

RELEASE NOTE SUMMARY



Overview

This document provides a compilation of Release Notes that have been published by Industrial Scientific to date. *Table 1. Document Summary* provides a list of instruments, version numbers, release dates, and a brief overview of each Release Notes document. Following Table 1, you will find a copy of the complete version of each document.

Document Summary

Table 1. Release Notes Document Summary

Instrument	Version	Release Date	Summary of Features Added and Issues Addressed
Ventis Pro Series			
	v3.6	11/18/2019	Critical bug fix & iOS 13 support for Sync app
	v3.5	09/27/2019	Introducing Wi-fi and Cellular Ventis® Pro
	v3.1	01/28/2019	Support for future new product releases and minor bug fixes
	v3.0	08/31/2018	RGX™ compatibility
	v2.5	07/09/2018	New sensor option; support for new product release in Q3 2018
	v2.4	03/08/2018	Improved iNet® Now usability; new LENS™ features
	v2.3	09/19/2017	Introduced iNet® Now
	v2.2	06/30/2017	Support for new product release in fall 2017
	v2.1	02/01/2017	New sensor options; new language options
	v2.0	11/18/2016	Introduced LENS™ Wireless; expanded iAssign® functionality; improved display backlight; other enhancements; minor bug fixes

Ventis® Pro Series

v3.6 – released November 18th, 2019

Upgrade recommendation

- Critical – All instruments must be upgraded to ensure continued safe operation.
- Recommended – Industrial Scientific recommends you upgrade the instrument firmware to ensure optimal performance.
- Optional – Users may upgrade instruments to take advantage of new features.

Upgrade Methods

Using a DSXi Docking Station, this firmware upgrade can be completed in approximately 8-10 minutes, or you can contact your local Industrial Scientific Service Center for assistance.

What is New in Ventis Pro Series v3.6?

Critical bug fixes – Screen locking/Freezing with v3.5 (VPRO-317)

This version corrects an issue introduced in the v3.5 firmware release. Instruments with v3.5 may encounter an issue where the instrument locks/freezes shortly after start-up or removal from a DSX docking station. When in the locked/frozen condition, the instrument will be unresponsive to button presses, sensor readings, and will not alarm when gas is applied. Removal of the battery is not required to reset the Ventis Pro if the issue arises. If an instrument encounters this issue, place it on a DSX docking station or charger with datalink and initiate the update via iNet® Control.

Minor enhancements and bug fixes

- Fixed iNet® Now Sync App compatibility issues with iOS 13 (VPROFIRM-234)

v3.5 – released September 27th, 2019

Upgrade recommendation

- Critical – All instruments must be upgraded to ensure continued safe operation.
- Recommended – Industrial Scientific recommends you upgrade the instrument firmware to ensure optimal performance.
- Optional – Users may upgrade instruments to take advantage of new features.

Upgrade Methods

Using a DSXi Docking Station, this firmware upgrade can be completed in approximately 8-10 minutes, or you can contact your local Industrial Scientific Service Center for assistance.

What is New in Ventis Pro Series v3.5?

Introducing Wi-fi and Cellular Ventis Pro

With the latest firmware v3.5 and either a wi-fi or cellular battery installed, the Ventis® Pro5 can directly upload location and safety data to iNet® Now live monitoring software. Supervisors will gain instant visibility into their operations and have real-time access to hazardous exposures, panic and man-down situations, and exact locations via text, email, or on-screen alerts.



Man-Down Alarm Pause using iAssign® Beacons (VPROFIRM-192, -189)

The Ventis Pro5 can automatically turn off the man-down alarm using iAssign Beacons for a customizable duration. Users can configure the iAssign Beacons to temporarily turn off man-down alarms using the latest iAssign App and set the pause duration for Ventis Pro5 devices in iNet Control. When the Ventis Pro5 sees an iAssign Beacon with man-down alarms turned off, the display screen will show a symbol (🚫) to indicate the man-down feature is not operational.

