

June 2023

Firmware Update for Select V2000 Series Roughneck Cameras, Introducing AI-Based Analytics

General Description

Vicon has released firmware for production for the cameras listed below.

For Valerus users who want to take advantage of the new AI features, download the latest PRONTO Discovery Tool with all the latest firmware for easy batch upgrade of all cameras.

A firmware upgrade is not recommended for ViconNet customers, since the advanced AI features are not supported.

Camera	Product Code	Older Firmware	Newest Firmware
V2005D-W313MIR V2005D-W818MIR V2005D-W28IR V2005B-W313MIR V2005B-W818MIR	10553-10 10575-00 10555-05 10554-10 10576-00	VCAM5L.01.00.1.8.5996	VCAM5L.01.00.0.8.6511
V2008D-W310MIR V2008D-W818MIR V2008B-W310MIR V2008B-W818MIR V2008-W-NL	10553-15 10575-10 10554-15 10576-10 10556-00	VCAM5L.01.00.1.12.5996	VCAM5L.01.00.0.12.6511
V2005D-PTZ	10561-10	VCAM5L.01.01.1.15.5459	VCAM5L.01.01.0.15.6525
V2360W-12-1	10559-05	VCAMCV2.01.00.0.10.5345	VCAMCV2.01.00.0.10.6513
V-CELL-HD-C V2005CNR-W24IR V-CELL-HD-CMOD	10578-00 10579-00 10578-10	VCAMCV2.01.00.0.17.6038	VCAMCV2.01.00.0.17.6513

Vicon Production

The latest firmware and discovery tool are available on Vicon’s website. A link is provided in the installation section of this document. Manufacturing will start using the new firmware for new camera production.

Updating is recommended for those who want to take advantage of analytics in Valerus or who are impacted by the bugs fixed, as noted below.

NOTE: After the camera is upgraded, the user must perform a Factory Default (Retain IP) to enable Advanced Museum Search and AI event functionality in Valerus. After the camera reboots, Valerus will re-sync all previously programmed settings. Any settings that were set via the camera web interface (for example, analytics or optical zoom settings) will need to be re-programmed. Failure to Factory Default (Retain IP) will result in undefined configurations between Valerus and the camera.

NOTE: ViconNet customers need to use the “ViconNet” mode in the camera’s setting to continue to use Museum Search. AI Analytics is not available in the ViconNet VMS. Additional information can be found on Vicon’s website.

For other applications, please review these release notes to help determine if the fixes included are relevant to your environment.

Please review the upgrade instructions described at the end of this document.

New Features

Object classification

The camera’s AI-based object classification allows it to distinguish people, vehicles, and animals from other objects in a scene and in analytics rules and triggers. Object-only recording, and the ability to filter out environmental noise that can inadvertently trigger a motion detection alarm (e.g., shadows, swaying trees, bushes, etc.), significantly increase operational efficiencies. In addition, Valerus 23.2+ includes color-coded bounding boxes and an advanced Museum Search that allows fast searching of recorded data with AI object classification filters.

Motion detection

Motion is now enabled by default for the entire scene for rapid deployment.

Motion alarm when PTZ is operated manually

For PTZ cameras, the option was added to generate an artificial motion alarm when the PTZ is operated manually. This will allow automatic recording when the PTZ is operated.

Motion detection in non-preset PTZ position

In the PTZ model, the option was added to detect motion in the entire scene, even when the PTZ position is not in a specific preset. Normally, motion is only detected when configured in a preset.

Motion object size

The motion object size has been changed from a slider control to a drawable object size to make configuration easier.

Mounting/Unmounting SD card

A control has been added to allow mounting and unmounting an SD card.

Memory management

The memory management makes more efficient use of the flash memory. When the SD recording is used, the record database index is stored on the SD card.

Upload certificate without CA

The option was added for a user to upload an SSL certificate without a CA (Certificate Authority).

ONVIF profiles

ONVIF profile M is now supported, and profile Q is removed.

Aspect Ratio and FPS management

All camera streams are set to default values of the same aspect ratio (e.g., 16:9, 4:3, 1:1) for display consistency.

Known Issues

Tailgating

The camera's new analytics functionality has the capability to send "Tailgating" alarms. At this time, Vicon's Valerus VMS cannot receive and act upon these alarms.

