VICON NEXUS

BEYOND MOTION

WHAT'S NEW IN VICON NEXUS 2.12?

WHAT'S INSIDE?

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About Vicon Nexus 2.12

Vicon Nexus 2.12 is a point release that provides features and enhancements in addition to those that were included in earlier releases of Nexus 2. For more information, see Nexus 2.12.1 new features, page 3 and Nexus 2.12 new features and functions, page 4.

Nexus 2.12.1 new features

Nexus 2.12.1 provides the following new features, in addition to those provided in Nexus 2.12:

- CGM2 version has been updated to v3.4.5, which includes these improvements:
  - Foot position adjustments
  - Foot scale updates to not calculate zero values
- The Oxford Foot Model has been updated: in the case where the two solutions to the quadratic are on the same side of zero, it takes the one with the largest magnitude.
- The version of ProEclipse that is installed with Nexus has been updated to version 1.4.1.

Nexus 2.12 new features and functions

Nexus 2.12 provides the following new features and enhancements:

Integrated workflow with Theia3D

Location: **Communications** pane > **Theia** tab > **Theia Batch Interface**

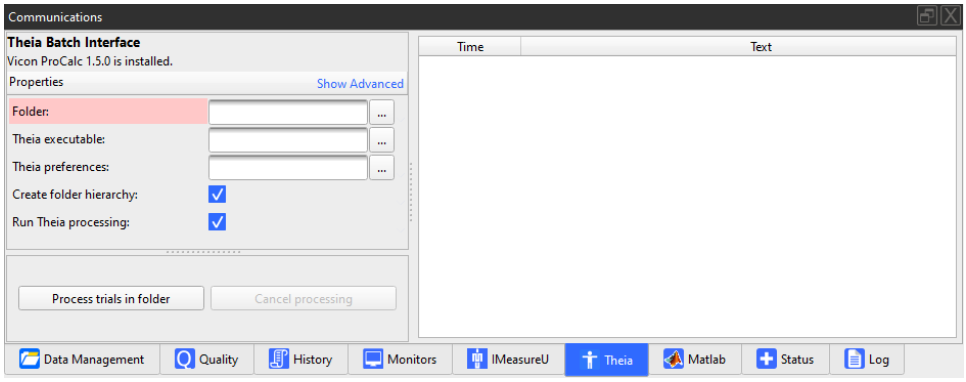
and

Tools pane > **Pipeline** tab > **Data Processing** operations > **Theia** operation

Vicon has partnered with Theia Markerless, Inc, to make available Theia-processed rotation information from video data captured with Vue cameras in Nexus.

Using the new Theia interface, you can process Nexus video data from within Theia3D, without having to launch Theia3D to process the data. You can then run Nexus pipeline operations to merge the video data from Theia3D with Nexus optical motion capture data and process it to produce joint outputs. This enables you to compare data from optical and markerless systems without having to leave Nexus.

From the Nexus **Communications** pane, you select the **Theia** tab to access the **Theia Batch Interface**. From here you can select multiple video files for processing. The files are processed through Theia3D, resulting in the output of C3D file(s) that contain rotation data for each subject. You can then run Nexus pipeline operations to merge the rotations into your Nexus PiG subject and to calculate the joint angles, all without leaving Nexus. The joint kinematics are calculated using Vicon ProCalc, so no additional third-party software (other than Theia3D) is needed.



You can also run Theia processing on one or more video trials, using the supplied **Theia** pipeline operation.

For more information, see Run Theia processing on video files in the *Vicon Nexus User Guide*.

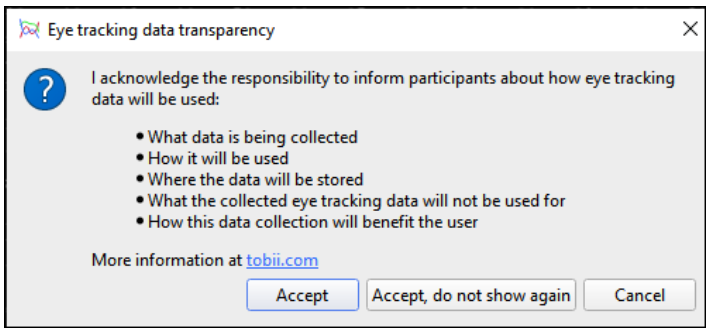
Integration with Tobii Pro Glasses 3

Location: **System Resources** tab > **Devices** > **Add Digital Device** > **Add Tobii Pro Glasses 3**

Previously, Nexus 2.10 and later let you integrate Tobii Pro Glasses 2 into your Vicon system, enabling you to output eye tracker position and gaze direction, with binocular gaze tracking.

