VISION[AI]RY RELEASE NOTES

Welcome to the Vision[Ai]ry v2.0 Release Notes. Please read this document to find important information about the product that may not be available in the user documentation.

CONTENTS

5100DR-091-2.0

VERSION HISTORY

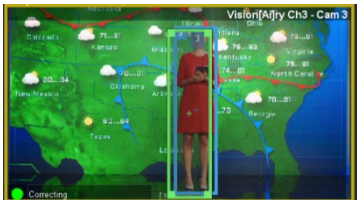
VERSION 2.0.0 – SEPTEMBER 2024

WHAT'S NEW

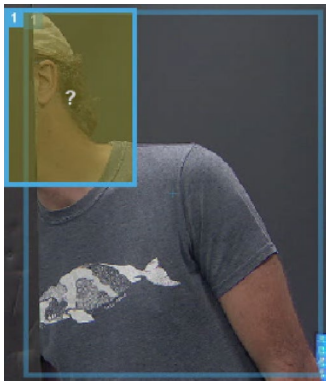
- **BODY TRACKING**

  Vision[Ai]ry 2.0 introduces the option of body tracking to enhance the existing facial tracking algorithm. Body tracking improves Vision[Ai]ry tracking in several ways:

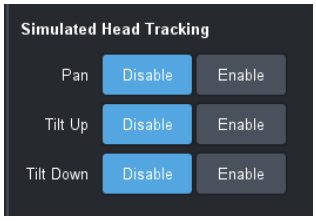
  - **Active Body Tracking** – use the Vision[Ai]ry framing target as the desired position of the subject's entire body instead of just their head. This can be useful when the subject is too far from the camera for their face to be detectable by Vision[Ai]ry, or when you want to frame the subject's entire body in the shot. The operator can switch between head and body targeting in the Vision[Ai]ry UI, and store targeting mode with templates.



  - **Simulated head projection** – in scenarios where Vision[Ai]ry can no longer detect a subject's head (for example, if they turn away from the camera) but their body can still be detected, Vision[Ai]ry will use the current position of the body to project a simulated head. This is displayed in the UI with a "?" to indicate that it is an estimation of the head position. Simulated head projection can help maintain a consistent subject ID when a subject turns away from the camera, particularly while moving. It also enables the simulated head tracking feature described below. Simulated head projection can be enabled and disabled per camera.



  - **Simulated head tracking** – when Vision[Ai]ry is operating in head targeting mode but can no longer detect the subject's head, simulated head tracking for continued smooth pan and/or tilt movement by tracking the likely position of the subject's head, projected by the simulated head algorithm. This ensures that temporary failure to detect a subject, for example, if they turn away from the camera while moving, won't result in jerky camera motion. It can also help prevent loss of subject when a subject stands up rapidly so that their head goes off the top of the frame, but their body is still visible.



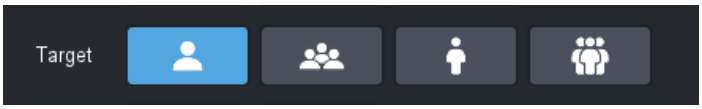
All body tracking features require hardware with a GPU and the Facial Tracking (RRB-VAI-FT-ENGINE) license an additional body tracking license for each engine channel (RRB-VAI-BT-ENGINE). See ***Site Requirements for Vision[Ai]ry (5100DR-092-2.0)*** for further information.

- **REBRANDING**

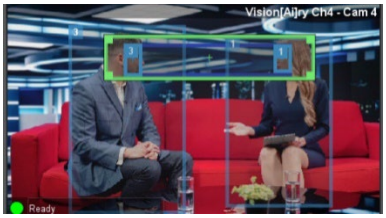
  To reflect the new body tracking features, Vision[Ai]ry has been rebranded from Vision[Ai]ry Ft to Vision[Ai]ry. This change affects the default install locations and some configuration file names. Please refer to the upgrade instructions in the ***Setup and User Guide for Vision[Ai]ry (5100DR-090-2.0)*** for assistance with updating to Vision[Ai]ry v2.0.

- **MULTI-SUBJECT FRAMING**

  Vision[Ai]ry can now be used to frame a group of subjects as well as a single subject. Multi-subject tracking works with both head and body targeting and is triggered by selecting a multi-subject targeting mode in the channel control page. Multi-subject targets can be stored in templates.



When operating in multi-subject framing mode, Vision[Ai]ry will draw a group bounding box that encompasses the bounding boxes for all subjects in the group and will attempt to position this group bounding box within the framing target.



