

Pyramix 15 Installation Guide



MERGING PYRAMIX



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Installation Guide v15.x

Installation Guide Pyramix 15 : Contents

1 Introduction	6
Thank you!	6
Scope	6
Windows 10 - IMPORTANT!	6
Windows 11 - IMPORTANT!	7
MassCore new implementation	7
2 Pyramix Versions - Compatibility and Installation Steps	9
3 For Users Performing Upgrades	11
4 System Requirements	14
Pyramix MassCore Systems	14
Pyramix Native	14
5 PC Setup	15
Motherboard Drivers and Utilities	15
BIOS Settings	15
Configuration Guides	15
Display Settings	16
Power Management	17
Drive Indexing	17
Other Applications	17
Video in Timeline	17
Video Hardware	17
ADR/Ovation Keyboards	17
6 Pyramix Software Installation	18
Installation Overview	18
Flux VS3/V3 plug-ins	18
VB VS3 plug-ins	19
Standalone Album Publishing application	19
7 Running the Installer	19
8 Pyramix Software Authorization	20

9 MassCore™ Installation	22
System Requirements	22
MassCore Installation	22
MassCore Installation - Upgrade	23
10 MassCore – RAVENNA	26
Installing the Merging Technologies NET-MSC-GBEX1 PCIe Ethernet Controller Card	26
Configure RAVENNA in the VS3 Control Panel	28
Before First Launch	28
Troubleshooting and tips	29
11 Native - ASIO/WDM	32
Installing the ASIO driver	32
Configure ASIO in the VS3 Control Panel	33
12 First launch	34
13 Troubleshooting	36
14 Lost or Stolen Merging Technologies Security Keys	36
15 Contacting Merging Technologies	37

Installation Guide V15.x



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1 Introduction

Thank you!

Congratulations on your purchase of Pyramix Virtual Studio. More than just a product, this is a gateway to the future of sound recording, editing, mixing and mastering. You have joined a worldwide community of users who have already discovered the Pyramix advantage.

Note: IMPORTANT!

The first thing you need to do is register your software to acquire your Pyramix key(s) and to be included in our user support list.

<https://my.merging.com/auth/register>

Please also subscribe to the User Forum at:

<https://forum.merging.com>

Scope

Pyramix Virtual Studio is a powerful and flexible Digital Audio Workstation (DAW) integrating hard disk recording and editing, digital audio mixing, effects processing, metering, machine control, video and mastering. Complete turnkey systems are available.

This document is intended to get you up and running with Pyramix, Pyramix MassCore and Pyramix MassCore RAVENNA as quickly as possible. For more detailed information about the Horus / Hapi / Anubis hardware and the Pyramix software please see their specific guides. If you have purchased Pyramix Virtual Studio 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.

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://merging.atlassian.net/wiki/display/PUBLICDOC/Windows+10+Configuration>

Details about the recommended Windows 10 Defer Update setting

<https://merging.atlassian.net/wiki/display/PUBLICDOC/Windows+10+Defer+Updates>

Windows 10 Recommended Version for Pyramix v15.x

- November 2022 update 22H2 (supported since Pyramix 14.0 & RTX64 3.7.4)
- November 2021 update 21H2 (supported since Pyramix 14.0 & RTX64 3.7.4)

If you run a previous Windows 10 version, Merging recommends you update it.

Windows Updates

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

<https://merging.atlassian.net/wiki/spaces/PUBLICDOC/pages/4818089/Windows+Updates+Validation+Status>.

Important! Before you perform a major Windows 10 update on a system already running a MassCore version, it will be important for users to remove MassCore from the MT Security panel - MassCore tab prior to performing a system update.

Users wanting to update Windows 10 to another version must follow the procedures documented here, select the appropriate document according to your current Windows 10 version.

<https://merging.atlassian.net/wiki/display/PUBLICDOC/Windows+Configuration+Guide>

Once the update to the required Windows version has been completed follow this Pyramix v15.x installation Guide.

Windows 7 is no longer officially supported since Pyramix 14 / Ovation 10.

Windows 11 - IMPORTANT!

Note: Merging strongly recommends you defer feature updates in Windows 11. Windows 11 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 11 Configuration Guide:

<https://merging.atlassian.net/wiki/spaces/PUBLICDOC/pages/4820313/Windows+11+Configuration>.

Details about the recommended Windows 11 Defer Update setting

<https://merging.atlassian.net/wiki/spaces/PUBLICDOC/pages/4818467/Windows+11+Defer+Updates>.

Windows 11 Recommended Version for Pyramix v15.x

- 24H2 (supported since Pyramix 15.0 & RTX64 4.5.1)
- 23H2 (supported since Pyramix 14.1 & RTX64 3.7.4)
- 22H2 (supported since Pyramix 14.1 & RTX64 3.7.4)

MassCore new implementation

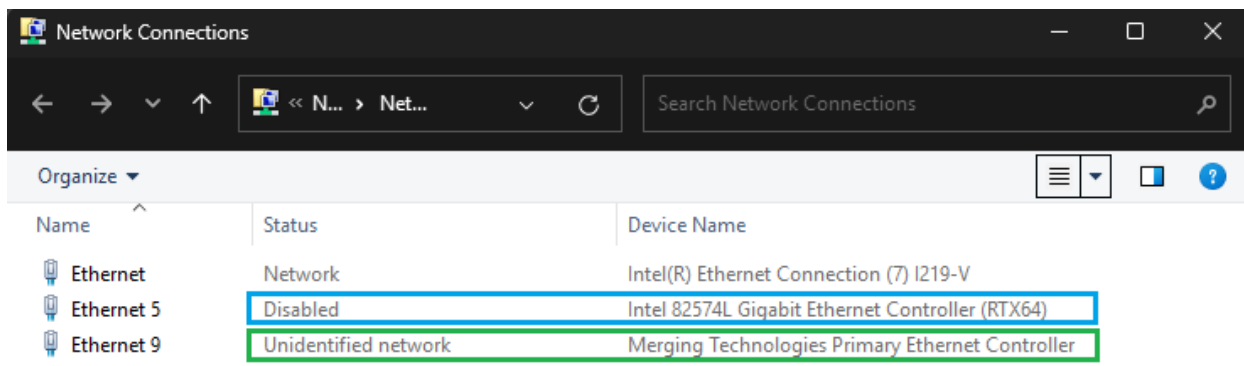
Pyramix 15 introduces a new RTX implementation (NAL).

The MassCore Network card is no longer used directly but through a RTX Virtual Adapter.

The card is no longer displayed in the Device Manager as a "*Merging Technologies PCIe 82574L Ethernet Controller*", but is converted to "*Intel 82574L Gigabit Ethernet Controller (RTX64)*" and "*Merging Technologies Primary Ethernet Controller*".

When a MassCore Network card is detected, the MassCoreNIC Service will convert it automatically to the new scheme. This operation can take a bit of time, so the 1st time the system sees a card that needs conversion, it can take 1-2 mins until it's usable.

Once the MassCoreNIC card has been properly converted to the new scheme, the physical card (below in blue) will show as disabled, and is replaced by the virtual Merging Technologies Primary Ethernet Controller (below in green).



The *Merging Technologies Primary Ethernet Controller* (and / or Secondary) is the one used for TCP/IP communications. If a Static IP has to be used, it has to be set on this adapter.