New iAssign Tag at Startup Option (VPROFIRM-137, -135)

The Ventis Pro5 now has three options for using the iAssign Tag at startup:

- OFF: Does not prompt users to use the iAssign Tag at startup
- Remind: Prompts users to use the iAssign Tag at startup. The screen times out after 30 seconds.
- Require: Prompts users to use the iAssign Tag at startup. The screen stays on until an iAssign Tag is used.

Introducing the 6-series O2 Sensor (VPROFIRM-79, -220)

The 6-series O2 sensor will allow a commonly requested sensor configuration in the Ventis Pro5: standard four gas with a CO2 IR sensor.

CO2 Sensor Calibration Fix (VPROFIRM-79, -220)

This firmware improves the calibration process to eliminate faulty zero failures on docking stations. The Ventis Pro5 with a CO2 sensor is fully compatible with DSXi Docking Stations with the latest firmware. Ventis Pro5 gas detectors with a CO2 sensor will be compatible with DSX-L Docking Stations with the next DSX-L firmware release.

Minor enhancements and bug fixes

- Fixed iNet Now Sync App Communication Issue (VPROFIRM-194)
- VPROFIRM-200, -191, -187, -180, -68, -148, -149, -155, -159, -97, -133, -136, -140, -144, -145, -146

v3.1 – released January 28th, 2019

Upgrade recommendation

- Critical – All instruments must be upgraded to ensure continued safe operation.
- Recommended – Industrial Scientific recommends you upgrade the instrument firmware to ensure optimal performance.
- Optional – Users may upgrade instruments to take advantage of new features.

Upgrade Methods

Using a DSXi Docking Station, this firmware upgrade can be completed in approximately 8-10 minutes, or you can contact your local Industrial Scientific Service Center for assistance.

What is New in Ventis Pro Series v3.1?

Ventis Pro v3.1 includes minor bug fixes and enhancements in support of future development.

Minor enhancements and bug fixes

- Corrected issue with iAssign Tags where character count restrictions caused the Ventis Pro instrument to display “Invalid Tag” in place of the appropriate site name, user name, or access level. (VPROFIRM-103)
- Corrected translation issues in French, Spanish, and Polish screens. (VPROFIRM-92)
- Updated the flash rate of the LEL low-alarm to match other low alarms. (VPROFIRM-75, -76, -74)
- VPROFIRM-47, -51, -54, -59, -64, -65, -66, -68, -71, -74, -75, -77, -78, -79, -80, -82, -84, -90, -93, -94, -95, -101, -112, -113, -117, -124

v3.0 – released August 31st, 2018**Upgrade recommendation**

- Critical – All instruments must be upgraded to ensure continued safe operation.
- Recommended – Industrial Scientific recommends you upgrade the instrument firmware to ensure optimal performance.
- Optional – Users may upgrade instruments to take advantage of new features.

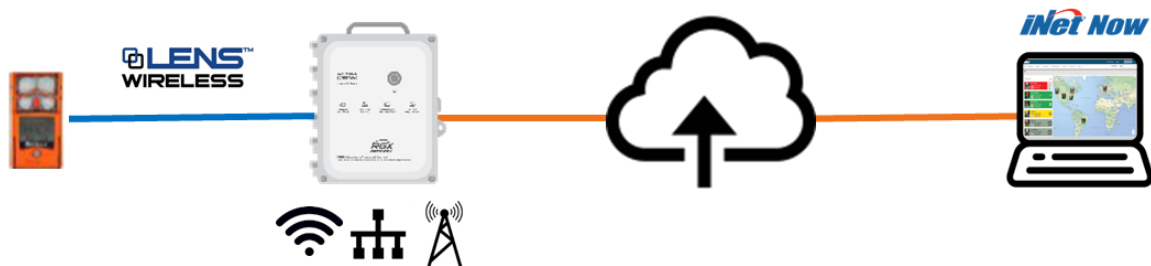
Note: This firmware upgrade is required to use Ventis Pro Series instruments with RGX gateways.