Object Left and Object Removed

The camera's "Object Removed" and "Object Left" analytics have inconsistent performance.

Purple bounding box

Vicon's Valerus VMS Client software can show bounding boxes related to the camera's new object classification functionality. Bounding boxes are green for people, blue for cars, and yellow for animals. When an analytics rule is configured for plain motion for non-classified objects, an occasional purple bounding box is visible.

Valerus bounding boxes in secondary stream

When the Valerus Client is set to show object classification related bounding boxes, the bounding box placement shown in the primary stream may slightly differ from the bounding box placement in a secondary stream (usually the stream used in a smaller tile).

Valerus bounding boxes in corridor mode

When the Valerus Client is set to show object classification related bounding boxes, the bounding box may appear misshaped when the camera is set to Corridor mode (rotated 90 or 270 degrees).

Valerus multiple bounding boxes

When a vehicle is moving in front of several parked vehicles, there may be several bounding boxes around the stationary objects for a short time.

Analytics per preset

For the PTZ model, when a new preset is added by Valerus, and AI analytics are applied to the new preset, the analytics page will appear empty in the camera web interface at first. A browser refresh will solve this.

Alarm in camera web interface

In the camera web interface in the analytics Live page, the box or line indication in the detecting area blinks red briefly when an alarm is triggered. On a slow or busy PC, the web browser may not be fast enough to show the red indication and the alarm will not be visible. The alarm, however, is sent to the VMS normally.

Zoom position reset

Cameras with a varifocal lens will need the FOV (zoom position) reset.

PTZ Home position reset

For PTZ cameras, the HOME position will need to be reset. PTZ inactivity period to return to HOME position needs to be reset.

Fisheye resolution

The V2360W-12-1 fisheye has a max resolution of 9 MP (black borders are eliminated). All streams will be reset to 30 fps (4000x3000 was limited to 20 fps all streams).

Frame per second reset

With the change in default stream aspect ratios, if a second stream was configured in Valerus for less than 30 fps, it will be reset to 30 fps.

Blank FPS field in Valerus

For the 8 MP cameras, the FPS field in Valerus will be blank if it had been set at 30 fps. Max stream available is 27 fps.

Fixed Issues

Line cross detection direction

An issue was fixed where a line cross detection would not work in one direction only.

Object size

An issue was fixed in the settings for minimum and maximum object size for analytics.

OSD text

An issue was fixed where the OSD (On Screen Display) would not properly display text containing apostrophes.

OSD date/time at midnight

When OSD was set to display date/time at midnight, the date/time presentation would be corrupted.

Memory leak

When the field for "HTTP Generic Event" was enabled, but left empty, a memory leak could exist.

SD card recording

After a format, the SD card would need to be disabled and re-enabled before the camera would start recording on it.

SSL info

When an SSL certificate is uploaded, it would not show on the SSL page until the page was refreshed.

SSL performance

Improvements have been implemented in the camera's encrypting/decrypting that is involved with Secure Socket Layer communication.

SSH weak algorithm

Vulnerability scanners would detect Weak algorithms and Weak key exchange.

FTP password

The built-in FTP server would only allow password length of 8 characters or shorter.

FTP root for admin account

When the FTP-server was accessed with an account "root," it would not have the SD card as the root directory. All FTP access is now pointing to the SD card.

PTZ relative positioning

When accessing the camera through API or ONVIF, and using relative positioning to control the PTZ, it was possible that an inaccuracy would build up overtime, due to a rounding error.

Auto Tour

When an auto-tour was configured, it was possible that it would not start automatically after the PTZ had been controlled manually (after a set time-out).

Day/Night switch caused motion

It was possible that switching from day mode to night mode, and vice versa, would generate a motion alarm, which could cause unnecessary recording.

TLS Version 1.1

Vulnerability scanners would detect "TLS Version 1.1 Deprecated."

Date/Time format

The control to set date/time format for OSD was missing. This has been added.

Stream table

Improvements have been implemented in the table of available streams that is communicated to the VMS through ONVIF.

Default bitrate

Improvements have been implemented in the bit rate used per available resolution.

Email

When the camera is set up to send email on specific events, there is a test button to test the email without the event happening. Also, if email fails, there is a more descriptive message to diagnose the issue.

