SensorConnect Changelog

Updated: 2026-02-03

v16.3.0 (2026-02-03)

Other changes and bug fixes:

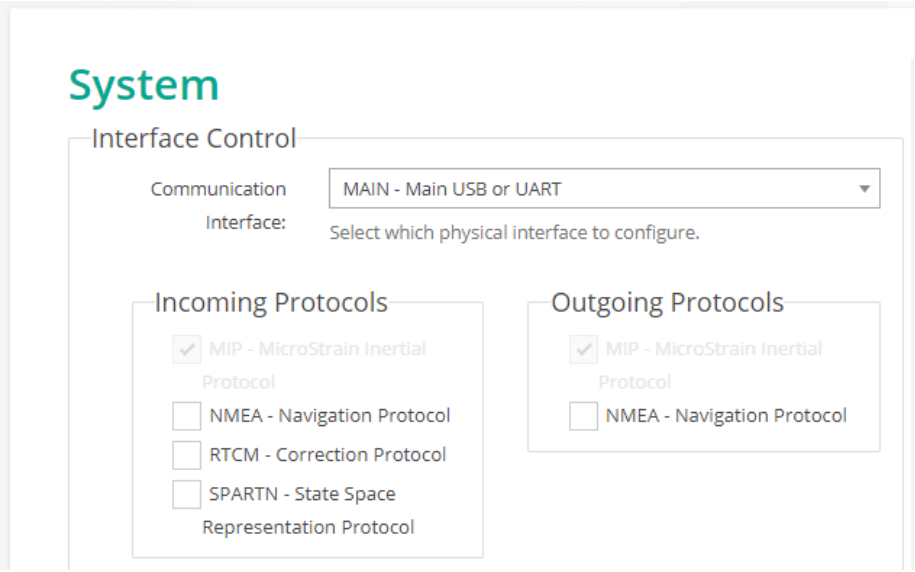
- Fixed bug that would prevent users from configuring UART behavior on CV7 devices
- Updated website links to hbkworld.com

v16.2.0 (2025-06-06)

Inertial Features and Changes

3DM-CV7-GNSS/INS Full Support

Interface control configuration has been added for CV7-GNSS/INS



Remaining configuration options for the CV7-GNSS/INS have been added and updated

v16.1.0 (2025-03-28)

Inertial Features and Changes

3DM-CV7-GNSS/INS Support

Partial configuration and data visualization support has been added for the 3DM-CV7-GNSS/INS.

Wireless Features and Changes

G-Link-200-P Support

Full configuration and data visualization support has been added for the G-Link-200-P.

v15.6.4 (2024-05-28)

Inertial Changes and Bug Fixes

- Fixed issue preventing opening the Configure screen for:
  - 3DM-CV7-AR
  - 3DM-CV7-AHRS
  - 3DM-GV7-AR
  - 3DM-GV7-AHRS

SensorCloud Interface Changes and Bug Fixes

- Fixed issue preventing adding time-bound unit configurations in the Advanced dialog on the Units screen. This fix will be deployed to the web interface shortly.

v15.6.0 (2024-05-13)

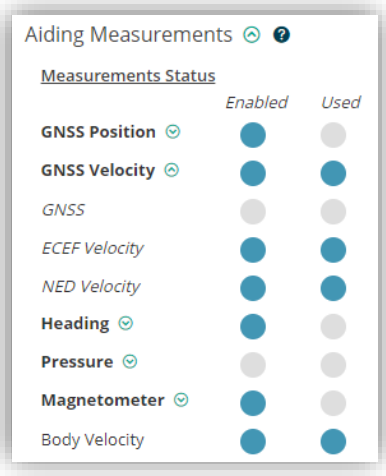
Inertial Features and Changes

3DM-CV7-INS and 3DM-GV7-INS Support

Configuration and data updates to reflect changes made to the device during development.

Additional measurement types added to the **External Measurements** window:

- Magnetic Field
- Pressure
- Height Above Ellipsoid
- Body Frame Velocity (previously Vehicle Frame Velocity)



Status Quickview: Improved Aiding Measurement Summary Display

Measurement statuses are now grouped into collapsible categories. By default, all categories are collapsed and you have a summary view of the category which indicates if any of the measurements in the category are enabled, used. By expanding each category you can see the status of each specific measurement source.

Data age is also now tracked for each measurement, if an update for a specific measurement source has not been received in three seconds, it's status indicators will be cleared.

More detailed descriptions can be seen by hovering over the category or measurement source label.

NMEA Message Format: Rebranded Sentence Types (3DM-GQ7 only)

With our departure from Parker Hannifin, we have changed our proprietary Parker (PK) NMEA sentence types to new MicroStrain (MS) sentence types. The contents of these messages have not otherwise changed.

Previous	New
PKRA	*MSRA*
PKRR	*MSRR*

Note: For 3DM-GQ7 devices on firmware versions prior to 1.1.03 will still output *PKRA* and *PKRR* even though the new values will display in the SensorConnect NMEA Message Format editor.

Other changes and bug fixes:

- Fixed the Get Field Strength from Web button on the Magnetic Calibration screen

v15.5.0 (2023-10-20)

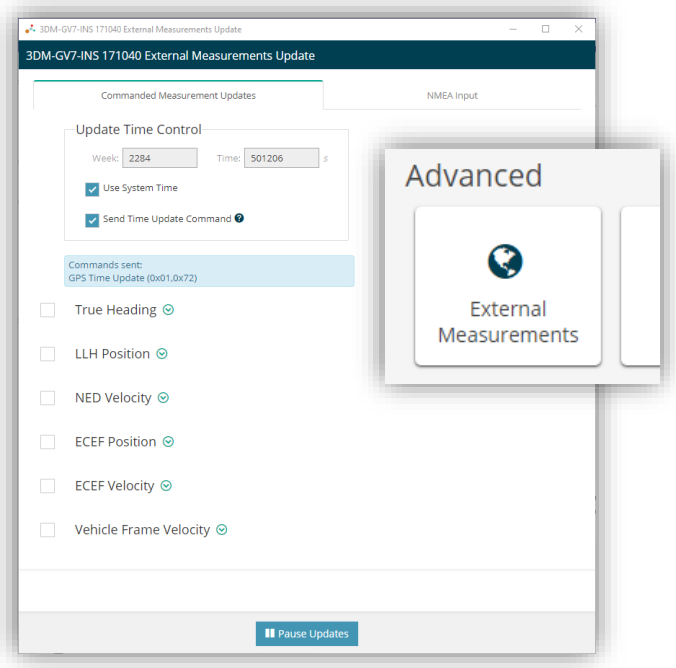
Inertial Features and Changes

3DM-CV7-INS and 3DM-GV7-INS Support

Full configuration and data visualization support has been added for the 3DM-CV7-INS and 3DM-GV7-INS.

External Measurements Window

A new window has been added for continuously sending external measurement data to devices that support this functionality. Although this window has limited options for other devices, it was added to allow users to easily test the new robust measurement input system on 3DM-CV7-INS and 3DM-GV7-INS devices without requiring actual sensor input setup or application development just to see the device working.

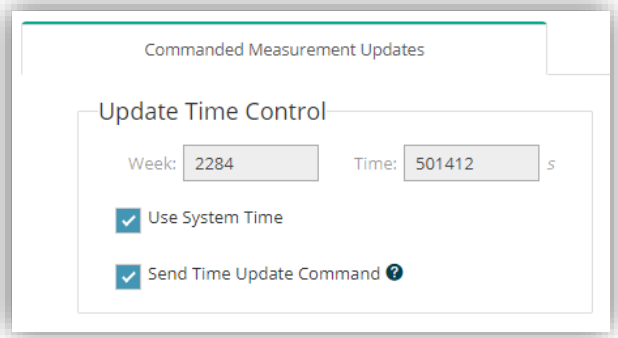


This window can be launched from the device options page under **Advanced -> External Measurements** or by right-clicking on the target device in the device list.

On the **Commanded Measurement Updates** tab you can select any number of supported commanded measurements to send to the device at a rate of 1 Hz.

For the 3DM-CV7-INS and 3DM-GV7-INS available commanded measurements include:

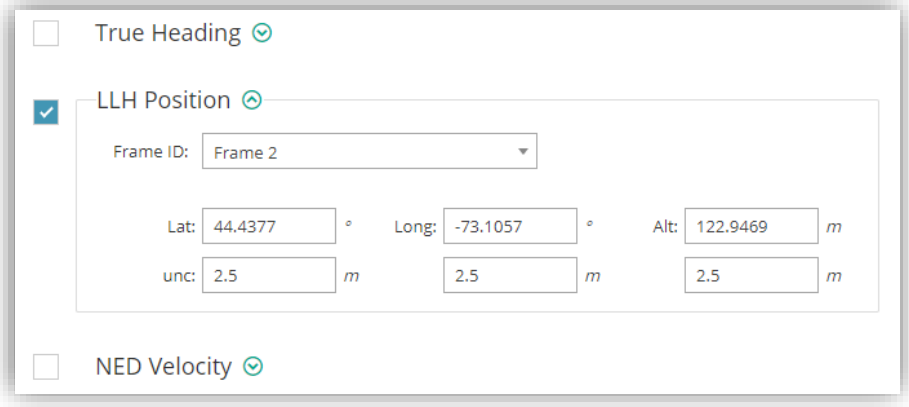
- Time (PC or custom)
- True Heading
- LLH Position & NED Velocity
- ECEF Position & Velocity
- Vehicle Frame Velocity



SensorConnect will automatically timestamp these measurements with the PC time, but that can be customized by unchecking **Use System Time** and editing the Week or Time values in the **Update Time Control** section.

The **Send Time Update Command** checkbox controls whether the indicated time is sent to the device as a measurement.

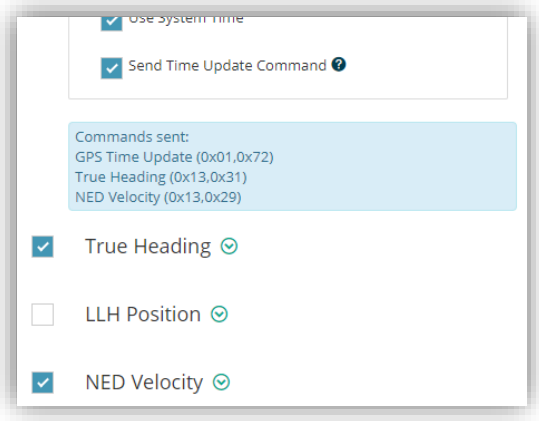
Each other measurement is disabled by default but can be enabled simply by checking the associated checkbox. When the box is checked, that measurement will immediately begin sending to the device. The measurement section will also expand so you can customize the values being sent. If you would like to customize the values before the first measurement is sent, simply click the measurement section title or arrow button to expand the section and edit the values before clicking the enable checkbox.

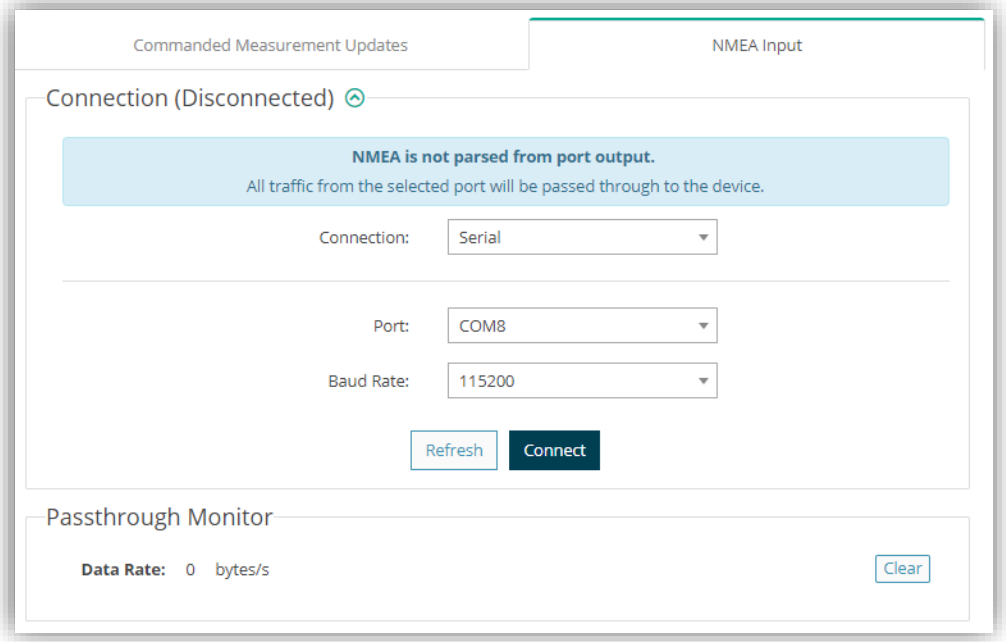


Some measurements have a Frame ID to select – these define the offset and rotation of the measurement input in the vehicle frame and can be set via the normal device Configure page in the Installation section. The currently configured translation and rotation values are indicated for each frame when the drop-down is expanded.

The update summary between the Update Time Control and measurement sections lists which commands are being sent. If any fail they will be listed in a red warning box directly below the update summary.

Sending measurements from all tabs in the External Measurements window can be paused by clicking the Pause Updates button – once resumed everything will resume exactly as it was without having to track down and disable, re-enable each individual measurement. Once paused you will see the update summary section go away because there are no updates being actively sent to the device.





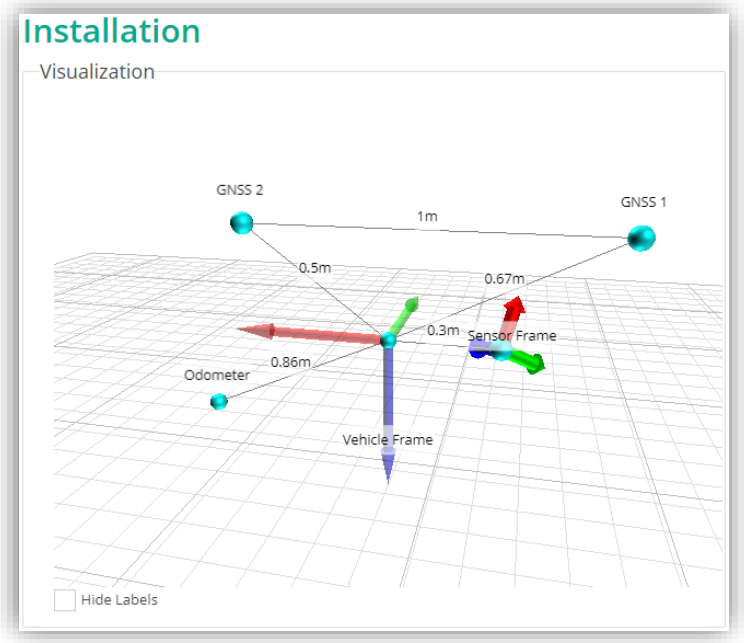
The **NMEA Input** tab is a bit more straightforward. This is available for devices that accept NMEA data over the main communications port. From this tab, in the **Connection** section, a Serial/USB or TCP Port can be opened from which all traffic will be forwarded to the target inertial device. When a connection is opened or closed the Connection section label is updated to indicate Connected or Disconnected. Collapsing this section will not close the connection.

It is important to note that this does not currently have NMEA parsing functionality – whatever is output over the selected port will be sent to the device. The device should ignore anything it does not recognize as either NMEA or MIP commands, but it's better not to send a lot of extraneous data.

The data being streamed into the device will show up in the **Passthrough Monitor** section. This section shows the active data transfer rate and can be cleared by clicking the Clear button.

Installation Configuration Visualization

On the Configure screen, all configuration options having to do with the physical placement of the device and surrounding components have been moved to a separate **Installation** section. A display has also been added to help visualize these configurations relative to one another and make it easier to notice if something is not right.



With the default configuration you will see a Sensor Frame indicator and a Vehicle Frame indicator completely aligned with one another. As the sensor frame is changed in the configuration controls below the visualization will be automatically updated to reflect the state that will be saved to the device when you click Apply Configuration.

Other components that will show up on the visualization once moved from origin:

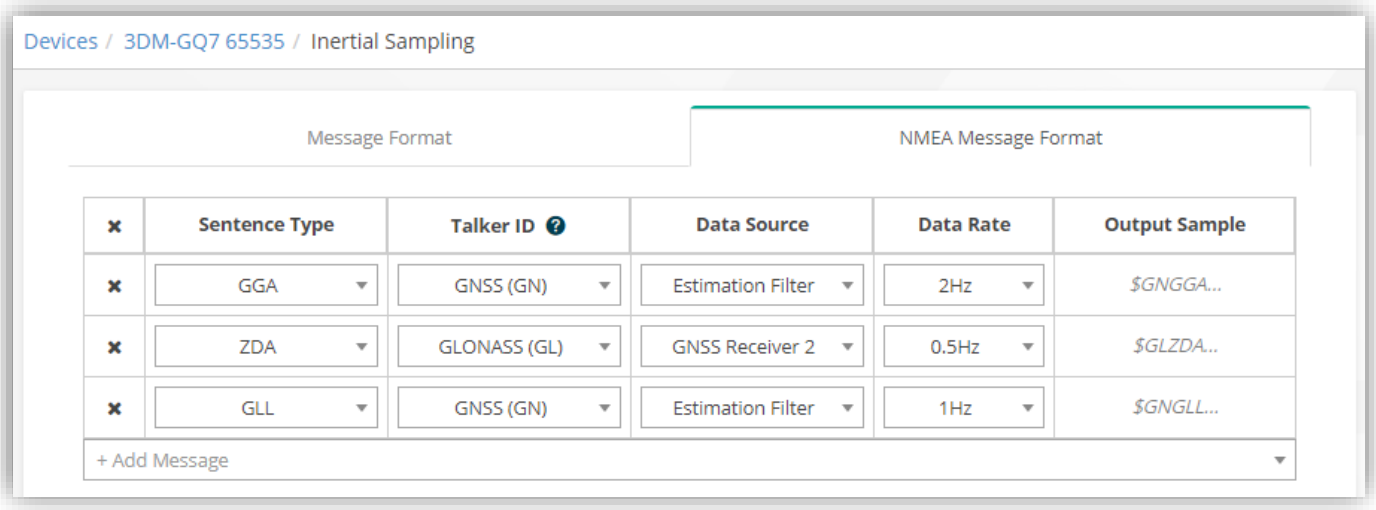
- GNSS antennas
- Odometer
- Generic aiding measurement frames (3DM-CV7-INS, 3DM-GV7-INS)

v15.2.5 (2023-01-04)

Inertial Features and Changes

NMEA Message Output Configuration

In the latest firmware release for the 3DMGQ7-GNSS/INS functionality was added to output data in NMEA message format over the main port. Support for configuring the NMEA output has been added to SensorConnect in the Sampling screen on the NMEA Message Format tab.



The device can be configured to output multiple NMEA messages with various data sources. The following options are available for each NMEA message configuration:

- Sentence Type: the type of message to output

- **Talker ID**: the data source identifier in the output message*
- **Data Source**: the device data set from which to source the message data
- **Data Rate**: the rate at which to output the message

The **Output Sample** column will show an example of the NMEA sentence header that will be output based on the current configuration selections.

Once configured, NMEA messages will be output as long as the source data is valid and the device is not idle. All NMEA messages require a valid timestamp.

The Set to Idle and Resume commands pause and resume both standard data and NMEA message output.

* For all messages except GSV, the selected Talker ID is included but does not correspond to a GNSS constellation source as it typically would. We recommend using the Talker ID to map to a specific data source for identification as there is no other data source identifier in the message output. GSV messages will be output for all Talker IDs - data for this message is sourced from the corresponding GNSS constellation.

Other changes and bug fixes:

- Fixed issue preventing firmware upgrade for 3DM-CV7, 3DM-RTK.
- Firmware version updated on device connect – if an upgrade was done while connected to another repository or computer the new firmware version will be read and displayed when the device is reconnected.
- Fixed an issue with recovering failed firmware upgrades when one or more device processor is in the bootloader.
- Added support for custom inertial models – they will no longer show up as Unknown Model or have issues with starting sampling, loading the configuration screen, etc.

Wireless Changes and Bug Fixes

- Update supported Transmit Power options for devices with the China region code.

v15.0.8 (2022-11-09)

Inertial Features and Changes

3DMGQ7-GNSS/INS new firmware release

Changes implemented to support additional 3DMGQ7 features that will be added in the upcoming firmware release. New device features include:

- GNSS SBAS support
- GNSS spoofing and jamming indication
- Configurable NMEA message output over the main port
- Additional filter configuration and data field output options

The full release notes can be found on the 3DMGQ7 product page under the **Downloads** section (pending release).

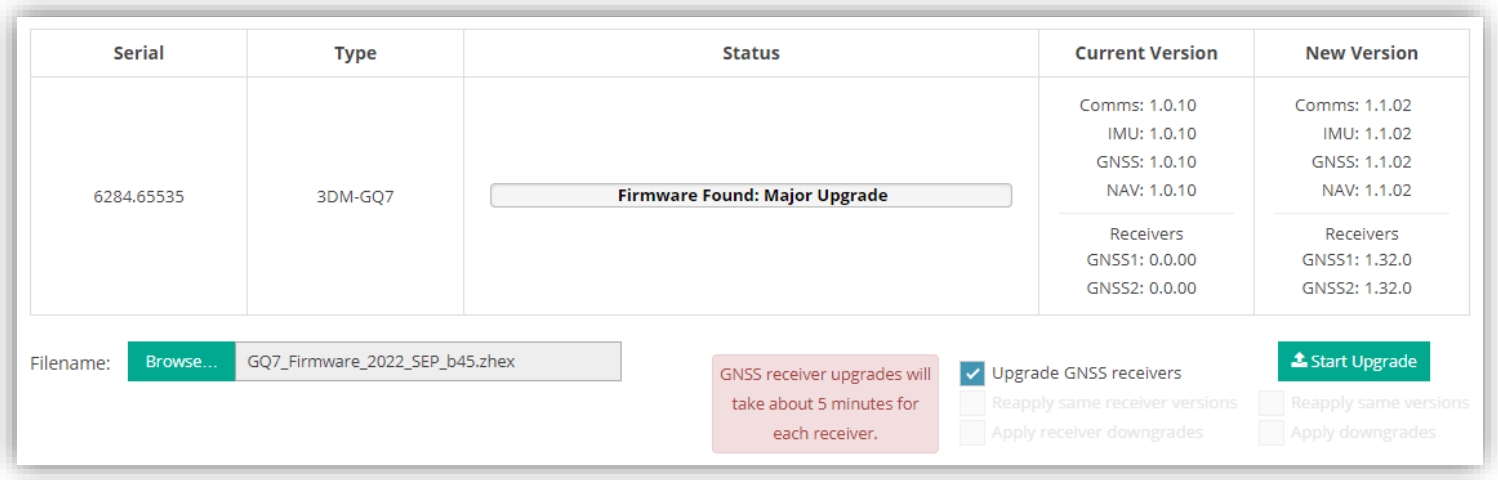
Support for a few of these features will not be available in this version of SensorConnect, including NMEA message configuration and the new Continuous Built-In Test data field. These will be added shortly.