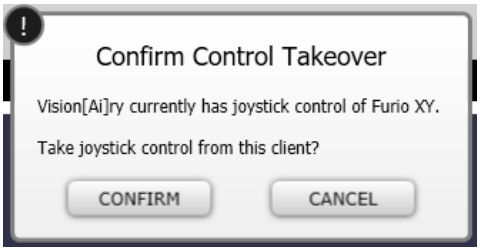
  - In **manual** subject selection mode, the operator can select multiple subjects by clicking on them to create a group of subjects.
  - In **automatic** subject selection mode, the operator can specify the maximum number of subjects in the group. When tracking starts or is reset, Vision[Ai]ry will automatically pick subjects to select up to the maximum provided based on their distance from the center of the framing target. No subjects will be added to the group while tracking is in progress, even if the number of subjects in the group is less than the maximum number specified by the operator.

- **SOFTWARE-BASED LICENSING**

  Vision[Ai]ry v2.0 now uses software-based licensing and requires access to an RPM licensing server, or directly back to the Ross Video Activation Server.

- **SUPPORT FOR SMARTSHELL CONFIRM CONTROL TAKEOVER**

When a SmartShell operator using the confirm control takeover option attempts to take control of a robot that is currently being controlled by Vision[Ai]ry they will receive a warning that Vision[Ai]ry currently has control.



BUGS ADDRESSED

- Vision[Ai]ry would fail silently if an invalid channel license was applied and continued to use the previously applied license. In Vision[Ai]ry v2.0, software-based licensing is used. Applying an invalid product key will generate a warning pop-up. Applying a valid product key which doesn't include the required features will show a not licensed error against the missing features [SO-1307]

VERSION 1.3.1 – JUNE 2023

BUGS ADDRESSED

- The Vision[Ai]ry Ft control service was not properly releasing memory when presets and framing templates were deleted, which could result in increased memory usage and eventually issues with CPU load spiking to 100%. This has now been fixed so that memory is properly released when presets are deleted or Vision[Ai]ry Ft loses connection to a camera. (SO-1325)
- The maximum memory available to Vision[Ai]ry Ft control service was limited to 256MB, causing insufficient memory errors when multiple channels, all with large numbers of presets were in use. This has now been increased to 1GB. (SO-1326)

VERSION 1.3.0 – MAY 2023

WHAT'S NEW

- **MULTI CHANNEL CONTROL**

  Changes were made to the Vision[Ai]ry Ft control service to support a workflow where each camera is controlled by a dedicated Vision[Ai]ry Ft engine.

  - Configure a single Vision[Ai]ry Ft control service to connect to multiple engines, by creating a channel for each engine. This provides a single point of configuration and allows Framing Templates and Links to Robotic Presets sharing between the channels. A software license (RRB-VAI-FT-ENGINE) is required for each engine that is being controlled.

- Use the new MultiChannel control page to view a configurable grid of up to 6 channel previews, allowing simultaneous monitoring of multiple channels and direct adjustment of framing target, tracking mode, and subject selection. A ribbon option provides a convenient method of monitoring Vision[Ai]ry Ft channels alongside SmartShell.

- **ENHANCED TRACKING**

  This release includes an upgrade to the algorithm that links subjects from frame to frame, providing:

  - Increased resilience to temporary loss of a subject, such as when they turn away from the camera or pass behind an obstacle.
  - Improved tracking of faster moving subjects moving at speeds of up to 1.3 m/s at distances of 5 m or more from the camera.
  - Increased ability to track subjects who stop moving or abruptly change direction.
  - Improved tracking of subjects who pass in front or behind another person, which is achieved by considering the size of different subjects as well as their position when linking subjects between frames.

- **TRACKING OPTIONS**

  A new set of tracking options allow Vision[Ai]ry Ft behavior tailoring to suit different workflows. These options can be tailored for each camera or set globally for all cameras.

  - **Loss of Subject** – determines how long Vision[Ai]ry Ft continues to search for a lost subject before reselecting a new subject or declaring an error.
  - **Auto Reselect** – a mode that determines behavior once the selected subject has been declared lost. When Auto Reselect is enabled, Vision[Ai]ry Ft automatically reselects a new subject when the previous subject is lost. When **Auto Reselect** is disabled, Vision[Ai]ry Ft shows a subject lost error when the subject is lost and waits for the operator to select a new subject. **Auto Reselect** is enabled by default in v1.3. To revert to behaviour in v1.2 and earlier, disable this option.
  - **Run with no Template**. This option determines how Vision[Ai]ry Ft responds when a preset or move is recalled with no linked framing template:
    - For a preset CUT or move CUE, Vision[Ai]ry Ft stops any active tracking when the recall starts and does not resume it at the end of the recall. This differs from previous releases, where active tracking resumed at the end of the shot recall.
    - For a preset or move RUN, behavior depends on the **Run with no Template** option:
      - Default behavior is to **Stop** any active tracking when the recall starts. Tracking does not resume when the recall is finished.

- Set to **Continue** to resume any active tracking throughout the recall. This was the behavior in v1.2 and earlier.