2 Pyramix Versions - **Compatibility and Installation Steps**

Native (ASIO on 3rd party hardware)

Compatibility: Windows 10 Professional 64-bit - Windows 11 Professional 64-bit

Installation Steps:

- Pyramix Software Installation - *Pyramix Software Installation on page 18*
- Entering Authorization Keys - *Pyramix Software Authorization on page 20*
- Select ASIO and the correct card/device in the VS3 Control Panel
(*Start Menu > Control Panel > VS3 Control Panel*) - *Configure ASIO in the VS3 Control Panel on page 33*

Native with ASIO/WDM for RAVENNA and Horus / Hapi / Anubis

Compatibility: Windows 10 Professional 64-bit - Windows 11 Professional 64-bit

Installation Steps:

- Install the Merging Audio device (MAD) provided with your Horus / Hapi / Anubis or available from <https://www.merging.com/support/downloads>
- Pyramix Software Installation - *Pyramix Software Installation on page 18*
- Entering Authorization Keys - *Pyramix Software Authorization on page 20*
- Select the desired network adapter in MAD Panel (*Start Menu > All Programs > Merging Technologies > Merging Audio Device Panel*) - Details in the Merging Audio Device (MAD) online documentation:
<https://merging.atlassian.net/wiki/spaces/PUBLICDOC/pages/4819685/Merging+Audio+Device>.
- Select ASIO and the Merging Audio Device driver in the VS3 Control Panel (*Start Menu > Control Panel > VS3Control Panel*) - *Configure ASIO in the VS3 Control Panel on page 33*.

MassCore with RAVENNA and Horus / Hapi / Anubis

Compatibility: Windows 10 Professional 64-bit - Windows 11 Professional 64-bit

Installation Steps:

- NET-MSC-GBEX1 Installation - *Installing the Merging Technologies NET-MSC-GBEX1 PCIe Ethernet Controller Card on page 25*.
- Pyramix Software Installation - *Pyramix Software Installation on page 18*
- Entering Authorization Keys - *Pyramix Software Authorization on page 20*
- MassCore Installation - *MassCore Installation on page 22*
- Select MassCore with RAVENNA in the VS3 Control Panel (*Start Menu > Control Panel > VS3 Control Panel*)

Note: Merging strongly recommends users to perform a Windows Update prior to installing Pyramix v15.x

Quick Setup Checklist for systems with Merging RAVENNA/AES67 Devices

1. Shut down the system and install the MassCore NET-MSC-GBEX1 PCIe Ethernet controller card. (Card drivers are included in the Pyramix and Ovation installers.)
2. Install Google Chrome (Optional)
3. Existing users of 64-bit MassCore may have to uninstall the previous MassCore version from the MT Security panel application.
4. MassCore users MUST configure their BIOS settings.
Please see BIOS Settings on page 15
5. Install Pyramix v15.x or Ovation v11.x.
6. Import your v15/v11 keys in MT Security Settings (or Merging License Manager)
7. Install MassCore from the MT Security panel - MassCore Tab.
8. MassCore SMP (multiple cores) users should launch the VS3 Control Panel and assign 2 cores (or more, up to 6) to MassCore. (A reboot will be required.)
9. In the VS3 Control Panel ensure that RAVENNA is selected in the Hardware section.
10. Configure the Switch/Router (if present).
Please refer to the RAVENNA Network Guide.
11. Launch Pyramix.
12. You can also launch the MT Discovery application and double-click on the Horus / Hapi/ Anubis entry for browser remote access.
13. Ensure that the Horus / Hapi/ Anubis is set to the same sampling rate as Pyramix or Ovation.
14. We recommend Horus, Hapi and Anubis users to update to the latest firmware available.
See <https://www.merging.com/products/interfaces/downloads>
15. Configure I/O as required in Pyramix/Ovation mixer and Horus /Hapi/Anubis.
Please download and install the latest ANEMAN application in order to manage and monitor your AoIP devices from www.aneman.net/#download

3 For Users **Performing Upgrades**

Note: Pyramix v15 keys are required to run Pyramix v15.
Users running MassCore will need MassCore RTX64 version 4.5.1.7199.

Pyramix

Please first uninstall any previous version of Pyramix before installing Pyramix v15 (and other Merging programs such as Ovation or VCube)

From the Windows Control Panel select Programs and features, and remove the installed version of Pyramix.

If you are planning to update your Windows version, please first uninstall the MassCore Runtime, by following steps 1 to 4 in the MassCore section below.

You can then proceed with the Windows update, by following the update procedure in the documents linked to below.

<https://merging.atlassian.net/wiki/display/PUBLICDOC/Windows+Configuration+Guide>

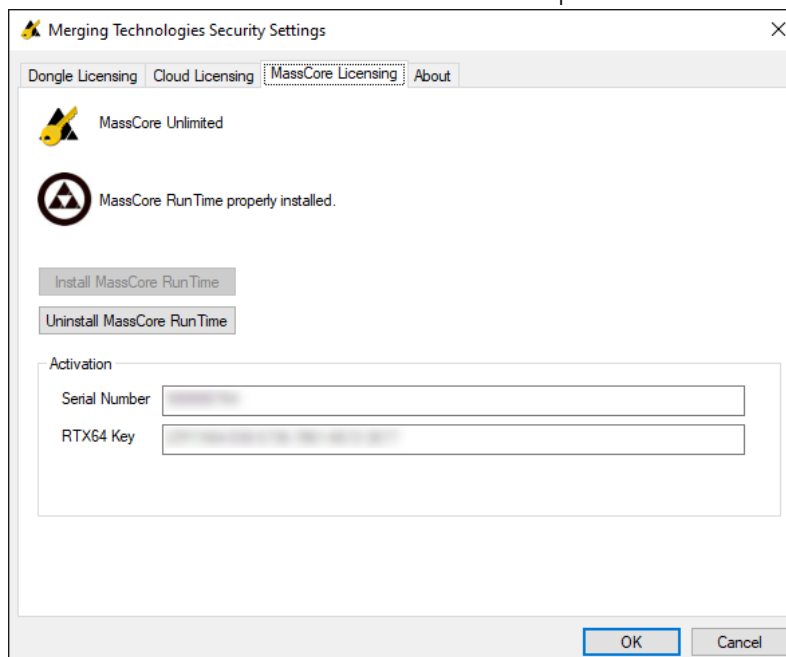
Masscore

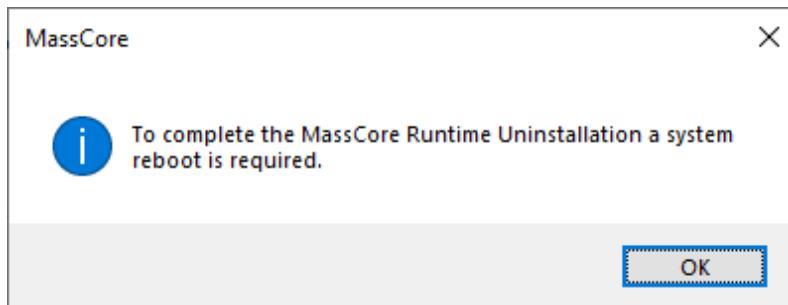
MassCore users running Interval Zero RTX64 version prior to v4.5.1.7199 MUST remove the existing MassCore runtime.

Note: RTX DONGLE USERS (SSK-HUD-RTX). The SSK-HUD-RTX dongle is no longer required since Pyramix 25th HotFix 3.

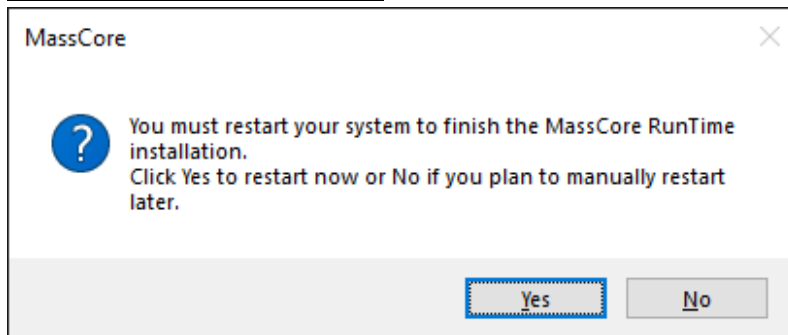
Once Pyramix v15 is installed follow these steps:

1. Launch **MT Security Settings** and select the **MassCore** Tab.
2. Choose the **Uninstall MassCore RunTime** option and confirm.