Upgrade Methods

Using a DSXi Docking Station, this firmware upgrade can be completed in approximately 8-10 minutes, or you can contact your local Industrial Scientific Service Center for assistance.

What is New in Ventis Pro Series v3.0?**RGX compatibility**

Ventis Pro Series is now compatible with the RGX Gateway. The RGX Gateway connects with Ventis Pro via LENS, providing real-time access to hazard exposures, panic, man-down situations and exact locations via text, email or on-screen alerts. With the RGX Gateway, customers can now use iNet Now features in hazardous locations without the need of a smart device. (VPROFIRM-36, VPROFIRM-46, VPROFIRM-48, VAUG-1367, VAUG-1380, VAUG-1380, VAUG-1386, VAUG-1390, VPRO-271)

**Minor enhancements and bug fixes**

- VPRO-376, -486, -507, -516, -522, -550, -551, -570, -589, -595, -625
- VAUG-1332, -1361, -1366, -1368, -1372, -1374, -1375, -1379, -1381, -1382, -1383, -1384, -1385, -1387, -1389, -1393, -1394, -1400, -1401, -1402, -1404, -1406, -1407, -1409
- VPROFIRM-34, -37, -40, -42, -44, -45, -46, -50

v2.5 – released July 9th, 2018**Upgrade recommendation**

- Critical – All instruments must be upgraded to ensure continued safe operation.
- Recommended – Industrial Scientific recommends you upgrade the instrument firmware to ensure optimal performance.
- Optional – Users may upgrade instruments to take advantage of new features.

Upgrade Methods

Using a DSXi Docking Station, this firmware upgrade can be completed in approximately 8-10 minutes, or you can contact your local Industrial Scientific Service Center for assistance.

What is New in Ventis Pro Series v2.5?**Introducing new carbon dioxide IR sensor**

- The CO2 IR sensor will be available for both Ventis Pro 4 and 5 and will require firmware version 2.5 or greater.

Name	Abbreviation	Range	Resolution	Technology	Part Number
Carbon Dioxide IR	CO2 IR	0-5% vol	.01% vol	Infrared	17155304-Q

Resolved successful calibration spans resulting in failed calibration (VPRO-570, VPRO-625)

Some users have experienced calibration results at a passing span percentage that gave a calibration failure indication. Sensors successfully completing a calibration with a passing span will now show as passed.

Minor enhancements

- VPROFIRM-34
- VAUG-1402, VAUG-1404, VAUG-1406
- VPRO-376, VPRO-486, VPRO-507, VPRO-589, VPRO-595

Minor bug fixes

- VPROQA-714
- VAUG-1400, VAUG-1401, VAUG-1407, VAUG-1409,
- VPROFIRM-37, VPROFIRM-40, VPROFIRM-42, VPROFIRM-43, VPROFIRM-44, VPROFIRM-45, VPROFIRM-52

Enabling future development

- VPROQA-713
- VPROFIRM-36, VPROFIRM-46

v2.4 – released March 8th, 2018

Upgrade recommendation

- Critical – All instruments must be upgraded to ensure continued safe operation.
- Recommended – Industrial Scientific recommends you upgrade the instrument firmware to ensure optimal performance.
- Optional – Users may upgrade instruments to take advantage of new features.

Upgrade Methods

Using a DSXi Docking Station, this firmware upgrade can be completed in approximately 8-10 minutes, or you can contact your local Industrial Scientific Service Center for assistance.

What is New in Ventis Pro Series v2.4?

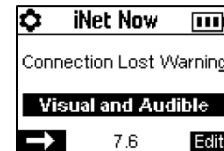
Improved iNet[®] Now user experience

- **Changed snooze duration from 15 minutes to indefinite and added visual indication when the snooze is activated (VPRO-516, VPRO-550)**

When users press the enter button for 3 seconds to snooze the connection-lost warning, the alarm will stay snoozed indefinitely until another connection-lost occurs. Also, the cloud symbol stops flashing in order to indicate the snooze has been activated.