In addition to offering integration with Tobii Pro Glasses 2, Nexus 2.12 adds integration with Tobii Pro Glasses 3.

With Nexus 2.12, when you first create a Tobii Pro 3 or Tobii Pro 2 device, a pop-up is displayed.



To continue, select from the displayed options:

- **Accept** - No further pop-ups are displayed until Nexus is restarted.
- **Accept, do not show again** - No further pop-ups are displayed until a later version of Nexus is used.
- **Cancel** - No device is created and the pop-up is displayed again if the you try to create a new Tobii device.

For information about setting up and using Tobii Pro Glasses 3 with Nexus, see Use Tobii Eye Tracker with Nexus in the *Vicon Nexus Reference Guide*.

> **Important**
> Before attempting to connect Tobii Pro Glasses 3, ensure that Bonjour is installed. (Bonjour installation is an option that is selected by default when Nexus is installed.) Also ensure that the Bonjour service is running (**Task Manager** > **Services** > **Bonjour Service**).

Python 3 compatibility

You can now run the Python SDK for Nexus in a Python 3 environment as well as in the current Python 2 environment.

> **Note**
> The example scripts that are supplied with Nexus are compatible with Python 2 only.

Updating your scripts

The Nexus API is supplied as a Python package, *viconnexusapi*. To make your existing scripts compatible, you must update them.

Replace the following import statement and variable definition:

UsingViconNexus.py

```
import ViconNexus
vicon = ViconNexus.ViconNexus()
```

with either this updated version:

UsingViconNexusAPI.py

```
from viconnexusapi import ViconNexus
vicon = ViconNexus.ViconNexus()
```

or the following one:

UsingViconNexusAPI2.py

```
import viconnexusapi
vicon = viconnexusapi.ViconNexus.ViconNexus()
```

An advantage of using the new package is that you no longer need to add lines to your scripts to update the *sys.path* with each new version of Nexus. The Python installed with Nexus will always contain the API version shipped with that version. However, if you install the package into another Python distribution, you are responsible for installing the appropriate version.

Installing the Nexus API into other Python distributions

The build of Python (Python 2) installed within Nexus automatically installs the package as part of Nexus. A script is also available with both the 32- and 64-bit installers, which installs the package into the system Python distribution. You can also directly install the package into any other Python distributions that you have installed.

Installing_viconnexusapi

```
cd "C:\Program Files (x86)\Vicon\Nexus2.12\SDK\Win32\Python"
# install the api into the system python
./install_vicon_nexus_api.bat
# install the api into a specific python distribution
<path to user python> -m pip install ./viconnexusapi
```

The advanced modeling scripts are provided as a package called *viconnexusutils* and are available in the same way as *viconnexusapi*, except that these scripts are not automatically installed. This is because they have additional dependencies that cannot be guaranteed to be present and must be downloaded by *pip*.

Launching the required Python

The shell launched by the python operation is either the Python distribution shipped with Nexus or your default Python (as determined by the PATH variable).

If the Python distribution shipped with Nexus is launched, the API package is automatically available for import, and additional scripts (eg, *ViconSetPython32Path.py*) are no longer required.

If you choose to use a Python that is different from the installed Nexus distribution, you can use a new advanced option to select the command used to launch Python. The options for this are **python.exe** or **py.exe**:

- If you have only a Python 2 **or** a Python 3 installation in the path, **python.exe** launches that version of Python.
- If you have both versions and the *pylauncher* utility, **py.exe** launches either Python 2 or Python 3, depending on a shebang comment at the start of the launched script.

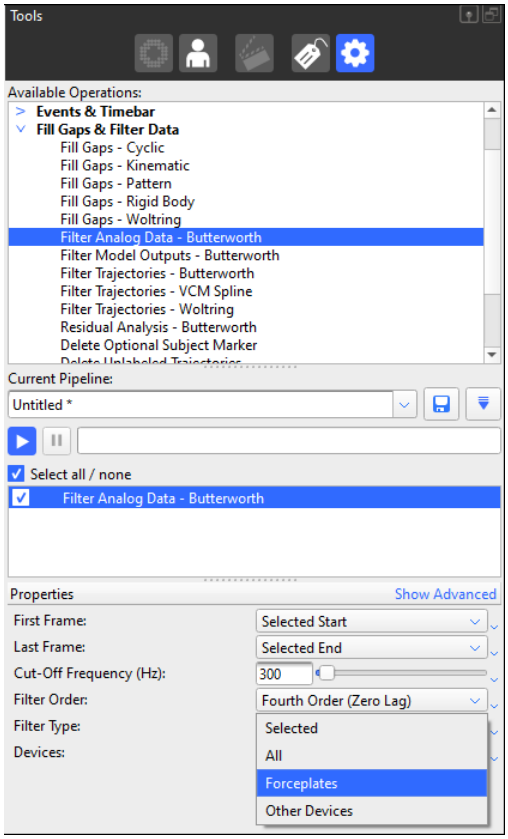
CGM2 Python version

CGM2 still launches using the version of Python 2 installed with Nexus.