- **ASYMMETRIC DEADBAND**

The deadband settings for each axis now include an offset slider, allowing the deadband to be weighted, causing Vision[Ai]ry Ft to react sooner when an actively tracked subject moves away from the target position in one direction than it would respond in the opposite direction. For example, if a subject is framed close to the top of the image, the tilt deadband could be offset and Vision[Ai]ry Ft would respond to and correct framing when the subject straightens up. This will allow the subject to look and move their head down without Vision[Ai]ry Ft correcting framing position.

- **HEAD TRACKING**

The ability to track heads, rather than faces, is available as a configuration option. Head tracking can offer benefits over facial tracking in some use cases:

- Head tracking is less sensitive to head position (pose). For example, turning to the left, to the right, or looking down, would typically change both the size and location of the bounding box when using facial tracking. By tracking the head – and defining the bounding box around the entire head, not just the face – the tracking will be less sensitive to these types of movements, and better maintain desired framing.

  Note: Even with head tracking, reliable tracking is best achieved when at least 50% of the face is visible.

- Facial tracking does not account for hairstyles, head coverings, or other factors that can change the size of the subject's head relative to their face/body. In practice, the camera operator will often want to keep the subject's entire head in the frame, without cutting off hair or headwear. In such cases, head tracking may provide a more appropriate model for subject tracking than facial tracking and make re-use of framing templates for different subjects more feasible.

  Note: Head tracking is a relatively new feature in the software and has not undergone the same degree of extensive testing and characterization as the more mature facial tracking algorithm. Therefore, we advise that users carefully characterize the performance of head tracking in their application and environment, to ensure that it will accurately identify and track heads in their use case.

- **VIEW OPTIONS STORED IN CLIENT**

Each DashBoard client will now store the view options set for each channel it controls and restore them on start-up. This eliminates the requirement to manually reset options when DashBoard restarts.

- **TRACKING RESTART BUTTON**

A new **Restart** button on the Channel Control page provides a single-click option to restart tracking after it has been interrupted, such as when an operator takes control of the camera from SmartShell.

BUGS ADDRESSED

- Unexplained slowdowns and disconnections on the Vision[Ai]ry Ft engine would sometimes occur when the engine had been connected to a camera for an extended time. Fixed by upgrading the library used to establish socket connections from the engine. (SO-1234)
- The Ai button in SmartShell used to start active tracking in Vision[Ai]ry Ft did not work to reset tracking when Vision[Ai]ry Ft tracking mode was already in the desired mode. Selecting the Ai button while tracking is active will now reset tracking, which will cause Vision[Ai]ry Ft to retake control of the camera and select the subject closest to the framing target if it is in Automatic Face Selection mode. (SO-1033)
- On restarting Vision[Ai]ry Ft Control Service, saved Framing Template deadband values were replaced with the values for damping. This has now been resolved for newly created Framing Templates, however any Framing Templates stored in v1.2 will still have damping values saved instead of deadband values. To fix this issue after upgrade to v1.3, recall the Framing Template, set the desired deadband values, then update the Framing Template to store the new values. (SO-1248)
- When using a Blackmagic DeckLink card to input 1080i59.97 video, the frame rate was not set correctly in the Vision[Ai]ry Ft Engine. The configuration has now been corrected to properly match the video rate with the video format. (SO-1166)
- Stopping or restarting the Vision[Ai]ry Ft Engine service sometimes resulted in the service hanging, requiring a computer reboot. This has now been fixed so that the engine service can be safely stopped and restarted without needing to restart the computer. (SO-1202)
- Restarting the Vision[Ai]ry Ft Control service would occasionally result in the robotic presets and categories for some cameras not being visible in the UI. This was typically seen when running on a VM. The initialization of the service has now been fixed to ensure that all templates and links are loaded before loading robotic presets to prevent this issue. (SO-1247)
- Restarting the Vision[Ai]ry Ft Control service would occasionally result in one or more links between a Framing Template and a Robotic Preset not being visible in the Robotic Presets tab in the Vision[Ai]ry Ft UI. Any attempt to add a new link to a preset where the existing link was not visible would result in the following error message: “A link to Preset already exists.” The initialization of the service has now been fixed to ensure that all templates and links are loaded before loading robotic presets to prevent this issue. (SO-1246)
- Links to deleted robotic presets from the camera were still included in the count of links associated with each Framing Template in the Vision[Ai]ry Ft Framing Templates tab. This has been resolved by deleting any link associated with a robotic preset that is either no longer present when Vision[Ai]ry Ft connects to the camera or deleted while Vision[Ai]ry Ft is connected to the camera. (SO-1257)

Note: When deleting a camera from Vision[Ai]ry Ft, an option is available to keep the links to that camera so that they can be restored when the camera is re-added to Vision[Ai]ry Ft. In this case, those links will still appear in the count of links associated with each Framing Template. (SO-1257)

VERSION 1.2.0 – JULY 2022

WHAT'S NEW

- **ROSS PTZ CAMERA SUPPORT**

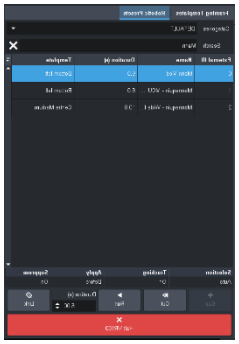
  This release adds support for Ross PTZ-12G and PTZ-NDI Cameras to Vision[Ai]ry Ft.