- **Added Connection-Lost Warning options (VPRO -469)**

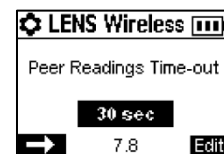
Users can choose between “Visual and Audible” and “Visual.”



Additional Features to LENS

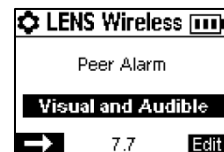
- **Added Peer Reading Time-out option (VPRO-432)**

Users now have an option to disable timeout for LENS™ peer readings or to timeout in 30 seconds. Disabling timeout is beneficial for situations in which constant peer readings are required (e.g. the hole watch for a confined space entry).



- **Added Peer Alarm options (VPRO-338)**

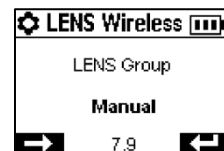
Users can choose from following options: Off, Visual, Audible, Visual, and Audible.



- **Added LENS Group mode options (VPRO-309)**

Users can now choose the method the instrument will use to join a LENS group: “manual” or “named.”

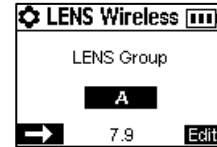
Manual method allows the instrument to join a group by touching



another instrument.

Named method allows the instrument to be assigned to a named group: A through J.

- An instrument will automatically join to the designated group without touching another instrument.
- The max number of instruments in a group is 25.
- Any instruments in manual mode can join the named group.
- Named method will consume extra battery power if the instrument is not joined to the designated group.



Other enhancements

- iAssign™ Proximity alarms get uploaded to Eventlog (VPRO-308)
- LEL Sensor – Propane calibration available (VPRO-317)
 - Support for DSX-L will be available in the next revision (version 9.8)

Minor enhancements

- VPRO-129, VPRO-348, VPRO-431

Minor Bug fixes

- VPRO-7, VPRO-8, VPRO-10, VPRO-13, VPRO-15, VPRO-48, VPRO-252, VPRO-254, VPRO-259

v2.3 – released September 19th, 2017

Upgrade recommendation

- Critical – All instruments must be upgraded to ensure continued safe operation.
- Recommended – Industrial Scientific recommends you upgrade the instrument firmware to ensure optimal performance.
- Optional – Users may upgrade instruments to take advantage of new features.

Upgrade Methods

Using a DSXi Docking Station, this firmware upgrade can be completed in approximately 8-10 minutes, or you can contact your local Industrial Scientific Service Center for assistance.

What is New in Ventis Pro Series v2.3?

Introducing iNet® Now

With Ventis Pro Series v2.3, Industrial Scientific is introducing iNet® Now which will add a new layer of visibility into gas detection programs. iNet Now is Industrial Scientific's live monitoring software that provides real-time text and email alerts for gas hazards, panic, and man-down situations allowing customers to respond to incidents faster. A real-time map view of workers and instruments helps you pinpoint the location of anyone from lone workers to people working within a facility. (VPRO-312, VPRO-318, VPRO-319, VPRO-449, VPRO-470)

Enabling future development

- VPRO-450, VPRO-455

Other enhancements

- Update the firmware to support new barometer to replace an end of life component (VPRO-471)

Minor bug fixes related to iNet Now

- VPRO-473

v2.2 – released June 30th, 2017**Upgrade recommendation**

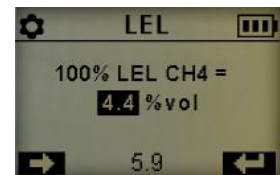
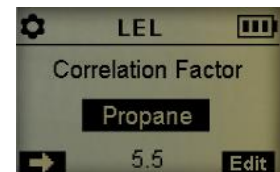
- Critical – All instruments must be upgraded to ensure continued safe operation.
- Recommended – Industrial Scientific recommends you upgrade the instrument firmware to ensure optimal performance.
- Optional – Users may upgrade instruments to take advantage of new features.

