



## Release Notes

*Generated at Fri Sep 24 09:51:29 2021  
For firmware version S1004*

### **DESCRIPTION:**

Software Release Notes: Changes since version S1003

	<b>Type</b>	Description
	<b>A level bug</b>	Critical; effects basic operation on the system with no work around
	<b>B level bug</b>	Semi-critical; affects basic operation on the system, however there is a work around
	<b>C level bug</b>	Non-critical; does not effect basic operation
	<b>Feature</b>	Added a feature that is not present in previous versions
	<b>Improvement</b>	Improved upon an existing feature

#	Type	Issue
1	C level bug	Removed the word dispense from alarms doc
2	Improvement	Delay after factory settings are restored
3	Improvement	Added concentration table help
4	Improvement	Changed the error message when loading Concentration file
5	A level bug	Fixed Sensor Initialization with Password
6	Improvement	Update HMI when factory settings are restored
7	A level bug	HMI Crash when Error dialog is open
8	Improvement	Changed default RI to 1.332987
9	C level bug	Enable Add button after serial fail
10	C level bug	Update firmware and sync time
11	A level bug	Fixed zoom out after axis click
12	C level bug	Fixed with of Tab Headers
13	C level bug	Added more information to Sensor Alarms
14	Improvement	Average RI readings for Conc Tab
15	A level bug	Added Sensor Initialization LED only
16	Improvement	RTC Initialization
17	Feature	LED Only Init / % to seconds
18	Improvement	New Modern Look to UI
19	Improvement	New Modern Look to UI
20	A level bug	Added password protection
21	Feature	Save size and position of HMI
22	Feature	Adjusted the width of Chemistry Dropdowns
23	Feature	Added a Analog Outputs tab
24	Feature	Added the status of Analog/Digital In/Out
25	C level bug	Added SVIDs for Concentration table and coefficients
26	Feature	Allow user to set units for Concentration
27	Feature	Analog Output Trimming
28	A level bug	Reworked the drop of communication when Recording Realtime
29	Feature	Display RI on Concentration Tab
30	Feature	Option to ignore warnings
31	C level bug	Fixed the width of the Alarm Tab Description Column

32	Feature	Ability to zoom the vertical axes independently
33	Feature	Allow user to name Real Time Trace output file
34	Feature	Added Time Auto Synchronization
35	Feature	Added Data and Time to RT .csv
36	Feature	Removed Log file unused data
37	Feature	Change Rezero to Offset
38	Feature	Removed Maintenance Mode
39	Improvement	Set Temp to 1 decimal place
40	Feature	Cleaned up the wording for settings
41	Improvement	Improved the Connect Task
42	B level bug	Fixed Firmware Download bad response
43	C level bug	Removed reference to rezero
44	Feature	Set hover time to 100sec
45	B level bug	Fixed the load of modified Conc Table CSV
46	B level bug	Fixed the load of modified Conc Table CSV
47	Improvement	Set COM ports up to 255
48	Improvement	Moved user entries to top
49	Feature	Removed Status Tab from HMI
50	C level bug	Fixed Missing Connect Button
51	C level bug	Fixed extra word in Upper Bounds
52	C level bug	Fixed extra word in Upper Bounds
53	C level bug	Added 1 decimal point to RI
54	C level bug	Added 1 decimal point to RI
55	Improvement	Added SVIDs for RI, Conc, Temp
56	B level bug	Fixed the graphing of TIR
57	Improvement	Added serial command line option
58	C level bug	Type in MAJOR VERISON
59	C level bug	Updated Firmware Version after download
60	Feature	Added Serial Communications

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**1 (860) - C level bug** - Removed the word dispense from alarms doc

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For alarm 20 (Power On) the dispense system was replaced with unit. 'Information: The dispense system was powered on or reset (#) times.' replaced with 'Information: The unit was powered on or reset (#) times.'. Work item 259.

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**2 (859) - Improvement** - Delay after factory settings are restored

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When factory defaults are restored, the HMI needs to delay before refreshing the current tab. Added a 1.2sec delay.

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**3 (859) - Improvement** - Added concentration table help

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Added a small box with Concentration Table help to show what the icons are for.