  - Cameras must first be added to DashBoard and the Furio gateway enabled.
  - FreeD tracking must be enabled on the camera.
  - Variable zoom must be turned on so that pan/tilt speed varies with zoom.

- **ROBOTIC PRESETS CAN TRIGGER FRAMING TEMPLATES**

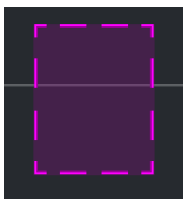
  Vision[Ai]ry Ft now has access to the robotic presets stored on the cameras that it controls. This lets you:

  - View the presets available on the selected camera
  - Recall a preset from within Vision[Ai]ry Ft
  - Link a robotic preset to a Vision[Ai]ry Ft framing template so that the framing template is automatically applied when the robotic preset is recalled. Options can be set for each link to determine when the template is applied and whether active tracking should automatically be turned on.
  - Recall a preset using another control system such as SmartShell or OverDrive and automatically recall the correct framing template and activate tracking on Vision[Ai]ry Ft.
  - View the last recalled preset on the selected camera and see the progress of all presets and moves recalled on the camera.



- **TEMPLATE PREVIEW**

  A preview feature has been added in this release so that when a framing template or robotic preset linked to a framing template is selected from the Framing Template or Preset List views, a preview of the framing target location associated with that framing template will be shown in the video viewer.



- **ROSSTALK LISTENER**

  Vision[Ai]ry Ft now supports some basic RossTalk commands that enable remote selection of a camera and changes to the active tracking mode. These can be used to fully integrate Vision[Ai]ry Ft into your OverDrive workflow.

- **SUPPORT FOR DECKLINK VIDEO I/O CARD**

  Vision[Ai]ry Ft now supports the Blackmagic DeckLink Video I/O card as an alternative method of inputting video to the system. Note that the DeckLink card in the Integrated Robotics Server can't be used to support both Vision[Ai]ry Ft and the Thumbnail Server at the same time.

- **IMPROVED CALIBRATION PROCESS**

  This release upgrades the calibration tool for commissioners to make the calibration process faster and more accurate.

  As part of the upgrade to the calibration, the target speed has been changed to make Vision[Ai]ry Ft more responsive to movements of the subject away from the target.

  - If you upgrade to Version 1.2 and continue to use your existing calibration, you will see no difference in performance.
  - If you upgrade to Version 1.2 and perform a new calibration for your head/lens combination, you will see that Vision[Ai]ry Ft corrects the camera position more quickly as it tracks the subject.

BUGS ADDRESSED

- Fixed an issue where Vision[Ai]ry Ft did not automatically reconnect to CamBot XY peds running Furio firmware after an Estop activation. Vision[Ai]ry Ft will now automatically reconnect to the ped once the Estop has been cleared. (SO-624)
- Fixed an issue where on rare occasions, operating Vision[Ai]ry Ft alongside a DashBoard camera plugin connected to the same camera can cause the "Enable joystick" functionality in the camera plugin to fail. This issue should not occur when using DashBoard 9.2.2 or higher (SO-492/CI-492)
- Fixed an issue where Vision[Ai]ry Ft would respond to a failure to connect to the status channel of a robot by making an excessive number of connection attempts to the command channel. Vision[Ai]ry Ft will no longer attempt to connect to the command channel until it is able to establish a connection to the status channel. (SO-672)

VERSION 1.1.0 – NOVEMBER 2021

WHAT'S NEW

- **CAMBOT SUPPORT**

  This release adds support for CamBot robotic heads.

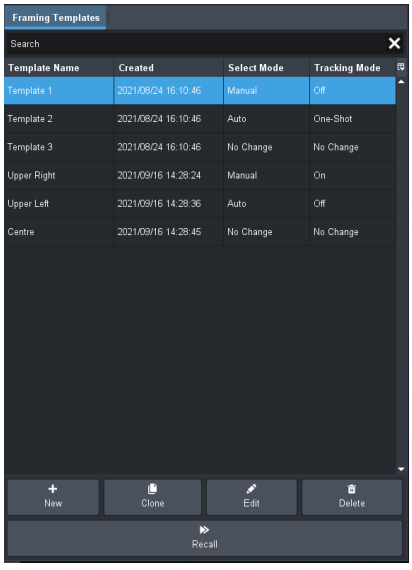
  - For CamBot 520PT and 600PT heads running firmware version 3.4.x or earlier, the robotics server must be upgraded to release 5.2e for proper operation with Vision[Ai]ry Ft.
  - For CamBot 600XY and 700XY heads running firmware version 3.5.x and 3.6.x, robotics server version 6.0b will be required for operation with Vision[Ai]ry Ft. CamBot 600XY and 700XY heads running Furio 5.2c firmware have been supported since Vision[Ai]ry Ft Release 1.0.

