



Tangent Hub

Installation Manual Rev 33



Check www.tangentwave.co.uk/support for updates.

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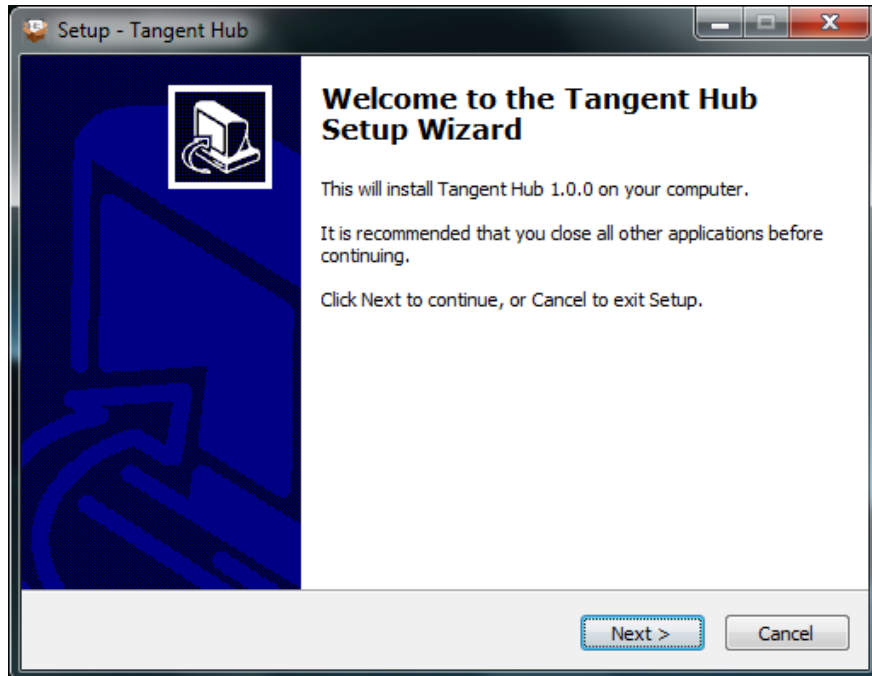
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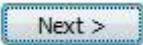
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1. Installation procedure for Microsoft Windows

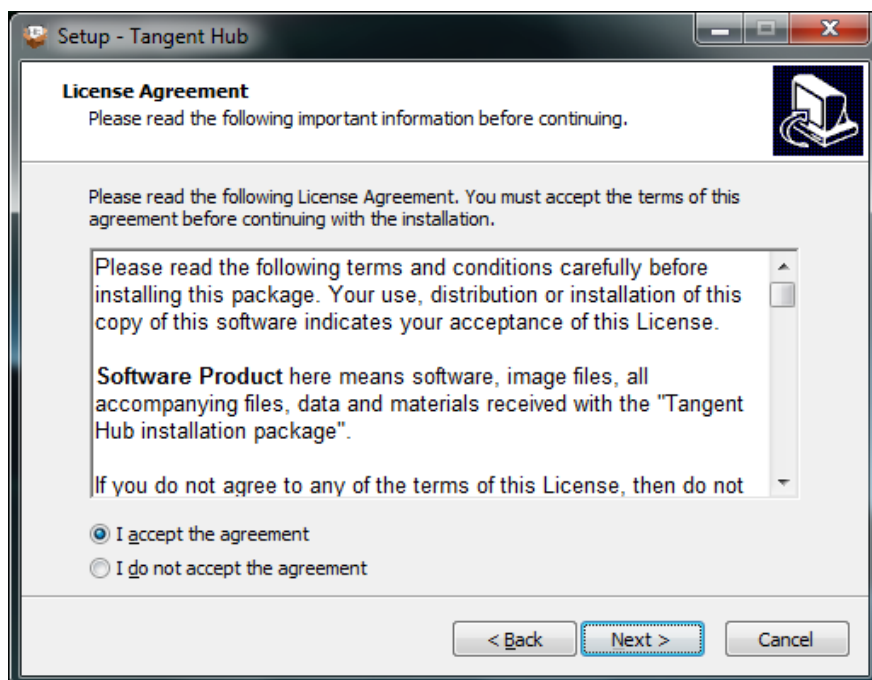
First download the latest package from our website: www.tangentwave.co.uk/support

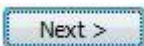
The file is an executable so just double-click to start (administrator account required).



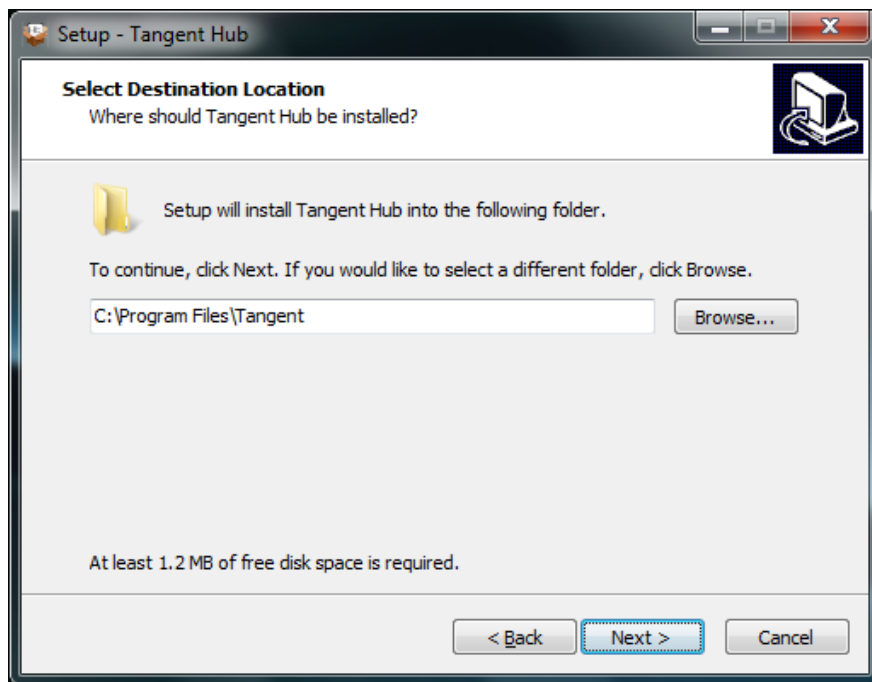
Click  to continue.