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**4 (859) - Improvement** - Changed the error message when loading Concentration file

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When loading a Concentration table file, if the file is open in excel, the file can not be read. Changed the error message to state the file is used by another process. Work Item 250

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**5 (858) - A level bug** - Fixed Sensor Initialization with Password

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Fixed the start of Sensor Initialization or Sensor Initialization LED only when a password is required. Length of message was wrong. Work Item 130

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**6 (856) - Improvement** - Update HMI when factory settings are restored

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When factory defaults are restored, the values get update on the current tab you are in. Only System and Info. Work Item 343

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**7 (856) - A level bug** - HMI Crash when Error dialog is open

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Prevent the HMI crash when the connection error dialog is left open. Work Item 338

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**8 (856) - Improvement** - Changed default RI to 1.332987

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Changed default RI to 1.332987 in Self Test Rezero. Work Item 335

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**9 (856) - C level bug** - Enable Add button after serial fail

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Reduced the wait for the Add button to become enabled after finding a COM port does not exist. Wait should be 5 seconds instead of 20. Work Item 337

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**10 (856) - C level bug** - Update firmware and sync time

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Saved the update firmware dialog when time needed to be sync'd. Update firmware after syncing time. Work Item 339

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**11 (856) - A level bug - Fixed zoom out after axis click**

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Fixed the zoom out after clicking on the left axis. Clears the axis when clicked in graph. Work Item 341

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**12 (856) - C level bug - Fixed width of Tab Headers**

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Set the max width of tab headers to 172 from 166. Work Item 342

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**13 (855) - C level bug - Added more information to Sensor Alarms**

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Added more explanation to the Sensor alarms for better customer understanding. Work Item 259

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**14 (855) - Improvement - Average RI readings for Conc Tab**

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Added the averaging and calc standard deviation of the RI readings over N samples. This value is used to insert into the Concentration table via the button. Work Item 330

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**15 (855) - A level bug - Added Sensor Initialization LED only**

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Added a item to the Utility menu to send a SENSOR\_INITIALIZATION\_LED\_ONLY message to the unit after asking for confirmation. Work Item 279

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**16 (854) - Improvement** - RTC Initialization

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Updated the method in which the PLL\_DIV and PLL\_DIVSEL are corrected if they become corrupt as well as optimized initialization of components on the SPI bus, including a review of the mutex protections used for components on the bus.

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**17 (854) - Feature** - LED Only Init / % to seconds

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This version contains 2 implementations for the following: 1.) LED only sensor initialization CMD 160 (does not touch air reference) with an optimized search for intensity and 2.) Converted the PP weighting attribute in system parameters from % to seconds.

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**18 (853) - Improvement** - New Modern Look to UI

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Updated the HMI to have a more modern look. Buttons flat and larger, white Background, white graph. Work Item #328

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**19 (853) - Improvement** - New Modern Look to UI

---

Updated the HMI to have a more modern look. Buttons flat and larger, white Background, white graph.

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**20 (853) - A level bug** - Added password protection

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Added the ability to set passwords so certain functions are protected by operator, Engineer or Owner passwords. Work Item: 147, 313

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**21 (853) - Feature - Save size and position of HMI**

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Save the size and position of the HMI when closed and open in same size and location on next run.

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**22 (852) - Feature - Adjusted the width of Chemistry Dropdowns**

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Adjusted the width of the chemistry dropdowns to change with the size of the window. Made the start window size 1060 X 720. Work Item # 274

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**23 (851) - Feature - Added a Analog Ouputs tab**

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Added a Analog Outputs tab to set the ANALOG\_PARAMETERS. Addes ability to trim outputs and set outputs to defined value. Work Items: 317, 176, 327, 157

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**24 (851) - Feature - Added the status of Analog/Digital In/Out**

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Added the status of the Analog outputs and Digital inputs and outputs to the status area of the HMI window. Tabs System, Info, Self Tests. Work Item 315

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**25 (850) - C level bug - Added SVIDs for Concentration table and coefficients**

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Added SVIDs for the concentration table and for the coefficients. Work Item 286

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**26 (850) - Feature - Allow user to set units for Concentration**

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Added a menu/Settings item to set the unit for concentration (default %). units are displayed on the MMI and in the RT\_Tace output files. Work Item 155

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**27 (850) - Feature - Analog Output Trimming**

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Implemented the ability to trim 4-20mA output and force outputs to a specific value. Implemented the 2nd digital output, now tied to a sensor warning state (auto clearing sensor warnings--which are separate from system error states tied to digital output 1).

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**28 (849) - A level bug - Reworked the drop of communication when Recording Realtime**

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Reworked the recording realtime when communications are lost. Verified for network loss, serial comm loss and direct serial lost. Work Item 183

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**29 (849) - Feature - Display RI on Concentration Tab**

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Added the monitored RI on the concentration tab by the Add entry button. Work Item: 249

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**30 (849) - Feature - Option to ignore warnings**

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Added a menu setting to ignore warnings. Warnings are still collected but will not display the yellow led indicator when ignoring. Work Item: 21 Added changes to cleanly come back from a communications loss.