New options for selecting devices for Filter Analog Data - Butterworth pipeline operation

Location: **Pipeline Tools** pane > **Fill Gaps & Filter Data** section > **Filter Analog Data - Butterworth** pipeline operation > **Properties** pane > **Devices** list

Two new options for the **Filter Analog Data - Butterworth** pipeline operation enable you to select force plates or other devices to which the operation is applied.



To select the new options:

1. Ensure the data that you want to filter is loaded in Nexus.
2. In the **Pipeline Tools** pane, expand **Fill Gaps & Filter Data** and select the **Filter Analog Data - Butterworth** pipeline operation.
3. Double-click to add it to the current pipeline and then select **Filter Analog Data - Butterworth**.

4. In the **Properties** pane, select the required options and in the **Devices** list, select either **Selected**, **All**, **Force Plates** or **Other Devices**.
   - **Force Plates** - Applies the filter to force plates that are connected to your system.
   - **Other Devices** - Applies the filter to all other devices (except force plates) that are connected to your system.
5. Run the **Filter Analog Data - Butterworth** pipeline operation on your data.

CGM2 update

Location: **Pipeline Tools** pane > **Data Processing** operations

The latest version of CGM2 (version 3.4.3) is installed with Nexus 2.12.

Updates including the following have been added to CGM2:

- Ability to enter thigh rotation
- Scalar model outputs
- Detection of missing markers

In addition, a number of issues have been addressed, including a correction to the head and thorax bones scale and position.

For more information, see What's new in CGM2? in the *Vicon Nexus Reference Guide*.

Customize floor grid dimensions and offsets

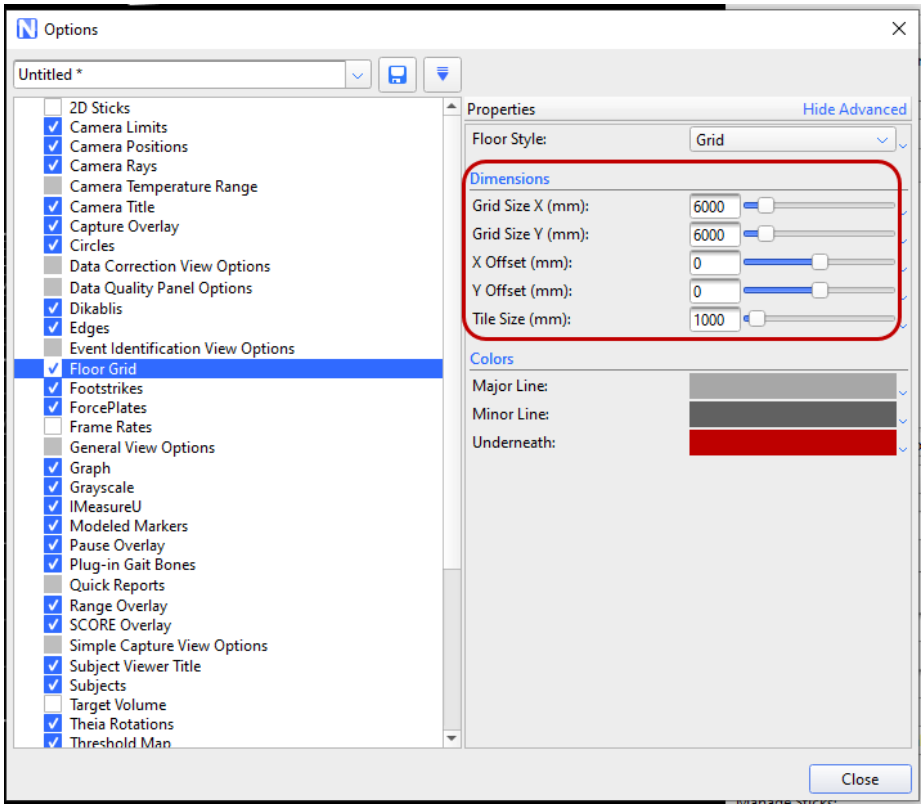
Location: **Window** menu > **Floor Grid** > **Properties** pane > **Dimensions** section

You can now use non-square layouts and offset the center of floor grids.