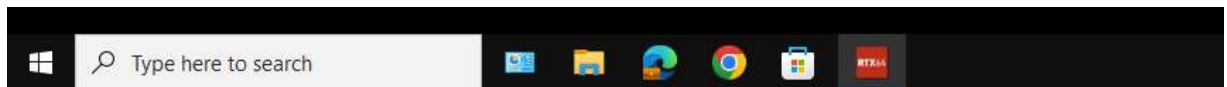




3. Click on OK to close the MTSecurity panel and reboot the computer selecting the NON-MassCore Windows Boot line.



4. Once rebooted, the MassCore RTX64 will automatically uninstall. The uninstall process is silent, there will be no progress bar displayed, only a RTX64 indication in the taskbar. It can take a few minutes.

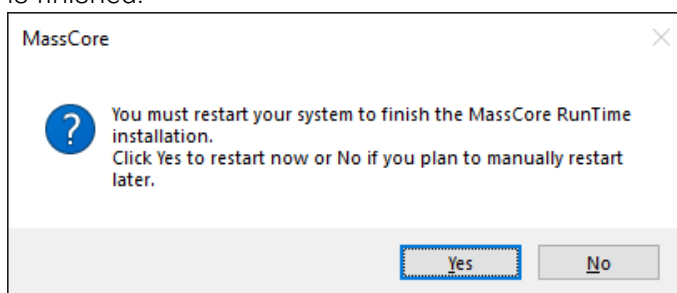


Your computer will automatically restart at the end of the uninstallation process.

5. Once the computer has rebooted, launch **MT Security Settings** and enter your **v15 keys** or confirm their presence.

Warning! If when entering your new MassCore key you experience a failure message, please contact keys@merging.com and let us know your Dongle serial number so that Merging can identify your current MassCore/RTX64 key and renew it if necessary.

6. Select the **MassCore** Tab and choose the **Install MassCore RunTime** option.
7. The installation process is silent, and you will be prompted to restart the computer once it is finished.



8. A RTX64 Driver approval dialog may appear. Accept it, click on **OK** to close the **MT Security Settings** panel and reboot the system.

Note:

Please note that the installation process can take some time.

At the end of the MassCore installation, users may see a popup dialog.

Please ignore until reboot.



9. After installation you should see an **Interval Zero** entry in **Windows Control Panel > All Control Panel Items > Programs and Features**.
This should read: **RTX64 4.5.1 Runtime (Version 4.5.1.7199)**.
10. Launch the **VS3 Control Panel** and configure it for **MassCore – RAVENNA**.
See: **Configure RAVENNA in the VS3 Control Panel on page 28**.

Users running with the MassCore network card NET-MSC-GBEX1

The card has to be converted to the new MassCore RTX implementation before being available in the VS3 Control Panel. This process is automatic but will require some time (usually 2-3 minutes)

You may have a look at Windows Device Manager – Network adapters: the card will no longer be displayed as a “Merging Technologies PCIe 82574L Ethernet Controller”, but as “Intel 82574L Gigabit Ethernet Controller (RTX64)” (and an additional “Merging Technologies Primary Ethernet Controller”)

Once the MassCoreNIC card has been properly converted to the new scheme, the physical card “Intel 82574L Gigabit Ethernet Controller (RTX64)” will be displayed as disabled in Windows Network Connections, and is replaced by the virtual *Merging Technologies Primary Ethernet*.

The *Merging Technologies Primary Ethernet Controller* (and / or Secondary) is the one used for TCP/IP communications.

If a Static IP has to be used, it has to be set on this adapter.

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 <https://www.merging.com/pages/pcconfig>

WARNING: Since Pyramix v12, Intel Core Processors prior to 4th Generation (4XXX) are no longer supported.

Please refer to our system recommendation for more details:

<https://merging.atlassian.net/wiki/spaces/PUBLICDOC/pages/4817980/Computer+Specifications>.

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 requiring multiple display outputs, OpenGL UI plugins (Flux, Izotope,), working with video, or when your workflow places high demands on graphics.
Please refer to the Pyramix PC Specifications for all details:
<https://merging.atlassian.net/wiki/display/PUBLICDOC/Graphic+cards+recommendations>
- Sufficient HD space and speed for your audio media files. The speed and amount of disk space required depends on sample rate, word length, number of tracks and length of program material.
A typical 7200 RPM SATA drive is sufficient for 48 tracks at 48 kHz.
Higher track-counts and/or higher sampling rates will require an SSD drive and/or multiple drives configured in Raid 0, 1, 10 or 5.
We recommend disks formatted as NTFS volumes with the Windows default block sectors size. For more details, please see
<https://merging.atlassian.net/wiki/spaces/PUBLICDOC/pages/481212/Media+drives+track+count>.
- BD/DVD/CD-ROM combo drive or better.
- Display with a minimum resolution of 1920x1080.
- 3 button mouse

Pyramix MassCore Systems

Certified Operating System: Windows 10 Professional 64-bit - Windows 11 Professional 64-bit.

Pyramix Native

Certified Operating System: Windows 10 Professional 64-bit - Windows 11 Professional 64-bit.

5 PC Setup

Motherboard Drivers and Utilities

Motherboard drivers should be updated to current versions, from its manufacturer website.

Motherboard Utilities should NOT be installed.

Please refer to our Windows configuration guides for more details:

<https://merging.atlassian.net/wiki/display/PUBLICDOC/Windows+Configuration+Guide>

BIOS Settings

Recommended BIOS Settings

Hyperthreading

Intel® Hyperthreading Technology is supported on 64-bit Native & MassCore systems.

This setting is commonly found in Main Bios page, or under CPU configuration.

(See the motherboard manual for further details).

- MassCore SMP users: Merging Recommends that Hyperthreading is enabled to benefit fully from the real-time engine power, VS3 support and the MassCore multithreaded engine.
- MassCore Non-SMP (single Core) users: Will gain some of these benefits by not enabling Hyperthreading, so that a full single Core is dedicated to MassCore.
- Pyramix Native: We recommend that Hyperthreading is enabled.
- For further information refer to the Pyramix User Manual chapter MassCore & VST Core Allocation.

Other Settings

The following features can create MassCore overloads (blinking red MSC).

Intel® SpeedStep Technology (also known as *Enhanced Intel® SpeedStep*), *Intel® TurboBoost Technology* as well as *CPU C States* (or *Intel® C-State*) features must be disabled in the BIOS.

These settings are commonly found in BIOS Power options or CPU Configuration.

Overclocking is not supported.

Secure Boot – Standard Mode feature is supported by the MassCore engine.

Configuration Guides

Windows Core Isolation – Memory Integrity is not supported by the Safenet driver, Discwrite Optical Drive driver (Gear) and MassCore (see Windows Configuration Guide for details).

Windows 10 users should refer to the Merging Windows 10 Configuration Guide:

<https://merging.atlassian.net/wiki/display/PUBLICDOC/Windows+10+Configuration>

Windows 11 users should refer to the Merging Windows 11 Configuration Guide:

<https://merging.atlassian.net/wiki/spaces/PUBLICDOC/pages/4820313/Windows+11+Configuration>

Merging has a number of specific configuration guides based on the validated hardware platforms available at

<https://merging.atlassian.net/wiki/display/PUBLICDOC/Validated+hardware+installation+guides>

Display Settings

Pyramix requires a minimum display resolution of **1980x1080**.

A Merging Windows configuration guide is available with recommendations here:

<https://merging.atlassian.net/wiki/display/PUBLICDOC/Windows+Configuration+Guide>

Please type advanced system settings in Windows search field (next to Windows Start button), and select the *Advanced* tab > *Performance Settings* to open the Performance Options window. Choose the *Visual Effects* Tab.