GNSS receiver firmware upgrades

To take advantage of the new SBAS and GNSS spoofing/jamming indication features, the GNSS receivers on the 3DMGQ7 must be upgraded. This is done directly through SensorConnect in the same way as any other firmware upgrade.

GNSS receiver upgrades are notably slower than standard device upgrades. The 3DMGQ7 has two receivers, each one takes about five minutes to upgrade. The entire upgrade process (standard device upgrade and both receivers) is **expected to take just over 10 minutes**.

On the Upgrade Firmware screen, after selecting the GQ7_Firmware file, there are some additional display elements and options related to the GNSS Receiver upgrade: 1) the receiver firmware version on the device and in the file under the Current Version and New Version columns respectively, and 2) the receiver update options.



Initially the Current Version for both receivers will be listed as 0. 0.00 – this is expected. Once the device is upgraded that number will be accurately reported.

Receiver update options mirror the regular firmware update options:

- Upgrade GNSS receivers
- Reapply same receiver versions
- Apply receiver downgrades

The first option (upgrade) is checked by default when an available update is detected. The second two options (reapply same and apply downgrades) should not be needed without direction from our support team.

If the device is disconnected or the upgrade otherwise simply run the upgrade again. SensorConnect knows how to pick back up where it left off. If a failure occurs during a GNSS receiver upgrade, that receiver will need to be placed into recovery mode. A GNSS receiver in recovery mode takes approximately 30 minutes to upgrade successfully.

Other changes and bug fixes:

- Add support for storing and displaying the Continuous Built-In Test data field for the 3DMCV7.
- Fix issue with the Sampling config screen changing the data field order when reading the configuration from the device.
- Fix issue with RTK activation codes occasionally being incorrectly shown as invalid.

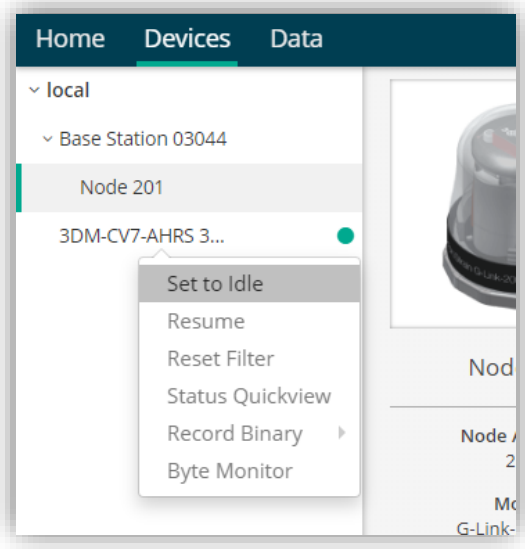
Wireless Changes and Bug Fixes

- Add support for the Taiwan region code.

v14.13.0 (2022-06-03)

Quick Actions on Device Tree

Right-click quick actions were added for connected devices (inertial sensors, wireless base stations) from the device list on the Devices tab. This is to make some more simple actions available regardless of what screen is being viewed or which device is currently selected.



Inertial sensor options:

- Set to Idle
- Resume
- Reset Filter
- Launch Status Quickview
- Record Binary (start, stop, pause/resume)
- Byte Monitor

Wireless Base Station options:

- Hide all Nodes (pre-existing)
- Record Binary (start, stop, pause/resume)
- Byte Monitor

Inertial Features and Changes

Additional 3DMCV7 support

Full configuration and data visualization support has been added for the 3DMCV7 with the exception of configuration for the device's new event system.

Event system configuration support will be coming soon but event data storage and visualization is supported – please reach out to support if you'd like to start using this feature on your 3DMCV7 and need assistance with setup!

v14.11.0 (2022-04-29)

Wireless Features and Changes

G-Link-200 (6522-6001) Support

Full configuration and data visualization support has been added for the new G-Link-200 (6522-6001).

Inertial Changes and Bug Fixes

- Fix for application crash when returning to main options screen from the Initialize/Reset Estimation Filter screen while streaming data.

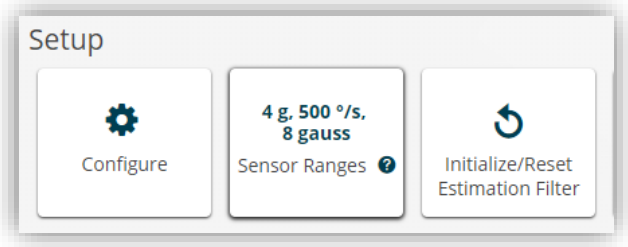
v14.10.8 (2022-04-18)

Inertial Features and Changes

Basic 3DMCV7 support

Initial support for the 3DMCV7 has been added for most configuration options and data outputs, firmware upgrades, and filter initialization.

One of the key features new to the 3DMCV7 is Configurable Sensor Ranges. A tile has been added to the main options screen in the Setup section that displays the currently configured sensor ranges and, when clicked, launches a dialog to change them.



Other changes and bug fixes:

- Fixed odometer config displaying an invalid configuration warning when the odometer was enabled even if the GPIO pins were properly configured for odometer input. The warning will now only be displayed if there is a discrepancy between these options.

v14.10.1 (2022-03-08)

General Changes and Bug Fixes

- Reload device options when device is connected – previously tiles would not be properly enabled/disabled and properties would not be read from the device on connect if the device was already selected from the device tree

Inertial Changes and Bug Fixes

- Remove NTRIP Client tile from options screen for devices that do not have RTK support.
- Add better failure handling on export configuration files – if a single command fails during export it will be skipped, the file will be generated successfully, and the individual command failure(s) will be reported to the user.
  Note: this may cause some commands to show up as “Not in File” – you do not need to be concerned about this, the same commands that were in the configuration files before will still be there. We are working on cleaning this up but if you have any questions feel free to reach out to our support team.

Wireless Changes and Bug Fixes

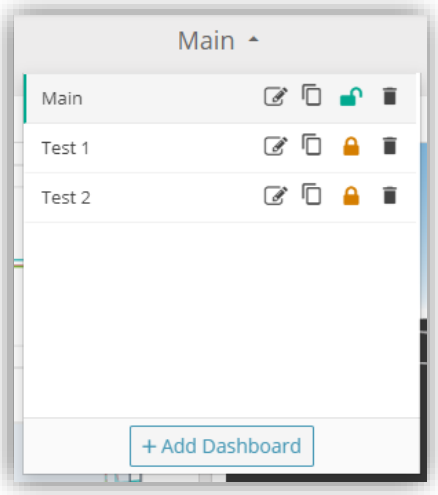
- Fix indicator icon alignment issues in device tree for wireless nodes.
- Add support for Indonesia region code.

v14.7.0 (2022-01-18)

Lock Dashboards

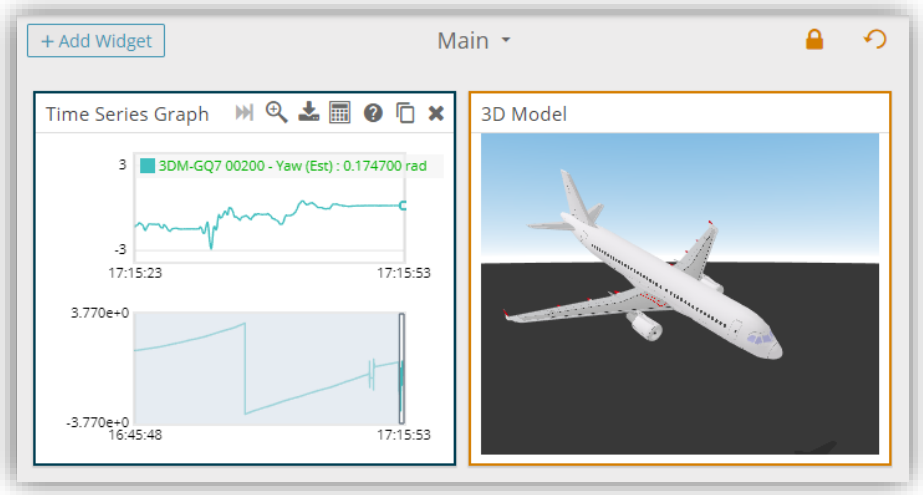
A lock button has been added to data dashboards to allow users to make temporary dashboard changes that will not be saved and can be easily reverted.

The lock button is available both in the top right corner of the dashboard and on the dashboards list drop-down.



An orange lock icon indicates a dashboard is locked.

A teal open lock icon indicates a dashboard is unlocked.



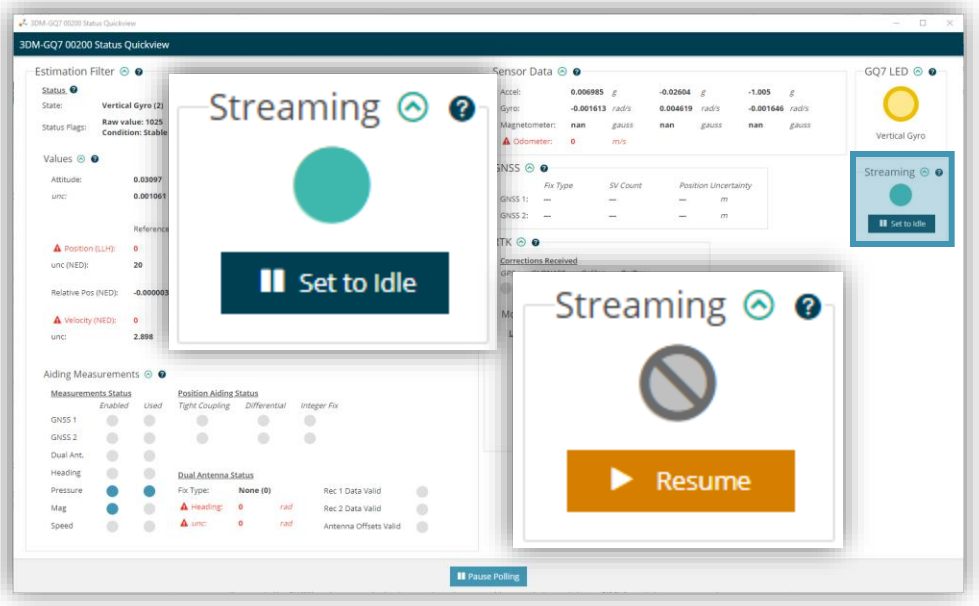
When a locked dashboard has pending changes, a revert button will be available next to the lock button and new widgets will be outlined in orange. On unlocking a locked dashboard, users can choose whether to keep or revert pending changes.

Dashboards are locked/unlocked individually and lock state does not persist when SensorConnect is closed. They are unlocked by default.

Inertial Features and Changes

Status Quickview Streaming Indicator

The Status Quickview window constantly polls and displays select data fields if they are not already streaming from the device – because of this it appears the device is streaming and data is being stored even when it is not.



To avoid confusion, a streaming indicator similar to the one on the device tree in the main window has been added to the Status Quickview window along with the option to set the device to idle or resume streaming right from the indicator display.

When the indicator is teal, the device is streaming the configured message format.

When the indicator is grey, the device is only polling the data required for display on the Status Quickview.

Other changes and bug fixes:

- Device set to idle on connect if data streaming is causing inability to read device information due to bandwidth
- Fixed application crash on CSV export if one or more selected channels have no data in the specified time range
- Display bitfield values as full integers instead of in scientific notation on the Time Series Graph widget

RTK Features and Changes

NTRIP Caster – add support for networked mountpoints

Previously the NTRIP caster supported only mountpoints mapped to a single base station – NMEA packets are now read from the Aux port and passed along in order to support corrections from networked mountpoints when RTCM handshaking is enabled on the GQ7.

New 3DM-RTK Support (6285-0100)

General support including firmware upgrades added for the new 3DM-RTK hardware (6285-0100).

A modem reset button has been added for use in instances of modem failure – this should not be used unless advised by our support team.

Firmware upgrade support removed for previous 3DM-RTK (6285-0000)

There will be no firmware updates for this device – if you're interested in switching to the new 3DM-RTK (6285-0100) please reach out to our sales team.

Wireless Features and Changes

Torque-Link-200-3ch Updates

Low-pass filter settings have been removed and the input range options updated for the Torque-Link-200-3ch (6332-3350).

v14.2.4 (2021-11-15)

Wireless Features and Changes

Torque-Link-200-3ch Support

Full configuration and data visualization support has been added for the new Torque-Link-200-3ch (6332-3350).

Inertial Changes and Bug Fixes

- Fix inertial Packet Builder response parsing – previously would not display command response content
- Improve handling of unknown model numbers (custom models, etc.)

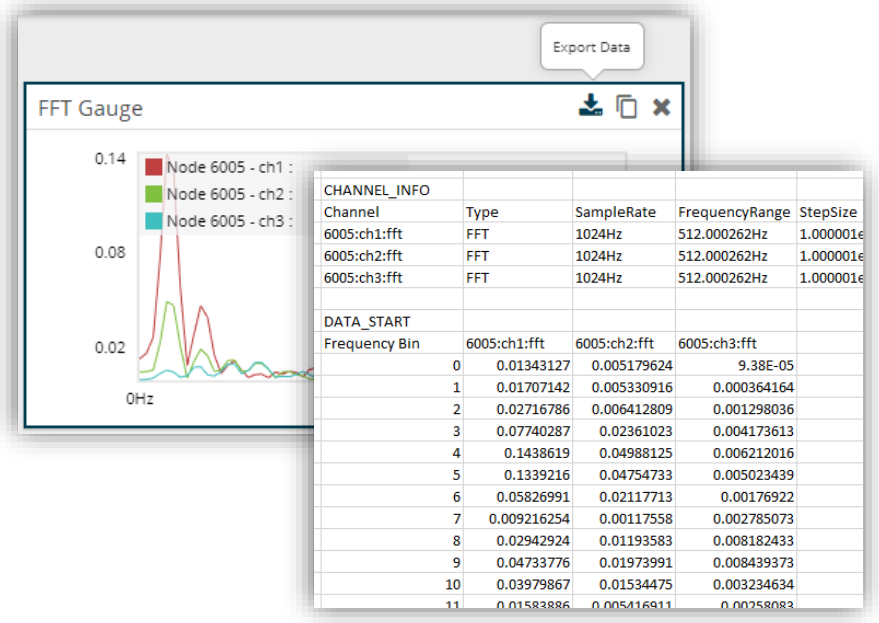
v14.2.1 (2021-09-28)

Export Static FFT to CSV

CSV export is now available for static FFT data sets generated from Math Engine menu on the Time Series Graph widget.

The resulting file includes header information for each included channel indicating data collection start and end times, sample rate, total frequency range, and the frequency step size represented within each bin row.

The Export Data button can be found in the top-right corner of static FFT Gauge widgets.



CHANNEL_INFO				
Channel	Type	SampleRate	FrequencyRange	StepSize
6005:ch1:fft	FFT	1024Hz	512.000262Hz	1.000001e
6005:ch2:fft	FFT	1024Hz	512.000262Hz	1.000001e
6005:ch3:fft	FFT	1024Hz	512.000262Hz	1.000001e
DATA_START				
Frequency Bin	6005:ch1:fft	6005:ch2:fft	6005:ch3:fft	
0	0.01343127	0.005179624	9.38E-05	
1	0.01707142	0.005330916	0.000364164	
2	0.02716786	0.006412809	0.001298036	
3	0.07740287	0.02361023	0.004173613	
4	0.1438619	0.04988125	0.006212016	
5	0.1339216	0.04754733	0.005023439	
6	0.05826991	0.02117713	0.00176922	
7	0.009216254	0.00117558	0.002785073	
8	0.02942924	0.01193583	0.008182433	
9	0.04733776	0.01973991	0.008439373	
10	0.03979867	0.01534475	0.003234634	
11	0.01583886	0.005416911	0.00258083	

Wireless Changes and Bug Fixes

- The available transmit powers for the South Africa region have been updated to increase the max limit to 20 dBm
- Fix bug causing time series CSV export failures when data calibration information undefined

v14.1.7 (2021-05-28)

Inertial Features and Changes

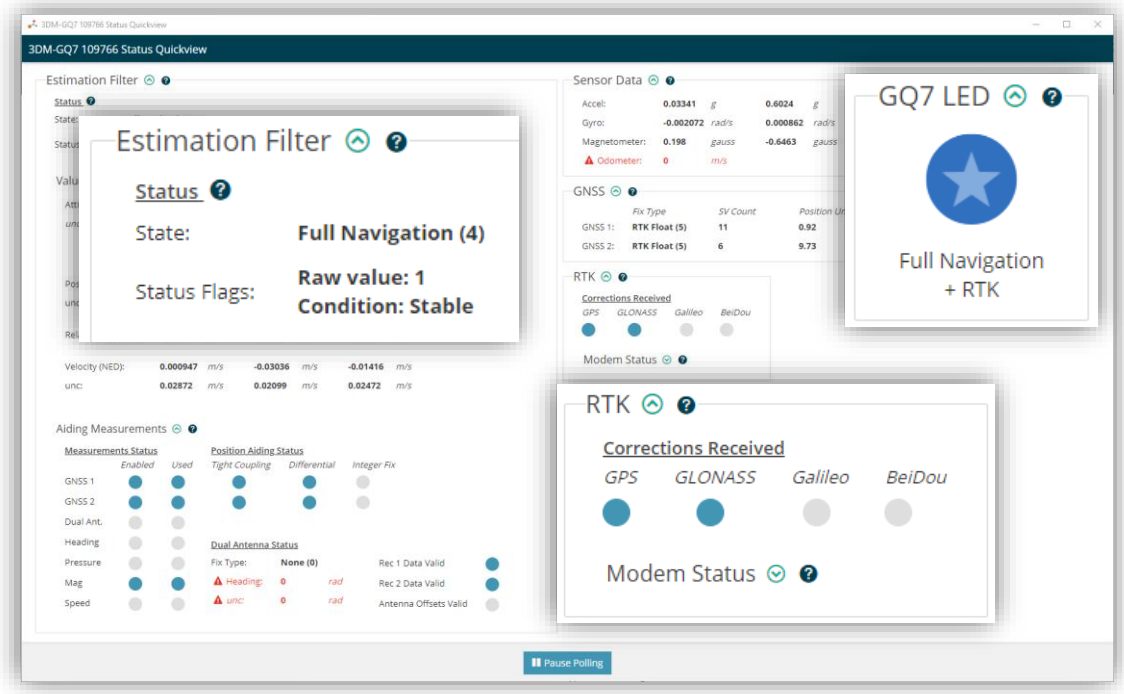
Status Quickview Window

The new Status Quickview option launches a separate window that continuously polls and displays some most commonly used data fields to more quickly and easily see an overview of the device state without configuring the message format and setting up a data dashboard.

This window can be viewed for each connected device alongside the main SensorConnect window as the device is configured or data is viewed on a custom dashboard.

The status quickview is supported for all inertial sensors but has some additional elements to help provide a more complete status overview for the 3DM-GQ7 including LED displays that mirror the device LED and 3DM-RTK LED (if connected).

Data in the quickview window is not stored unless the device is configured to stream each field.

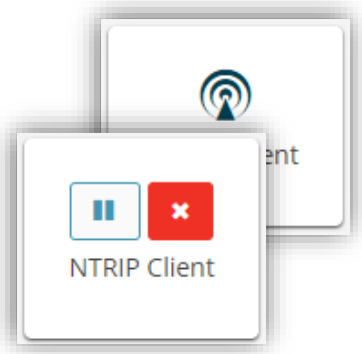


NTRIP Client for RTK Corrections without 3DM-RTK

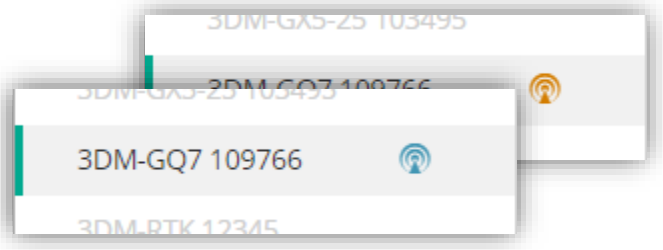
The NTRIP Client allows correction data to be streamed directly to a device from a 3rd party network. This feature is currently only available for the 3DM-GQ7 from the device options screen under the Advanced section. An internet connection is required to use this feature.

When clicked a dialog is presented to enter the 3rd party NTRIP caster details (host, port, mountpoint), your user credentials for that network, and the GQ7 auxiliary port connection details.

Once connected Pause/Resume and Stop streaming buttons are available on the NTRIP Client option tile.