- A new maximum of 50 m now applies to both the x and y axes.
- You can save customized floor grids for future use.
- Old saved options files will load correctly and transfer their settings to the new parameters.

To change the floor grid:

1. In the **Options** dialog box (click **Window** > **Options**, or press F7), select **Floor Grid** and in the **Properties** pane on the right, click **Show Advanced**.
2. In the **Dimensions** section, change the grid size and/offset in X and Y as required.

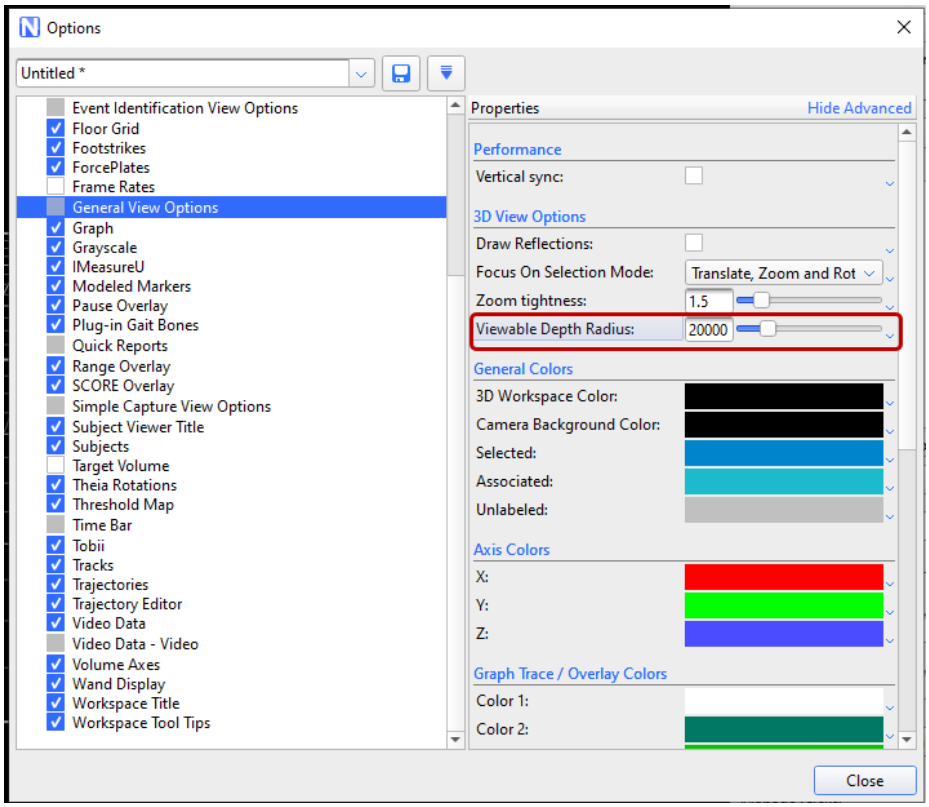


> **Note**
> This functionality is available only in Nexus 2.12 and later. Earlier versions of Nexus 2 do not read the new files correctly and the floor grid returns to the default size.

If you make the floor grid so large or extend the offsets so far that the grid doesn't render at the far end, you can increase the viewable depth.

To increase the viewable depth:

1. In the **Options** dialog box (click **Window** > **Options**, or press F7), click **General View Options**.
2. In the **Properties** pane on the right, click **Show Advanced**.
3. Under **3D View Options**, change the **Viewable Depth Radius** value (default is 20000 mm).



Support for Blue Trident Firmware 10 (and Firmware 9)

Blue Trident Firmware 10 provides support for the new 8 GB memory chip and for the current 4 GB memory chip. New features have been introduced for IMU Step and Capture.U and a number of issues have also been addressed.

Nexus 2.12 supports both Blue Trident sensors running Firmware 9 and sensors running Firmware 10.

> **Note**
> If you use Blue Trident sensors for Nexus only, you don't need to upgrade to Firmware 10 (Blue Trident sensors with the 8 GB memory chip use Firmware 10 as supplied).

Requirements and upgrading

For information about requirements and systems supported for this version of Nexus, see:

- Requirements for Nexus 2.12, page 17
- Systems supported for Nexus 2, page 19
- Upgrading Nexus, page 20

> **Note**
> The Vicon motion capture system and the Nexus software, manufactured by Vicon Motion Systems Limited, have been tested prior to shipment and meet the metrological requirements as detailed in the Medical devices directive.
> (See *Regulatory information* in the Nexus documentation area of the Vicon website, docs.vicon.com/[1].)