Please read the license agreement and click in the appropriate box.

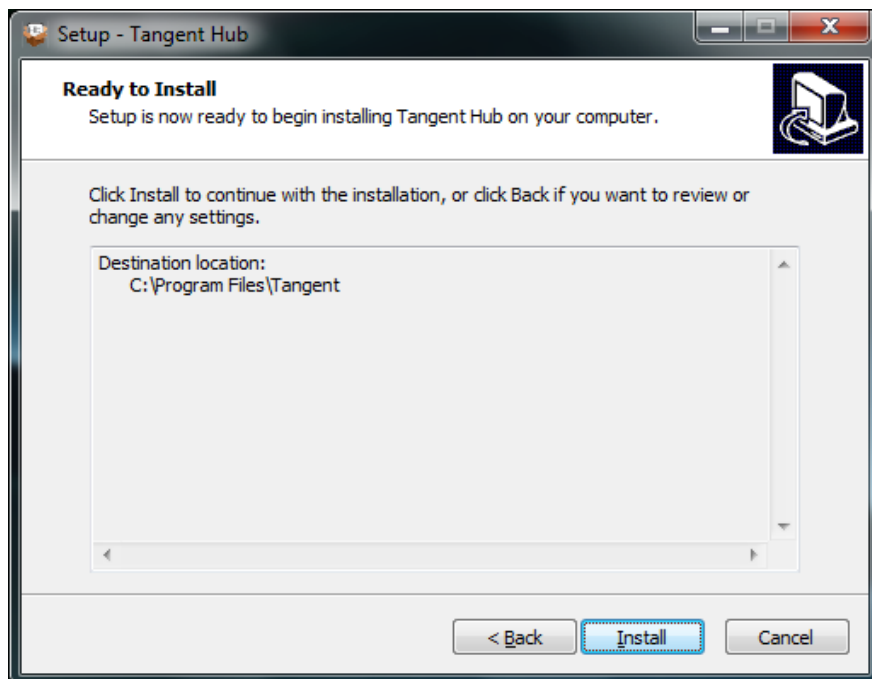


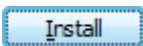
If you have chosen to accept the agreement, click  to continue.

You will now be prompted to choose the installation location.

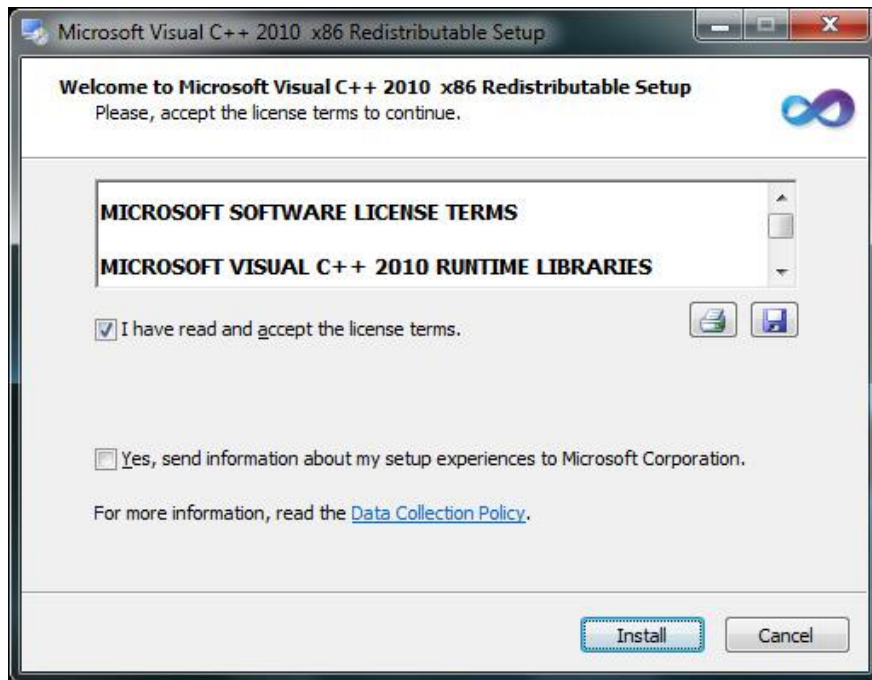


After you have selected the folder click  to continue.



Click  to start the installation process.

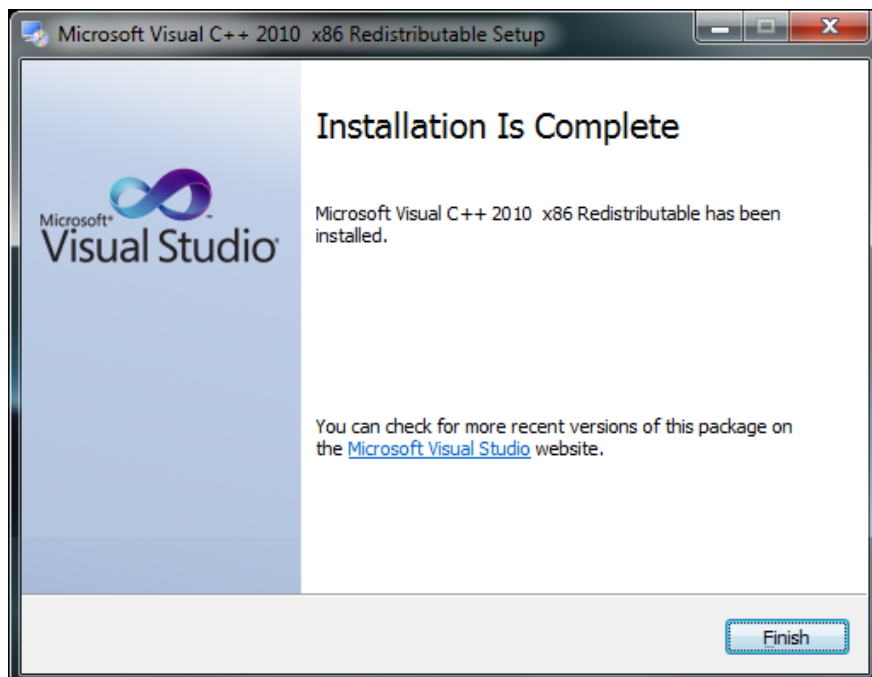
If you do not have the Microsoft Visual C++ 2010 Redistributable package installed on your PC then you will now see the following screen.