- Pause to temporarily stop streaming corrections which can be restarted by clicking Resume
- Stop to cancel streaming correction and close the connection



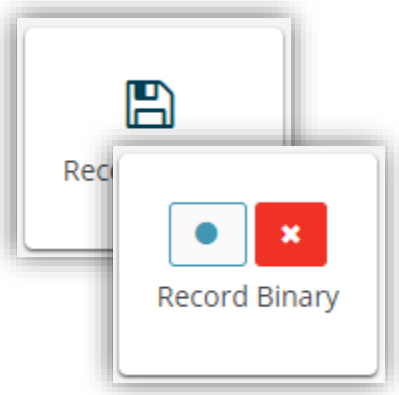
While streaming an indicator displays on the device tree to indicate corrections are being received. The indicator is blue while receiving corrections and turns orange when streaming is paused. The state and last received time can be seen in the tooltip when hovering the mouse pointer over the device tree indicator.

Other changes and bug fixes

- Timestamp data fields are now saved to the device at the beginning of the message format instead of the end.
- Fix the available Estimation Control configuration options for the CV5-25 (hard and soft iron auto-calibration now available)
- GNSS Position and Attitude Aiding Status, Aiding Measurement Summary data channels: fix status bitfield parsing, change time of week channel name from “TOW (Last Valid)” to “Time of Week” for accuracy (previously collected data will not be pulled forward into new channel but will remain available under old channel name).

v13.9.2 (2021-04-06)

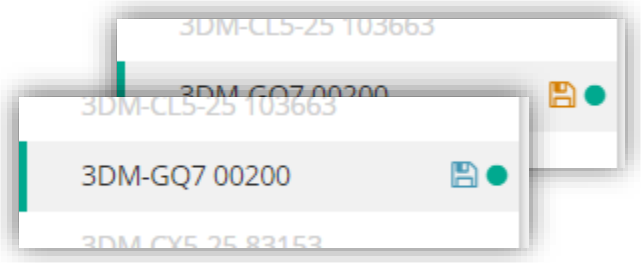
Record to Binary File



Recording raw byte communication to and from the device was previously available in the Monitor Bytes window for connected devices (base stations, inertial devices, 3DM-RTK) but has been moved to the main device options screen for better accessibility. For inertial and RTK devices it is found under the Control section, for base stations it is found under Advanced.

When clicked the user is prompted to select a file location for the new binary file. Once selected the file is created and all traffic over the port will be recorded unless recording is paused or stopped. Pause/Resume and Stop button controls are accessed on the Record Binary option tile once a file is selected and is open.

- Pause to temporarily stop recording – additional traffic will be recorded to the same file when Resumed
- Stop to close the file – to continue recording another file will need to be opened



When a file is open a save indicator displays on the device tree to indicate communication with that device is being recorded. The indicator is blue when actively recording and turns orange when recording is paused.

While actively recording the file name, size, and write rate can be seen in the tooltip by hovering the mouse pointer over the device tree indicator.

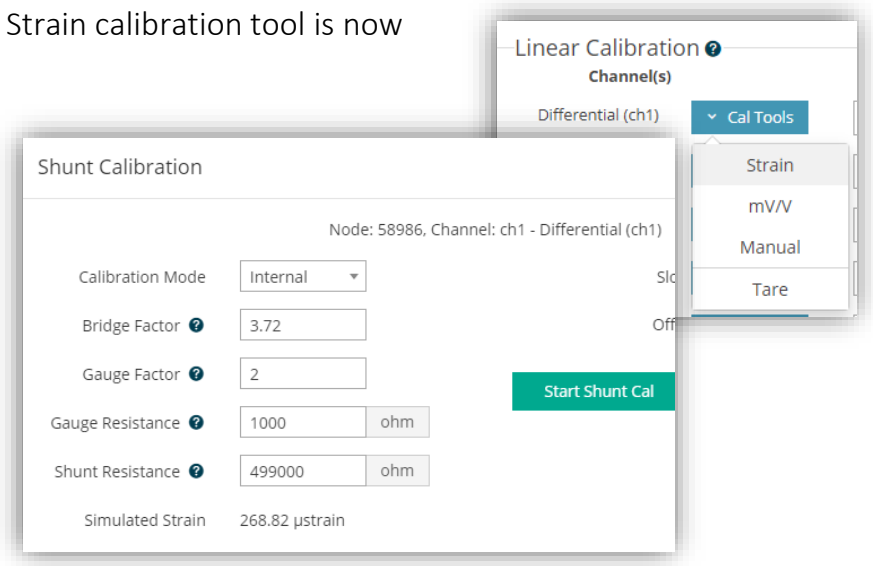
Wireless Features and Changes

Torque-Link-200-3ch Support

Full configuration and data visualization support has been added for the Torque-Link-200-3ch.

Strain Calibration tool improvements

The “Number of Active Gauges” input field on the wireless channel Strain calibration tool is now “Bridge Factor” and input is no longer required to be a whole number.



Bridge Factor is the number of active arms in a strain gauge Wheatstone bridge but may also be a fractional value depending on the physical configuration of the gauges.

For example: steel has a Poisson ratio of 0.3 so gauges used in a transverse configuration on steel may contribute 0.3 to the bridge factor instead of 1.

Other changes and bug fixes

- Fix for base station transmit power changing on failure to communicate with a previously discovered node in the Sampling Network screen.

Inertial Changes and Bug Fixes

- Get SensorCloud RTK Activation Code improvements: previously clicking Get Activation Code automatically copied the code to the clipboard but now launches a dialog that displays the code with a copy button and a link directly to SensorCloud RTK.
- Fix bug causing 3DM-RTK firmware upgrades to hang indefinitely at the end of the upgrade process after applying the new image and power-cycling.
- Add support for new GQ7 data output fields:
    - GNSS Dual Antenna Status (0x82,0x49)

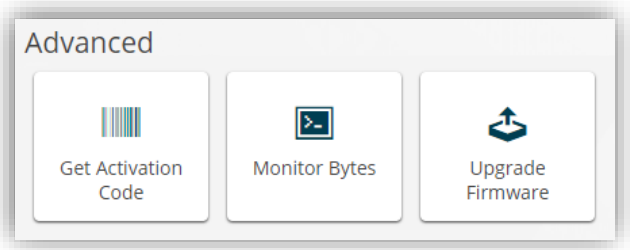
v13.8.5 (2021-02-01)

Wireless Changes and Bug Fixes

- Fix bug preventing display of data sampled once every 30 seconds or slower on the Timeseries Graph widget – this will retroactively fix the display of previously collected data.

Inertial Features and Changes

3DM-RTK Support



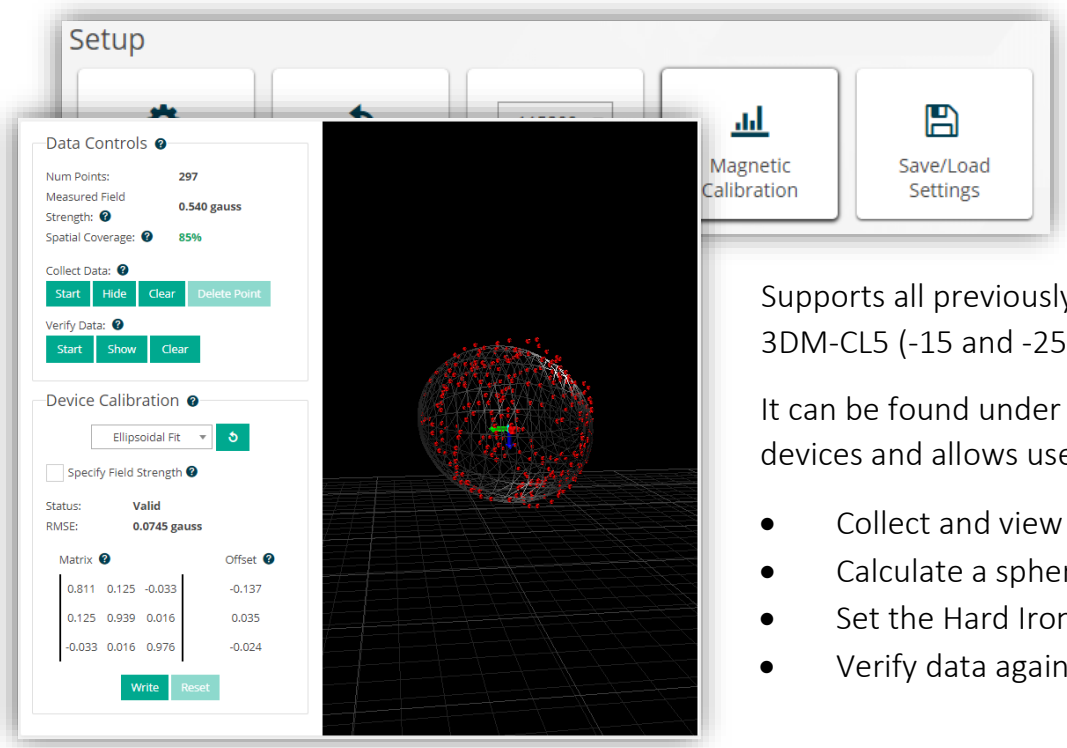
Support has been added for the 3DM-GQ7.
Available functionality includes:

- Firmware upgrades
- Read SensorCloud RTK activation code
- Basic device, modem, and signal status indicators

When plugged into a connected 3DM-GQ7 the RTK device status information can be viewed by sampling the GNSS RTK Corrections Status channel field in the RTK data set.

3DM-CL5-15, -25 Support

Full configuration and data visualization support has been added for the 3DM-CL5-15 and 3DM-CL5-25.



Magnetic Calibration Tool

Previously available in the standalone Iron Calibration tool, this functionality has been integrated into SensorConnect for convenience and stability.

Supports all previously supported devices as well as the 3DM-GQ7 and 3DM-CL5 (-15 and -25).

It can be found under Setup on the main options screen for supported devices and allows users to:

- Collect and view plotted magnetometer data
- Calculate a spherical or ellipsoidal fit
- Set the Hard Iron Offset and Soft Iron Matrix device configuration
- Verify data against the calculated fit

MIP Packet Builder

Interface added for building custom MIP commands to send to inertial devices and parse responses available under Advanced on the main options screen for supported inertial devices. Most users will not need this functionality and should use this only with guidance from support.

Other changes and bug fixes

- Fix performance issues around data collection with Byte Monitoring window open – now, by default, data packets will be excluded and only commands and responses displayed. All traffic (data, commands, responses) will still be saved to recorded binaries.
- Add support for new GQ7 data output fields:
    - Odometer Scale Factor Error (0x82,0x47)
    - Odometer Scale Factor Error Uncertainty (0x82,0x48)
- Add warning messages in Configuration to help with GPIO config (i.e. warn on odometer input enabled but not configured to a pin).

v13.4.13 (2020-11-03)

Wireless Changes and Bug Fixes

- Added support for mass units: grams, tons, tonnes (metric ton)
- Fix beacon timing issue on start synchronized sampling network

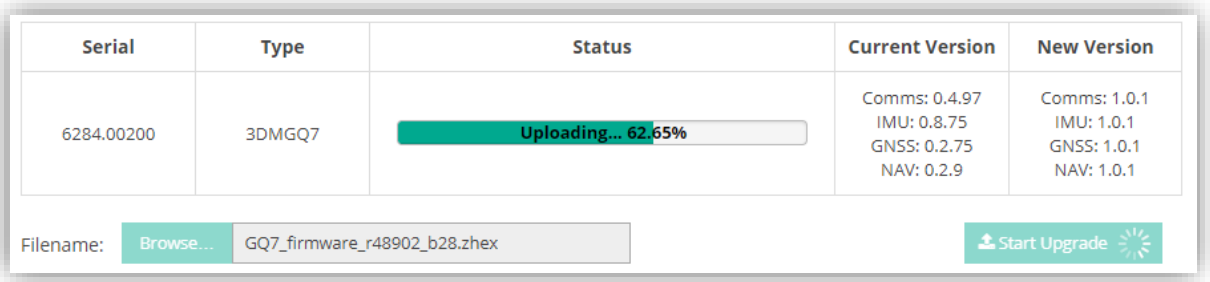
Inertial Features and Changes

3DM-GQ7 Support

Full configuration and data visualization support has been added for the 3DM-GQ7 (limited support previously available).

Firmware Upgrades

Inertial firmware can now be upgraded via SensorConnect for all GX5, CX5, and CV5 devices, and the new GQ7. All-in-one firmware files (.zhex) will be made available through the Microstrain site for easy, one-click upgrades.



The legacy upgrade tool will not work with the new ZHex file format and does not support the GQ7.

Other changes and bug fixes

- Improve Reset button functionality – display confirmation dialog with option to save current settings to startup
- -10 devices message format no longer reset to all channels at max rate on connect

v12.7.7 (2020-07-28)

Wireless Features and Changes

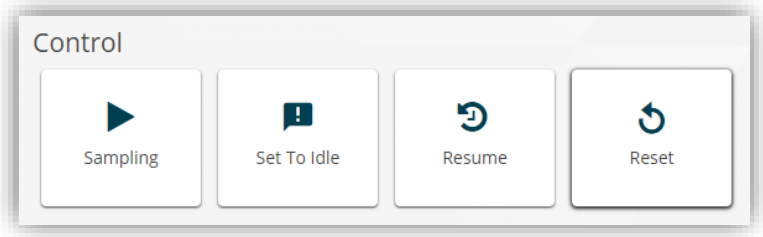
Bug fixes

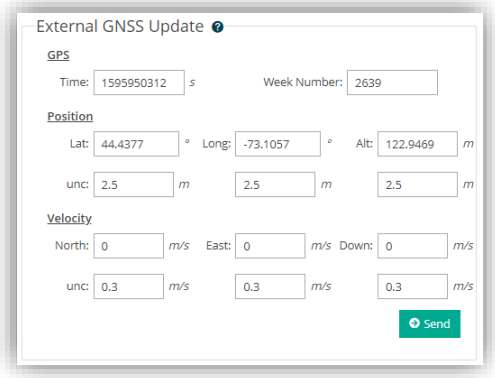
- Fix for failure to load Configure screen after changes made to Temperature Sensor settings.

Inertial Features and Changes

Reset Device button

Reset button is now available for all inertial devices under the Control section of the main options screen. This button sends the Reset Device command (0x01, 0x7E) to the sensor.





External GNSS message builder

Users are now able to send a GNSS update message to the filter through the Initialize/Reset Estimation Filter screen. This sends only a single External GNSS Update command (0x0D, 0x16) at a time, it does not transmit continuously. In its current state this feature is most useful for providing just an initial position for a filter configured to accept external GNSS messages.

Other changes and bug fixes

- Sensor to Vehicle Frame Transformation setting changed to Sensor to Vehicle Frame Rotation for accuracy
- Fixed Antenna Offset validation to ensure the offset magnitude <= 10 m
- Fixed Accel Bias, Gyro Bias, Capture Gyro Bias, Mag Hard Iron Offset configured values switching on save/load
- Sampling configurations: changed default sample rate to 100 Hz for supported data sets

v12.5.16 (2020-03-19)

Wireless Features and Changes

Channels 25 and 26: Wireless frequency channels 25 and 26 are now available for the WSDA-200-USB and WSDA-2000.

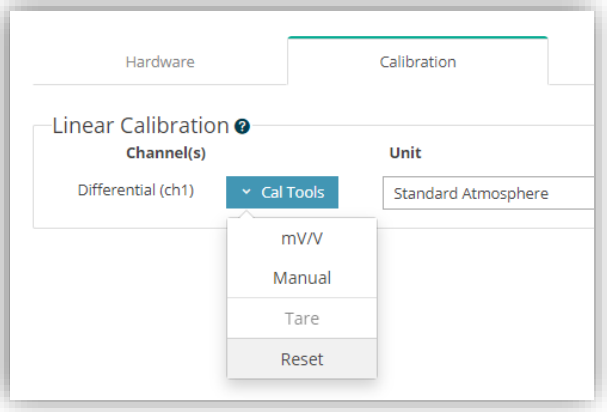
V12.5.10 (2020-02-07)

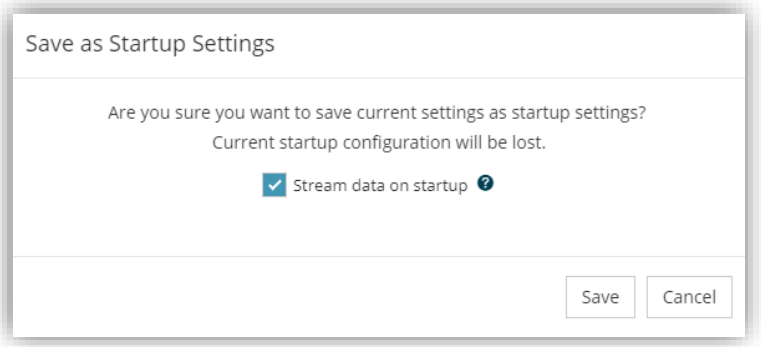
Wireless Features and Changes

PT-Link-200-GY Support: Full data streaming and configuration support for the new PT-Link-200-GY has been added.

Reset to Factory Calibration

The ability to reset a Wireless node channel's calibration back to the original factory calibration values has been added for supported devices. The Reset button is available under the Cal Tools menu on the Calibration tab of the Configure screen. This is currently only supported on the PT-Link-200-GY.





Inertial Features and Changes

Enable/Disable Streaming on Startup

An option has been added to Save as Startup Settings on the Save/Load Settings screen to enable or disable streaming on startup. Changing this option will not change current settings, it will only be applied on startup.

Bug Fixes

- Clicking Apply on the Inertial Sampling Config screen will now only apply the new message format without resuming streaming – the Start button still both applies the new message format and initializes/resumes streaming.
- Limited functionality issue on inertial devices connected via serial at a baud rate of 9600 has been resolved.

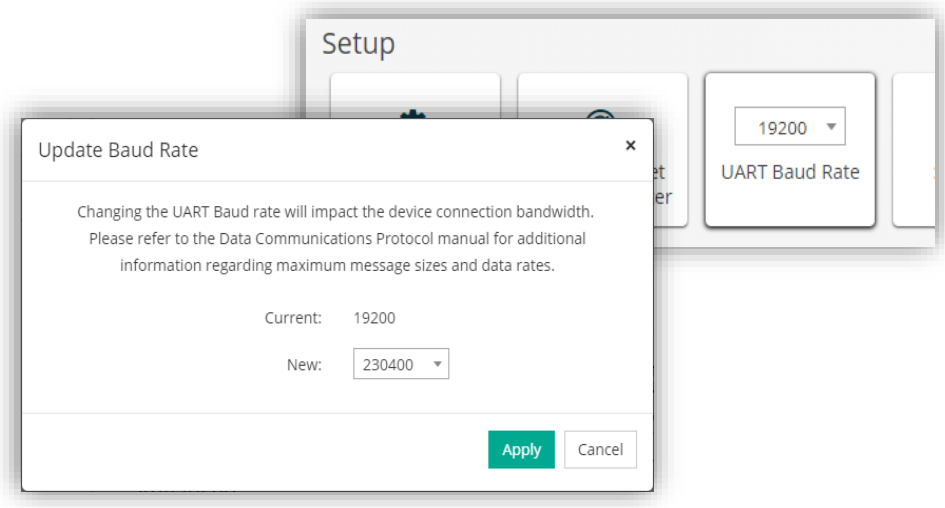
V12.3.0 (2019-12-18)

G-Link-200-R Support: Full data streaming and configuration support for the new G-Link-200-R has been added.

Inertial baud rate configuration:

The ability to configure the baud rate on inertial devices has been added. It is accessible from the UART Baud Rate button on the main device options menu. When changes are applied the connection will automatically be re-established at the new baud rate to maintain communication.

Previously, connection via USB always displayed the baud rate as 115200 in the device info panel – this will now accurately reflect the baud rate configured on the device.



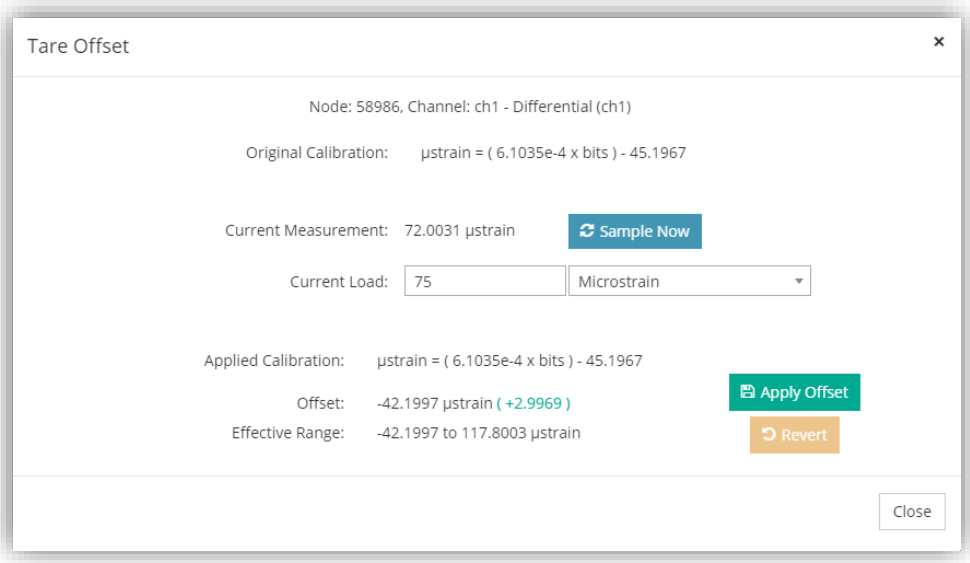
Other notable updates and bug fixes:

- Fixed data stuttering in Time Series Graph widget when sampling at high data rates.

V12.1.4 (2019-10-30)

Wireless Tare:

A tare tool has been added for differential and single-ended channels on supported nodes (see below). This is available for each channel on the Calibration tab in Configure under the Cal Tools dropdown.



This tool automatically adjusts the offset by sampling a real value with the currently configured calibration settings and calculating the offset that would return the user-specified measurement value. That offset can then be applied to the channel and tested by re-sampling to confirm that the measurement now matches the target.