- **OPERATION WITHOUT FREED**

  Vision[Ai]ry Ft requires data about the zoom position of the lens for proper tracking performance. In release 1.0, this required a FreeD data stream from the head. Release 1.1 introduces support for direct polling of the head as an alternative to FreeD. Polling for position is approximately 2x slower than listening for FreeD updates, but does not impact tracking performance. Robotic heads that are already configured within Vision[Ai]ry Ft to use FreeD will continue to do so after upgrading to Release 1.1. When new heads are added to Vision[Ai]ry Ft, FreeD will now be disabled by default but can be enabled during configuration if any undesirable impacts of using direct polling are encountered. Note that if FreeD is enabled, the FreeD must be configured properly on both the robotic head and in Vision[Ai]ry Ft. Failure to do this will result in Vision[Ai]ry Ft being unable to get position information and will have a severe impact on tracking performance.

- **FRAMING TEMPLATES**

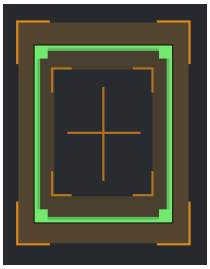
  This release introduces Framing Templates to Vision[Ai]ry Ft to make it easier to integrate Vision[Ai]ry Ft control into studio workflows. A framing template stores the current framing settings for a Vision[Ai]ry Ft Channel (framing target position, deadband, damping, enabled axes), along with recall options (face selection mode and tracking mode). This allows you to rapidly set up framing and engage Vision[Ai]ry Ft when running a show. The framing template viewer in the channel control page displays available framing templates in a



sortable, searchable format with buttons to create, manage and recall templates.

- **UI ENHANCEMENTS**

  A number of enhancements have been added to the Vision[Ai]ry Ft Control page to make operation easier and more flexible. These include the following:



  - **Deadband visualization** – displays how far the tracked subject can move once on-target before active tracking will start correcting the camera position. This option is available in the View Options pop-up.
  - **Video size** – the View Options pop-up now offers three different sizes for the video window to best suit different workflows.

  - **Lock aspect ratio** – a lock button has been added to the Basic Options window to lock the width-to-height ratio of the framing target so that its size can be adjusted without disturbing its shape.
  - **Set To Selection** – the Set To Selection button in the Basic Options window moves the framing target to the position of the currently selected subject – making it easy to maintain framing, or create a framing template once the shot is correctly framed.
  - **Subject Selection** – Vision[Ai]ry Ft now supports clicking a subject's bounding box within the viewing area to select or deselect that subject.

- **DEPLOYMENT OPTIONS**

  Vision[Ai]ry Ft can now be configured to work with DashBoard to facilitate joystick control and integration of camera selection with either SmartShell or DashBoard camera plugins.

  - **Operation with SmartShell** – using the Robotics Bridge Server, Vision[Ai]ry Ft can be configured to follow SmartShell camera selection. Optionally, a separate USB HID joystick can be connected to DashBoard to control Vision[Ai]ry Ft framing.
  - **Operation with DashBoard PT Head Plugin** – when controlling robots from the same DashBoard client that is controlling Vision[Ai]ry Ft, DashBoard can be configured so that selecting a camera within Vision[Ai]ry Ft will select the plugin controlling that head for joystick control of camera axes. Optionally, a split screen view can be used with the correct plugin being brought to the front when it is selected in Vision[Ai]ry Ft. Note that in this configuration, it is not possible to use a joystick to control framing or camera selection in Vision[Ai]ry Ft.

BUGS ADDRESSED

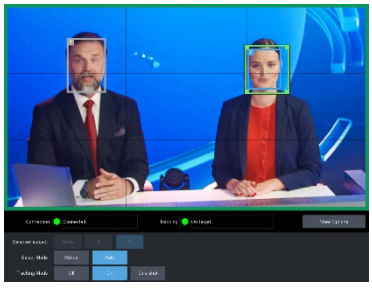
- Fixed an issue where, on rare occasions, the numbered **Selected subject** buttons below the viewing area on the channel control page stop changing to reflect changes in the faces and bounding boxes visible in the video. (SO-507).
- Fixed an issue where, in some cases, removing the SDI video input from the SDI to NDI video converter providing the video feed to Vision[Ai]ry Ft could result in the Vision[Ai]ry Ft control page cycling between the last video frame received and a red "no video" error warning state instead of continuously displaying the "no video" warning. (SO-487)

VERSION 1.0.0 – JUNE 2021

WHAT'S NEW

This is the first release of Vision[Ai]ry Facial Tracking. Vision[Ai]ry Facial Tracking (Ft) is the first in a suite of products that use video analytics to automate some of the functions of a camera operator. Vision[Ai]ry Ft uses AI-based facial recognition to detect, locate and track the position of faces within the video stream of a camera. It then uses these facial positions to drive the pan, tilt and zoom axes of the robotic camera system to maintain the desired framing of the face or faces in the image. This eliminates the need for a camera operator to manually adjust for the position of the subject in the image.