The Tangent Hub requires this extension from Microsoft to be installed. Read the license and check the box.

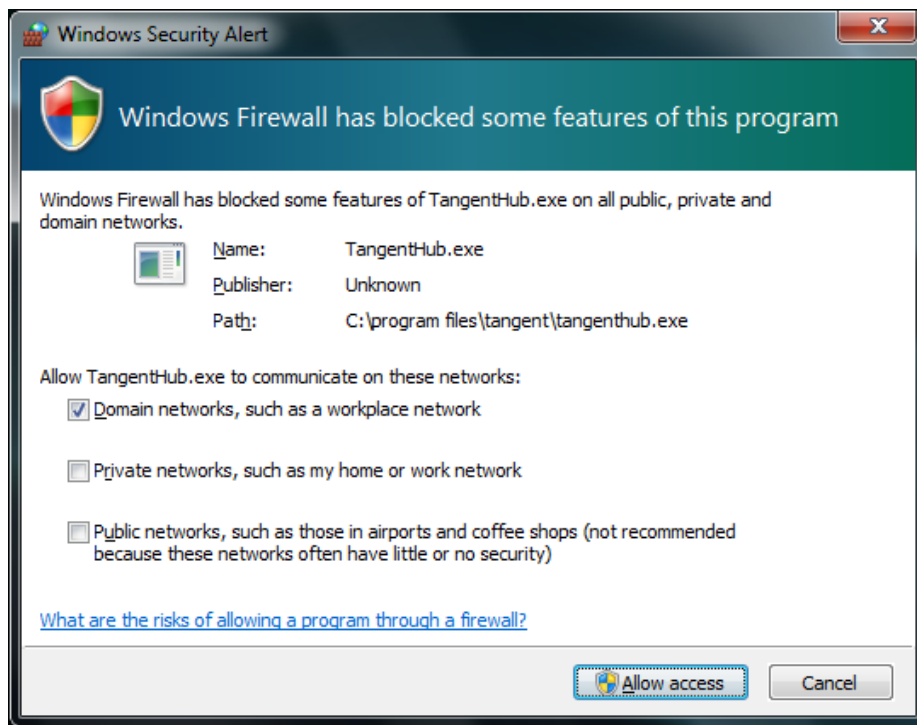
Click  to install the package.

Once the package is installed you will see the following screen.



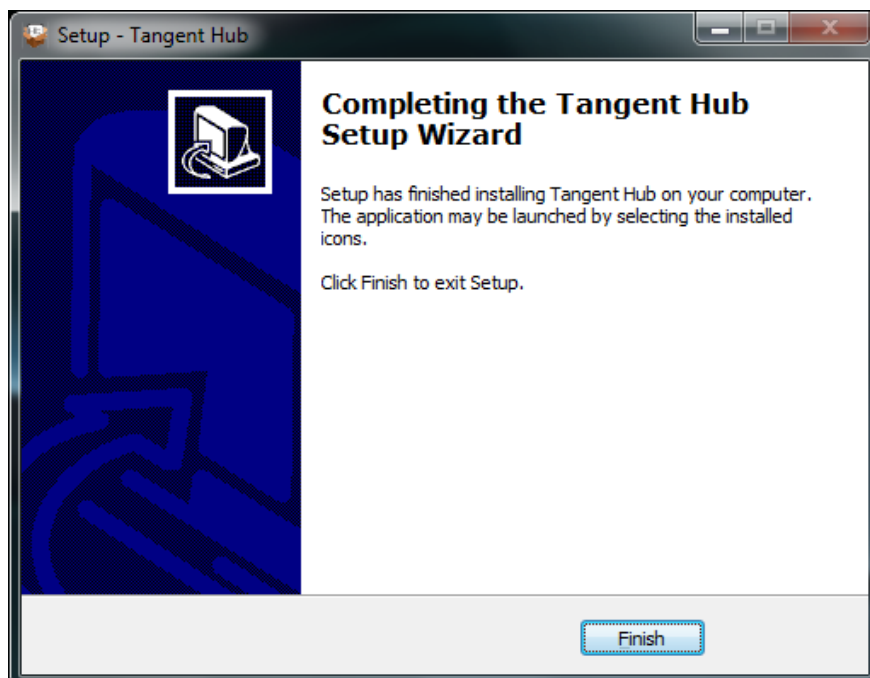
Click  to continue.

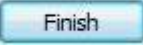
Depending on your firewall settings you may see the following screen.



Click  to continue.

Once the setup is complete you will see the following screen.



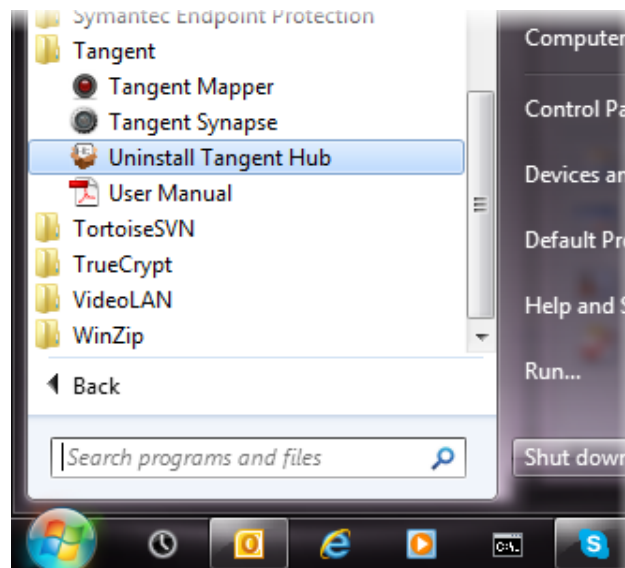
Click  to complete the process.

The Tangent Hub is now installed and runs automatically in the background every time your PC is started.

Please consult the manual for your software application to determine if any configuration is required to enable communication between the application and the Hub.