Supported Node	Minimum Firmware Version*
V-Link-200	12.45139
SG-Link-200, -OEM	12.44849
Torque-Link-200	12.44849

** At time of release, firmware for this feature is not yet available*

Notable Bug Fixes:

Byte Monitor behavior on sensor disconnect

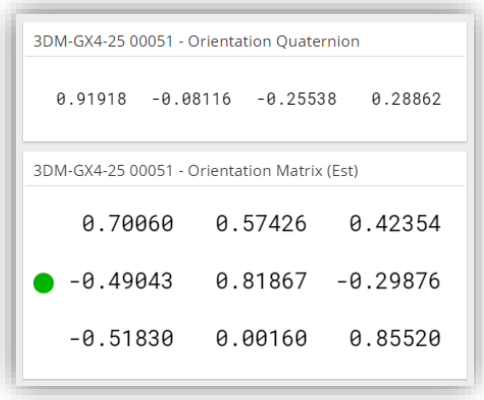
Previously on sensor disconnect/reconnect or repository change, the Byte Monitor window would lose connection to the sensor and prevent the launch of another window for the same sensor to resume monitoring bytes sent and received over the connection. With this update, we've made changes to make this window behave more intuitively:

- On sensor disconnect the Byte Monitor window will now display an overlay indicating the sensor is disconnected and will automatically resume displaying raw byte data on sensor reconnect.
- On repository change all Byte Monitor windows will be automatically closed.

Export CSV formatting issue with Valid Flag data

An issue was introduced in the previous release (12.0.9) with the addition of data with valid flags associated with each point. When exporting data, if a value/flag channel did not have data for every included timestamp (sampling at a lower frequency, not sampling for the entire time range, timestamps offset with other data, etc.) data for other channels were sometimes offset incorrectly and written to the wrong column in the CSV. This issue has now been resolved and CSVs will be formatted as expected.

V12.0.9 (2019-09-10)



Matrix and Quaternion data:

Matrix and Quaternion Data will now be properly stored and displayed (previously this data was discarded).

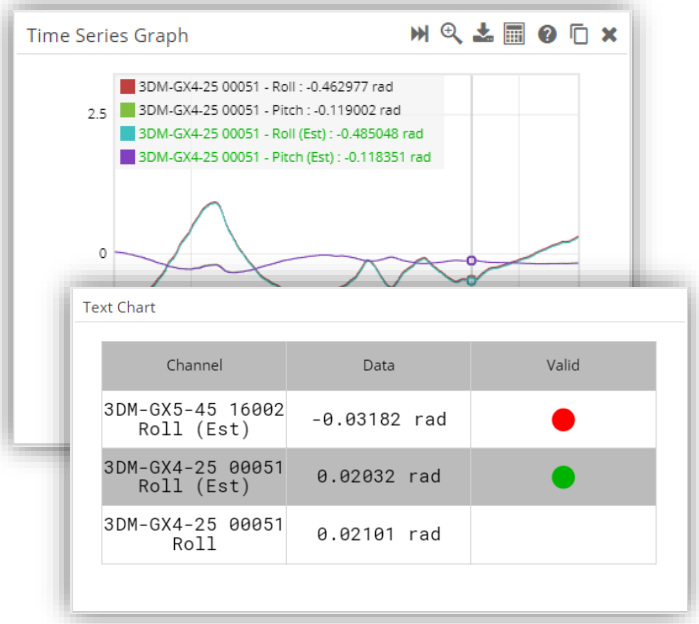
- View a channel's latest data point with the Matrix Display widget
- Export data to CSV for selected time range

Currently, only inertial devices output matrix or quaternion channels.

Valid Flags:

Many inertial data fields output a valid flag associated with each point – previously this data was discarded, but SensorConnect will now properly store and display this information

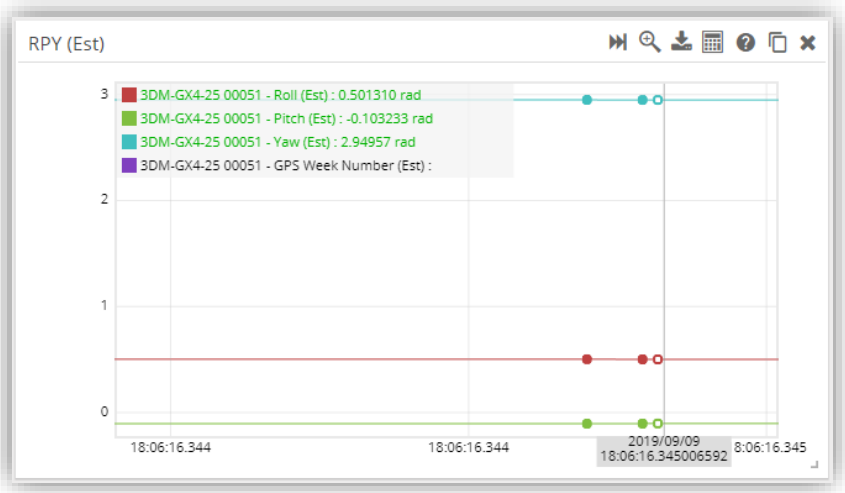
- Indicated as a green (valid) or red (invalid) dot in the Numeric Display, Matrix Display, and Text Chart widgets
    - The Text Chart can be configured not to display the Valid column in the widget settings
- Indicated as green (valid) or red (invalid) legend text in the Time Series widget
- Black text or a missing dot means there is no associated valid flag
- Valid flags are exported to CSV with the base channel values



Improve timestamps on inertial data:

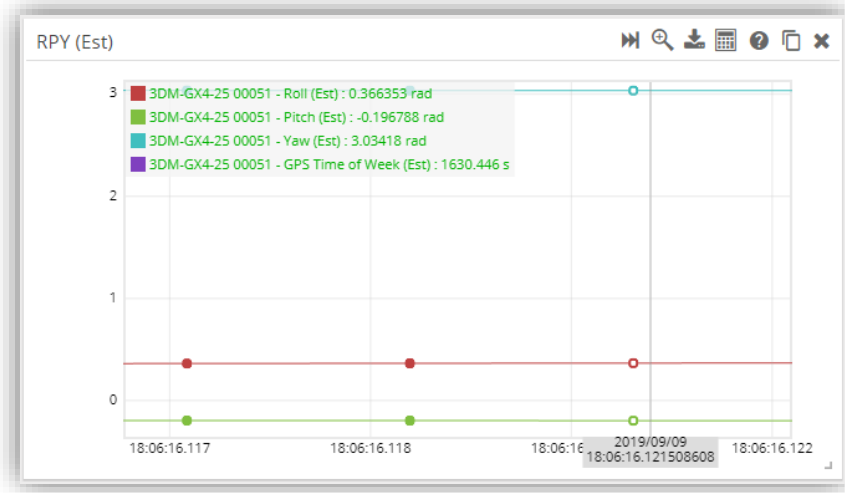
Inertial data points will no longer ‘bunch’ on the Time Series graph and in CSV exports when streaming at high sample rates over a USB connection if the timestamp data field is included in the data packet.

Changes have been made to the Inertial Sampling configuration screen to assist in selecting a message format that will allow your data to benefit from the timestamping improvements.



Point bunching – No Timestamp included

(Three points @ 500 Hz over USB)

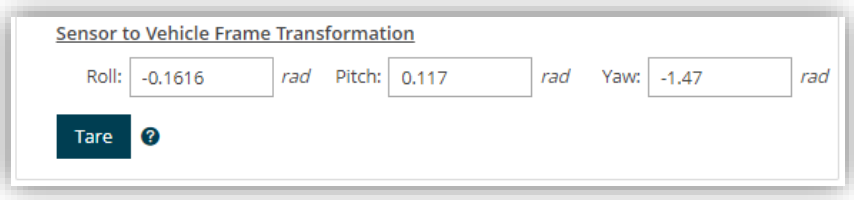


Improved timestamping – Timestamp included in packet

(Three points @ 500 Hz over USB)

Add Inertial calibration functions:

Added Tare Orientation, Capture Gyro Bias, and Capture Auto Mag Calibration for inertial devices which support these commands. They can be found in Configuration directly below the affected settings for each:



- Tare Orientation – Sensor to Vehicle Frame Transformation
- Capture Gyro Bias – Gyro Bias
- Capture Auto Mag Calibration – Hard Iron Offset, Soft Iron Matrix

Settings values are updated to display the results after the corresponding command is run.

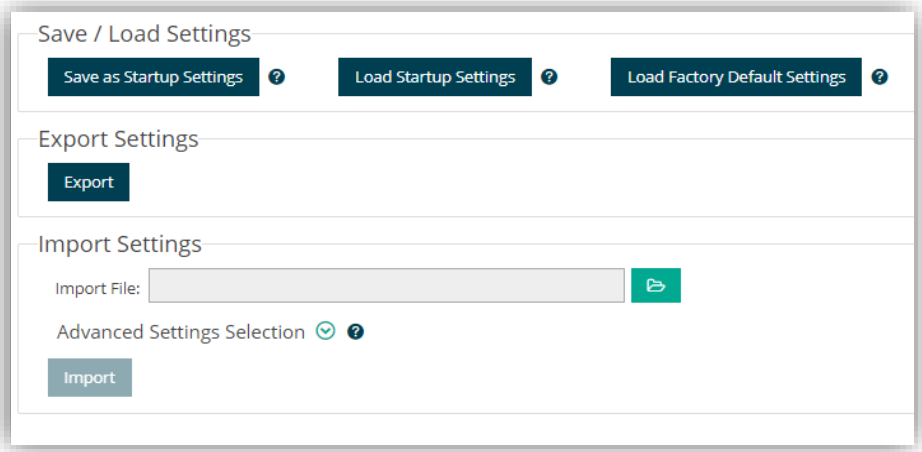
Other notable updates and bug fixes:

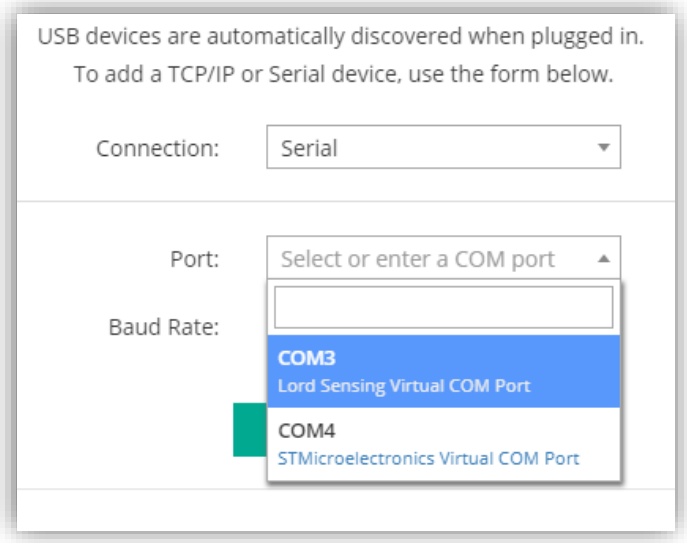
- Trailing spaces in new repository names automatically removed
- Additional status flag and bitfield channels will now display as human-readable text instead of numbers in the Time Series, Numeric Display, and Text Chart widgets
- Fix default calibration coefficient for SG-Link-200 and Torque-Link-200 pulse frequency channels
- Fix Byte Monitoring window display sizing when monitor's scale settings adjusted from default
- Fix duplicate inertial channel names on the Data tab

V10.4.9 (2019-06-05)

Inertial Save/Load Settings: The Save/Load Settings option for an Inertial device allows you to:

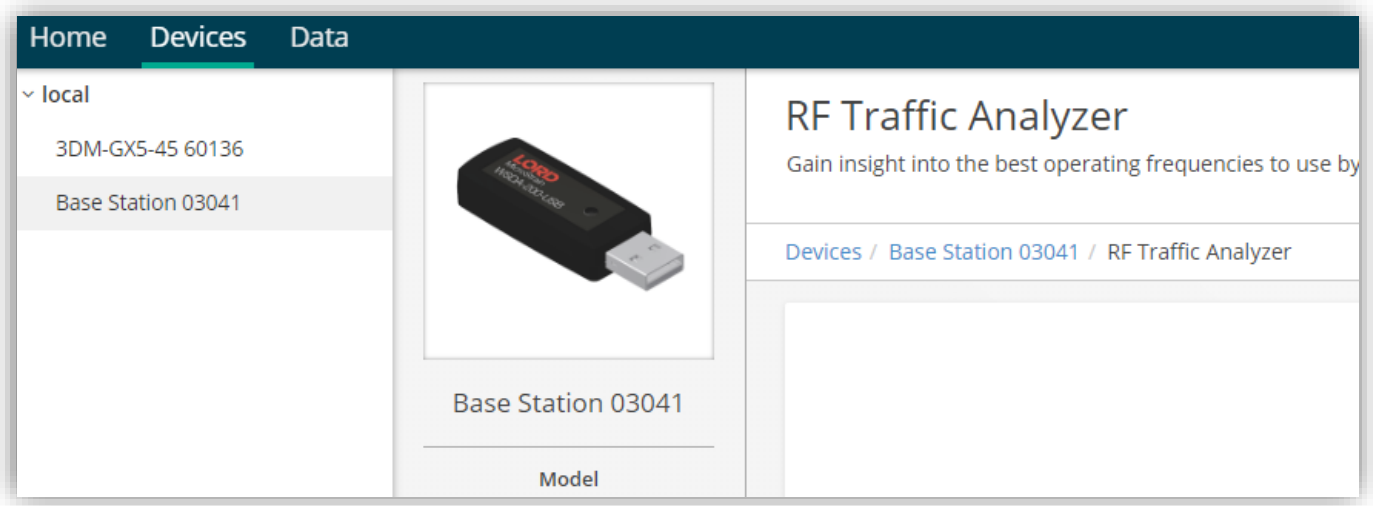
- Save the device's current settings as startup settings
- Load the device's startup settings onto the device
- Load the factory default settings onto the device
- Export the current settings to a file
- Import a settings file back onto the device





COM Port list: The Manual Add Device window has been updated to include a list of the COM ports on the PC, allowing for easier selection.

Title Bar / breadcrumbs: A title bar has been added to the top of the right section and includes information about the content you are looking at, as well as navigation breadcrumbs to easily jump back to the previous page.



Byte Monitoring – Save to File: The Byte Monitoring window now has an option to save the live raw binary data to a file.

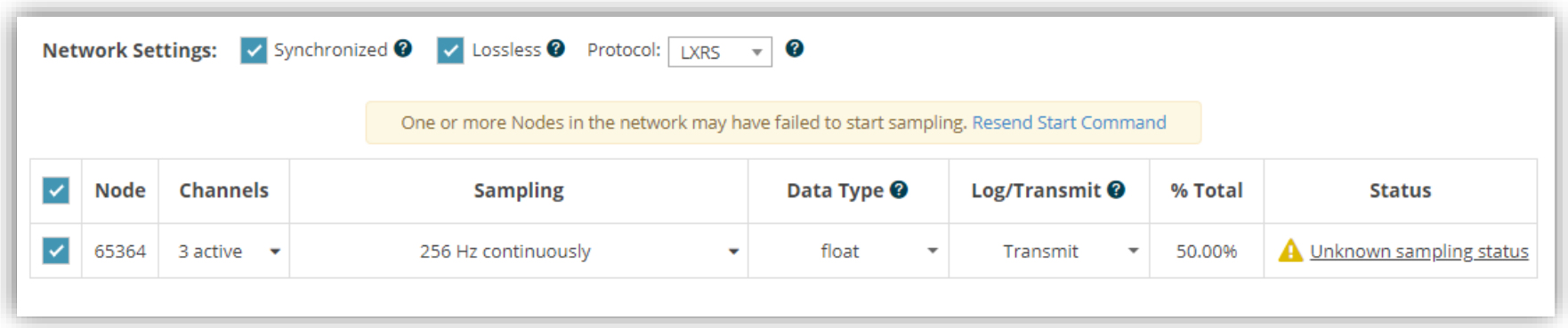
Other notable updates and bug fixes:

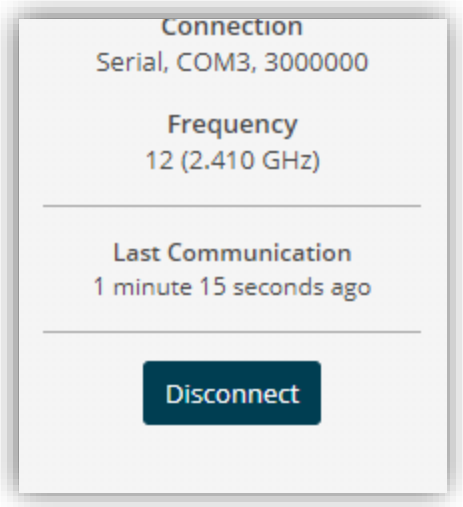
- Fix for RPM to Hertz unit conversion
- Fix for channels data not loading correctly in some scenarios where transmitted and log data were collected
- Allowing manual calibration of SG-Link-200 and Torque-Link-200 pulse frequency and total pulses channels
- Changed the Shunt Cal's default number of gauges and gauge resistance values based on node model
- Display higher resolution on FFT frequencies when needed
- Updated to CEF 74.1.16 / Chromium 74.0.3729.131

V10.0.8 (2019-04-09)

Support for Double-Precision: Some Inertial fields are output with double precision. Previous versions of SensorConnect truncated these values to floats. SensorConnect now fully supports double precision for these values.

Improved Wireless Start Sampling: In some cases, SensorConnect was unsure if a Wireless Node actually started sampling and would erroneously list a Node as started when it was still idle. If the response to the start sampling command is not heard, SensorConnect will now notify you, and give you the option to resend the command to the device.





Disconnect: It can be useful, especially when developing your own applications using LORD Sensing's hardware, to keep SensorConnect open, and quickly disconnect/reconnect to a device. We've added this functionality to all devices now, not just devices that were manually added.

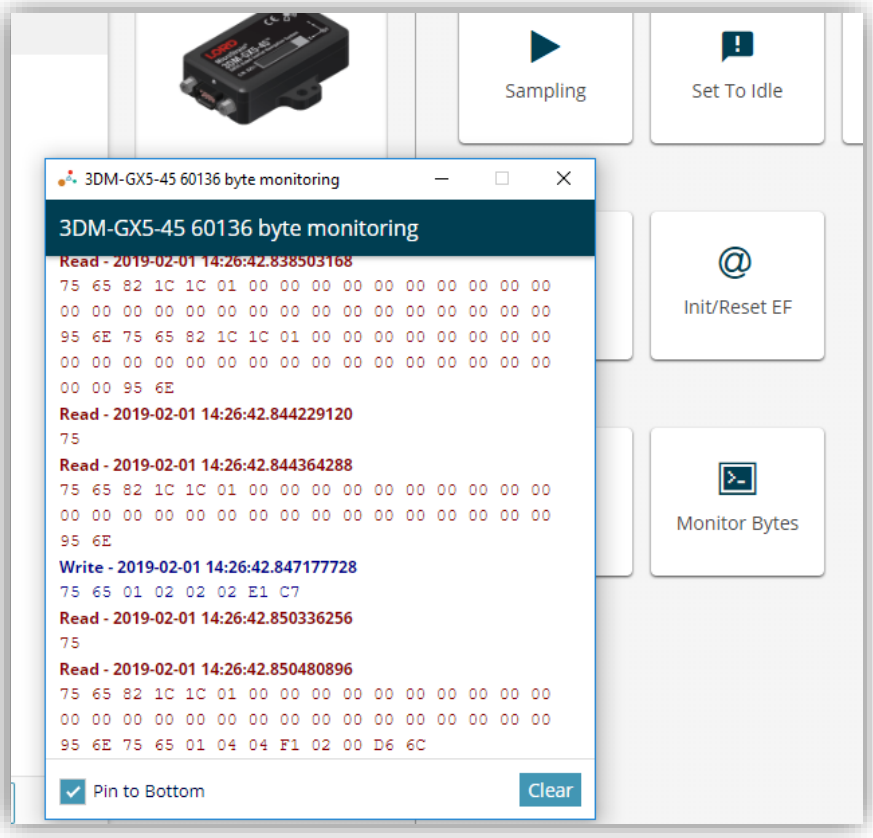
Auto-Y keyboard shortcut: Auto-Zoom on the Y-axis is a commonly used feature. You can now perform this action by pressing the 'Y' key when focused on the Timeseries Widget.

Other notable updates and bug fixes:

- Fix for being unable to configure an IEPE-Link
- Fix for unplugging a BaseStation sometimes causing Nodes to be hidden from it in the Device List
- Fix for incorrect input ranges for G-Link-200-OEM 40G Nodes
- Fix for Byte Monitoring windows showing duplicate data in some cases
- Fix for CSV export failing in some cases
- Fix for MathEngine stats failing if at least one selected channel has no data for the select time range
- Showing error message on startup of SensorConnect if missing critical files due to an installer error, instead of just crashing
- Sorting Inertial channels alphabetically in the Inertial Sampling screen
- Added timestamps of the min and max values in the MathEngine stats output

v9.17.4 (2019-02-01)

Monitor Bytes option: Each connected device (BaseStation, Inertial Node, Displacement Node) now has a *Monitor Bytes* option which allows viewing the raw bytes from reads and writes to/from the device.