CVBR

The camera would switch to CVBR (Constrained Variable Bit Rate) as soon as it was connected through ONVIF.

Zoom/Focus control

When using the slider controls in the camera's user interface, it was possible to drag the slider to an extreme that would enter an invalid value.

Zoom control in ONVIF

An issue was fixed where absolute zoom control would only work if zoom was set to 1x. This was not as specified in the ONVIF protocol.

Installing the Updated Firmware

The latest firmware is available on Vicon’s website from the Software Downloads page. A link is provided below.

<http://www.vicon-security.com/software-downloads-library/vicon-camera-software/>

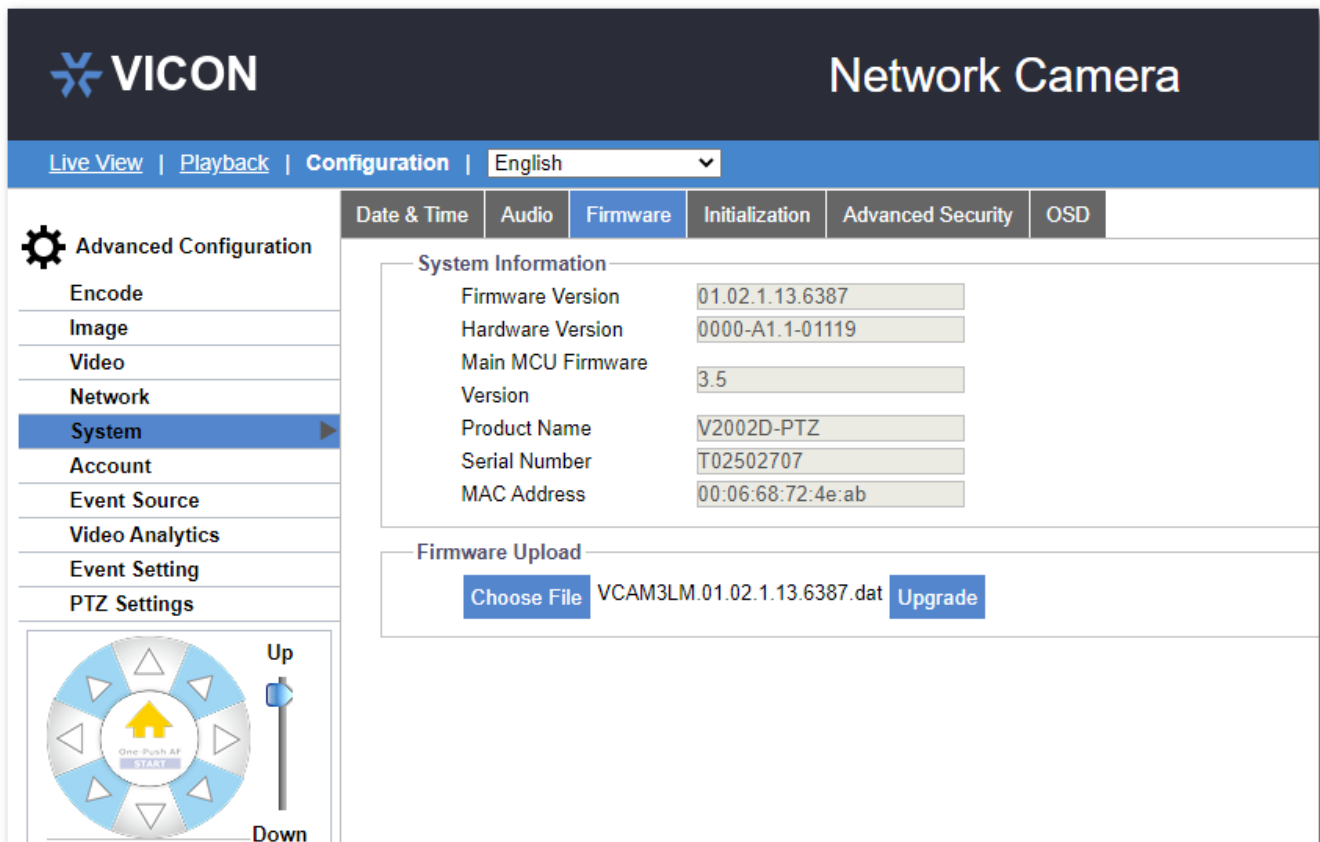
Download the firmware to your PC. Unzip the file.