Disable the following settings by unticking the boxes to prevent MassCore peaks:

- Animate Windows when minimizing and maximizing – disable
- Animations in the taskbar and Start Menu – disable
- Enable Peek – disable
- Fade or slide menus into view – disable
- Fade or slide ToolTips into view – disable
- Save taskbar thumbnail previews – disable
- Show thumbnails instead of icons
- Show translucent selection rectangle – disable
- Show window content while dragging – disable
- Slide open Combo boxes – disable

☒ Custom:

☒	Animate controls and elements inside windows
☐	Animate windows when minimizing and maximizing
☐	Animations in the taskbar
☐	Enable Peek
☐	Fade or slide menus into view
☐	Fade or slide ToolTips into view
☒	Fade out menu items after clicking
☐	Save taskbar thumbnail previews
☒	Show shadows under mouse pointer
☒	Show shadows under windows
☐	Show thumbnails instead of icons
☐	Show translucent selection rectangle
☐	Show window contents while dragging
☐	Slide open combo boxes
☒	Smooth edges of screen fonts
☒	Smooth-scroll list boxes
☒	Use drop shadows for icon labels on the desktop

Power Management

As with other Digital Audio Workstations and Non-Linear Editors, we recommend setting the PC to the High-Performance Power management scheme or RTX64-Recommended (MassCore Users).
Pyramix / Ovation are NOT designed to support Standby modes.

Drive Indexing

In the interests of better performance, we recommend turning Indexing OFF for all Data drives (System drive indexing should be left ON)

Other Applications

Like all Digital Audio Workstations, Pyramix works best when there are no other unnecessary applications or services running.

Video in Timeline

As of Pyramix 12, Ovation 8 and VCube 8, Merging strongly recommends using a dedicated graphic card rather than onboard graphics.

In a Pyramix Native system video performance depends principally on the system configuration.

Video Hardware

Merging supports Blackmagic design Video Cards thru the DeckLink SDK.

This covers the Decklink product lines.

Note:

The DeckLink 8K cards are not supported above 4K DCI / 25 fps.

The DeckLink Studio monitor is known to be working but has no Video reference to ensure genlock.

Merging has certified its applications under Blackmagic Design versions 12.8.1 and 14.1. Please download and install from <https://www.blackmagicdesign.com/support>

ADR/Ovation Keyboards

Please refer to the following page for installation information:

<https://merging.atlassian.net/wiki/display/PUBLICDOC/Pyramix+ADR+and+Ovation+keyboard+install+guide>

6 Pyramix Software Installation

Important! If you have not already done so, 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. Note that this can take a considerable time. (Over an hour in some cases.) This is a Microsoft problem.

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

Installation Overview

Note: If you have purchased hardware options such as the NET-MSC-GBEX1 PCIe Ethernet card, the Sync Board and or a Blackmagic video card, please install these following the instructions in the accompanying documentation.

The drivers for all of these except Blackmagic cards, ADR Keyboard and SeaLevel GPIOs are installed automatically with the Pyramix software.

SeaLevel GPIO's installation

<https://merging.atlassian.net/wiki/spaces/PUBLICDOC/pages/4820761/GPI+GPO+Sealevel+Installation>

Blackmagic video card drivers have to be downloaded from the Blackmagic website and installed separately. Merging has certified its applications under Blackmagic Design versions 12.8.1 and 14.1. Please download and install from <https://www.blackmagicdesign.com/support>

ADR/Ovation keyboard

<https://merging.atlassian.net/wiki/display/PUBLICDOC/Pyramix+ADR+and+Ovation+keyboard+installation+guide>

Installer

The Pyramix software uses an automated installer wizard which will install all necessary prerequisites.

Installing Ovation will also install Pyramix.

Note: The security dongle must be in place and the security keys entered before attempting to launch the software, but not required during the installation process.

Flux VS3/V3 plug-ins

Download the Flux Center application in order to install the Flux VS3 plugins:

<https://www.fluxhome.com/download>

With the release of Pyramix 15, Flux Plugins will no longer be included in any software pack for new customers. If you are purchasing Pyramix for the first time, Flux Verb and Studio will not be integrated by default.

However, existing users upgrading from a previous version via ASM can continue using Flux Verb and Studio. While these plugins will remain functional, they will not be adapted to the new graphical enhancements. You will still be able to update them via the Flux Centre when new versions become available.

Please note that owners of other VS3 Flux Plugin Packs will now require iLok authentication to be recognized and function properly. This transition scheme will be provided free of charge.

This change ensures compatibility while maintaining a seamless transition for long-time users upgrading to Pyramix 15.

IMPORTANT NOTICE: unfortunately Flux VS3 plugins release (V23) have some bugs particularly on the graphic side. Flux is working on a new version that should solve all issues.

For contacting Flux, please use their contact form <https://www.flux.audio/knowledge-base/>

VB VS3 plug-ins

The VB Plugins (VS3) are legacy; while it is still possible to use those plugins, there will be no more active development or support.

Standalone Album Publishing application

The Standalone Album Publishing application is included since Pyramix v11.1 and allows several instances to be run concurrently.



Independent Settings may be applied for each instance. (Via initial Settings changes.)

7 Running the Installer

To install the Pyramix Virtual Studio software, please download from <https://www.merging.com/support/downloads> (registration required).

Please follow the automatic installation procedure accepting the option to install drivers and reboot your PC once setup is complete.

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

After the installation, you may shut down the computer to place the NET-MSC-GBEX1 Ethernet card in the computer (MassCore users).

8 Pyramix Software **Authorization**

The Pyramix Virtual Studio 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.

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 SafeNet 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.

Safenet Dongle - Entering your Key(s)

After the Pyramix installation process you will have to enter your keys 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 Start > Control Panel > MT Security Settings), click the Import Key button and browse for your key file named *YourPersonalKeyXXXXX.mtk*
3. Open the **MT Security Settings Control Panel** (as above), 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.

QLM Cloud based security- Entering your Key(s)

For users needing to run Pyramix or Ovation without a Merging SafeNet dongle, Cloud based security is available.

Note: SafeNet keys cannot be transferred to QLM security for a chosen release. This process can only be undertaken at the upgrade stage.

For further information about cloud security please see the following online documentation:

Cloud Licenses activation/deactivation

<https://merging.atlassian.net/wiki/spaces/PUBLICDOC/pages/4818872/Cloud+Licensing+Security>

QLM SelfHelp Tool

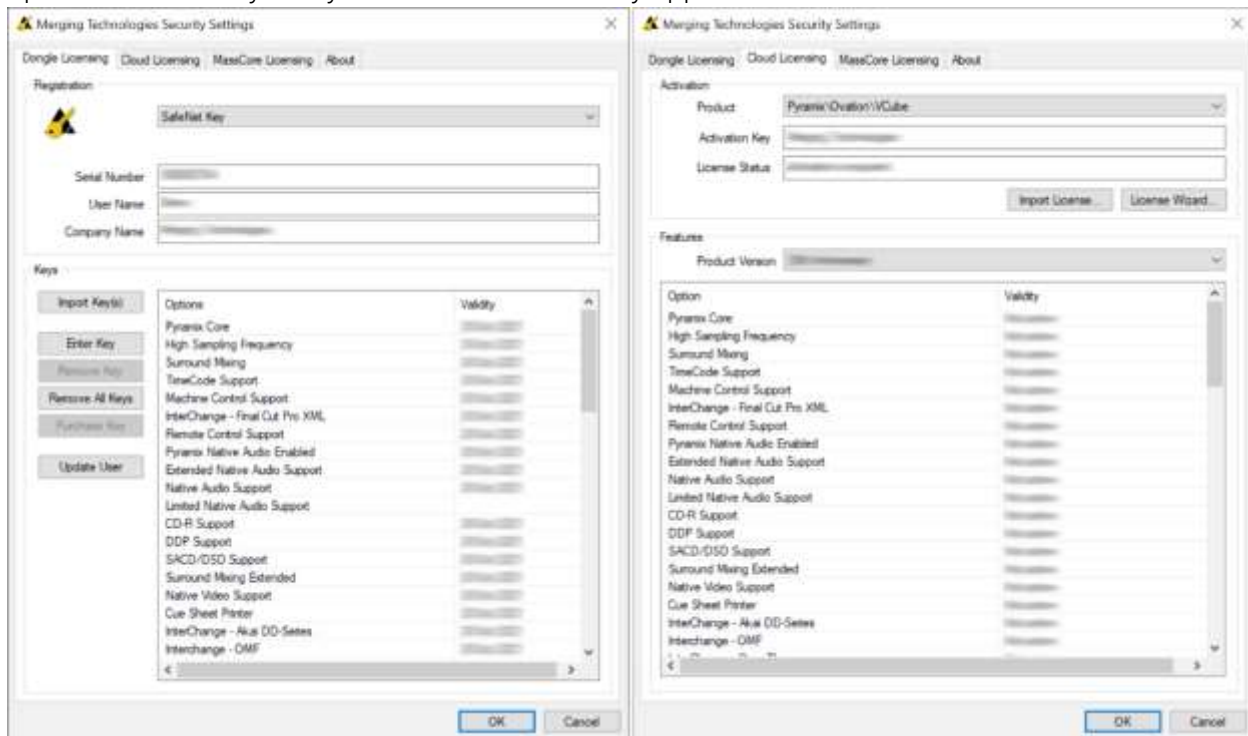
<https://merging.atlassian.net/wiki/spaces/PUBLICDOC/pages/4819704/Cloud+licensing+Self+Help+Tool>