1 http://docs.vicon.com/

Requirements for Nexus 2.12

Note the following requirements for Nexus 2.12.

- Operating systems for Nexus 2.12, page 17
- Basler video cameras and Nexus 2.12, page 18
- MATLAB and Nexus 2.12, page 18
- ProCalc and Nexus 2.12, page 18
- Vicon IMUs and Nexus 2.12, page 18

For information on graphics cards, see Graphics processors for Nexus, page 25.

For information on optimizing performance for AMD CPUs, see Improving system performance on AMD CPUs[2].

Operating systems for Nexus 2.12

Nexus 2.12 is supported under the following operating system:

- **Microsoft Windows 10, 64-bit** (this is the Vicon-recommended OS): Compatible with and fully supported. Installation, software operation and required third-party drivers tested.

Although Nexus may install and function under other Microsoft Windows operating systems, Vicon does not support or recommend this.

2 https://docs.vicon.com/display/Connect/Improving+system+performance+on+AMD+CPUs

Basler video cameras and Nexus 2.12

If Basler digital cameras will be connected to Nexus 2.12, ensure you have updated to the Basler Pylon5 SDK and drivers (v5.0.0), which are available from the Vicon website.

If you are using an Intel i340, i350 or i210 network card, when you install the drivers, select the option for **Filter drivers**, not **Performance drivers**.

> **Important**
> The Pylon5 driver supports Basler GigE cameras under Windows 10.

MATLAB and Nexus 2.12

If you are planning to use MATLAB with Nexus 2.12, ensure that, in addition to installing MATLAB, you install the .Net Framework version 4.5[3] or later.

ProCalc and Nexus 2.12

To run ProCalc with Vicon Nexus 2.12, you must install ProCalc 1.2.1 or later.

Vicon IMUs and Nexus 2.12

To update IMU firmware for Nexus 2.12, use Vicon Capture.U Desktop. For information, see the Vicon Capture.U User Guide[4].

3 https://www.microsoft.com/en-gb/download/details.aspx?id=30653
4 https://docs.vicon.com/display/IMU

Systems supported for Nexus 2

Before you install Vicon Nexus 2.12, note the following limitations on supported systems:

- Nexus captures data only from Vicon systems (including Vicon Vero and Vicon Vue, Vicon Vantage, Vicon Bonita, Vicon T-Series, and MX+ and MX cameras and units).
- Nexus 2.12 does not support connection to the Reference Video System (Nexus Slave application).

Upgrading Nexus

This section describes functionality that is dependent upon the version of Vicon Nexus that is being upgraded:

- Upgrading from Nexus 2.7 and earlier, page 20
- Upgrading from earlier versions of Nexus 2, page 21
- Upgrading from Nexus 1.x, page 22

> **Note**
> Although data collected in Nexus 2.12 (ie, . *c3d* files) can be viewed in earlier releases of Nexus, you cannot reprocess this data (ie, . *x2d* with . *xcp* files) in releases earlier than 2.7.

Upgrading from Nexus 2.7 and earlier

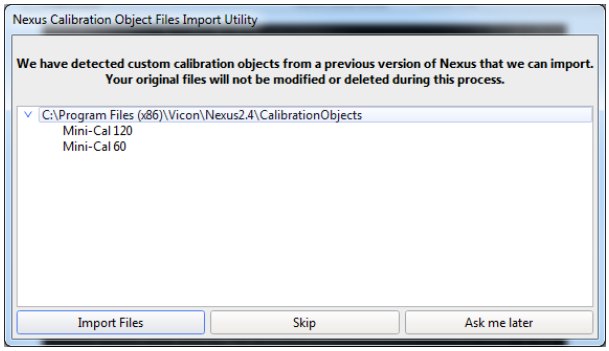
Improvements to camera calibration that were provided by Nexus 2.7 have the following effects on compatibility of data between releases:

- Data collected in earlier releases of Nexus can be reprocessed in Nexus 2.12 because calibration (*.xcp*) files that were created in earlier releases are fully compatible with Nexus 2.12. Note that if you load a calibration (*.xcp*) file that was created in an earlier release of Nexus into Nexus 2.12 and save it, Nexus maintains its compatibility with earlier releases.
- You can use earlier releases of Nexus to view data that was collected in Nexus 2.12 (that is, you can open Nexus 2.12 *.c3d* files in Nexus 2.7 and earlier).
- However, calibration (*.xcp*) files that are created in Nexus 2.12 are not backward-compatible, that is, they cannot be read by releases of Nexus earlier than 2.7, and loading will fail if attempted.