- **ROBUST FACIAL TRACKING**
  Vision[Ai]ry Ft uses robust facial detection algorithms to detect and locate faces in the video stream. The model is trained on a culturally, gender and age diverse data set and will detect faces which are up to 50% obscured (e.g. turned sideways, glasses, hats, masks). Faces can be detected down to 9% of the height of the video frame and moving at up to 10% of the field of view per second.

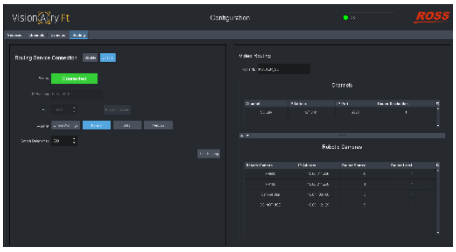


- **CONTROL OF PAN, TILT AND ZOOM AXES**
  The framing target is used to define where the selected subject should be located within the frame. When tracking is activated, Vision[Ai]ry controls pan, tilt and zoom axes to automatically center and resize the selected subject within the framing target. Zoom compensation is used to maintain consistent pan/tilt performance at all zoom positions. Combined with MotionDirector, Vision[Ai]ry Ft will control framing during preset recalls and moves.

- **SIMPLE UI WITH INTEGRATED VIDEO**
  Use Ross Video DashBoard Facility Control System to view and control the operation of Vision[Ai]ry Ft. Operation is simple and intuitive and includes a video feed with framing target and face detection boxes superimposed.

- **OPTIMIZED FOR FURIO ROBOTIC HEADS**
  Release 1.0.0 supports all Furio robotic heads including CamBot XY Peds running SmartShell release 5.2c or higher. CamBot 520PT and 600PT heads are not supported in this release.

- **INTEGRATED CONFIGURATION UI**
  Use DashBoard to view and configure the settings for your Vision[Ai]ry Ft Control system.



INSTALLATION / UPGRADE CONSIDERATIONS

INSTALLATION

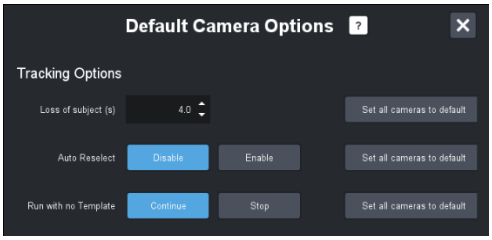
- The Vision[Ai]ry Ft Engine experiences a high processing load when it is tracking faces. Please ensure that it is installed on a system running Windows 10 (or higher) that meets the minimum system requirements outlined in the ***Site Requirements for Vision[Ai]ry Ft (5100DR-092-1.3)***. Current Ross Video SmartShell workstations meet these requirements, but older SmartShell workstations purchased prior to 2019 may not. The Ross Video Robotics Server cannot be used to run the Vision[Ai]ry Ft Engine.
- Vision[Ai]ry Ft v1.3.1 is compatible with all Furios and CamBots, subject to the following constraints:
    - Furio robotic heads and CamBot XY Pedestals running Furio firmware must be upgraded to SmartShell v5.2c or later.
    - For CamBot PT Heads or XY Peds running CamBot firmware, the Robotic Server must be upgraded to SmartShell v5.2e with Robotics Server hotfix 5.2.505.8000 or v6.0b or later.
- Vision[Ai]ry Ft v1.3.1 is also compatible with Ross PTZ-12G and PTZ-NDI cameras. Please note that Vision[Ai]ry Ft does not support NDI|HX video, so the NDI|HX output from the PTZ-NDI cannot be used with Vision[Ai]ry Ft.
- FreeD is no longer required for Vision[Ai]ry Ft when controlling Furio robotic heads and CamBots. It is required when controlling a Ross PTZ Camera. Where it is enabled, it must be

properly configured on both the robotic head and in Vision[Ai]ry Ft. Be cautious when moving a camera from one channel to another as this will impact where the FreeD data must be sent.

- A video converter device is required to convert video into a format that can be input to the Vision[Ai]ry Ft Engine – this could be an SDI to NDI converter (note that NDI|HX is not supported), a SDI to USB converter, or an integrated Blackmagic DeckLink video converter card. Note that a single channel on a DeckLink card cannot be shared between Vision[Ai]ry Ft and the robotics thumbnail server.
- The routing service running on the Robotics Server is required to perform video routing for Vision[Ai]ry Ft.
- For more information about installation considerations, see ***Site Requirements for Vision[Ai]ry Ft (5100DR-092-1.3)***.