MT Security troubleshooting

<https://merging.atlassian.net/wiki/spaces/PUBLICDOC/pages/4821299/MT+Security+and+authorization+keys>

Keys

At any time, you can check the serial number of your Security dongle and check the software options enabled in your system in the MT Security application.



Merging License Manager- Entering your Key(s)

For users needing to run Pyramix or Ovation without a Merging SafeNet dongle, the Merging License Manager is available.

For further information about the Merging License Manager please see the following online documentation:

<https://merging.atlassian.net/wiki/spaces/PUBLICDOC/pages/855572481/Merging+License+Manager+MLM+for+Pyramix-Ovation>

Evaluation Mode

If started without a valid registration key, the software will recognize that no valid key is available and will start in "evaluation" mode, which only allows for basic operation of the software as follows:

- Limited to 2 channels of I/O on host soundcard (ASIO)
- No Project > Save function
- Tone is added to new recordings
- All optional extra cost features are deactivated
- All editing functions, playback, file type conversions etc. are fully functional.

9 MassCore™ Installation



System Requirements

A quad core Intel processor is the minimum requirement.

BIOS and Windows should be configured following our recommendations for the MassCore engine to run properly.

<https://merging.atlassian.net/wiki/display/PUBLICDOC/Windows+10+Configuration>

<https://merging.atlassian.net/wiki/spaces/PUBLICDOC/pages/4820313/Windows+11+Configuration>

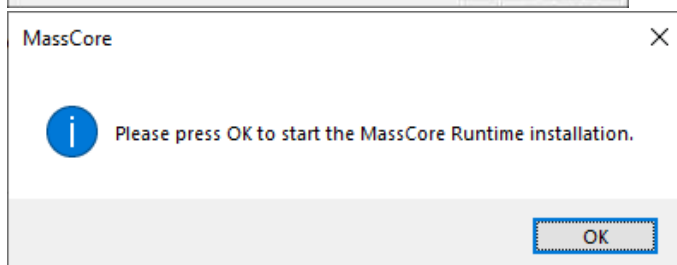
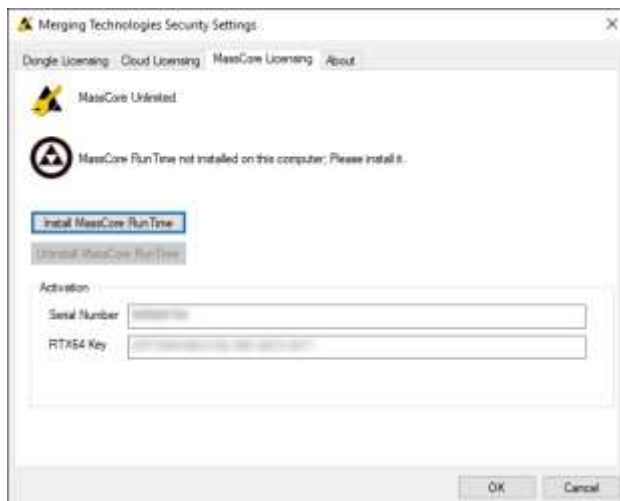
Conditions

- You MUST be logged in as an Administrator to install MassCore.
Note: You do not need to be logged in as an Administrator to RUN Pyramix or Ovation with MassCore, just to install it.
- You must have the MassCore (Base) and MassCore 64bit keys, and an RTX 64 key in order to proceed with the installation.
Please contact your Merging Technologies Sales Partner if you do not have these options but want to use MassCore.
- A MassCore Network card is required to run in MassCore mode (but not mandatory during the installation, it can be added later)

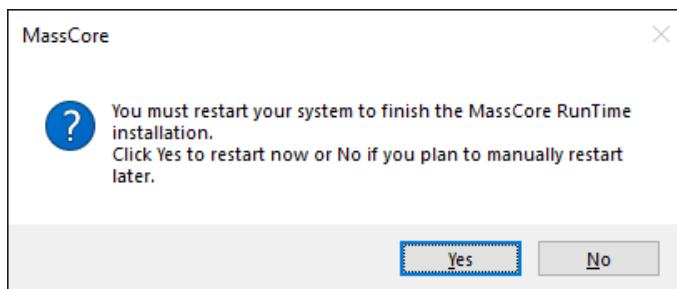
MassCore Installation

1. Install Pyramix v15.
2. Launch **MT Security Settings** and enter your v15 keys (including the MassCore key) or confirm their presence.
Merging License Manager users must first enter their keys in the Merging License Manager application, then launch MT Security Settings.
Warning! If when entering your new MassCore key you experience a failure message, please contact keys@merging.com and let us know your Dongle serial number so that Merging can identify your current MassCore/RTX64 key and renew it if necessary.
3. Select the *MassCore* Tab.
4. Press the **Install MassCore Run Time** button (will only be enabled if the MassCore base, MassCore 64bit keys and a valid RTX64 license code are present.) and confirm the installation.

Please note that the installation process can take some time to proceed.



5. The installation process is silent, and you will be prompted to restart the computer once it is finished.



6. Restart System after the install, please reboot the computer on the MassCore boot line.

MassCore Installation - Upgrade

If you are planning to update your Windows version, please first uninstall the MassCore Runtime, by following steps 1 to 5 in the MassCore section below.

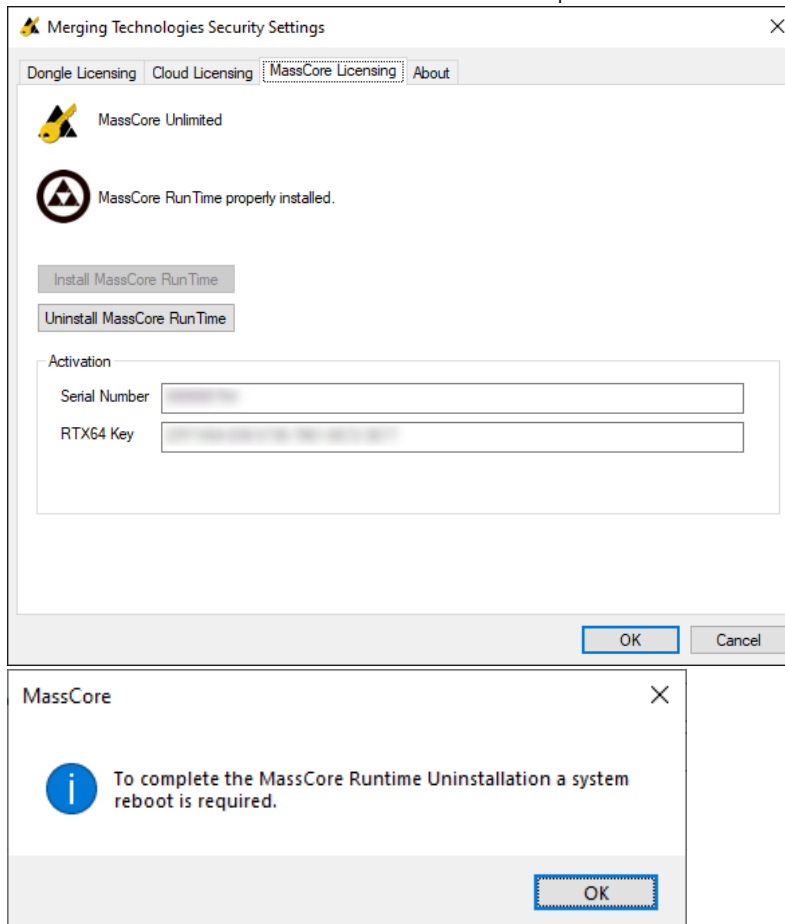
You can then proceed with the Windows update, by following the update procedure in the documents linked to below.