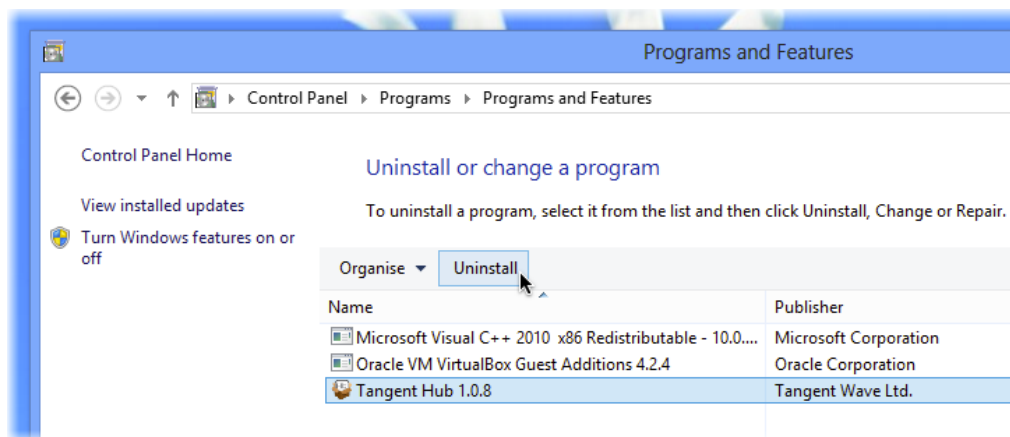
1.1 To Remove

For Windows XP and Windows 7, open the Start Menu and navigate to the folder in which you installed the Hub.



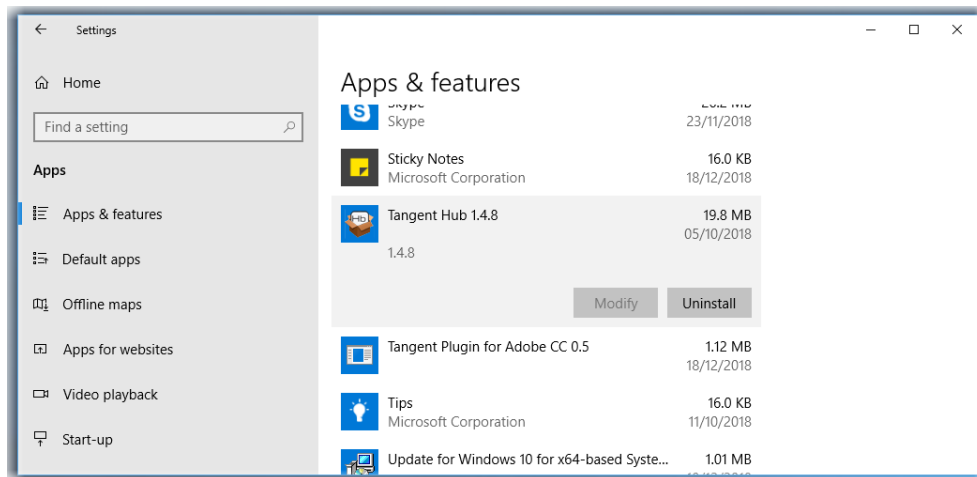
Choose **Uninstall Tangent Hub** and follow the instructions.

For Windows 8, open the Control Panel from the Settings menu and choose the 'Programs: Uninstall a program' option.



Select the **Tangent Hub** entry, then click on Uninstall and follow the instructions.

For Windows 10 open the settings window and choose the 'Apps' section heading.

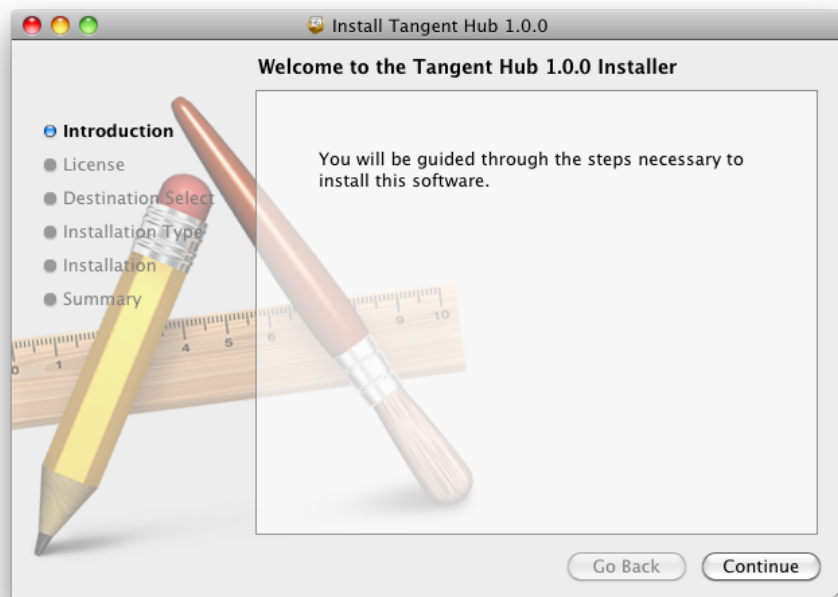


Select the **Tangent Hub** entry, then click on Uninstall and follow the instructions.

2. Installation procedure for macOS

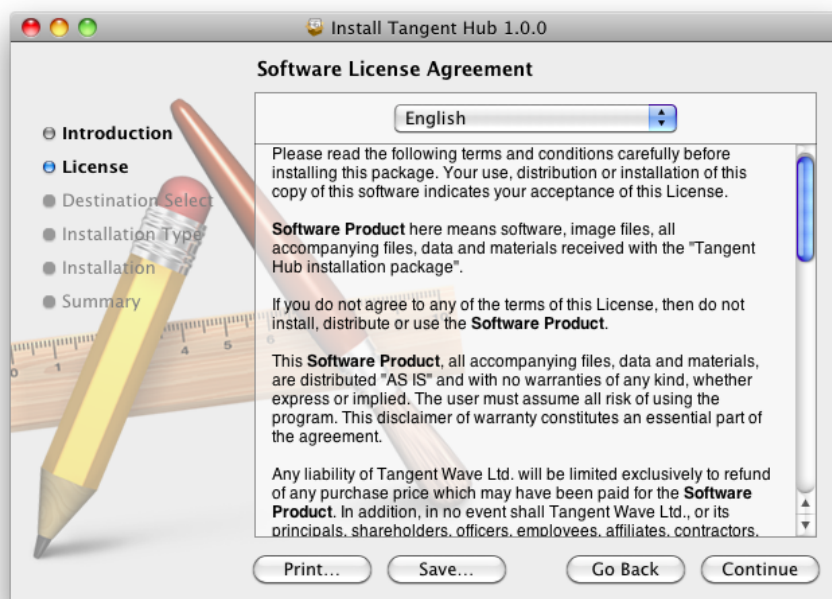
First download the latest package from our website: www.tangentwave.co.uk/support

The file is an executable so just double-click to start.