Upgrading from earlier versions of Nexus 2

If you are upgrading from a previous version of Nexus 2, during installation a dialog box gives you the option of adding the **Auto Intelligent Gap Fill** button and/or the **Add to Quick Report** button to your Nexus toolbar. For more information on these features, see Automatically fill gaps in trial data in the *Vicon Nexus User Guide* and Quick Reports in the *Vicon Nexus Reference Guide*. To add the additional button(s) to your toolbar, click **Upgrade Files**.

On first launch, Nexus 2.12 scans the installation directories of earlier versions of Nexus 2 and offers to automatically transfer custom objects that it finds.



If you click **Import Files**, Nexus 2.12 copies custom calibration objects from earlier versions of Nexus (2.0 and later) to the **Public Documents** folder (eg *C:\Users\Public\Documents\Vicon\Nexus2.x\CalibrationObjects*).

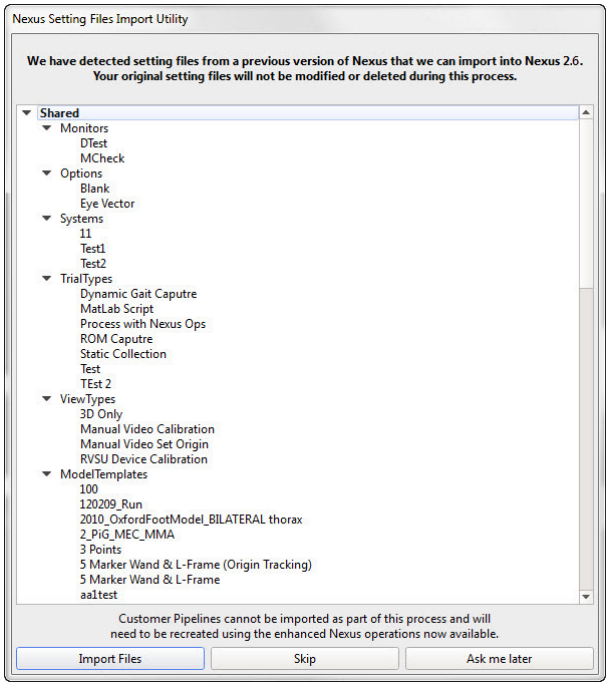
> **Important**
> When you create new custom calibration objects, ensure you save them into this folder (not to the Nexus installation folder), so that they are available to future versions of Nexus.

Upgrading from Nexus 1.x

> **Note**
> This section applies only to versions of Nexus that are earlier than 2.0.

Nexus 2.12 installs into its own folder, called *Nexus2.12*. If you already have Nexus 1.x installed, it will remain installed alongside the new Nexus installation.

On installation, Nexus 2.12 automatically scans for Nexus 1.x files, displays a list of any older files that it finds, and provides an automated system for importing these into Nexus 2.12.



This process copies all the old files and converts the copies, ensuring that original files are not moved, altered, or destroyed.

> **Important**
> Custom pipelines are not copied from earlier versions of Nexus, so if you want to use your old pipelines, copy them from the following Vicon product installation folder (by default in *C:\Program Files (x86)\Vicon* or *C:\Program Files\Vicon*):
> *\Nexus\WorkstationPlugins*
> and paste them to the following location in the Vicon production installation folder (by default in *C:\Program Files (x86)\Vicon* or *C:\Program Files\Vicon*):
> *\Nexus2.#\LegacyPlugins*
> They will then be available in the **Legacy** pipeline operations in Nexus 2.12.

For more information on the installation and licensing process, see *Installing and licensing Vicon Nexus*.

Regulatory information

For Vicon Nexus regulatory details, see Vicon Nexus regulatory information in the Nexus documentation area of the Vicon website (docs.vicon.com[5]).

5 http://docs.vicon.com/

Graphics processors for Nexus

Nexus is tested and fully supported with NVIDIA graphics processors. This is the Vicon-recommended graphics processor for PCs that are to run your Vicon system and Nexus software.

Using other graphics processors is not recommended and may affect the performance of the software.

If you experience issues with the software and you have been informed by Vicon Support that this is due to the graphics processor, note these points:

- Issues can occur when you first start the software, or may be due to a driver or Windows update.
- If you previously had a working configuration, consider rolling back the driver version or restoring Windows to a working restore point.
- Some laptops have both a dedicated graphics processor and an integrated processor. You can select the processor for use by an application. You can usually find the option for this by right-clicking the application's shortcut. You can find further general controls in the NVIDIA control panel.

