guide 11

Windows Firewall 19

Windows Update 6

## Y

YourPersonalKey 18