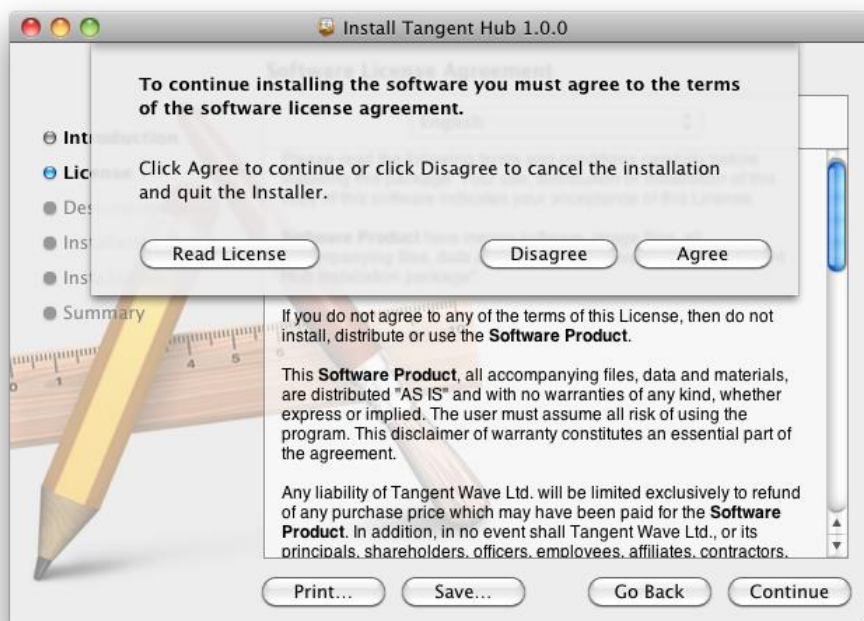


Click on **Continue**.

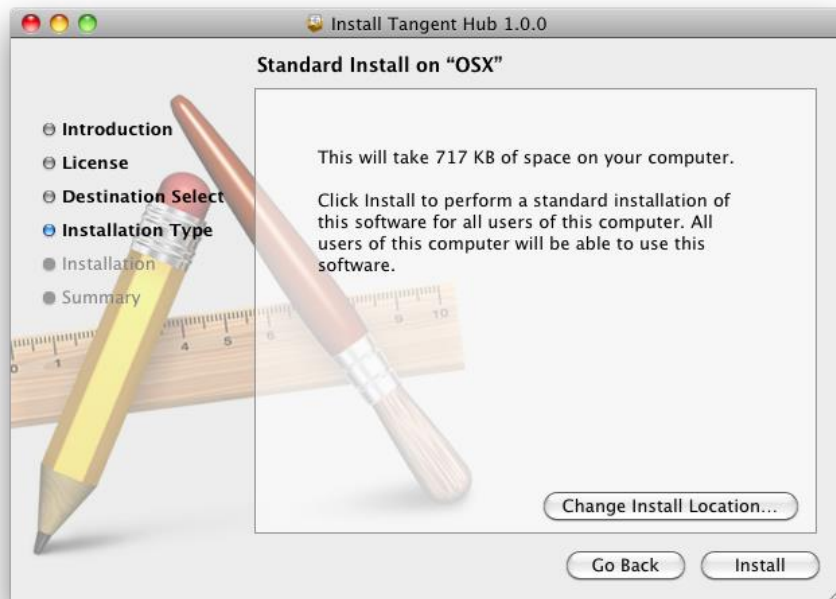
Please read the license agreement.

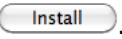


If you have chosen to accept the agreement, click on **Continue** and then **Agree**.



You will now be prompted to choose the installation location or to accept the default.



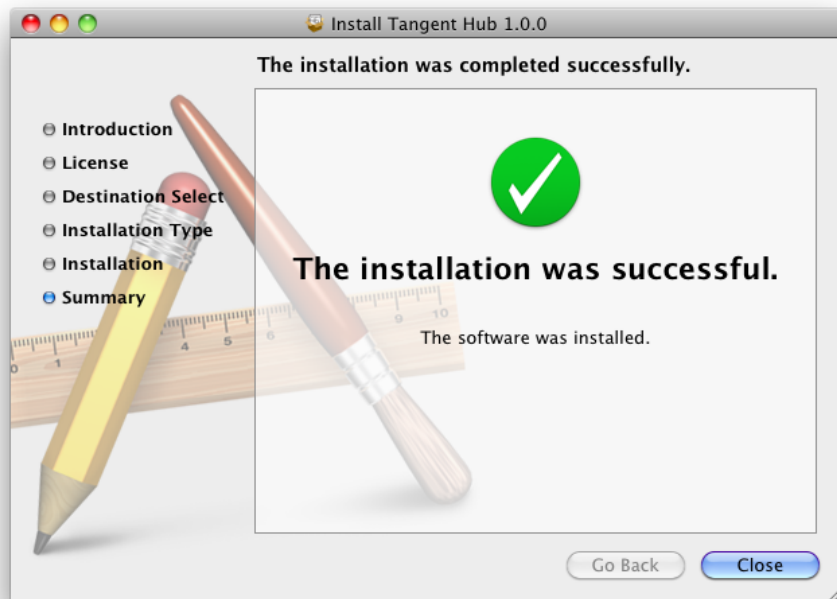
After you have selected the location click on .

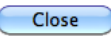
You will then be prompted to enter an administrator name and password to continue with the installation.



Enter the required details and click on  to start the installation process.

Once the package is installed you will see the following confirmation.



Click on  to complete the process.

Depending on your firewall settings you may see the following screen.