If an NVIDIA processor is not available and you experience a software crash, the following workaround may help. It involves installing an additional file to the Nexus program directory. To do this, you need read/write access to this location and may require the help of an administrator.

1. Download and unzip the file found in the OpenGL section at the bottom of this page[6].
2. Rename the file to *opengl32.dll*.
3. With Nexus closed, place the *opengl32.dll* file in the folder that contains the Nexus executable (*Nexus.exe*), for example:
   C:\Program Files (x86)\Vicon\Nexus2.12
4. Launch Nexus.
5. Repeat Step 3 for any other instances of Nexus.

6 https://www.vicon.com/software/nexus/?section=downloads

This solution mitigates any crashes experienced whilst you're running Nexus, however, performance, such as redraw and general navigation, may be adversely affected. This solution has been tested on a limited number of Intel graphics cards for Windows 10.

Addressed issues

Issues addressed in Vicon Nexus 2.12.1

- Markers are now correctly displayed in the 3D workspace after a Quick Report is generated, with no unwanted lines.
- Tobii Pro (2 and 3) Eye Tracker data is displayed in the 3D workspace when the kinematic fit is applied upon loading a C3D file. This also includes trials when devices are sampled at higher frame rates.
- Update to the SDK command for GetDeviceDetails when using Tobii Pro (2 and 3) Eye Tracker.
- Frame rate in the Status pane is now updated when streaming data, as well as when connected to a live system.
- Theia plugin can be disabled.
- Update to the unit label on the Vicon Blue Trident accelerometer data when writing C3D files.
- Timebar now resets after batch processing to enable current frame updating in event identification mode.
- Subject parameter requirements updated for the Hybrid CAST Visual3D Ai VST.
- Deleting multiple AVI files within ProEclipse removes all those files within the session folder.
- ProEclipse error messaging has been updated.

Issues addressed in Vicon Nexus 2.12

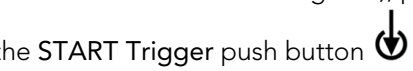
- When a high number of IMU sensors are rendered to screen, Nexus no longer stops working.
- If a C3D has groups added to the Parameter section, they are now added in the correct location and with the correct parameters.
- When you run a CGM2 pipeline operation in Nexus and generate a MKR file, the head and thorax that are visualized in Polygon's 3D workspace are now correctly scaled.
- If you run CGM2 when scalar model outputs are present (eg, after running the Oxford Foot Model), CGM2 no longer terminates with errors.

Known issues

The following issues are known to exist in this release.

(For information on CGM2 issues, see Known issues for CGM2 in the *Vicon Nexus Reference Guide*.)

Description	Workaround
The example scripts that are supplied with Nexus are compatible with Python 2 only.	None. Use Python 2 to run the scripts.
If you have opened Theia outside of Nexus, and then try to run Theia processing through Nexus, the trials are not processed.	Before running Theia processing from Nexus, close any other instances of Theia that are currently running.
When you're using Tobii Pro Glasses 3, if the glasses are disconnected from an Ethernet connection and then reconnected, in Nexus, the device continues to be displayed as not contributing (with a gray Play icon) and it stops sending data.	To return the device to full functionality, perform a manual resync. To do this: • In the Nexus System tree, right-click **Local Vicon System** and then click **Resynchronize**.
The sample rate value for AMTI Force Plates displayed in the System tree doesn't match the **Acquisition rate** that is selected in the Properties of the AMTI Devices Controller. Except in the case of the initial value, the sample rate that is displayed in the **System** tree is the last selected **Acquisition rate**, not the current rate.	In the Properties of the AMTI Devices Controller, temporarily change the value (up or down) for **Fz Threshold**. The sample rate for the force plates in the System tree changes to match the selected **Acquisition rate** of the AMTI Devices Controller.