<https://merging.atlassian.net/wiki/display/PUBLICDOC/Windows+Configuration+Guide>

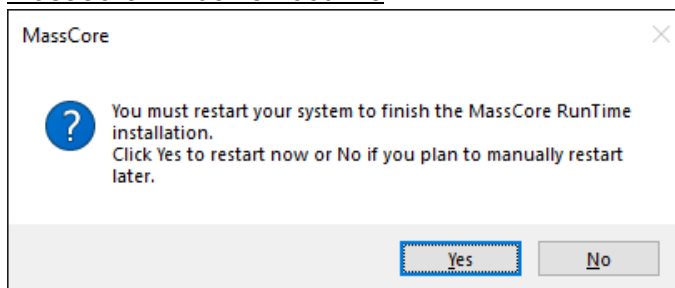
1. Install Pyramix v15.
2. Launch **MT Security Settings** and enter your v15 keys (including the new MassCore key) or confirm their presence, then go in the **MassCore** Tab.

Merging License Manager users must first enter their keys in the Merging License Manager application, then launch MT Security Settings.

- Choose the **Uninstall MassCore RunTime** option and confirm.



- Click on OK to close the MTSecurity panel and reboot the computer selecting the NON-MassCore Windows Boot line.



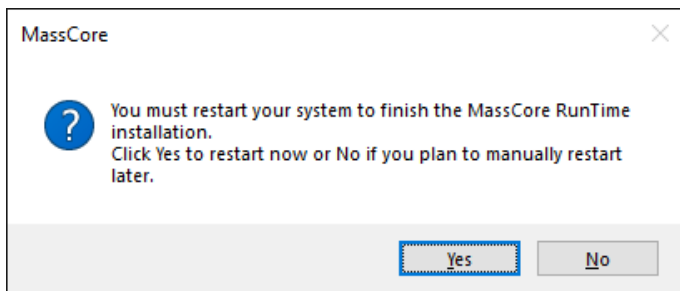
- Once rebooted, the MassCore RTX64 will automatically uninstall. The uninstall process is silent, there will be no progress bar displayed, only a RTX64 indication in the taskbar. It can take a few minutes.



Your computer will automatically restart at the end of the uninstallation process.

- Once the computer has rebooted, launch **MT Security Settings**, select the **MassCore** Tab and choose the **Install MassCore RunTime** option.

7. The installation process is silent, and you will be prompted to restart the computer once it is finished.



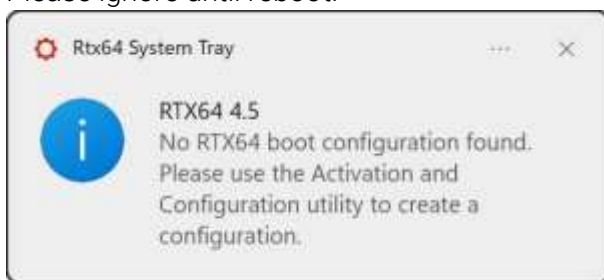
8. A RTX64 Driver approval dialog may appear. Accept it, click on **OK** to close the **MT Security Settings** panel and reboot the system.

Note:

Please note that the installation process can take some time.

At the end of the MassCore installation, users may see a popup dialog.

Please ignore until reboot.



9. After installation you should see an **Interval Zero** entry in **Windows Control Panel > All Control Panel Items > Programs and Features**.

This should read: **RTX64 4.5.1 Runtime (Version 4.5.1.7199)**.

Launch the **VS3 Control Panel** and configure it for **MassCore – RAVENNA**.

See: **Configure RAVENNA in the VS3 Control Panel on page 28**.

Users running with the MassCore network card NET-MSC-GBEX1

The card has to be converted to the new MassCore RTX implementation before being available in the VS3 Control Panel. This process is automatic but will require some time (usually 2-3 minutes)

You may have a look at Windows Device Manager – Network adapters: the card will no longer be displayed as a "Merging Technologies PCIe 82574L Ethernet Controller", but as "Intel 82574L Gigabit Ethernet Controller (RTX64)" (and an additional "Merging Technologies Primary Ethernet Controller")

Once the MassCoreNIC card has been properly converted to the new scheme, the physical card "Intel 82574L Gigabit Ethernet Controller (RTX64)" will be displayed as disabled in Windows Network Connections, and is replaced by the virtual *Merging Technologies Primary Ethernet*.

The *Merging Technologies Primary Ethernet Controller* (and / or *Secondary*) is the one used for TCP/IP communications.

If a Static IP has to be used, it has to be set on this adapter.

10 MassCore – **RAVENNA**

Certified Operating Systems (OS) for RAVENNA

Pyramix v15 MassCore in RAVENNA mode is certified under Windows 10 and 11 Professional (64-bit versions).

System Requirements

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

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

Please refer to the MassCore-RAVENNA recommendations (Quad-Core is the minimum requirement)

Required Hardware

The Merging Technologies NET-MSC-GBEX1 PCIe Ethernet controller card is required for MassCore – RAVENNA

Installing the Merging Technologies NET-MSC-GBEX1 PCIe Ethernet Controller Card

The NET-MSC-GBEX1 PCIe card can be installed in your computer before or after installing Pyramix v15.



Procedure

1. Power down your PC and switch it off at the wall. Remove the screws securing the top or side of the case and carefully slide off the panel.
2. An anti-static wristband is sensible precaution whenever working with sensitive electrical equipment. Keeping one hand on a metal part of the case will have the same effect, though you may need both hands when installing certain items of hardware.
3. Locate an empty PCIe slot and remove the metal backing plate by removing the screw holding it in place and carefully sliding it up and out. In some cases, there are no backing plates and you will need to remove a length of metal instead. Do this using a flat-blade screwdriver and/or pliers, taking care to avoid any sharp edges left behind.

4. Remove the NET-MSC-GBEX1 card from its protective anti-static envelope and align it with the vacant PCIe slot as shown below.



5. Push down, gently at first, ensuring you have the pins aligned correctly with the slot, and then apply more pressure to slot the card fully home.
6. Use the screw which was used to retain the backing plate to secure the card in place and check that the card sits comfortably.
7. Finally, replace the case cover(s) and switch the machine back on at the socket.
8. At the next power up and boot Windows will discover the Merging Ethernet PCIe card. Pyramix v15 can now be installed.

Required Software

In order to operate Pyramix with RAVENNA and Horus / Hapi / Anubis, Pyramix must be installed. The Pyramix v15 installer includes Apple Bonjour.

As of Pyramix v11.0.7 HotFix the installer no longer includes the ANEMAN application which now comes as a separate installer. Please download and install the latest ANEMAN in order to manage and monitor your AoIP devices from www.aneman.net/#download

Enter your Pyramix keys

Launch MT Security settings and enter your Pyramix v15 keys. Please see **Entering your Key(s)** on page 20.