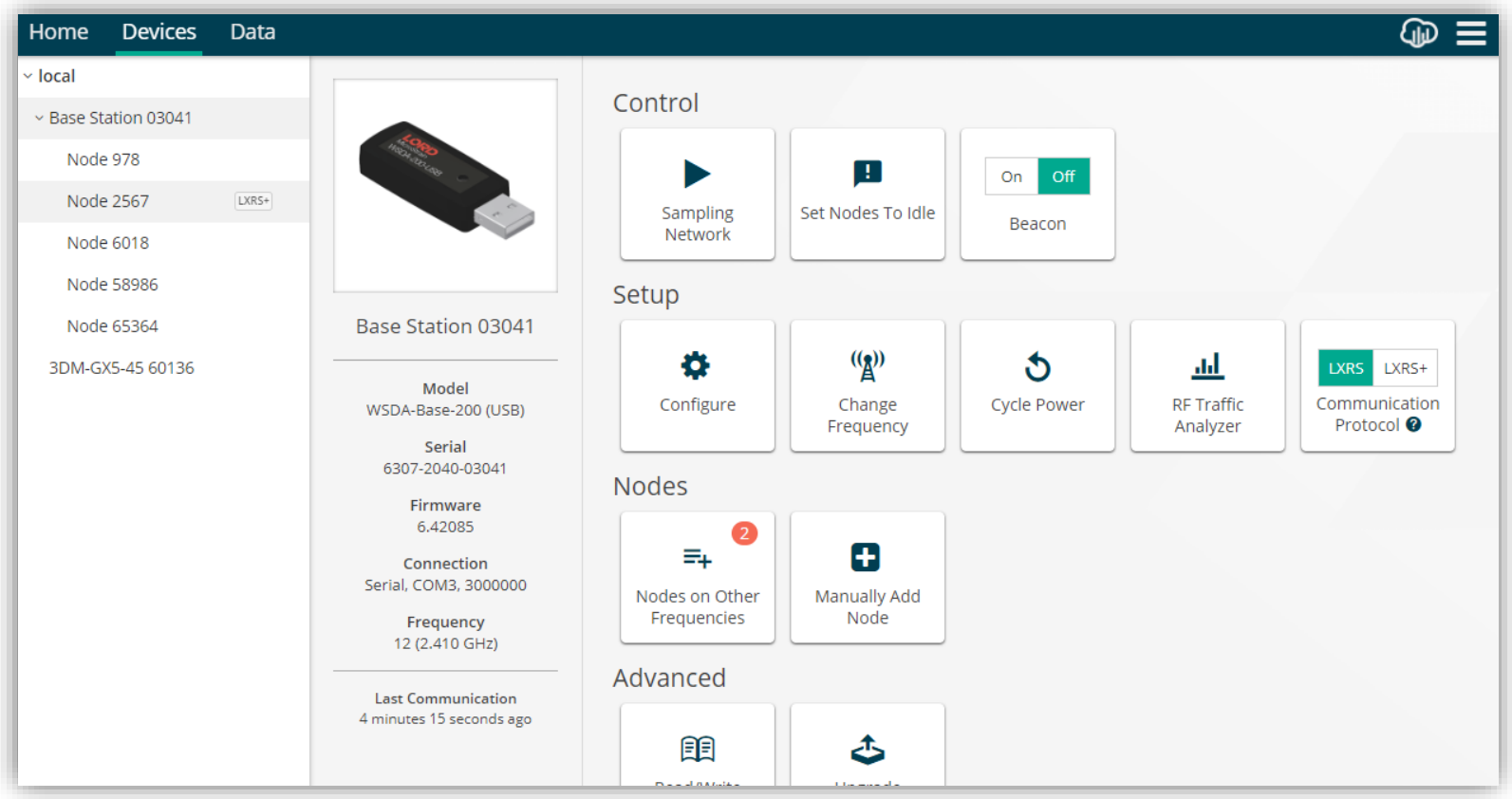


Other notable updates and bug fixes:

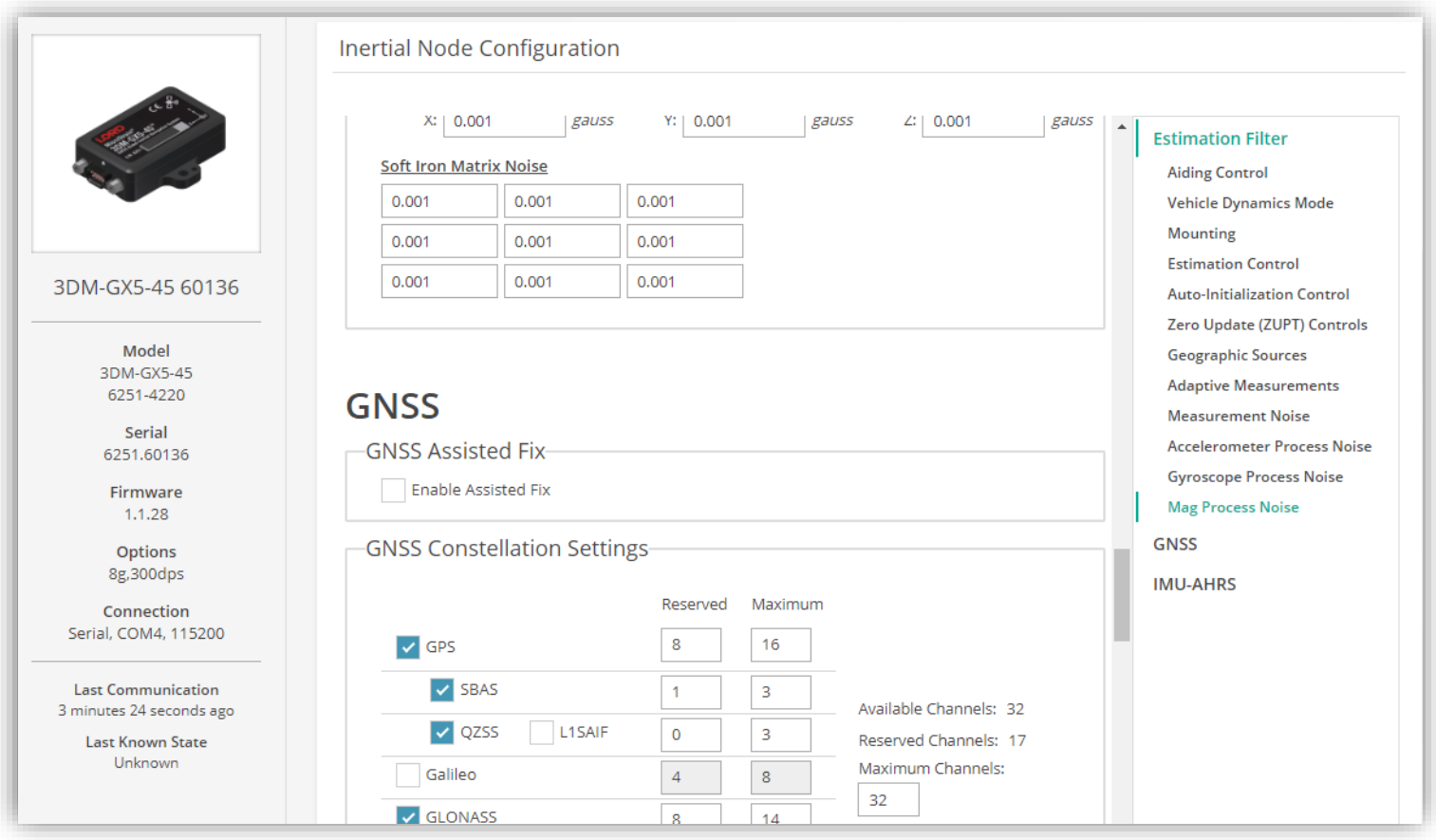
- Revised list of input ranges for RTD channels
- Support for SG-Link-200 and SG-Link-200-OEM new firmware only allowing 1 low pass filter setting for all channels
- Fix for incorrectly detecting calibration changes when first entering the TC-Link-200 configuration screen
- Fix for error messages positioned incorrectly on the Inertial configuration screen
- Fix for IPv6 addresses not fitting in the device info sidebar
- Fix for CSV export crash in some scenarios

v9.16.13 (2018-12-21)

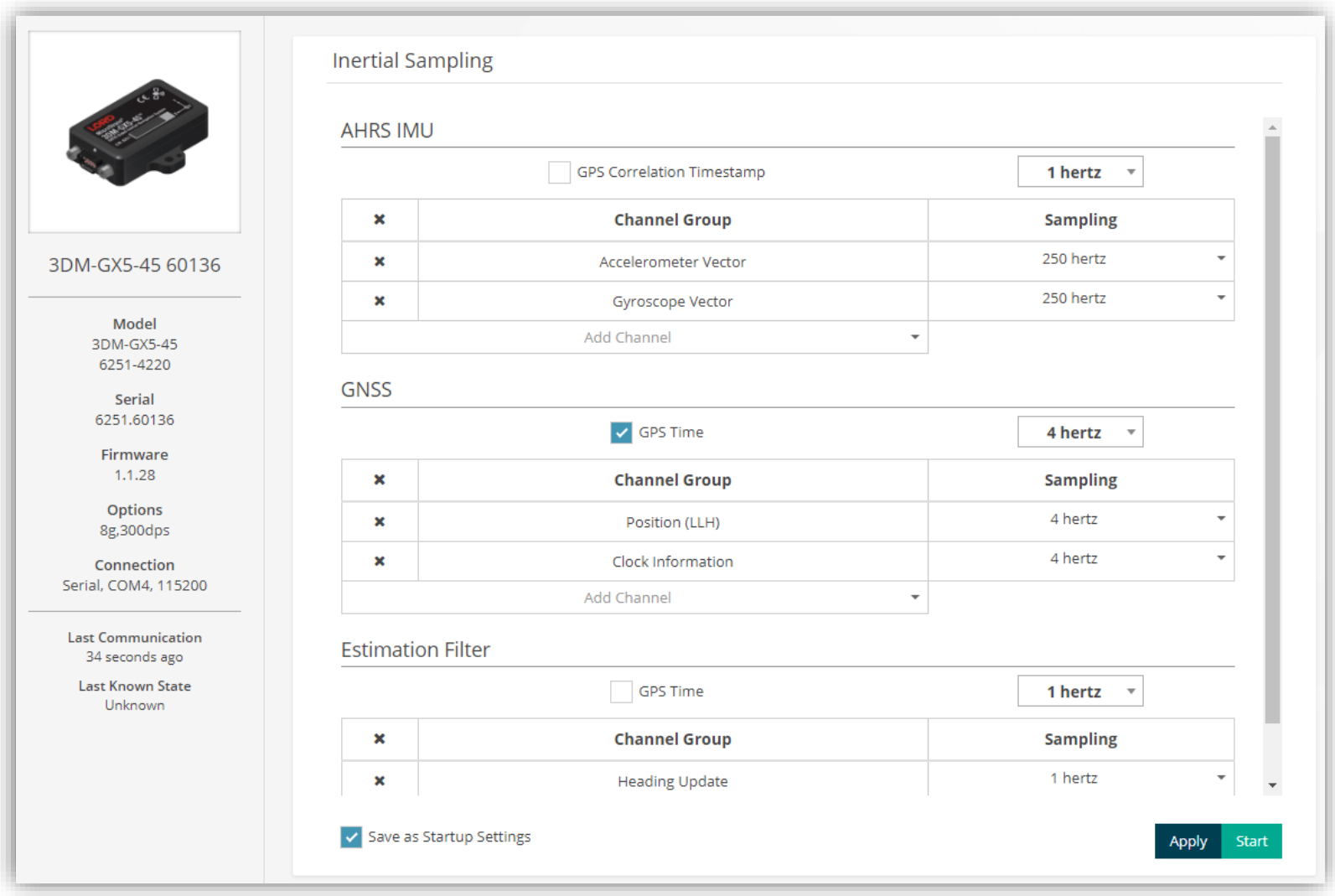
Device Info sidebar: The section that shows the device image and information, has been restyled and moved from the top bar to a sidebar. More information has been added to this section as well, depending on the device.



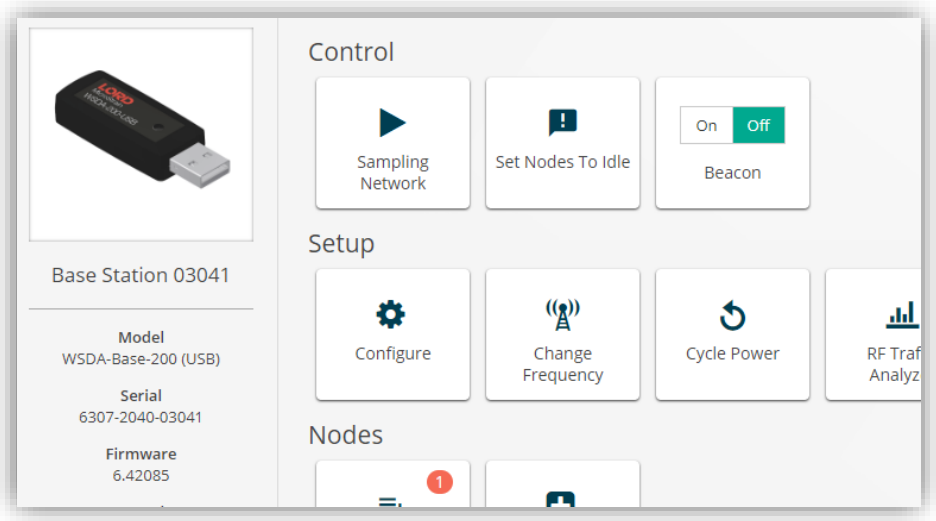
Inertial basic configuration: Inertial basic configuration is fully implemented. This includes configuration of Estimation Filter, GNSS, and IMU-AHRS settings.



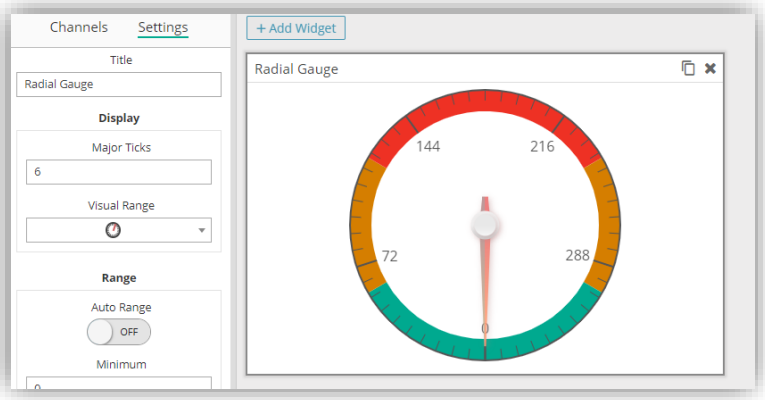
Revamped Inertial sampling screen: The Inertial sampling screen has been redesigned to better differentiate between channels that fall under IMU-AHRS, GNSS, and Estimation Filter.



Beacon Status: The current Beacon status is now indicated with a toggle switch on the Beacon button (when supported by the device firmware).

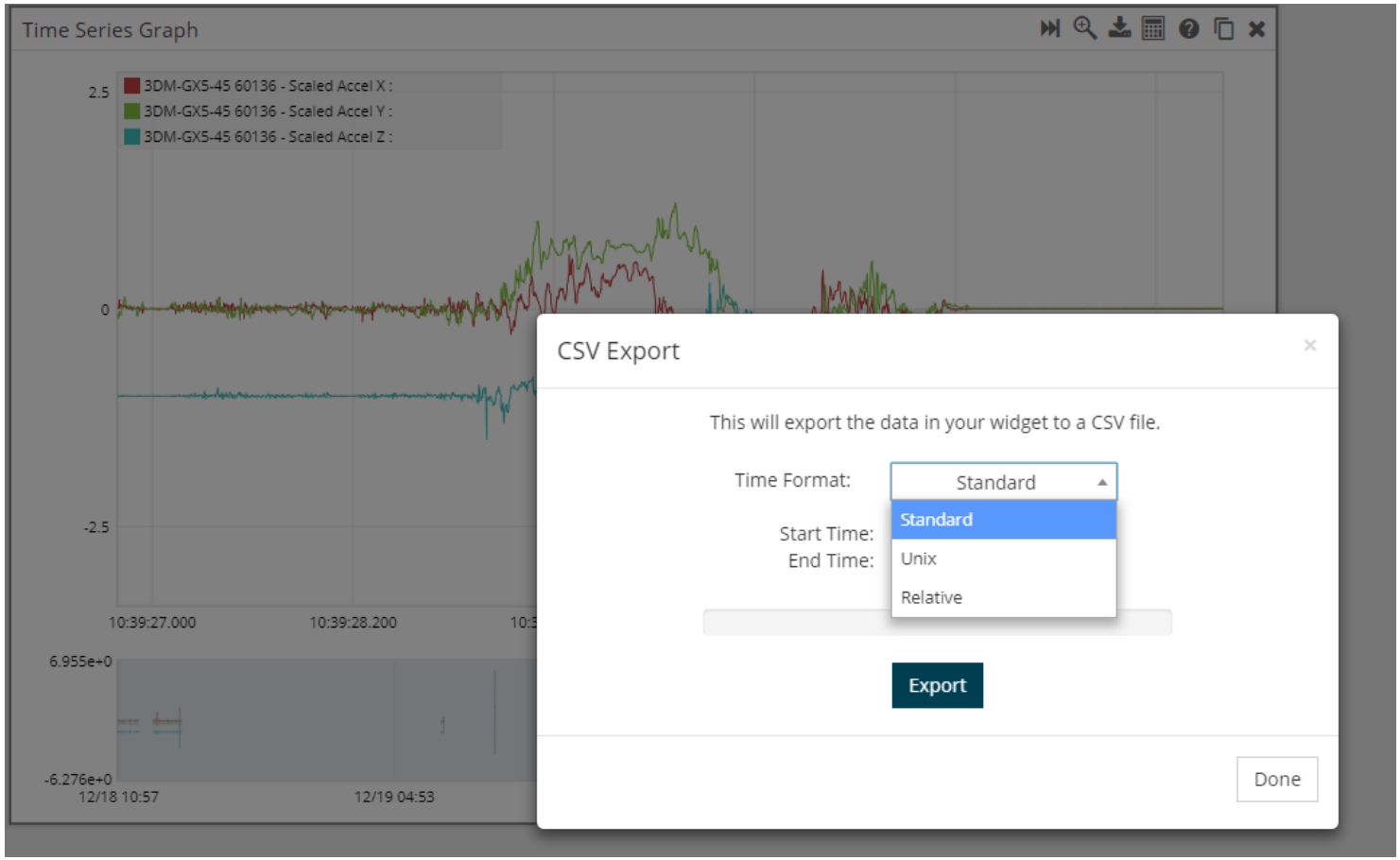


360 degree radial gauge: The Radial Gauge widget has a new setting that allows changing to a complete 360° circle. This can be useful in displaying data that wraps around, such as orientation.

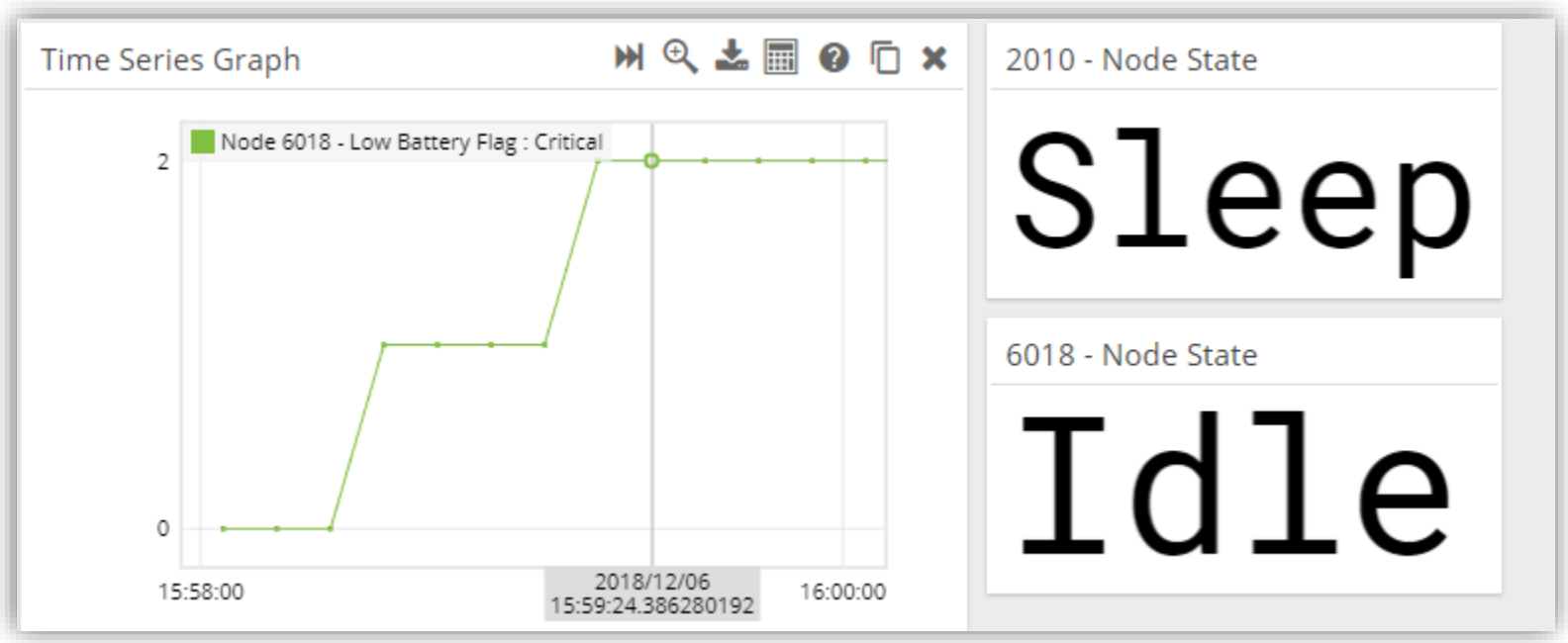


Export CSV timestamp format: The CSV export functionality now has an option to choose the format of the timestamps that will be in the CSV. For example:

- **Standard:** 12/21/18 15:39:26.803017212 (each line has the full, human-readable timestamp)
- **Unix:** 1545406766803017212 (each line has the number of nanoseconds since unix epoch)
- **Relative:** 0.004995580 (each line has the number of seconds from the start time)



Diagnostic and Status flags text display: The Diagnostic and Status flags are fully supported now show text values instead of their numeric values, when possible.



TC-Link-200 and RTD-Link-200 Support: The TC-Link-200 and RTD-Link-200 are fully supported.