There are two options to install the new firmware in the camera:

- Using web interface of the camera, uploading the firmware directly into the device.
- With PRONTO Device Manager Software that can be installed on a PC.

Camera Web Interface

In the camera web interface, under Configuration > System > Firmware, press “Choose File” under “Firmware Upload” and select the downloaded firmware file. Then press “Upload” to start the update. The camera will install the update and reboot with the new firmware version:



Using PRONTO Device Manager Software

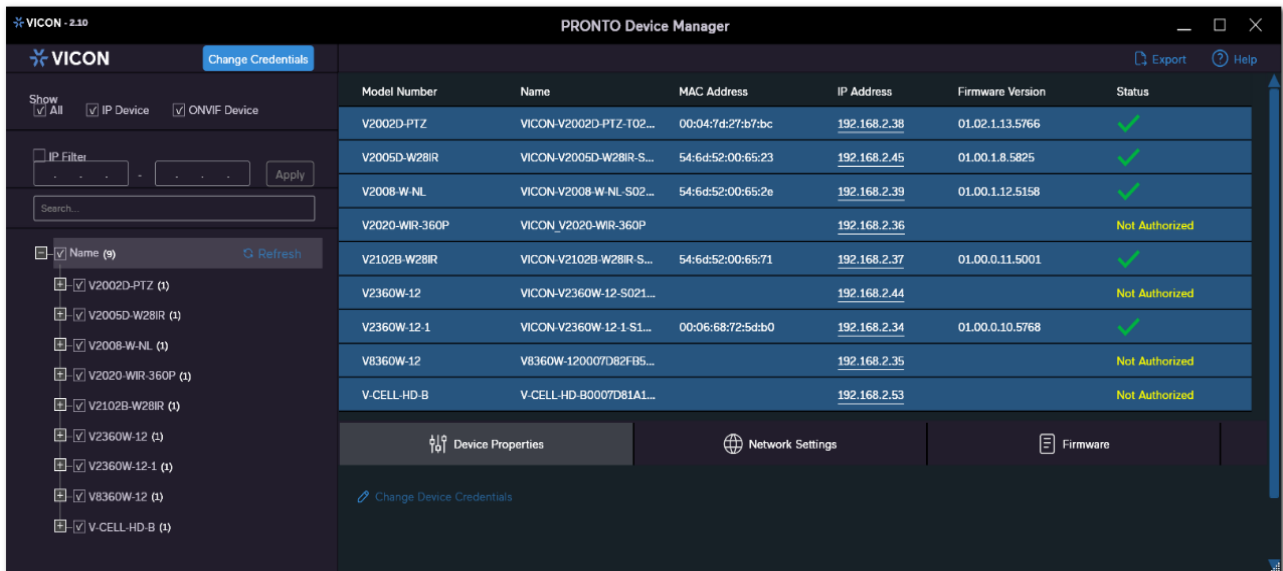
PRONTO is Vicon's device manager tool that can be used to discover all Vicon cameras in a network. This standalone single discovery tool running on a PC, allows users to discover cameras in the network, configure network parameters and update camera firmware (single camera, or in batch)

Pronto Device manager can be downloaded from Vicon's website:

<https://www.vicon-security.com/software-downloads-library/pronto-device-manager-software/>

Pronto Device manager user guide can be found here:

https://www.vicon-security.com/wp-content/uploads/2022/08/Vicon-Pronto-Device-Manager_User-Guide.pdf



To update firmware on one or more cameras:

- Scan the network and find the camera model that needs a firmware update.
- Enter valid credentials for the camera that needs a firmware update.
- Select camera(s). (More cameras can be selected that use the same firmware file.)
- Press the "Upload Firmware File" button; load the new firmware into Pronto.
- Press "Upgrade Device" and select the new firmware file just loaded into Pronto.
- Press Apply. The new firmware is now uploaded to the selected camera(s).
- Allow some time for the camera(s) to reboot after the firmware is uploaded.
- Press "Refresh" and verify the camera(s) are now listed with the new firmware version.