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**31 (849) - C level bug - Fixed the width of the Alarm Tab Description Column**

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Adjusted the width of the Alarm Tab Description column to be 30 less the the width of the listview. Adjust width with the window. Removed test code from firmware. Added script to launch and close the hmiserver

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**32 (848) - Feature - Ability to zoom the vertical axes independently**

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Added a feature to zoom the vertical axes independently by dragging down on the axis. Added tooltip to the chart to inform the user how to zoom the chart and axes. Work Item #295

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**33 (848) - Feature - Allow user to name Real Time Trace output file**

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Added a Browse button for the user to enter the name of the file to save RealTime Traces to instead of using the default. Work Item: 301

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**34 (848) - Feature - Added Time Auto Synchronization**

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Added the ability to have the HMI sync the time with the unit whenever time is off. Done at startup of HMI or whenever time is read from unit. Work Item: 281

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**35 (847) - Feature - Added Data and Time to RT .csv**

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Added the date and time to a column in the Real Time Trace .csv file. Started with Record Realtime Work item: 304, 159

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**36 (847) - Feature** - Removed Log file unused data

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Removed values for Log CSV File Cells C1 - C11 Work Item 303

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**37 (847) - Feature** - Change Rezero to Offset

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Dropped "Rezero" from Concentration Rezero (Offset) on System Tab Work Item: 298

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**38 (846) - Feature** - Removed Maintenance Mode

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Removed the maintainance mode from the HMI. Not useful. Work Item 296

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**39 (846) - Improvement** - Set Temp to 1 decimal place

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Changed the display of temperature on HMI window to 1 decimal place. Work Item 246

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**40 (846) - Feature** - Cleaned up the wording for settings

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Cleaned up the wording of key HMI information. Work Item: 325

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**41 (845) - Improvement** - Improved the Connect Task

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Changed the Connect Task to load all messages in the queue and wait until all are received. All messages must be received to indicate connected. Work Item 290

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**42 (844) - B level bug** - Fixed Firmware Download bad response

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Fixed the handling of a bad return from the unit when downloading firmware. HMI resends the same segment but needs to reset the sequence number. Retry now completes. Work Item 228

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**43 (844) - C level bug** - Removed reference to rezero

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Removed the sensor error code 30001 reference to temperature rezero may be required. We removed the capability for a customer to perform a temperature rezero. Work Item 243

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**44 (842) - Feature** - Set hover time to 100sec

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Set the hover time on register entries to 100sec. Allows tooltip (Min/Max/Default values) to display for long period of time as cursor is over label. Work Item 247

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**45 (842) - B level bug** - Fixed the load of modified Conc Table CSV

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Loosened the parsing of a concentration table file (.csv) that has been modified by Excel. Work Item 250

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**46 (842) - B level bug** - Fixed the load of modified Conc Table CSV

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Loosened the parsing of a concentration table file (.csv) that has been modified by Excel. Work Item 250

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**47 (842) - Improvement** - Set COM ports up to 255

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Allow for 255 comports in the dropdown list for New Connections. Work Item 291

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**48 (842) - Improvement** - Moved user entries to top

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On the Info Tab, placed the user entered information at the top of the list, place the fixed information lower on the list. Work Item 323

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**49 (841) - Feature** - Removed Status Tab from HMI

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Removed the Status Tab as not useful. Removed Status control associated with tab. Work Item 269

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**50 (840) - C level bug** - Fixed Missing Connect Button

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Reset the ButtonIsVisible property when disconnecting. Work Item 309

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**51 (840) - C level bug** - Fixed extra word in Upper Bounds

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Removed the of in the 'Upper concentration bounds of exceeded'. Work Item 242

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**52 (840) - C level bug** - Fixed extra word in Upper Bounds

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Removed the of in the 'Upper concentration bounds of exceeded'

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**53 (840) - C level bug** - Added 1 decimal point to RI

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Added 1 decimal point to RI on the main graph, Profile graph and Concentration graph. 6 decimal places, 0.000000 Work Item 275

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**54 (840) - C level bug** - Added 1 decimal point to RI

---

Added 1 decimal point to RI on the main graph, Profile graph and Concentration graph. 6 decimal places, 0.000000

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**55 (840) - Improvement** - Added SVIDs for RI, Conc, Temp

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Added the SVIDs for RI, concentration, fluid temperature, and Uncompensated RI. Work Item 286

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**56 (838) - B level bug** - Fixed the graphing of TIR

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The graphing of the TIR from unit was 1 pixel off from the files that were saved and loaded.

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**57 (838) - Improvement** - Added serial command line option

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Added serial communication started from the command line option. added -b 57600 for baudrate

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**58 (838) - C level bug** - Type in MAJOR VERISON

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Updated project to show 1003 as the MAJOR\_VERSION. Failed to update the MAJOR\_VERSION in project.xls for RELEASE 1003

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**59 (838) - C level bug** - Updated Firmware Version after download

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Updated the Firmware version in the MMI after downloading new firmware at startup. Fixed the RELEASE procedure in 'How to build.txt'

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**60 (837) - Feature** - Added Serial Communications

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Added the serial comport communications to the New Connections dialog. Network or COMPORT tabs.