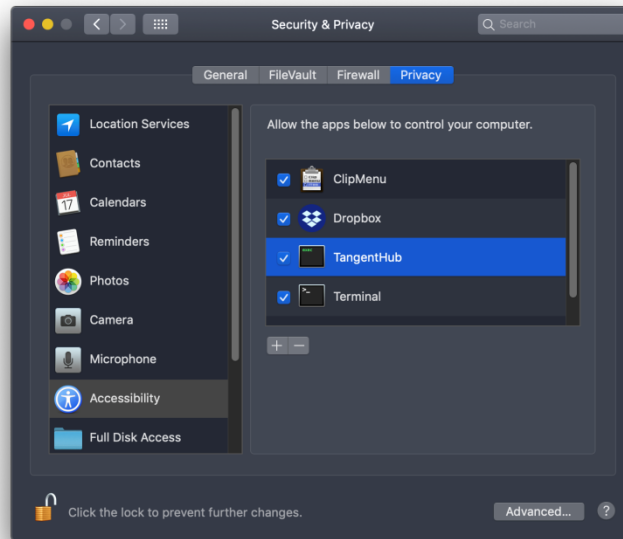


Click on  to continue.

The Tangent Hub is now installed and runs automatically in the background every time your Mac is started.

Please consult the manual for your software application to determine if any configuration is required to enable communication between the application and the Hub.

Depending on your macOS version, you may be asked to enable the TangentHub process in the system preferences for Accessibility to allow keyboard shortcuts to control your computer. This is available in the Security & Privacy settings under the Privacy tab.



2.1 To Remove

Hub Version 1.0.0

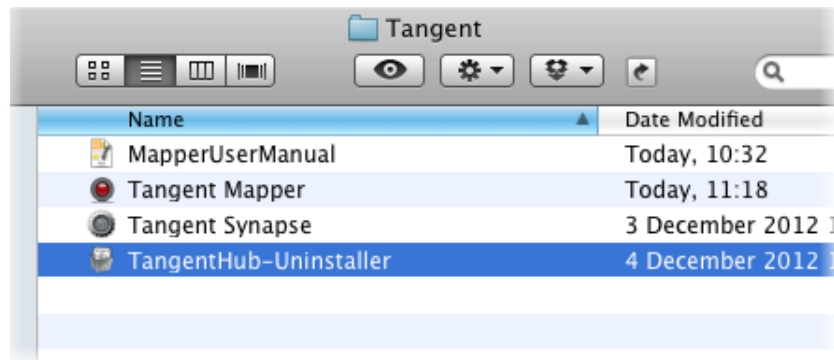
Navigate to the `/opt/Tangent/bin` folder

Hub Version 1.0.1 onwards

Navigate to the `/Library/Application Support/Tangent/Hub` folder

Hub Version 1.0.4 onwards

Navigate to the `/Applications/Tangent` folder



Double-click the **TangentHub-Uninstaller** (administrator account required).

3. Installation procedure for Linux

The Tangent Hub is currently available in 64-bit format for Linux distributions that support RPM package installations. To access the installer or if you have other specific requirements then please contact us at support@tangentwave.co.uk

To install the package; open a Terminal window and navigate to the folder where you downloaded the installer. Run the following command using the appropriate downloaded filename (sudo account password required):

```
sudo rpm -i TangentHub-1.0.0-1.x86_64.rpm
```

You should see confirmation of the Hub service being started as follows (the exact format of the text may vary between Linux distributions):

```
starting tangenthub
tangenthub          0:off  1:off 2:on 3:on 4:on 5:on 6:off
starting tangenthub service: [ OK ]
```

On some older systems an attempt to install a package can produce a segmentation error during the install cycle. This is indicated by the installation command aborting with a killed process. This does not indicate a fault with the package, the problem is caused by a bug in the OS runtime libraries. This can be avoided by running the installation command with the `-ignoresize` option. When the installation is successful you will see the service starting confirmation as detailed above.

The Tangent Hub is now installed and runs automatically in the background every time your PC is started.

On the Linux platform there is an optional installation step that is required if you want to make use of the auto-select function of the Hub where the panel controls change to follow your active desktop window as you switch between software applications. After installing the RPM package you will see the following message in the Terminal window:

```
=====
                        TangentHub Installation Option
=====

The Tangent software can be set up to automatically switch control of your panels to
match the foreground application on your desktop. To do this you need to allow access
to the X display for the root account which slightly reduces your system security.

To allow the Tangent software access to desktop sessions run the following command:

/opt/Tangent/bin/autoselect.sh install

You can remove support for the option at any time with the command:

/opt/Tangent/bin/autoselect.sh remove
=====
```

If you choose to install this option you will allow the local non-network root account access to the user X display server. This allows the Hub process to monitor the foreground window on your desktop. Having this setting in place slightly reduces the security of your X sessions and so the decision to install it has been left as a post-installation option that defaults to leaving your system unchanged.

To install this option simply follow the instructions in the console message and run the command:

```
/opt/Tangent/bin/autoselect.sh install
```

The option can be removed at any time by running the command:

```
/opt/Tangent/bin/autoselect.sh remove
```

If the auto-select option is not installed the function will be disabled in the Mapper UI and cannot be used by the Hub. No other functions of the Tangent software are affected. Once installed the option will remain in place until it is explicitly removed or the RPM package is uninstalled.

Please consult the manual for your software application to determine if any configuration is required to enable communication between the application and the Hub.

3.1 To Remove

Open a Terminal window and run the following (sudo account password required):

```
sudo rpm -e TangentHub
```

You should see confirmation of the removal (the exact format of the text may vary between Linux distributions):

```
stopping tangenthub
stopping tangenthub service: [ OK ]
tangenthub          0:off 1:off 2:off 3:off 4:off 5:off 6:off
```

On some older systems an attempt to remove a package can produce a segmentation error during the install cycle. This is indicated by the removal command aborting with a killed process. This does not indicate a fault with the package, the problem is caused by a bug in the OS runtime libraries. This can be avoided by running the installation command with the `--ignoresize` option. When the removal is successful you will see the confirmation as detailed above.

4. Hub Version Notes

V1.0.0

- First release – all platforms.

V1.0.1 – Mac OS X only

- Fixed bug with fast user switching.
- Changed the installation location from **/opt** to **/Library/Application Support**.

V1.0.2

- Fixed bug with panel-list.xml file becoming corrupted.

V1.0.4

- Synapse utility added to the distribution.
- **Mac OS X only** - the uninstaller has been moved from **/Library/Application Support/Tangent/Hub** to **/Applications/Tangent**.

V1.0.5

- Maintenance release.

V1.0.6

- Tangent Mapper application and manual added to the distribution.