Merging License Manager users must first enter their keys in the Merging License Manager application, then launch MT Security Settings to install MassCore.

Note: v15 keys are required and MassCore requires an RTX64 key in order to run RTX64.

Install MassCore

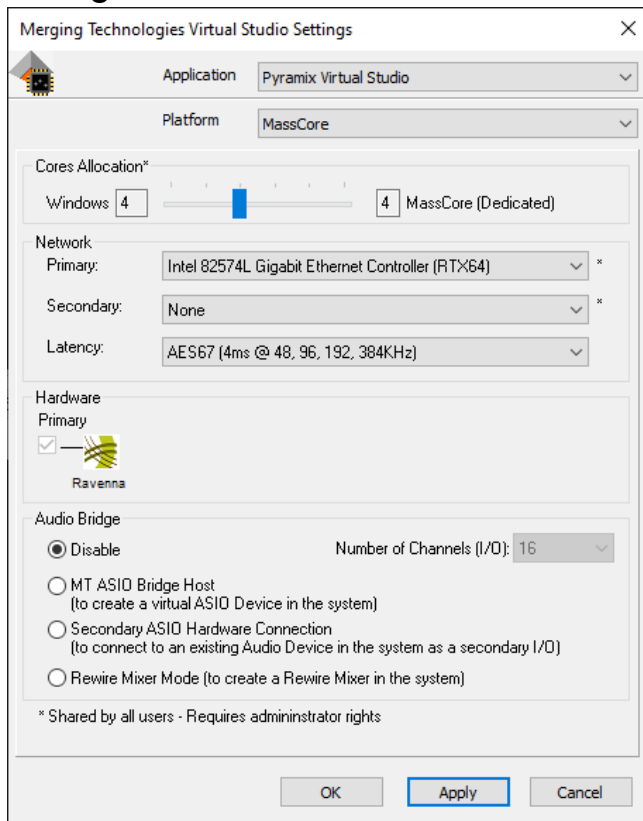
Please see **MassCore Installation** on page 22

Notes:

- A valid MassCore (Base) key and a valid MassCore 64-bit key are mandatory. Please make sure that you are in possession of a Safenet dongle or Cloud keys, with valid keys in order to operate Pyramix in MassCore-RAVENNA mode.
- The NET-MSC-GBEX1 Ethernet card requires MassCore in order to function.

- The NET-MSC-GBEX1 Ethernet card cannot be used for Native – ASIO RAVENNA.

Configure RAVENNA in the VS3 Control Panel



1. Launch the **VS3 Control Panel** (Start: All Programs > Merging Technologies > VS3 Runtime > VS3 Control Panel).
2. Select **Platform: MassCore**
3. **Cores Allocation:** Leave on the default setting for now.
For now, leave **Latency** on the default setting **AES67**.
4. **Audio Bridge:** Set as required (see Pyramix User Manual for details)
5. Click on the **OK** button.
6. When the VS3 panel **Do you want to save MassCore configuration?** dialog box appears, click on **OK**
7. The VS3 control panel will close.

Note: The VS3 Control Panel must be launched as Administrator to access the Cores Allocation and Primary / Secondary NIC settings

Before First Launch

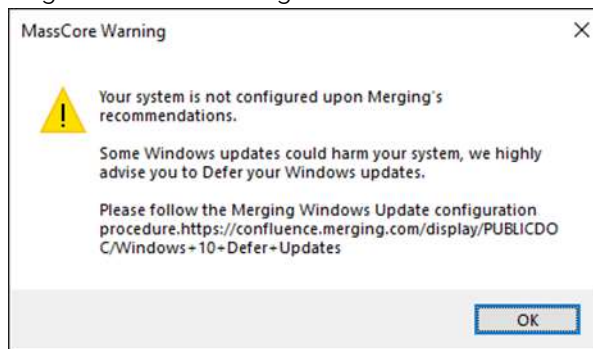
Before launching Pyramix v15, you must ensure that a **PTP Master*** is present on your RAVENNA/AES67 network.

Merging Technologies recommends using its **Horus**, **Hapi** or **Anubis** converters as PTP Master.

** The Precision Time Protocol (PTP) is a protocol used to synchronize clocks throughout a computer network.*

Notes:

- Core allocation and Network adapters can be modified if the VS3 Control Panel is started in Administrator mode (Run as administrator)
- RAVENNA mode supports all four Latency modes. (VS3 Control Panel)
To enable RAVENNA I/O connections please refer to Aneman and its user manual.
- Merging Technologies highly recommend Low Latency or AES67 modes for optimal performance. The Extra and Ultra latency modes should only be used on Merging Turnkey systems or approved configurations since these modes can be very demanding on performance, depending on system configuration and user workflow.
- Horus / Hapi / Anubis users should refer to their respective User Manual for configuration set-up with Pyramix.
- At the first Pyramix launch if your Windows update policy is not configured correctly, you might see the message below:



More details on the procedure to follow are available here:

<https://merging.atlassian.net/wiki/display/PUBLICDOC/Windows+10+Defer+Updates>

Troubleshooting and tips

RAVENNA: Horus / Hapi / Anubis & Network configuration

Merging recommend that the Ethernet MassCore card and Horus / Hapi / Anubis are configured to obtain an IP address automatically.

Setting Horus / Hapi / Anubis and Network Card to Obtain IP Addresses Automatically

Network Card

1. Open *Network Sharing Center* in the *Windows Control Panel*
2. Right-click on the *MassCore Ethernet card NET-MS-GBEX1* and open *Properties*.
3. Select **Internet Protocol Version 4, TCP/IPv4** (which is the only one activated) and click on *Properties*.
4. Select the **Obtain an IP address automatically** option.
5. Click on **OK** in each dialog to accept the changes and close the dialogs.

Horus / Hapi

1. Open the Horus / Hapi *Setup > Advanced > Network* page
2. In the *IP address* section select **Auto**

Anubis

1. Open the Anubis *Home* page (long push on Merging triangle logo)
2. Enter the *Settings > General* menu
3. Browse to the *Network* section.
4. Set Obtain an IP address setting to **Auto**.

Setting Fixed IP addresses

Note: For users running firmware prior to 3.9.3b38957, setting a Fixed IP is not recommended due to the fact that the Horus / Hapi Maintenance mode will be only be effective in Auto IP mode. This is mandatory for Firmware updates.

1. First, check the IP address of the Horus / Hapi device under *Setup > Network*.
For Anubis, open the *Settings > General* page and browse to the *Network* section.
To be able to see each other, the Merging Technologies Network card and Horus / Hapi / Anubis must be in the same range of addresses. (Example 192.168.xxx.xx).
2. The IP address of the MassCore Network card can be changed in *Windows Control Panel > Network Sharing Center > Change Adapter Settings*.
Right click on the *Merging Technologies Primary Ethernet Controller* and open *Properties*.
Select **Internet Protocol Version 4, TCP/IPv4** (which is the only one activated) and click on *Properties*.
Switch to **Use the following IP address** and enter an IP address that is in the same range as the Horus / Hapi / Anubis IP address. The *Subnet Mask* should be added automatically.
Click on **OK** in each dialog to accept the changes and close the dialogs.

Windows Firewall and UAC

If not configured correctly, Windows Firewall can block communication between MassCore and Horus / Hapi / Anubis.

Firewall

If you don't use the Windows firewall or if you encounter connection issues, please configure your Firewall.

See this page for further details

<https://merging.atlassian.net/wiki/spaces/PUBLICDOC/pages/4820536/Antivirus+and+Merging+Technologies+Softwares>

User Account Control

- Open the *Windows Control Panel* > *User Accounts* section and click on **Change User Account Control Settings**.
- Move the slider down to **Never Notify**.