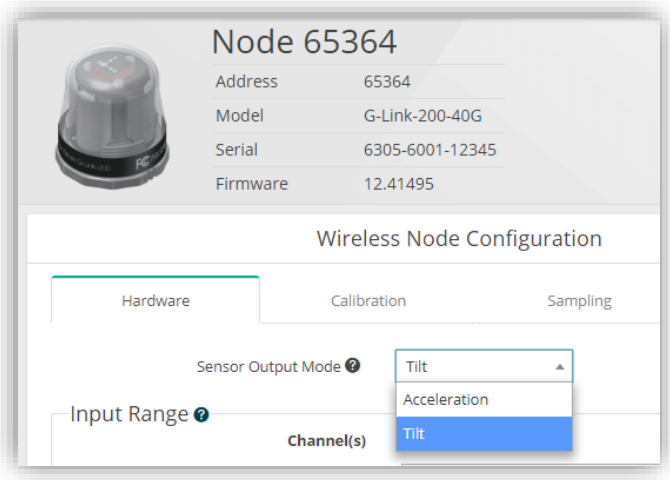
Faster FFTs: Static FFT generation (accessed from the MathEngine button on the Timeseries graph widget) is now up to 20x faster.

Other notable updates and bug fixes:

- Improvements to Unit/Volt wireless calibration tool
- Added mV/g calibration tool for IEPE-Link
- Improved styling of radial gauge widget
- Fix for RF Sweep mode sometimes staying enabled when leaving the screen
- Fix for freezing when clicking on a Wireless Node immediately after it was added to the device menu
- Fix for switching repos sometimes throwing errors
- Fix for timeseries graphing issues when lots of NaNs are in the data
- Fix for zoom not working correctly on FFT widget when plotting FFTs with different frequency ranges
- Fix FFTs not working for sample rates slower than 1Hz
- Confirm closing of Notes widget so users don’t accidentally throw away their notes
- Dark mode styling of helper tooltips

v9.12.11 (2018-09-24)

Sensor Output Mode: The latest firmware for the G-Link-200 allows configuring the device to output Tilt channels.



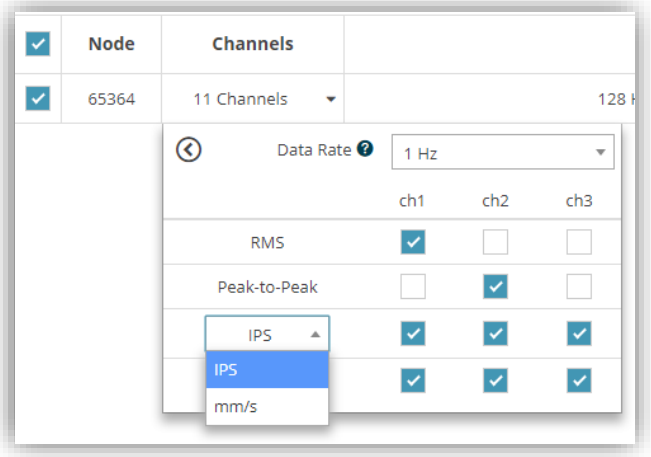
Last Known State: The last known state for devices is shown in the top right of the screen when the device is selected. This information, including the last communication time, will also automatically be refreshed every few seconds.

Other notable updates and bug fixes:

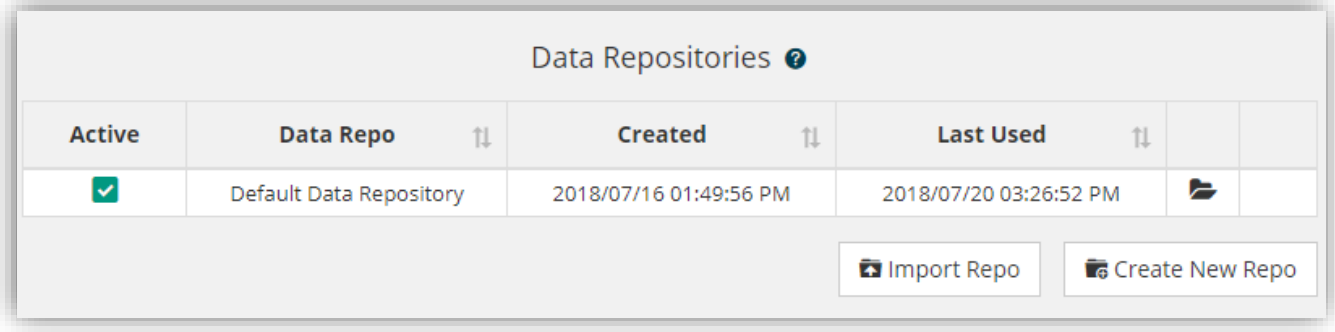
- Support for more Inertial configuration options
- Support for the SG-Link-200
- Support for % memory full diagnostic channel data
- Auto-seeding the timestamp for Demod-Digital when connected and when Resume button is pressed
- Fix for FFT widget shift-zoom issues when Windows display zoom scaling is applied
- Fix for Node Save State always saving calibration coefficients even when user specified not to
- Fix for Shunt Cal tool sometimes causing SensorConnect to crash
- Fix for error when attempting to reconnect to a WSDA-Pro in some scenarios

v9.9.2 (2018-07-24)

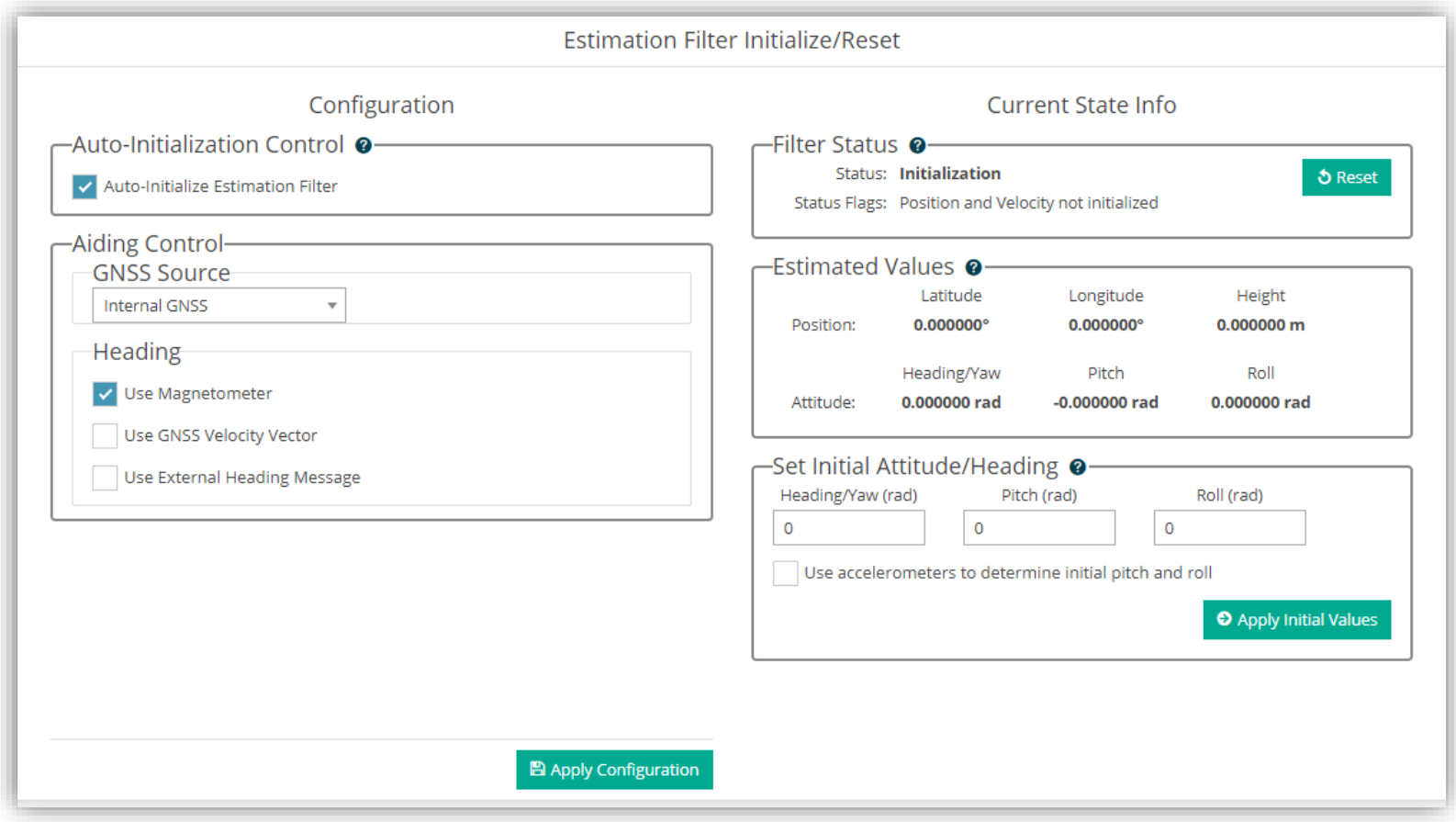
Velocity Derived channel unit: The Derived channel list now allows configuring the Velocity channel to support both IPS and mm/s (on supported Node firmware).



Data Repository Import: An Import Repo button has been added which allows importing of a Data Repository that was collected from another computer. A browse folder button was also added for opening the Data Repo in Windows File Explorer.



Initialize/Reset Estimation Filter: The Initialize/Reset Estimation filter functionality has been added for Inertial Nodes.



Other notable updates and bug fixes:

- Revised list of supported Input Ranges for the SG-Link-200-OEM
- Support for the Torque-Link-200 Wireless Node
- Support for configuration of WSDA-Base-101 buttons
- Added default calibrations in the configuration screen for known channels
- Added buttons to browse to, or open directly, an exported CSV file
- Added the ability to hide all nodes when right-clicking a BaseStation in the Device menu
- Added the ability to hide disconnected BaseStations and Inertial sensors when right-clicking in the Device menu
- CEF Update which fixed a flickering line graph issue
- Fix for LiveConnect connections failing to communicate with Nodes due to timeout issues
- Fix for failing to reconnect to a WSDA-Pro through LiveConnect in the same session
- Fix for small ranges causing issues in the Linear Gauge auto-ranging

v9.6.4 (2018-06-14)

Notable updates and bug fixes:

- Support for the TC-Link-200-OEM Wireless Nodes
- Support for the SG-Link-200-OEM Wireless Nodes
- Fix for calibration coefficients sometimes not being loaded and applied to data correctly
- Fix for BaseStation timeouts sometimes being set incorrectly when switching between connection methods
- Fix for auto-y on the Timeseries graph sometimes not zooming correctly

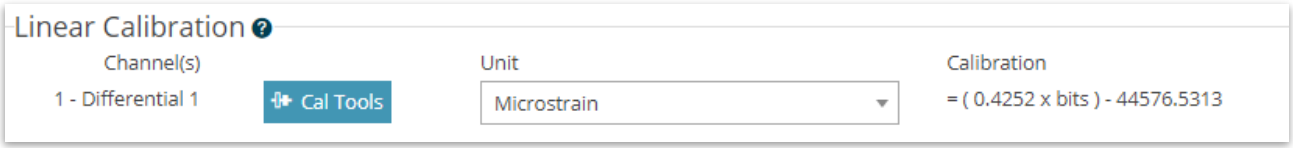
v9.4.3 (2018-05-08)

Notable updates and bug fixes:

- Fix for channel units getting corrupted
- Fix for crash when closing SensorConnect when running RF Sweep
- Fix for errors when switching between RF Sweep Modes
- Fix for Node Save State not exporting all eeprom locations

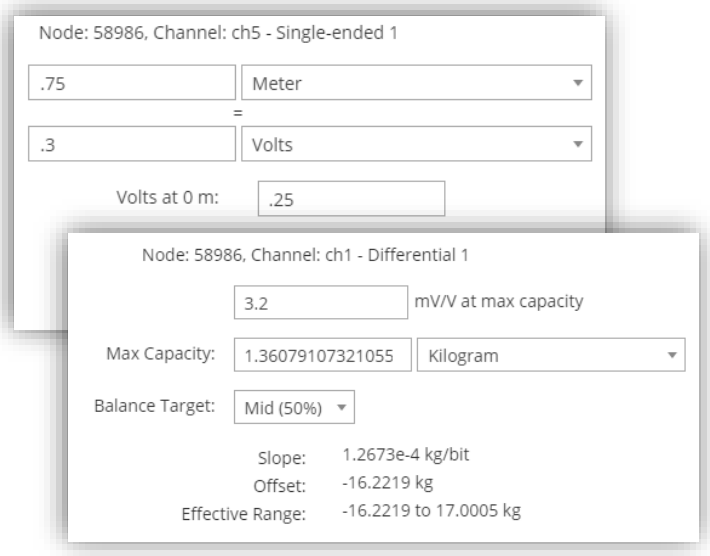
v9.3.8 (2018-05-01)

Changes to wireless node Calibration settings: Various changes were made to the Calibration settings (slope, offset, and unit) page to improve usability:



- Automatic unit conversion between units of the same category
- Raw voltage unit calibrations available for applicable nodes
- New tools to automatically calculate slope and offset from information on the sensor calibration sheet

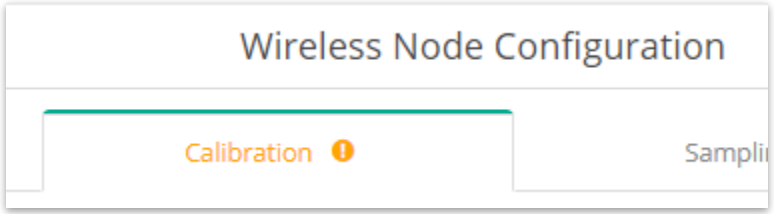
  Shunt calibration and manual slope and offset entry will still be available for relevant channels.



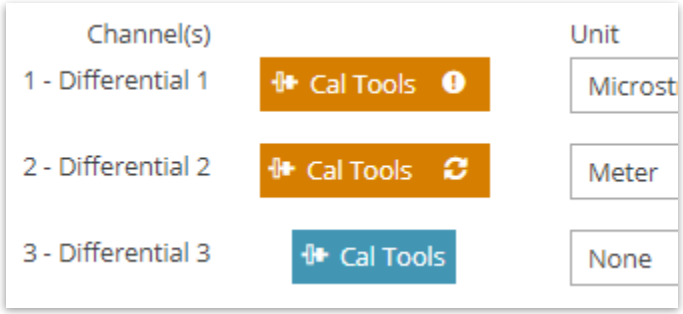
Unit/V Calculator for Single-ended Channels: Slope and offset are calculated based on the voltage output at the specified sensor input.

mV/V Calculator for Differential Channels: Slope and offset are calculated based on the sensor's mV/V sensitivity, maximum capacity, and the hardware offset balance target of the channel.

Calibration invalid warnings: When an Input Range is changed or a channel's Hardware Offset is updated via Auto Balance on the Hardware tab, the calibrations for the associated channel(s) may no longer be valid, warnings are displayed on impacted channels to indicate a change may be needed.



Orange text and a warning icon indicate there are warnings on the tab – these do not need to be resolved before configuration changes are applied.

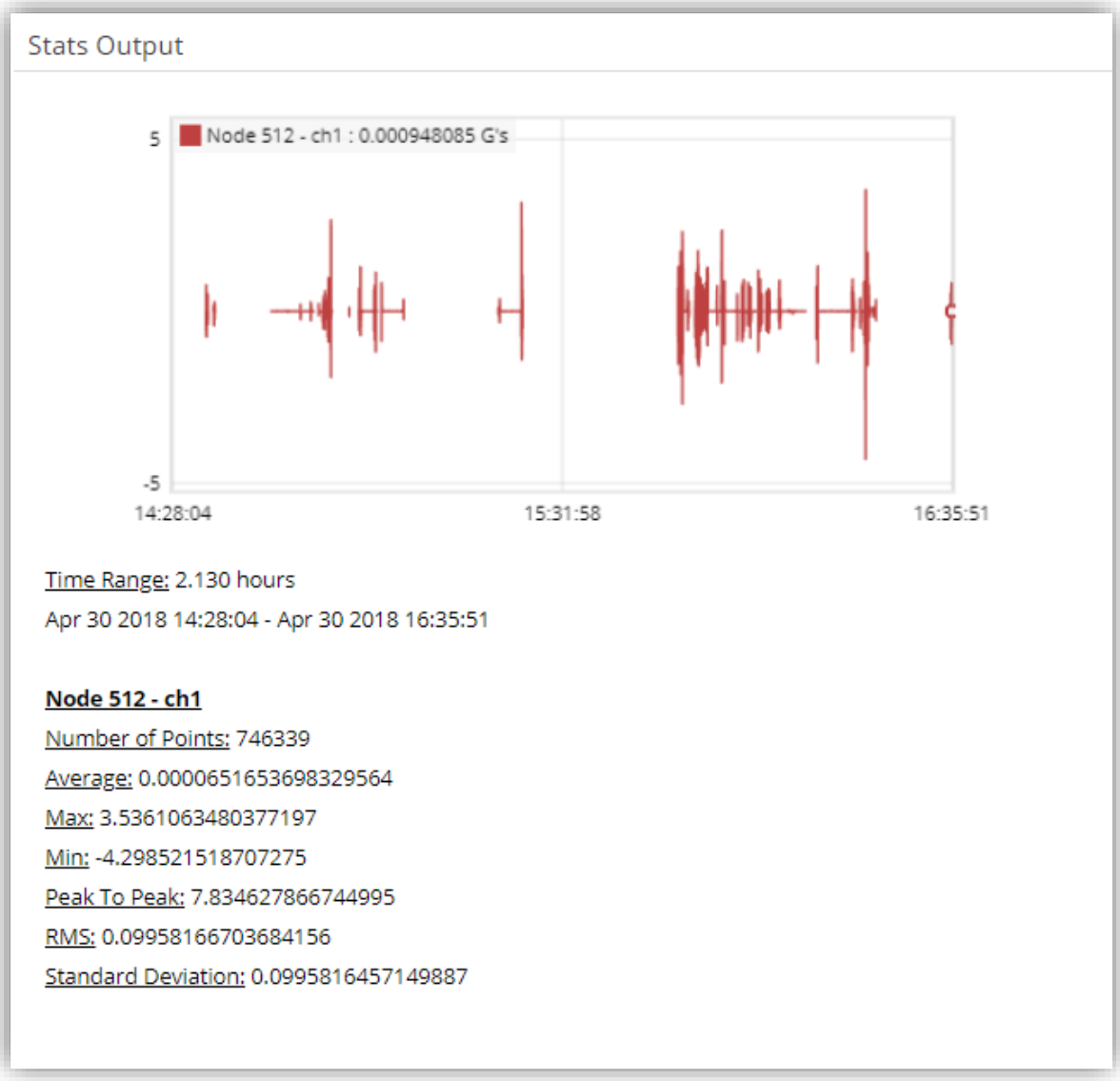


The calibration tools button will turn orange, and a warning icon will be displayed when the channel's calibration has been impacted.

Auto Recalibrate: Whenever possible, an auto recalibrate button will be available for an impacted channel. Clicking this will update the calibration to compensate for all hardware configuration changes automatically.