UPGRADING FROM V1.2 OR EARLIER

- When upgrading to a newer version of Vision[Ai]ry Ft, ensure that both the Vision[Ai]ry Ft Control and the Vision[Ai]ry Ft Engine(s) are upgraded together. Typically, no re-configuration is required after upgrade, although it is recommended that you back up the workspace directory within the install folder prior to upgrade as a precaution.
- For upgrade to v1.3 and later, please note:
    - A change has been made to the default behavior when Vision[Ai]ry Ft loses the subject that it is actively tracking in Automatic Face Selection mode. Previously, the channel would show an error and wait for the operator to select another subject or restart tracking. New default behavior is to automatically select a new subject. If you want to revert to the previous behavior, go to **Default Camera Options** in the **Cameras** tab of the **Configuration** page, set **Auto Reselect** to **Disable**, and press **Set all cameras to default.**



    - A change has been made to the default behavior when a preset or move with no linked framing template is recalled on a camera currently being controlled by a Vision[Ai]ry Ft channel:
        - For a preset CUT or move CUE any active tracking stops when the preset recall starts. In v1.2 and earlier, the active tracking mode was then restored when the recall was complete. In v1.3 and later, active tracking remains disabled until it is manually reactivated by the operator.
        - For a preset or move RUN the new default behavior is to **Stop** all active tracking as soon as the recall starts, similar to the behavior for a CUT described above. Behaviour in v1.2 and earlier was to continue the active tracking throughout the recall. To revert to this behavior, go to **Default**

Camera Options in the **Cameras** tab of the **Configuration** page and set **Run with no Template** to **Continue**.

- For systems configured with multiple Vision[Ai]ry Ft engines, the existing configuration, where a separate Vision[Ai]ry Ft Control service is used for each engine, will continue to work after upgrade. However, you may want to reconfigure your deployment to use a single Vision[Ai]ry Ft Control Service in order to take advantage of the new MultiChannel Control view and to share Framing Templates between channels. See **the *Setup and User Guide for Vision[Ai]ry Ft (5100DR-090-1.3)*** for instructions.

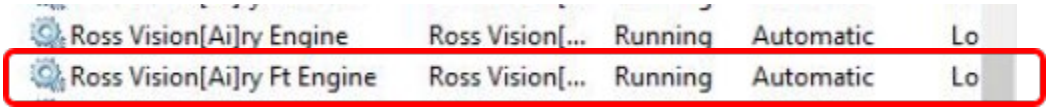
- The default location for installation of Vision[Ai]ry Ft was changed in v1.2 – see the ***Setup and User Guide for Vision[Ai]ry Ft (5100DR-090-1.3)*** for steps required to move your install to the new location when upgrading from v1.1 or earlier.

KNOWN ISSUES

This section outlines known issues in the latest release

CONFIGURATION

- (New) **X-Series – Lens Calibration**: Lens calibration can fail when the zoom position is close to the end of the zoom range (45000+). While the lens calibration file remains functional, operators may experience tracking performance issues within the uncalibrated range, particularly if the damping is set to a low value. (SO-1761)
- (New) When upgrading the Vision[Ai]ry engine service from v1.3.1 or earlier to v2.0, the previously installed Ross Vision[Ai]ry Ft Engine Service is sometimes not being uninstalled. After installing v2.0, check the running services to ensure that **Ross Vision[Ai]ry Ft Engine** service is not present. If it is, manually uninstall the **VisionAiryFtEngine** application and restart the **Vision[Ai]ry Engine Service.** (SO-1759)



- (New) Starting the Vision[Ai]ry Engine service when the properties file contains errors can result in the engine crashing. In this case, please review and correct changes, or delete the properties file and restart the Vision[Ai]ry Engine Service to generate a new properties file. (SO-1696, SO-1697)
- (New) If the Vision[Ai]ry Control Service is unable to connect to the licensing server, or check out the license for a feature that it requires when it restarts, a manual refresh of the licensing configuration page will be required when the problem is resolved to ensure that Vision[Ai]ry will check out the required licenses. Vision[Ai]ry includes a 7 day grace period for problems due to loss of connection to the server. For previously checked out licenses, this problem would only occur if the grace period for the license had expired. To manually trigger a license refresh go to the Channels tab on the Configuration page, press the License button to open the Licensing dialog, and press Refresh. (SO-1717)