Upgrade Methods

Using a DSXi Docking Station, this firmware upgrade can be completed in approximately 8-10 minutes, or you can contact your local Industrial Scientific Service Center for assistance.

What is New in Ventis Pro Series v2.2?

- **No LENS Wireless peers warning (VPRO-240)**
Optional warning that the user is not a member of a LENS Wireless group. Warning triggers five minutes after startup or five minutes after all peers have left the group. Option is enabled/disabled using settings screen 6.12.
- **New LEL correlation factors (VPRO-224)**
Added hexane, propane, and toluene correlation factors for a pentane calibrated LEL sensor. Correlation factors are modified using settings screen 5.5.
- **Adjust LEL methane range (VPRO-228)**
User option to change 100% LEL from 5.0% volume to 4.4% volume for methane-calibrated LEL sensors. Modified using settings screen 5.9.
- **Option to disable sensor deadband (VPRO-474)**



User option to enable/disable sensor deadbands to comply with EN45544 approval. Modified using settings screen 5.10.

- Improved pump block test at startup (VPRO-37, VPRO-306)**
 For instruments with internal pumps, a pump block test is required at startup to ensure the instrument is able to detect and recover from a blockage in the gas path. This enhancement makes the pump block test faster while not impacting reliability.
- Removed all methane correlation factors (VPRO-440)**
 Removed all methane correlation factors for LEL sensors as ongoing testing has shown that methane-based LEL correlation factors may change significantly over time as the sensor ages. All correlation factors for sensors calibrated to methane and all methane correlation factors for sensors calibrated to other gases have been removed.

Enabling future development

- VPRO-312, VPRO-318, VPRO-319
- VPRO-87, VPRO-88, VPRO-90

Minor bug fixes

VPRO-197, VPRO-253, VPRO-286, VPRO-304, VPRO-305, VPRO-362, VPRO-451

v2.1 – released February 1st, 2017

Upgrade recommendation

- Critical – All instruments must be upgraded to ensure continued safe operation.
- Recommended – Industrial Scientific recommends you upgrade the instrument firmware to ensure optimal performance.
- Optional – Users may upgrade instruments to take advantage of new features.

Upgrade Methods

Using a DSXi Docking Station this firmware upgrade can be completed in approximately 8-10 minutes, or you can contact your local Industrial Scientific Service Center for assistance.

What is New in Ventis Pro Series v2.1?

New sensor options including long-life oxygen, dual range methane IR, and phosphine.

Name	Abbreviation	Range	Resolution	Technology	Part Number
Oxygen (long-life)	O2	0-30% vol	0.1% vol	Electrochemical	17155304-Y
Methane IR (dual range)	CH4	0-5% vol 5-100% vol	0.01% vol 0.1% vol	Infrared	17155304-N
Phosphine	PH3	0-10 ppm	0.01 ppm	Electrochemical	17155306-9

Expanded language options:

- Italian, Dutch, Portuguese, and Polish are now available.

Accessory Compatibility

- DSX Standalone: version 7.0.3
- DSXi: version 7.0.3
- DSX-L: version 9.6 or greater (expected April 2017)
- Accessory Software: 9.6 (expected July 2017)

v2.0 – released November 18th, 2016**Upgrade recommendation**

- Critical – All instruments must be upgraded to ensure continued safe operation.
- Recommended – Industrial Scientific recommends you upgrade the instrument firmware to ensure optimal performance.
- Optional – Users may upgrade instruments to take advantage of new features.

Upgrade Methods

Using a DSXi Docking Station this firmware upgrade can be completed in approximately 8-10 minutes; or you can contact your local Industrial Scientific Service Center for assistance.