V1.0.7

- Fixed bug with over-sensitive Wave and CP200-BK panel trackerballs.

V1.0.8

- Tangent Mapper menus allow active application switching and a built-in way to check for software updates. Tangent Mapper user manual linked into the Help menu.

V1.0.9 – Windows and Mac OS X only

- Added auto-selection of the active application that has control of the connected panels. The active application follows the desktop focus when this function is enabled.

V1.1.1

- Enabled auto-select functionality for Linux (requires extra installation step).
- Added support for keypress applications that can control any software package with keyboard short-cuts.

V1.1.2

- Improved the display of Unmanaged applications in the Tangent Mapper.

V1.1.6

- Added support for the element-Vs virtual surface tablet app.
- Auto-select target software can be edited in the Tangent Mapper settings menu.
- Bug fix for auto-select from the desktop not working on Windows 8.
- Bug fix for some fake keypresses not working on Windows.

V1.1.7

- Enabled the top line of the element-Tk panels to show current mode, ALT and bank state change information.
- Bug fix for XML parsing for restricted character escape sequences.
- Improved stability for WiFi tablet app connections under Windows.
- Improved auto-select behaviour for software applications that take desktop focus before connecting to the Hub.
- Improved capacity for data comms between the Hub and Mapper.
- **Windows and Mac OS X only:**
 - Keypress mapping files for Adobe Premiere Pro CC.
- **Mac OS X only:**
 - Keypress mapping files for Final Cut Pro X.
 - Auto-select fix for Adobe SpeedGrade.

V1.1.8

- Keypress events can now be mapped to all knobs and trackballs as well as buttons.
- Panel displays are cleared when no longer controlled by any application.
- All Mapper application pop-up mapping menu selections now trigger the display of the mapping window for the target control if it is not already active.
- Bug fix for discarding or saving of changes on exit of the Tangent Mapper.
- Changed the Mapper application icon to remove the shadow effect.
- Bug fix for slider controls in the Tangent Mapper control mapping window.
- Updated the uninstallers to remove all system defined keypress apps (user created keypress apps are not affected).
- **Windows only:**
 - Installer and uninstaller executables are now digitally signed by Tangent Wave Ltd.
- **Mac OS X only:**
 - All executables are now digitally signed for improved GateKeeper compatibility.
 - Installer package is now digitally signed by Tangent Wave Ltd.
 - Bug fix for the text alignment issue in OS X Yosemite.
 - Intermittent mouse emulation problem fixed.
 - Updated the auto-select data for Adobe SpeedGrade CC 2014 for the latest Adobe software release.

V1.2.0

- Improved Mapper UI and menus for better management of applications and their mappings:
 - New wizard approach for creating a new control map for a selected application.
 - Combined application and control map management window.
 - Simplified keyboard shortcuts for basic functions.
 - Better handling of unsaved changes.
 - Simplified menu for selecting and switching between applications.
 - Improved handling of panel configuration changes.
 - New diagnostic window with display of system data and settings.
 - New menu item to allow system data reset to virgin installation state.
 - Improved handling of the auto-select setting.
- **Mac OS X only:**
 - Update to keypress mapping for Final Cut Pro X, including new Logic Pro X and Motion applications.

V1.2.1

- Improved Mapper support for mode and bank mapping changes:
 - New mapping context for 'Current Bank in All Modes' added to the Mapper. All combinations of current/all modes and current/all banks are now available.
 - Improved handling of 'All Modes' and 'All Banks' mappings when adding new modes and banks. The system will now preserve the 'All' status of existing mappings as required.
- Bug fix for slider and spin box based value changes in the Mapper settings and mapping windows.
- New Versions utility to check for new releases of Tangent software that is used for automatic checks (which can be disabled).

V1.2.2

- Added support for the new Ripple panel.
- Includes an option for Ripples to emulate element-Tk panels so they can be used with applications that currently only support element panels.
- Improved handling of panel connection/disconnection updates in the Synapse utility.

V1.2.3

- Public release for Ripple panel support including element-Tk emulation.
- Improved support for Adobe Premiere Pro.

V1.2.6 – Mac OS X and Windows only:

- New virtual Head-Up-Display (HUD) for Ripple panels to show panel information on your monitor:
 - Selectively shown for individual control touches and/or display updates.
 - On-screen display time can be set from 1 second to always on.
 - HUD window can be dragged to your preferred screen position.
 - Supports three HUD window sizes to suit your monitor resolution.
- Auto-selected keypress applications will now close down when their associated software is no longer running.
- Mapper now indicates the current application mode in the mode tabs, with new menu short-cut option to jump to the current mode tab.

V1.2.8

- Reordered the Ripple HUD trackerball labels to better match the hardware configuration. Same change applied to the element-Tk panel display for consistency.
- Improved user interaction in the Mapper for control labels.

V1.3.1

- Minor changes to auto-select handling.
- **Mac OS X and Linux only:**
 - Improved support for Autodesk products.

V1.3.2

- New 'Goto Bank n' action for banked controls.
- New reverse direction option for parameters and menus on knob and trackerball controls.
- New sensitivity option for mouse emulation action.
- **Mac OS X only:**
 - Improved handling of fast user switch issue with warning.

V1.3.3

- Implements TIPC version 4.
- **Mac OS X and Windows only:**
 - Bug fix for excessive CPU loading at user log in.

V1.3.4

- Initial support for the new Arc panels.
- Show all panels or only connected panels option in the Mapper.

V1.4.3

- Arc and Wave2 panel display brightness settings available via the Mapper.

V1.4.4

- Added custom control mappings to support application plug-ins.
- Implements TIPC version 6.

V1.4.5

- Improved support for Wave2 panels in the Mapper.

V1.4.6

- Renamed the 'Fake Keypress' action and parameter to more user-friendly 'Keyboard Shortcut'.

V1.4.7

- New Mapper menu option for installing a panel licence.
- Improved panel displays for expired or no licence contexts.

V1.4.8

- Arc Navigation panel can now change all button banks with the next/previous/goto button bank action.

V1.5.2

- New mapping parameters for persistent mouse emulation (toggled version is still available).
- Improved support for mouse emulation: scroll and mouse speed, reverse direction mapping options available.
- Arc panel licence information now available in the diagnostics window.
- Improved handling of Ripple/Tk panel emulation.
- Bug fixes for panel display brightness settings.
- Removed deprecated keyboard shortcut apps.