MathEngine Stats Updates:

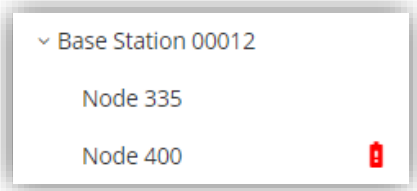
- Added a screenshot of the TimeSeries graph that the stats were run on
- Added Standard Deviation
- Added Peak to Peak
- Added Time Range



Other notable updates and bug fixes:

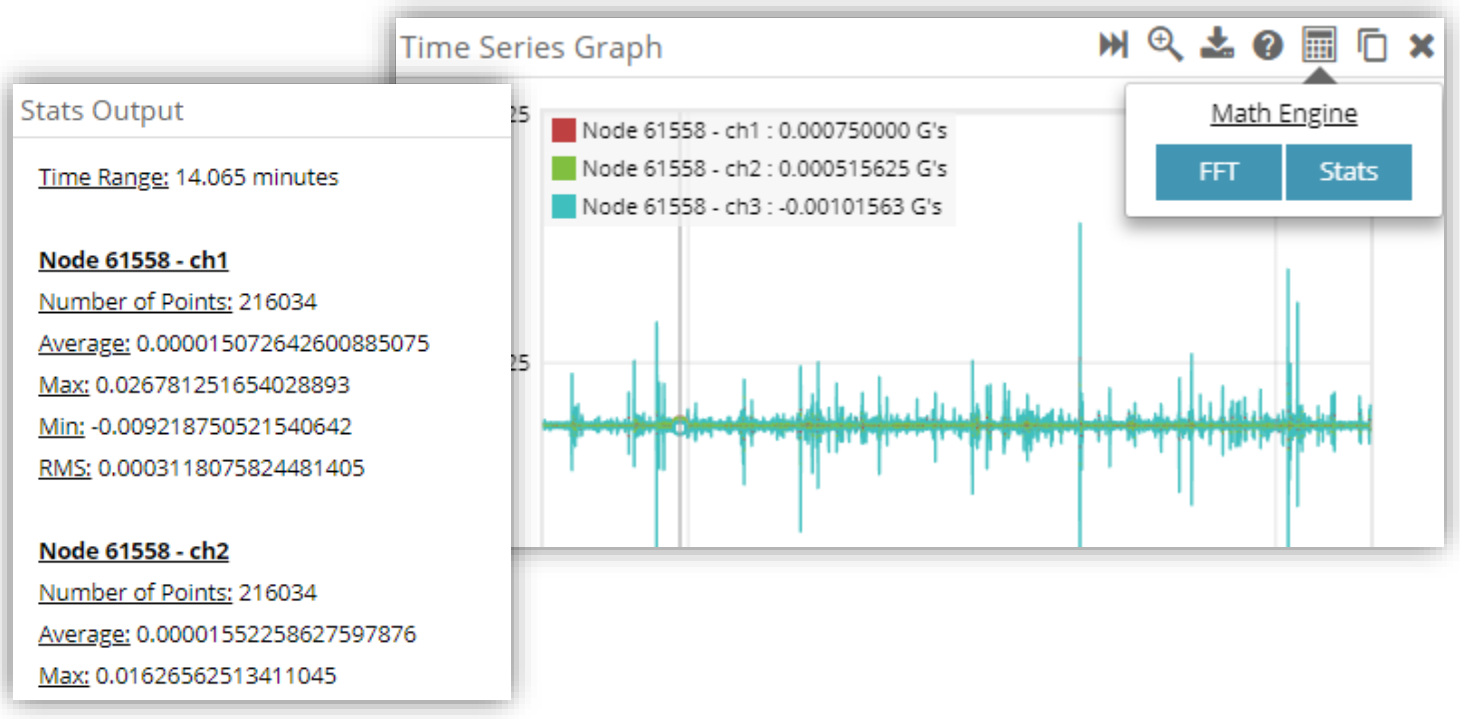
- Added Export option for the Notes widget
- Only showing widget icons when active or on hover, for a cleaner UI when not interacting with the widgets
- Allow staying logged in to SensorCloud when switching data repos
- Upgrading the database on loading of a data repository if needed (fixes issue with multiple users on one machine)
- Fix for the TimeSeries graph not plotting the first point in some scenarios
- Fix for Hide Node right-click option sometimes not showing up
- Fix for WSDA-Pro devices using incorrect timeouts when switching between different methods of connection to the same device (TCP vs USB vs LiveConnect)
- Fix for MathEngine FFTs causing the UI to freeze during a long calculation
- Fix for MathEngine FFTs being incorrect when using a large amount of data

v9.0.2 (2018-04-04)

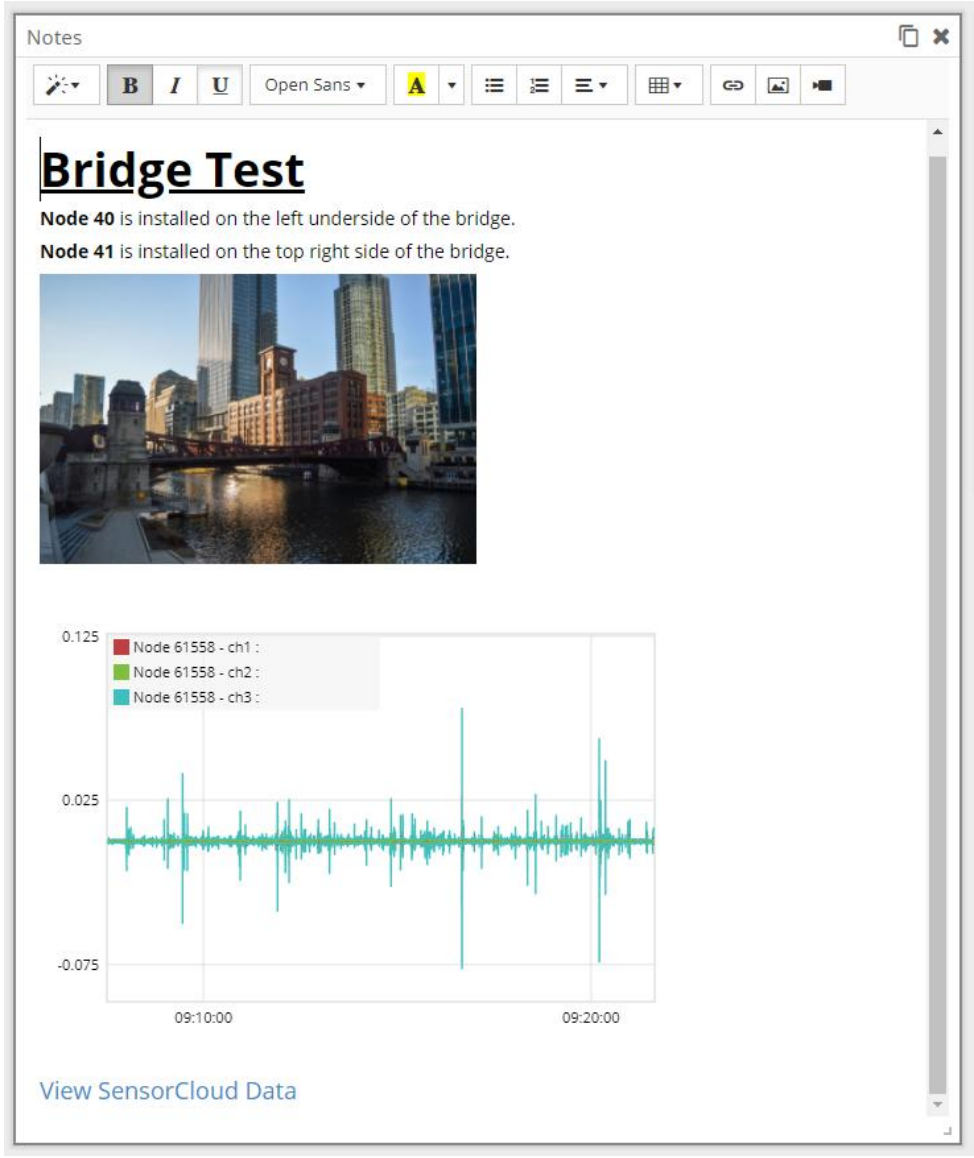


Low Battery Indicator: A low battery indicator icon next to Nodes when a low battery notification is heard in a diagnostic packet (only available on some Nodes).

Stats (MathEngine): A Stats function has been added to the MathEngine dropdown which calculates the Min, Max, Average, and RMS per channel in the user selected time range.



Notes Widget: Take notes about your data directly in your dashboard. Include pictures, videos, and external links with an easy-to-use interface.



Other notable updates and bug fixes:

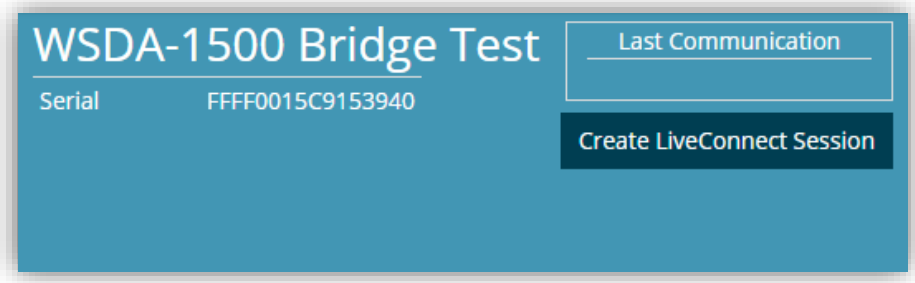
- Improved device enumeration to better find devices connected via USB
- Improved operation of broadcast Set to Idle
- Added more descriptive channel labels in the Sampling screen
- Fix for logging out of SensorCloud causing an error which prevented new activity from showing up
- Fix for datalog download wrapping around when downloading a Node that was 100% full
- Fix for crash when downloading logged derived channel data
- Fix for the mean derived data channel showing incorrect channel name
- Fix for BaseStation firmware upgrade sometimes requiring a restart of SensorConnect
- Fix for Chromium memory leak, which required SensorConnect to restart its UI every few hours

v8.8.15 (2018-01-31)

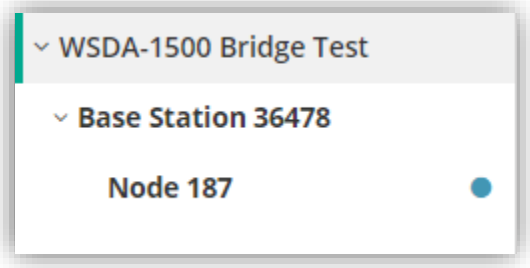
- Improved communication for WSDA-Pro devices (WSDA-1000, WSDA-1500, and WSDA-2000)
- Automatic latency test / timeout discovery when first connecting to WSDA-Pro devices
- User adjustable timeout with latency test for WSDA-Pro devices
- Lazy loading of devices, allowing for faster SensorConnect startup times
- Support for some basic Inertial configuration options
- Added Inertial Set to Idle and Resume buttons
- Support for the Digital Demod device
- Updating Node information when a Node Discovery packet is heard, to minimize communication attempts
- Fix for failing to communicate with Nodes over TCP connections with lots of latency
- Fix for failing to switch communication protocols from the sampling screen
- Fix for crash on startup if data repo failed to be deleted
- Fix for Device Menu communication protocol indicator something showing incorrect value
- Fix for percent bandwidth being shown in Non-Sync Sampling mode in some cases
- Fix for Shunt-Cal writing erroneous value to the Hardware Offset eeprom
- Fix for Timeseries graph resetting zoom after 30 seconds in some cases
- Fix for IEPE-Link incorrectly limiting burst duration

v8.4.8 (2017-11-30)

- LiveConnect functionality now available when logged in to your SensorCloud account within SensorConnect



Log in to SensorCloud and click on a WSDA-Pro device. A new "Create LiveConnect Session" button is available.



Creating a LiveConnect session allows you to communicate with your WSDA-Pro device as if it were connected directly to your computer. Change settings, configure networks, and collect data to your local PC while the ethernet-connected WSDA is anywhere in the world!

- Support for WSDA-Pro devices connected via USB. Plug in your WSDA-1500 or WSDA-2000 via the USB port on the back of the device, and it will show up in SensorConnect just like a standard USB BaseStation
- Better organization of device options
- Improved Histogram widget's axes display
- Updated device images
- Improved performance with large number of Nodes in the device list
- Support for the 910hz Sample Rate
- More dark theme improvements
- Fix for CSV export always truncating decimal places to 6 digits of precision
- Fix for inaccurate frequency axis calculations for FFT widget
- Fix for Sync Sampling being unchecked by default if a Node in the sampling table fails to communicate
- Fix for bug in FFT widget with multiple FFTS where differing frequencies are incorrectly scaled to the max frequency

v7.7.6 (2017-09-26)

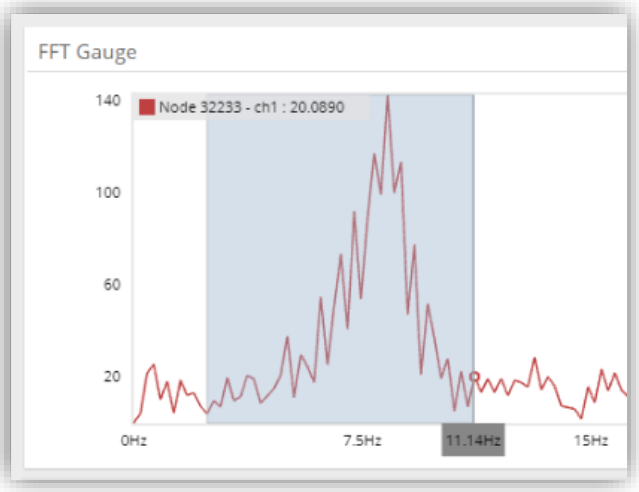
- Loading calibration coefficients in more places to prevent the case of SensorConnect not knowing the calibration to apply to data
- Refreshing device header information after firmware upgrades, eeprom changes, etc.
- Removed Retry loading device info button when device is known to be disconnected
- Fix for timestamps being calculated incorrectly (rounding error) with sample rates 1kHz and above
- Fix for timestamps being slightly off between log and transmit data points with sample rates 1kHz and above
- Fix for WebGL1 FFT error on creation
- Fix for error when exporting derived channels to CSV
- Fix for failing to change Node's protocol through the Node options screen if it differs from the BaseStation's
- Fix for Sensor Delay configuration usability issues
- Fix for crash when reloading Node information in some cases
- Fix for dark theme incorrectly styles in some cases
- Fix for widget icons highlighting white on white background for light theme
- Fix for F11 full screen not working

v7.4.11 (2017-08-30)

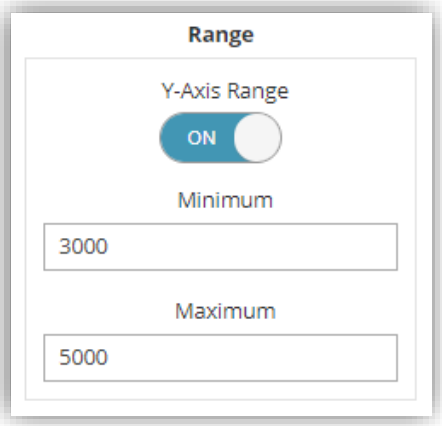
- Major Fix for firmware upgrade of BaseStations sometimes causing the device to become inoperable
- Fix for last communication time sometimes being incorrect for devices
- Fix for very slow download speeds when downloading logged data from Wireless Nodes
- Fix for many duplicate units being added to the database
- Fix for exporting logged data, in combination with other transmitted data, causing some values to be uncalibrated in the resulting CSV file
- Fix for random spikes in Timeseries graph that aren't actually in the data
- Fix for many widgets being blurry when using Windows zoom levels above 100%

v7.4.5 (2017-08-24)

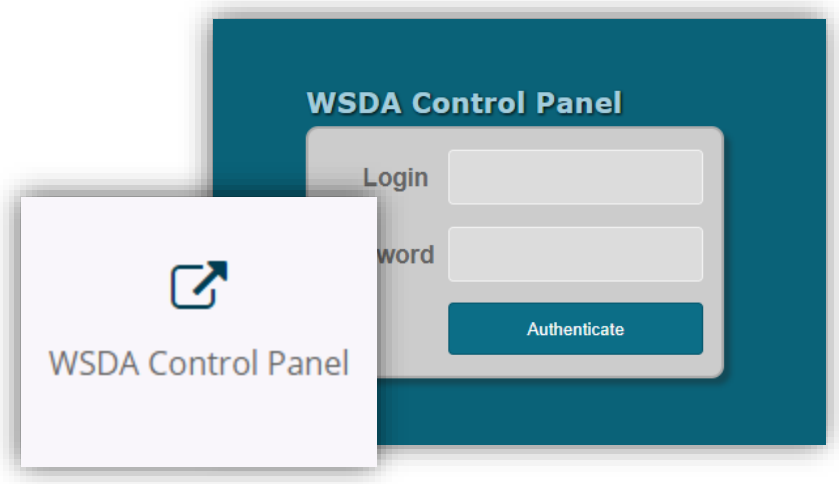
FFT horizontal zooming: The FFT widget now allows for zooming in the X-axis.



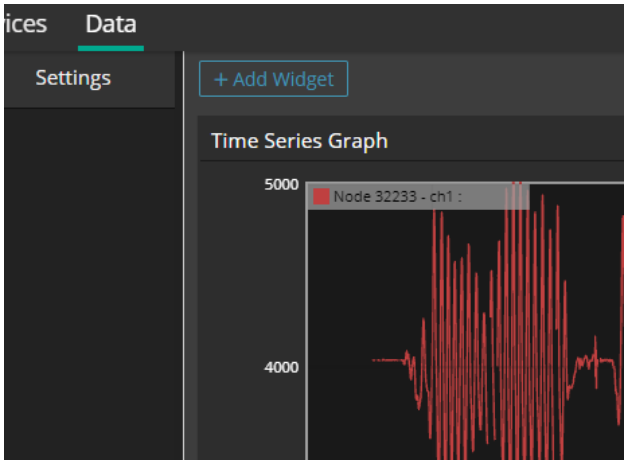
Y-axis clamping: The Timeseries and FFT widgets have a new setting that allows clamping the Y-axis to specific min and max values.



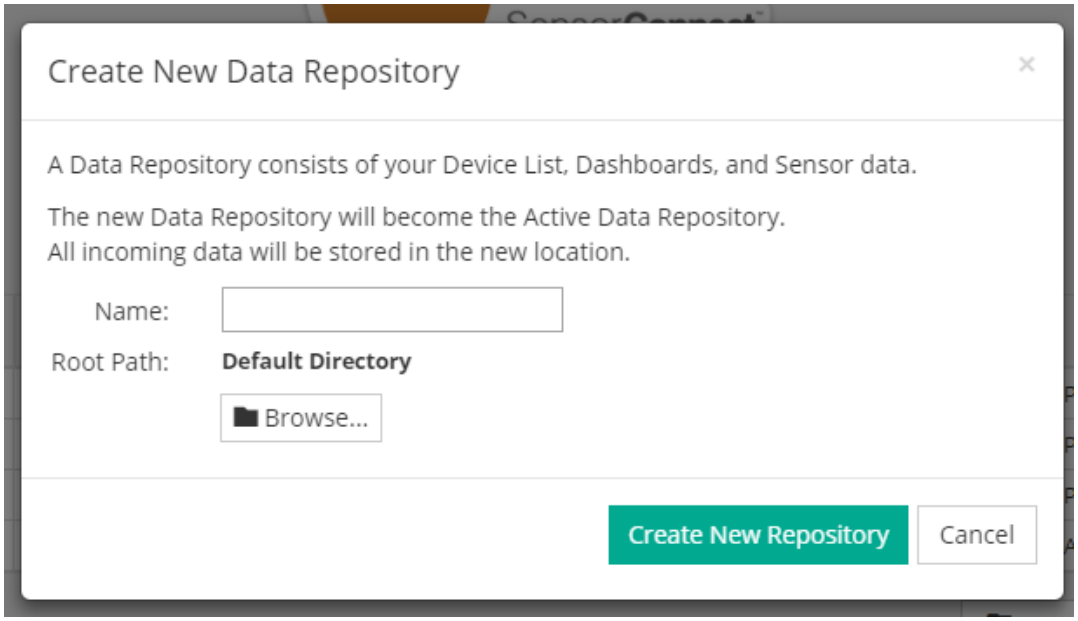
WSDA Control Panel: When connected to a WSDA-1500 via TCP/IP, a new WSDA Control Panel button is provided in the options which is an easy shortcut to opening the control panel in a new browser tab for WSDA-1500 specific settings.



Dark theme improvements: The Dark theme has been expanded to work across all of SensorConnect's UI.



Easier Data Repository creation: We've received feedback that creating Data Repositories was tedious. With the latest SensorConnect, you only need to provide a name for your new repository and it will be created in a default location. If you still want to choose the location (for storing on a different hard drive for instance), this can still be done by pressing the Browse button.



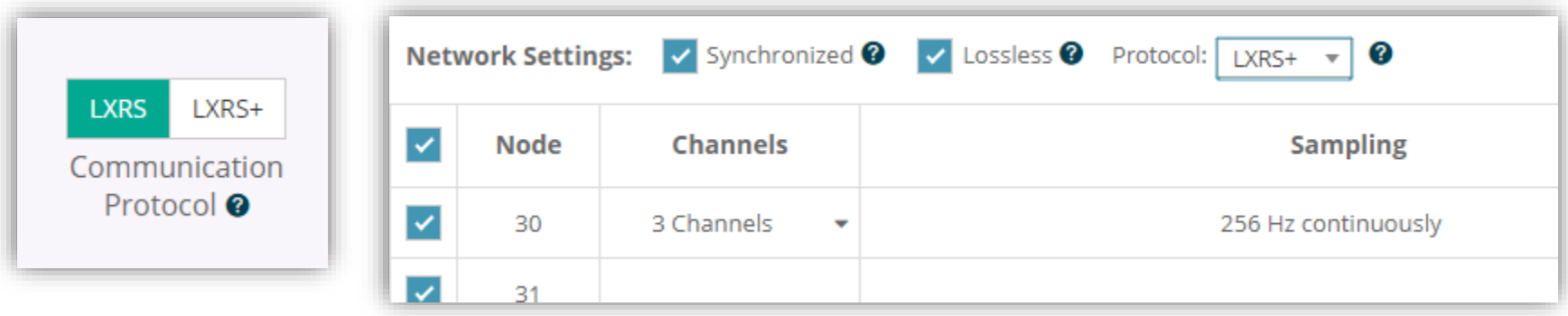
Other notable updates and bug fixes:

- Support for DPI Scaling to prevent a blur when using a display with a zoom applied in Windows
- Fixed color issue with status indicator widget
- Fixed TCP/IP connection not allowing reconnecting
- Fixed disconnecting from a device sometimes causing a crash
- Fixed bug in Sensor Warmup

v7.0.0 (2017-08-03)

64-bit: We now offer 64-bit builds of SensorConnect. We recommend everyone use this installer when possible. We will still provide 32-bit builds of SensorConnect for those with 32-bit machines.

LXRS+ support: Nodes and BaseStations that support LXRS+ can now be changed between the two modes. LXRS+ prioritizes network throughput over range, and is designed to work at ranges up to 400m with network throughput of up to 16ksps. A LXRS+ option is available on the options screen for devices that support it, and in the Sampling screen when it is available for a network.

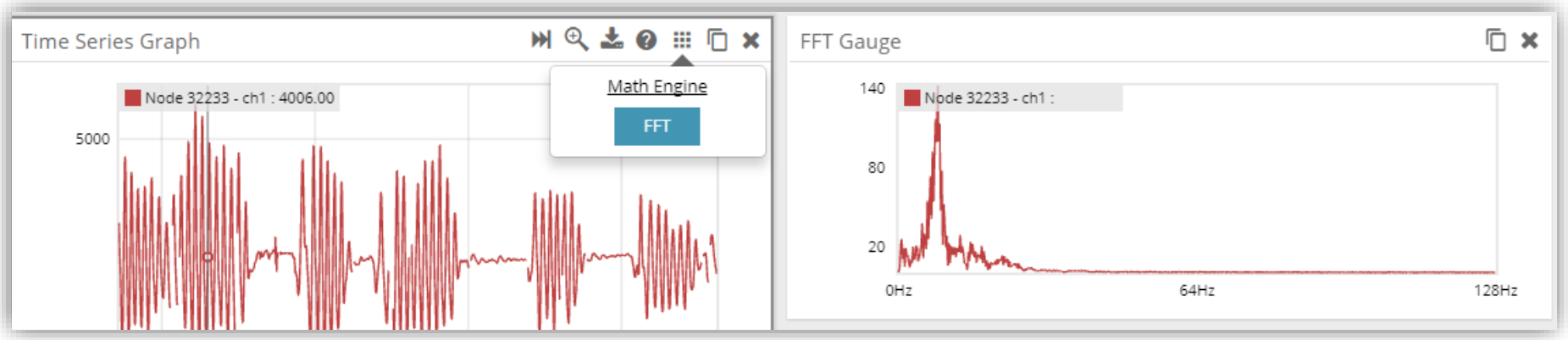


WSDA-200 support: The WSDA-200 USB BaseStation is now supported, with the option to enable LXRS+ mode for Nodes/networks that support it.