What is New in Ventis Pro Series v2.0?**Introducing LENS™ Wireless**

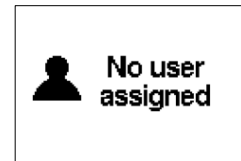
LENS Wireless is an out-of-the-box, self-configuring, peer-to-peer wireless mesh network that does not require time consuming setup or expensive infrastructure. LENS-enabled instruments transfer alarms and real-time gas readings to and from any other instrument on the network. With LENS Wireless, instruments are able to communicate at long-range distances of up to 100 meters (300 feet). (VPRO-80, VPRO-185, VPRO-148, VPRO-164, VPRO-110, VPRO-76, VPRO-75)

Expanded iAssign™ Functionality

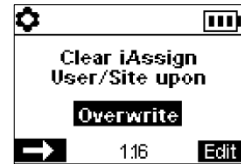
- iAssign prompt during startup (VPRO-113)
Option to prompt users during startup to tap a user and/or site tag to the instrument. Prompt will timeout after 30 seconds.
Enabled/disabled using settings screen 2.5.



- No user and/or site assigned warning (VPRO-116)
Option to remind users during operation that no user and/or site is assigned to the instrument. Enabled/disabled using settings screen 6.10.



- Reset iAssign user and/or site when overwritten only (VPRO-68)
Option to clear temporary iAssign user and/or site assignments when overwritten by new user and/or site assignments. Enabled/disabled using settings screen 1.16.

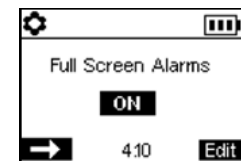


Improved Display Backlight

- Backlight manually turned on by pressing power/left button (VPRO-107)
When the backlight is turned off, the user can turn it on by pressing the left/power button. If the left/power button is also used for an instrument function (e.g. advance screen, scroll through list), that function will require a second left/power button press.
- Backlight always on during instrument alarms (VPRO-4)
The instrument's display backlight will always be enabled during instrument alarms, regardless of ambient light conditions.
- Backlight always on during startup (VPRO-123)
The instrument's display backlight will always be enabled during startup, regardless of ambient light conditions.

Other Enhancements

- Reduce time to bump test and calibrate on a docking station (VPRO-63)
Five percent reduction in calibration and bump test times when using a DSX™ Docking Station. A standard 4-gas (LEL, O2, CO, H2S) Ventis Pro Series instrument will complete a bump test in approximately one minute and instrument calibration will complete in approximately three minutes.
- Disable Full Screen Alarms and Alarm Action Messages (VPRO-66)
Optional feature to disable full screen alarms and alarm action messages on the instrument.
While full screen alarms and alarm action messages are beneficial in personal protection applications, these features may not be necessary during monitoring applications where gases are known to exist and the user wants to view the changing instrument readings. Enabled/disabled using settings screen 4.10.
- Rename carbon dioxide/hydrocarbon IR sensor to carbon dioxide/LEL IR sensor (VPRO-156)
On the instrument's display, the former 17155304-U hydrocarbon (or HC*) sensor will be displayed as LEL* for clarification purposes. The asterisk indicates the sensor uses infrared technology. No performance changes were made.



Enabling future development

- The following enhancements were made to aid in future development projects:
 - VPRO-82, VPRO-126
 - VPRO-81, VPRO-171, VPRO-172, VPRO-127 (May 2017 note - iAssign Beacons)

Minor bug fixes

- The following minor bugs were addressed during this firmware update: VPRO-32, VPRO-61, VPRO-46, VPRO-53, VPRO-11, VPRO-56, VPRO-74, VPRO-77, VPRO-108, VPRO-62, VPRO-55, VPRO-50, VPRO-72, VPRO-36, VPRO-42, VPRO-43, VPRO-109, VPRO-131, VPRO-128, VPRO-73, VPRO-137, VPRO-184