Description	Workaround
When you select a connected Delsys Trigno EMG digital device and in its Properties, set the **Trigger Mode** to Triggered and then configure the correct sync port, the Delsys device disconnects, and in the **System** tree, its icon goes gray. Devices do not reconnect until you set the **Trigger Mode** back to Not Triggered.	1. In the Nexus System tree, right-click **Local Vicon System** and then click **Resynchronize**. 2. Wait for the Delsys device icon(s) to go green and during the next 4–5 seconds (while the device icons are green), press the **START Trigger** push button  at the top right (below the power indicator) on the Delsys Trigger Module. Delsys devices stay connected and green, synchronized and ready to capture a trial.
When you're using a Blue Trident sensor to capture movement, and have Global Angle selected, global angles are streamed, but both global angles and 9-axis raw data is captured to the sensor.	None
When you're using Vicon Blue Trident sensors, at high device counts, some sensors begin to drop packets, so some flickering may be observed in the view pane.	When working with a large number of sensors, reduce the Bluetooth stream rate or the number of enabled axes. This issue does not affect the data recorded to the device.
If you drag the **Report Options** pane to outside of the **Nexus Quick Reports** window and release the mouse button, then try to drag it back, it does not re-attach inside the **Nexus Quick Reports** window.	To restore the **Report Options** pane to its previous docked location, double-click its title bar, then drag it to the required position within the **Nexus Quick Reports** window.
The **Nexus Quick Reports** window does not have a Close button.	To close the window, press F4.

Description	Workaround
A crash can occur if any Noraxon EMG error messages are not dismissed before shutting down Nexus.	Dismiss all Noraxon EMG error messages before exiting Nexus.
When run via the Run Python operation, the Load Trial command in the Python SDK is not able to load a trial.	Run the Python script from IDE or command line.
Some of the latest versions of the FFDShow video encoder fail to work properly.	Vicon recommends the use of ffdshow_rev3562_20100907.
Running a legacy VPI operation removes non-standard model outputs.	Use the equivalent native operations.
AMTI digital device plugins missing required dependencies.	For AMTI Digital Device V1_00.vdd, download Microsoft Visual C++ 2008 SP1 Redistributable Package (x86) from https://www.microsoft.com/en-gb/download/details.aspx?id=5582 For AMTI Digital Device V1_10.vdd, download Microsoft Visual C++ 2010 Redistributable Package (x86) from https://www.microsoft.com/en-gb/download/details.aspx?id=5555
Basler cameras do not work under Windows 10 with Pylon drivers earlier than Pylon5.	If Basler cameras will be connected to Nexus 2.5 or later, update to the Basler Pylon5 SDK and drivers (v5.0.0), which are available from the Vicon website.
Device drivers for Cometa/Wave depend on your Windows version.	For Windows 10 device drivers, contact Cometa.
When the system frame rate is set above 80Hz, if you enable Preview mode, no preview is displayed for Vicon Vantage cameras (the **Camera** view is blank).	To use Preview mode with Vantage cameras, select a system frame rate below 80Hz.

Description	Workaround
When you right-click the **Devices** node on the **System Resources** pane, Noraxon is not available in the **Add Digital Device** menu.	When you install the Noraxon plug-in (ViconInterfaceForNoraxon - v1.0.2.1.msi), change the installation path to C:\Users\Public\Documents\Vicon\Nexus2.x\DigitalDevices\
Noraxon Telymyo DTS device halts camera and analog data delivery when Noraxon devices are housed/not charged.	Digital devices now have an **Enabled** parameter in their **Properties** pane. To prevent a given manufacturer's plugin from holding up the rest of Nexus, clear **Enabled** for ALL devices from that manufacturer.
Unable to run legacy Static Gait Model under Japanese Windows. Log entry reads: No parameter file found	The legacy Plug in Gait model does not support international character sets. Instead of using the legacy Plug-in Gait model, use the native Nexus 2 replacement gait model (found under **Data Processing** pipeline operations: **Process Static Plug-in Gait Model** and **Process Dynamic Plug-in Gait Model**).
Export c3d at the end of a pipeline does not clear the trial and leaves the trial with a dirty flag (*).	The **Export C3D** operation does not write out the subjects associated with the trial. To remove the dirty flag on a trial, save the entire trial, which saves all associated files (x2d, xcp, etc), using the **Save Trial - C3D + VSK** operation.
Video capture duration can be limited directly after deletion from SSD storage.	After deleting your video files, wait a few seconds before starting your next capture. This is because some Solid State Drives require a few seconds to recover full Write speed after file deletion.
Spaces in variable names can cause BodyLanguage to fail.	When creating subject parameters for use in BodyLanguage modeling, use underscores instead of spaces.
Nexus can suffer many problems if Eclipse databases are created in locations that are Read-only. These problems range from data silently failing to save to crashes.	NEVER create Eclipse databases in locations that require administrator privileges to read or write.

Description	Workaround
Starting a capture very soon after a change to the system frame rate, or a resynchronization, can result in erratic capture behavior (failure or dropped frames).	Avoid starting captures soon after changing the hardware setup.
PAL or NTSC camcorders are included in Active Wand camera calibration if the MX system is set to run at the same standard (i.e. PAL or NTSC).	Before performing active wand camera calibration, disable the camcorders.