3DM-GX5 and 3DM-CV5 support: The 3DM-GX5 and 3DM-CV5 Inertial product lines have basic support with more features coming soon.

Automatic check for updates: On startup, SensorConnect will now check for updates in the background. If an update is available, the menu icon in the top right of the screen will change to orange, and the dropdown will indicate that an update can be downloaded from our website.

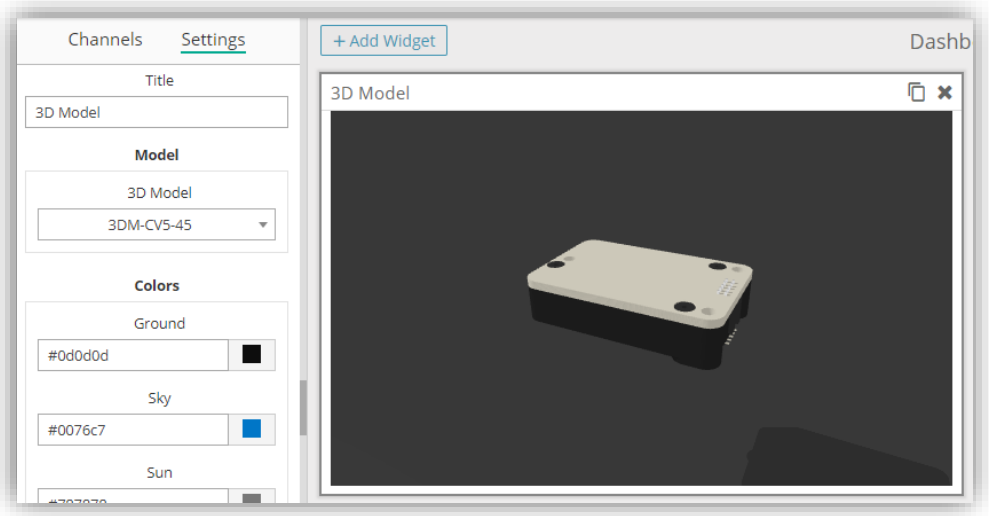
MathEngine and static FFTs: We are happy to announce the introduction of MathEngine into the SensorConnect interface. On a Timeseries graph, zoom in to the data you want to analyze, click the MathEngine button, and select the FFT option. A new static FFT widget will be created of the data that you had selected in the graph.



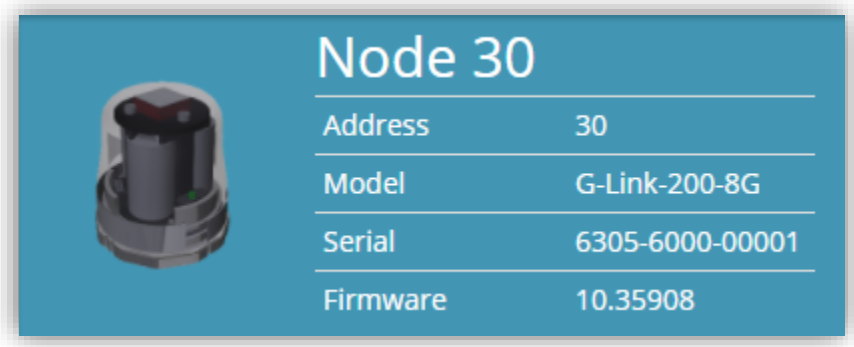
Duplicate widgets and dashboards: Widgets and dashboards can now easily be duplicated with the push of a button.

Maximizing widgets: Double-clicking the header bar of a widget maximizes it to take up the full width and height of the dashboard area.

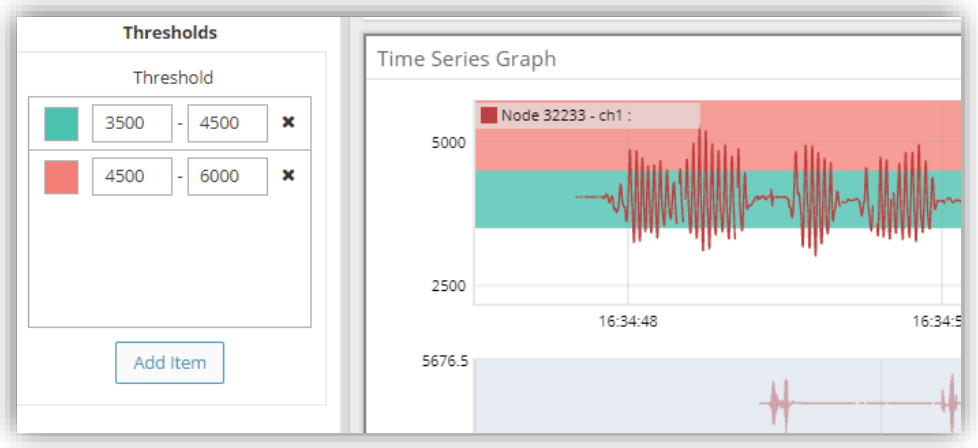
New 3D models: The 3D Model widget now has support for displaying LORD Sensing devices.



Device images: Clicking on a device will now show an image of that device in the header, which helps better identify what you are interacting with.



Thresholds: The Timeseries widget now allows for setting thresholds, which will add colored sections to the graph.



Support for FFT with WebGL1: Many customers were reporting they could not use the FFT widget because their computer did not support WebGL2, or it was blacklisted for some reason. We have ported this widget over to WebGL1 to remove that requirement.

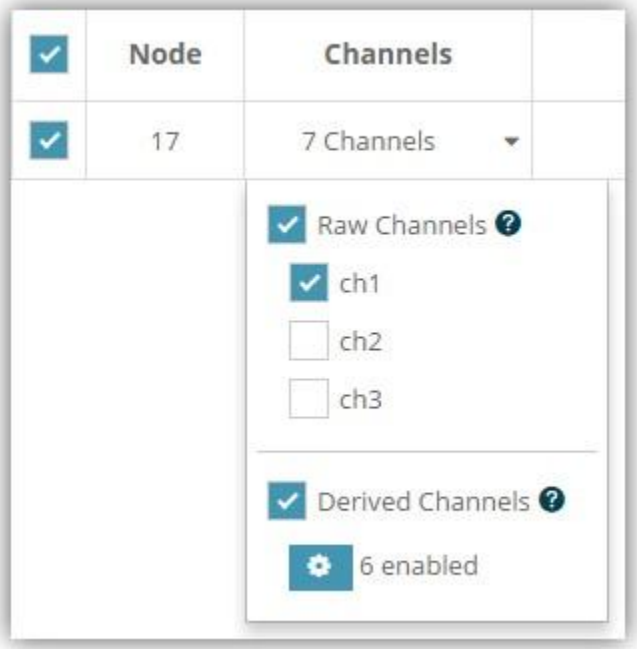
Other notable updates and bug fixes:

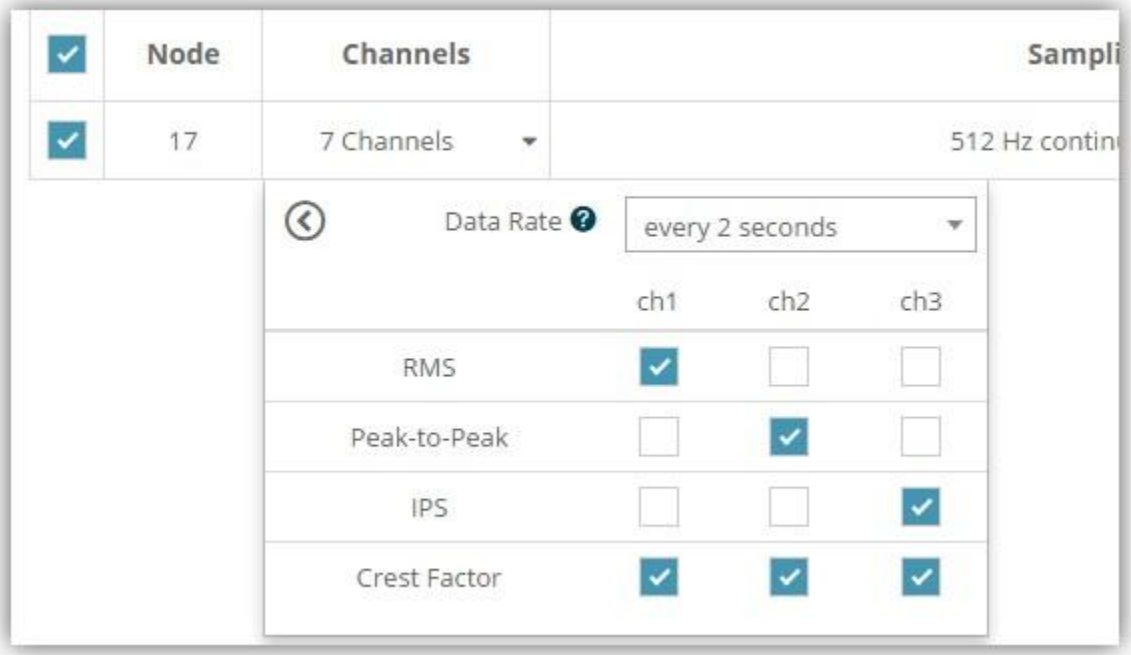
- Fix for logged data causing issues with calibration coefficients
- Fix for transmit and logged data causing duplicate entries in the CSV export
- Fix for devices being connected and disconnected causing a crash in some scenarios
- Added retries to installer upgrade utility
- Added more rows and columns to the dashboard for greater flexibility of widgets
- Using WebGL2 features when possible to optimize the performance of the Timeseries graph
- Fix for analog pairing screen not working correctly
- Fix for Timeseries graph erroneously zooming back out on initial load or some user interactions
- Fix for sometimes causing a spike at the end of downloaded datalogged data

v6.0.0 (2017-03-07)

G-Link-200: The G-Link-200 is fully supported. This includes configuration and parsing of new data packets.

Derived channels: The G-Link-200 is the first Node to support Derived Channels. These can be configured by clicking the Channels dropdown in the Wireless Sampling screen.

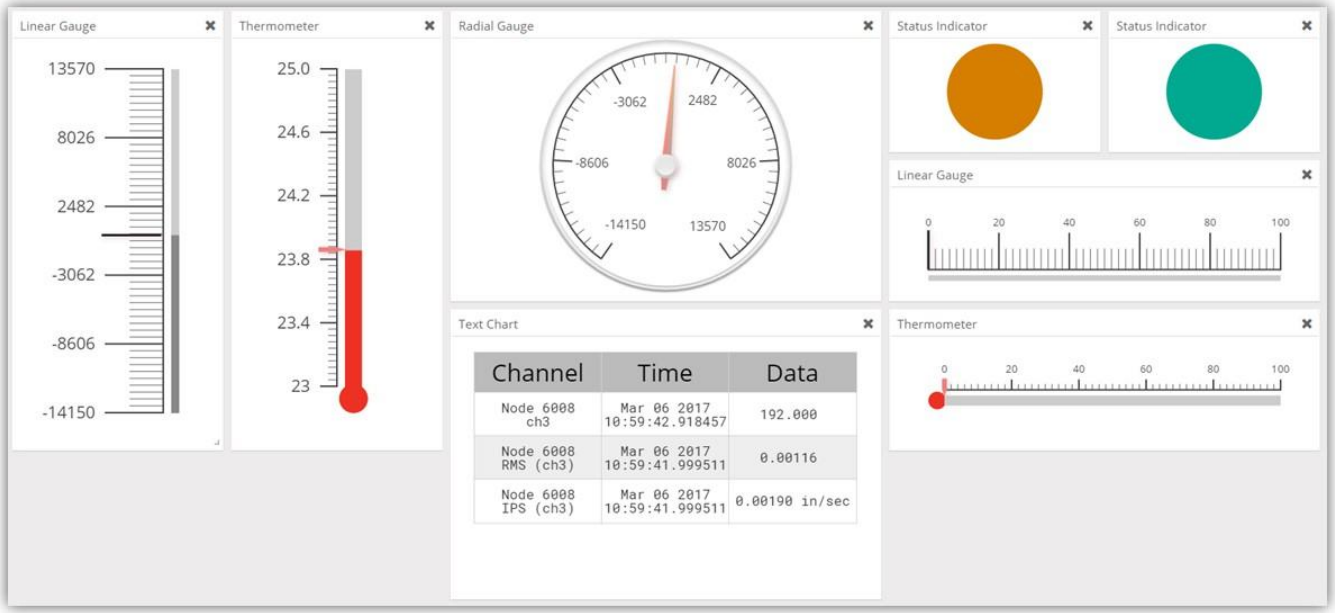




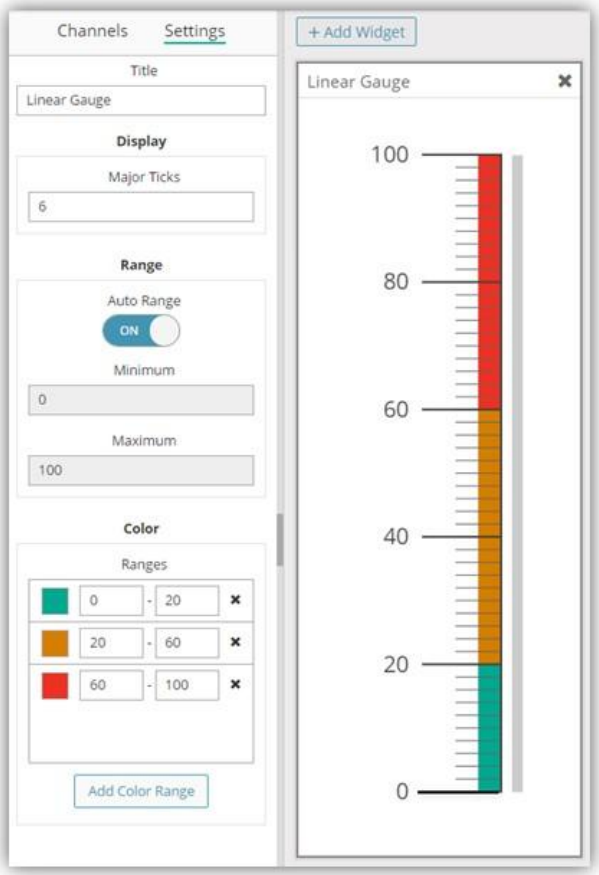
Improved channel tree organization: The channel tree now has separate hierarchies for Derived and Diagnostic data channels, making it easier to get to the data you need without cluttering the interface.

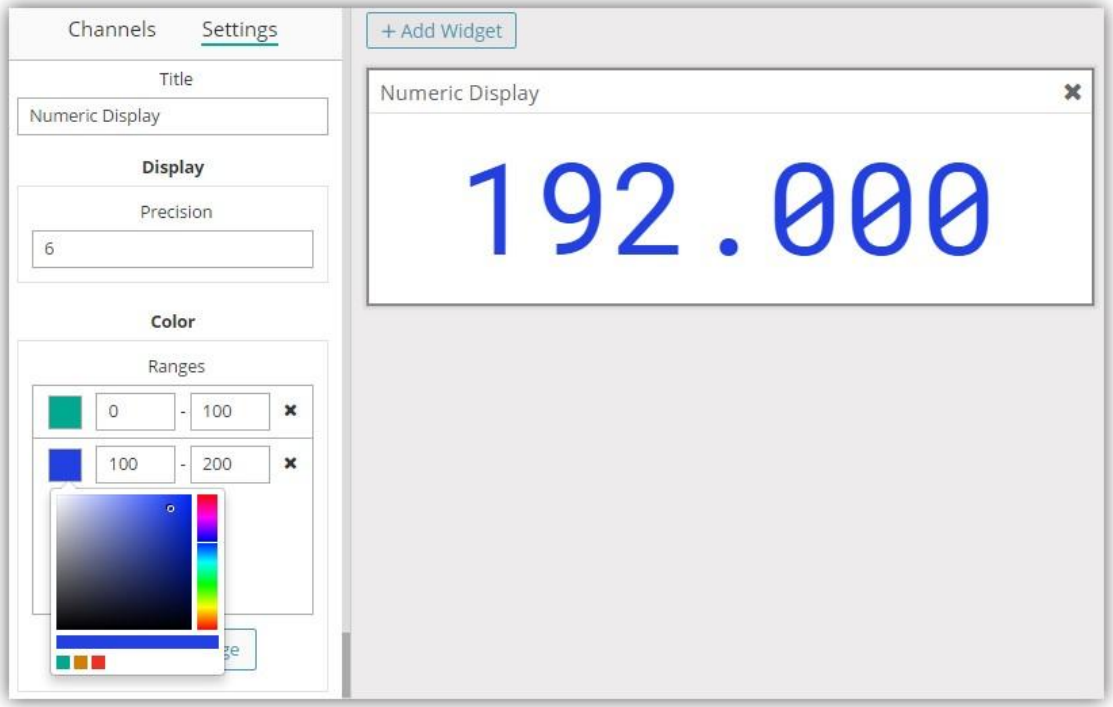
New data widgets: New data widgets are now available for displaying data. The new widgets include

- Linear Gauge
- Thermometer
- Radial Gauge
- Status Indicator

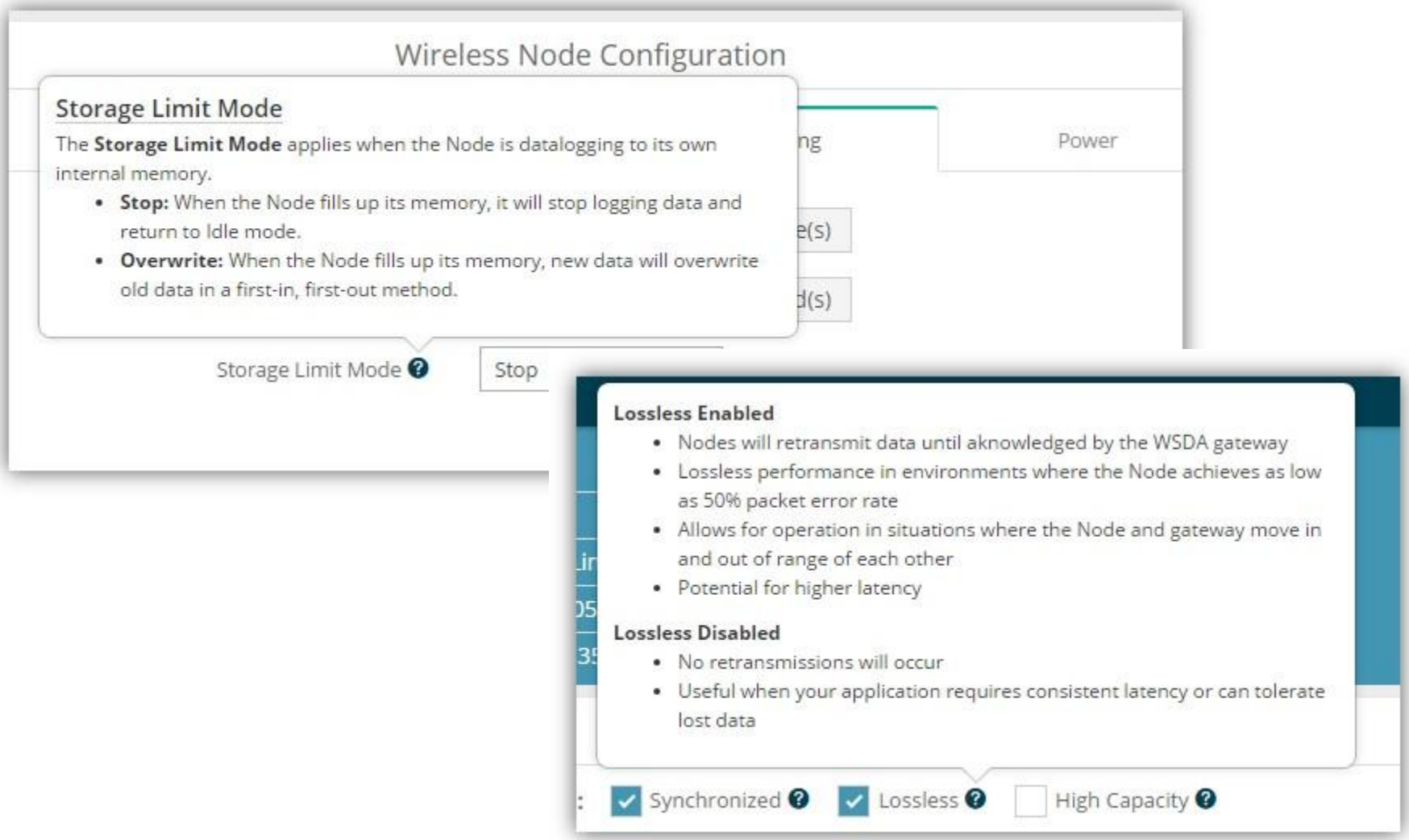


Color ranges: Many widgets now support configuration of the Color Ranges setting.





Helper tooltips: You will notice many helper tooltips on the Wireless configuration and Sampling screens. Clicking these will provide details for the specific setting.



Live updating of SensorCloud channels: If you are logged in to SensorCloud from within SensorConnect and are viewing your cloud data, it will now periodically update with new data. This means you can leave a dashboard up with just SensorCloud data and see the most recent data continuously update.

Other notable updates and bug fixes:

- F11 full screen support
- Set Nodes to Idle button on BaseStation options screen for setting multiple Nodes to idle mode
- Channel Data Tree displays icon for sensor/channel activity
- Snap to Latest button on Timeseries graph controls
- Support for SensorCloud Two-Factor Authentication (2FA) login
- Fix for long loading of Stage 1 (requires upgrade of data repositories older than 5.27.0)
- No longer cycling power on Nodes unless an EEPROM change has actually been made