Antivirus

- 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://merging.atlassian.net/wiki/display/PUBLICDOC/Antivirus+and+Merging+Technologies+Softwares>

11 Native - **ASIO/WDM**

Certified Operating Systems (OS) for RAVENNA

Pyramix v15 in ASIO Native mode is certified under Windows 10 Professional (64-bit) - Windows 11 Professional (64-bit)

System Requirements

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

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

Please refer to the Native recommendations.

Required Hardware

An ASIO device is recommended to run Pyramix in Native ASIO mode.

Alternatively, a Windows Audio WDM device can be used with the embedded WASM driver.

A Gigabit Ethernet controller card is required for RAVENNA/AES67 ASIO Native mode.

Installing the ASIO driver

Merging Audio Device driver - RAVENNA/AES67

Install the Merging Audio Device driver, by following the online instructions:

<https://merging.atlassian.net/wiki/spaces/PUBLICDOC/pages/4817924/Merging+Audio+Device+Installation>.

Note: At least one Merging technologies RAVENNA/AES67 device must be present on the network for the ASIO clocking.

The MAD replaces the previous RAVENNA ASIO Driver.

Third-party ASIO device

Download and install your third-party ASIO device driver according to its manufacturer instructions.

Note: The driver must be 64-bit compatible.

Third-party WDM device

Download and install your third-party WDM device driver according to its manufacturer instructions.

Note: The driver must be 64-bit compatible.

Configure ASIO in the VS3 Control Panel



1. Launch the **VS3 Control Panel** (Start: All Programs > Merging Technologies > VS3 Runtime > VS3 Control Panel)
2. Select **Platform: Native – ASIO**
3. **I/O Selection - Driver name:** Select your ASIO device from the drop-down list.
For WDM devices, please select the **Driver Name: WASM**.
The WDM device can then be selected in Pyramix/Ovation Settings – Audio device.
4. **Audio Bridge:** Set as required (see Pyramix User Manual for details)
5. Click on the **OK** button.
6. When the VS3 panel **Do you want to save ASIO configuration?** dialog box appears, click on **OK**.
7. The VS3 control panel will close.

The Inputs and Outputs present on the ASIO device will now be available in Pyramix.

12 First launch

Important! After installation has been completed, please reboot the PC before attempting to launch Pyramix Virtual Studio.

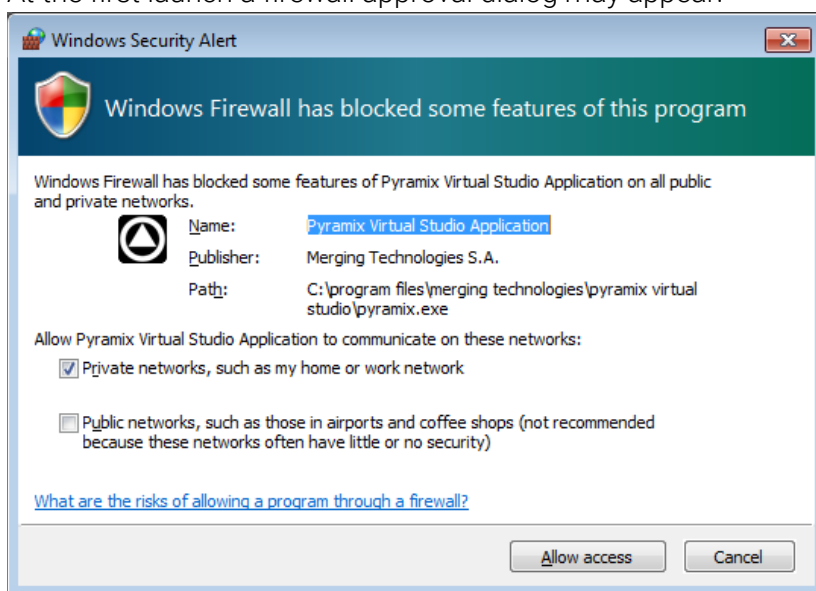
The VS3 control panel application must be properly configured before attempting to launch Pyramix Virtual Studio.

Launch Pyramix

Double-click on the Pyramix Virtual Studio desktop icon to launch Pyramix.

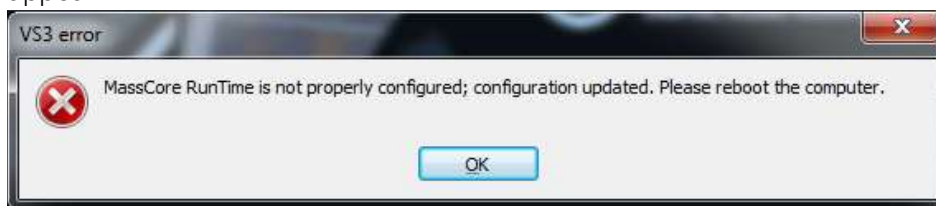
Notes:

- At the first launch a firewall approval dialog may appear:



Click on **Allow access** for both network types, since this is necessary to ensure correct Audio Connections and VT2 (Virtual Transport 2) functioning.

- At the first Pyramix launch and or after installing MassCore the following alert box may appear.

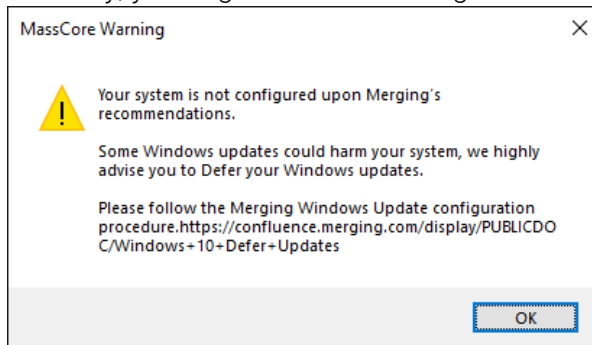


If it does, please reboot the computer one more time.

If after a computer restart this error message still appears, please follow the instructions in our knowledge base:

<https://merging.atlassian.net/wiki/display/PUBLICDOC/MassCore+Runtime+is+not+properly+configured+error+message>

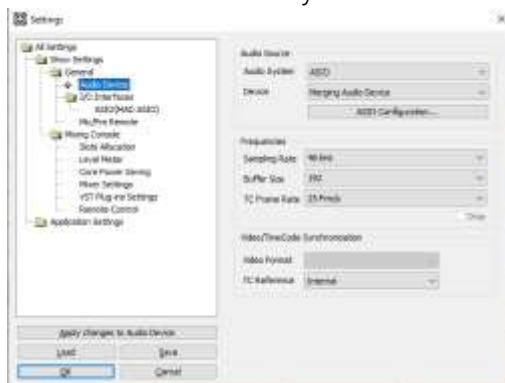
- At the first Pyramix MassCore launch if your Windows update policy is not configured correctly, you might see the message below:



More details on the procedure to follow are available here:

<https://merging.atlassian.net/wiki/display/PUBLICDOC/Windows+10+Defer+Updates>

- At the first Pyramix launch, if no ASIO device has been set in the VS3 Control panel, Pyramix will use the WASM driver.
- Since Pyramix 15, you can change your Native Audio Device in the Pyramix Settings > Audio Device > Audio System.



Note: Switching between Native and MassCore can only be done in the VS3 Control Panel, and requires an application or computer restart (if the system was not started with the MassCore boot line).

Documentation

The Pyramix User Manual is available from within the application and may be accessed via the Help menu or by pressing F1, or online at

<https://www.merging.com/support/downloads#pyramix>

13 Troubleshooting

Please visit regularly www.merging.com

And for the latest Troubleshooting Guide and FAQ sections

<https://merging.atlassian.net/wiki/spaces/PUBLICDOC/overview>

14 Lost or Stolen **Merging Technologies Security Keys**

(SafeNet USB Dongles)

The Merging USB Key carries all the value of your Merging software and the software license 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 license 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.)

15 Contacting **Merging Technologies**

International Office

Merging Technologies S.A.
Le Verney 4
CH-1070 Puidoux
Switzerland

For all documentation inquiries or suggestions for improvement:

<https://www.merging.com>