V1.6.4

- New user preferences menu in the Mapper - panel alt-lock functionality; Mapper mode follows application mode functionality.
- All Tangent software version checking is now done via the Versions application.
- Improved detection of an application's associated running executable if it has changed.
- Mapping a control to the 'Select ALTERNATE Function' action now automatically adds the same to the alternate mapping for that control.
- Bug fix for handling new control maps that were not saved.
- Bug fix for incorrectly allowing new control maps to be created for unmanaged applications.
- Support for dark mode on macOS.

V1.7.0

- Adobe Premiere Pro Extended plugin (macOS and Windows). Extended plugin including Audio, Effects and additional controls. (Remove the 'Tangent' control surface plugin and replace with the 'Tangent Extended' plugin in the Premiere Pro preferences to enable the new functionality).
- Adobe Lightroom Classic plugin (macOS and Windows).
- Adobe Audition plugin (macOS and Windows).
- Support for OSC commands.
- Optional anonymous usage information gathering (macOS and Windows).
- Hub IPC connections no longer restricted to localhost allowing remote working if supported by apps.
- Mapper bug fix for 'Follow Application's Active Mode' incorrect behaviour.
- Mapper improved tab focus navigation in the mapping window.

V1.7.9

- Added HUD settings reset button in Mapper panel configuration.
- Follow-me mode expanded to include current control bank and alternate mapping state in addition to the current mode.
- Improved Wave and Wave2 button grid mapping label layout in Mapper.
- Adobe Premiere Pro plugin now supports keyframes in effects, also improved panel display values for various controls, including audio.
- Improved OSC support:
 - better user supplied min/max/step values for OSC controls.
 - absolute OSC values can now be specified in control mappings.
 - added highlight, indicate and rename commands for OSC controls.
 - added the display text OSC command.
 - added a command to allow selecting of modes by name. This is in addition to the existing command to select by mode number.
 - modified OSC port handling so the hub will use the configured OSC server port plus one to listen for incoming messages.
 - the listening OSC port is now available immediately when an app connects to listen for incoming value and display update messages.
- Improved user supplied min/max/step values for custom controls.
- New ability to train panel control mappings using the UI in apps that support it (such as Unreal Editor via the Tangent plugin).
- Added new option in Mapper developer menu to cross-generate mappings from one panel range to another to help with creating default maps.
- Wave2 serial numbers are now included in the panel configuration window.
- Improved support for High DPI on Mac.
- Improved support for Windows keyboard shortcut key handling.
- Windows updated to 64-bit binaries. The new installer automatically uninstalls any existing 32-bit software. Note that from now on if you want to revert to an earlier 32-bit version you must explicitly uninstall the 64-bit software first.
- Windows support for dark mode.
- Windows High DPI support.
- Bug fixes:
 - issue reading panel hardware version in some contexts.
 - Mapper comms issue with large data transfers.
 - some Windows applications were not detected by the auto-select functionality.
 - Mapper comms when applying a large number of control mapping changes.
 - selection of the correct Linux display to fix issues with auto-select functionality and keypress mapping processing.
 - possible corruption of Arc panel licence data.

V1.8.5

- Introducing the Warp Engine to allow control of any application via scripted mouse and key warps.
- Shadow app concept introduced to allow unmanaged apps (e.g. Resolve) to have customisable Warp Engine control maps.
- Warp Engine scripts are blocked if the active app controlling the panels does not have desktop focus to prevent unwanted interaction with other windows. This functionality requires Auto-Select to be enabled.
- Keypress mappings are now blocked if the active app controlling the panels does not have desktop focus to prevent unwanted interaction with other windows (consistent in behaviour with Warps).
- Unsaved control map changes are now automatically saved if an app disconnects from the Hub. The map is named with a 'Recovered' tag and will be reloaded when the app connects again.
- Improvement for unmanaged app panel display refresh handling, particularly with Resolve.
- Support for Unreal Editor plugin v1.0.5+ extended functionality.

V1.8.7

- Mapper has a new Warp Script Editor window to allow recording, editing and management of Warp Engine scripts.
- Warp Engine double click bug fix with new CLICK command option.
- Improved support for trackerball controls and Warp Engine scripts so X and Y can be more easily combined.
- macOS bug fix for interaction between keyboard shortcut modifiers and Warp Engine scripts.
- Adobe control surface plugin, the workspace names have been replaced by numbers to avoid issues with versioning and translations.
- macOS software is now Universal for Intel/Apple Silicon.
- Updated the Qt version across Windows and macOS.
- macOS software installer now requires 10.14 Mojave or newer.
- Windows installer now requires Windows 10 or newer.

V1.9.8

- The new Warp Engine Configurator utility is available for macOS and Windows which can install default Warp Scripts for a selected number of applications configured specifically for your system screen resolution and layout.
- Warp Scripts installed by the Warp Engine Configurator utility are identified as system defined with a lock icon in the Warp Script Editor window. These scripts can't be edited or deleted, but may be copied and modified as user scripts. User defined scripts are fully editable.
- Extended the control map export and import functionality to include Warp Engine script files. Only user defined Warp Script data is exported/imported. If you use system defined Warp Scripts you must install these separately using the Warp Engine Configurator utility (where available).
- Warp Scripts can now use :LOOP+ and :LOOP- to define separate repeating script sections for positive and negative knob movement. The existing :LOOP is still available where the same script is used for both movement directions.
- New Warp Engine CALL command that allows one script to call another by name. Called scripts can be nested (one script calling another that calls another etc.) but they cannot contain any :LOOP sections or PAUSE commands.

- The Warp Script Editor window now supports the idle timeout value setting. This determines how long after turning a knob the system waits before exiting a looped Warp Script to allow fine tuning for the best user experience.
- Improved how the Versions utility checks for updates across the beta and public release channels.
- Raw control limit extended to support 30 controls.
- Raw controls can now be highlighted, tagged and relabelled by plugins, as well as being able to display values on panel displays.
- There is a new mappable menu control to change to the next or previous mode that displays the current mode name as its value.
- Support for newer plugins for Unreal Engine v1.1.0+ with extended functionality.
- Mapper bug fix where some numerical values could not be entered in the mapping window for systems with different language settings.
- Mapper bug fix for the Warp Script search box placeholder text in Dark Mode.