- When Vision[Ai]ry Ft is configured as a Multi-Channel system, with a single Vision[Ai]ry Ft Control service controlling multiple engines, using the Robotics Bridge Server to link SmartShell camera selection to channel selection within DashBoard will not work correctly. When the channel is in Standby, selecting the channel will cause SmartShell to briefly switch to the selected camera and then switch back to warn that no device is selected. Robotics bridge server should not be used in this scenario – instead the MultiChannel UI page can be used to view all Vision[Ai]ry Ft channels simultaneously, and to open individual channel UI pages when necessary (SO-1310).
- The Vision[Ai]ry Ft Configuration page will not display the channel licensing or channel configuration views when it has been shared using the DashBoard proxy server and is being viewed from another DashBoard Client. To avoid this, any DashBoard Client that will be used to configure Vision[Ai]ry Ft should connect directly to the Vision[Ai]ry Ft Control Service rather than through the proxy service in DashBoard. (SO-478)
- Using the Vision[Ai]ry Ft Configuration page to add a new channel connection within approximately 30 seconds of deleting the previous channel connection can cause the channel control page to fail to update properly. If this happens, right click on the Channel node in the DashBoard tree and select Refresh to reload the page. (SO-479)
- Stopping and restarting the Vision[Ai]ry Ft Engine service will sometimes cause DashBoard to unexpectedly shut down. If this happens, restart DashBoard to continue operation. Stopping and restarting the Vision[Ai]ry Ft Engine service is not required during a normal workflow. (SO-491)

CHANNEL CONTROL

- (New) When operating in multi-subject targeting mode with manual subject selection, if Vision[Ai]ry has been unable to detect one subject in the group of selected subjects for more than the loss of subject timeout, it will deselect all subjects in the group. To restore tracking, reselect the desired set of subjects and restart tracking. (SO-1668)
- (New) Subject IDs are sometimes swapped when subjects cross in front of or behind each other. Vision[Ai]ry is not currently recommended for use in scenarios such as this. (SO-1524)
- When connecting to Vision[Ai]ry Ft from a DashBoard instance running on a Virtual Machine (VM), with the Multi Channel page open and multiple video streams visible, there may be lag that makes it hard to drag the framing targets or switch UI pages. This is due to the absence of a graphics card which would typically provide some hardware acceleration for the NDI decoding. To alleviate this problem, it may be necessary to reduce the number of camera views in use at one time when operating on a VM. (SO-1201)
- Recalling a robotic preset or move from SmartShell or another control system while Vision[Ai]ry Ft is actively moving the camera to centre a subject may cause either the robotic preset to fail with error “MOVEMENTAFTERTIMEOUT” on a Furio or “BUSY” on a CamBot, or Vision[Ai]ry Ft to show a position error and/or loss of control of the robotic head. This is due to a requirement for the robotic head to be stationary before it starts a preset recall. This issue will be resolved in a future SmartShell release – in the meantime, turn off Vision[Ai]ry

Ft active tracking or wait for it to complete before recalling a robotic preset (SO-1289, SO-1306).

- On rare occasions if the machine being used to run DashBoard to view the Vision[Ai]ry Ft UI goes to sleep, when it wakes up, the NDI stream from the Vision[Ai]ry Ft Engine to the DashBoard UI will be completely black. When this happens, the video window in the UI shows bounding boxes floating over a black background. The ability of the engine to actively track subjects is not affected. To avoid this situation, we recommend changing power settings to prevent computers hosting Vision[Ai]ry Ft from going to sleep. If the problem does occur, it can be fixed by using the Services app in Windows to restart the Ross Vision[Ai]ry Ft Engine service. (SO-973)
- When using a DashBoard client running on Mac OSX to view the Vision[Ai]ry Ft UI, some text fields will appear cut-off. This does not impact the functionality of the UI. (SO-642)
- When switching between cameras in the Vision[Ai]ry Ft Channel Control page, the last video frame from the previous camera will be visible briefly before the video is updated to show the video from the new camera. This will not affect facial tracking performance. (SO-365)
- No warning is provided if the Vision[Ai]ry Ft camera control hits an axis limit. Vision[Ai]ry Ft will continue to display “Correcting” and will continue to send a velocity request to the camera axis. Please ensure that the limits on your robotic head are properly configured to avoid damage. (SO-496)
- Correction of camera position can sometimes fail due to loss of the subject while Vision[Ai]ry Ft is moving the camera. This can occur if the height of the bounding box around the selected subject is close to the minimum of 9% of image height, tracking is turned on with low damping (<50%), and the target is far from the starting position of the subject. (SO-632)

GETTING HELP

At Ross Video, we take pride in the quality of our products, but if problems occur, help is as close as the nearest telephone.

Our 24-hour Hot Line service ensures you have access to technical expertise around the clock. After-sales service and technical support is provided directly by Ross Video personnel.

During business hours (Eastern time), technical support personnel are available by telephone any time. Emergency after hours calls are answered by an answering service (live person) who will patch your call to the on-call support specialist. In the event that the on-call person is assisting another customer, the answering service will contact the back-up support specialist.

Our team of highly trained staff is available to react to any problem and to do whatever is necessary to ensure customer satisfaction.

- **Toll-free Technical Support 24/7:** 1-844-652-0645 (North America), or +800 1005 0100 (International)
- **Technical Support:** (+1) 613-652-4886
- **E-mail for Technical Support:** techsupport@rossvideo.com
- **ROSS VIDEO | HELP CENTER:** https://support.rossvideo.com/hc/en-us
- **E-mail for General Information:** solutions@rossvideo.com
- **Ross Video Website:** http://www.rossvideo.com