

XSpeedTool



Release: 1.16.00.0000

Last update: 25/10/2023

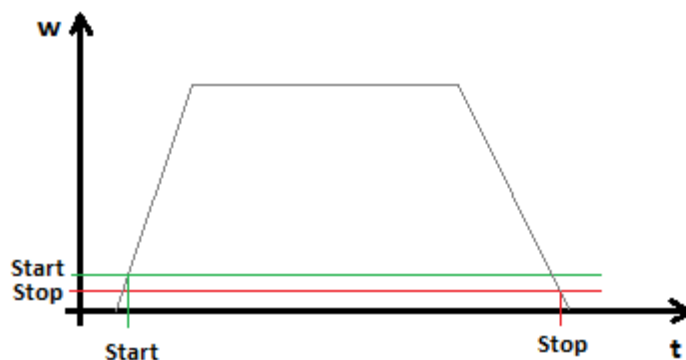
1. Release 1.00.00.0001

Date: 02/03/2020

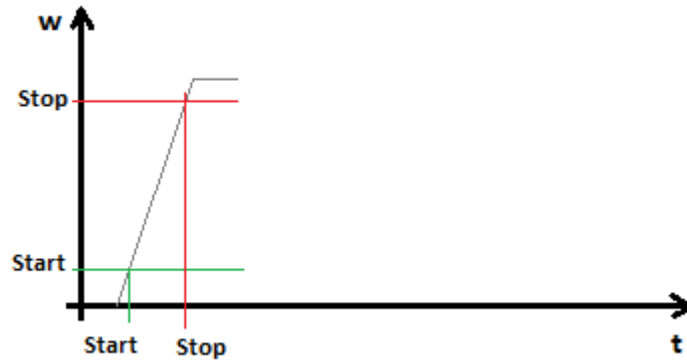
1st XSpeedTool release.

2. Release 1.00.00.0002

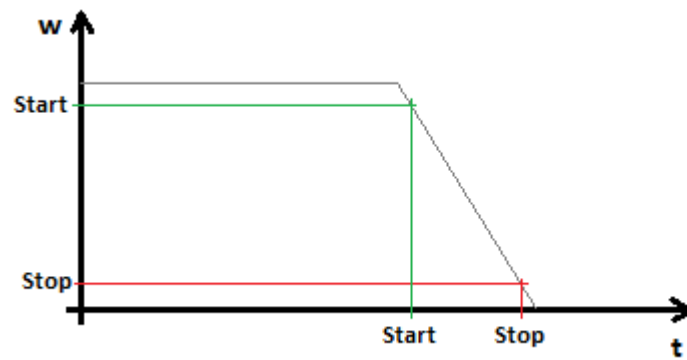
- Replaced VER command with RELF one to get full application firmware release.
- Sent STWT (start weight) command after have sent calibration configuration to correctly set callbacks in the indicator's application firmware.
- Displayed animated image while filters and spectrum are computed.
- Removed connected indicator's firmware build release, only release, sub-release and bug-release are displayed.
- Resized weigh items in the Analysis's weighs panel, now are smaller in height.
- Replaced max weight in weigh items labels in the Analysis's weighs panel with "Wx" label, where x is a number increased by one on every new weigh loading, loaded from file or captured by connected indicator.
- Magnify glass icon near Port in Advanced panel now reloads communication ports.
- Analysis panel, Data acquisition: renamed *Triggers* to *Trigger load pulse* (*Trigger 1* from release 1.01.00). Points started to be sent when the weight is greater of equal to on value and stopped to be sent when the weight is less or equal to off value.



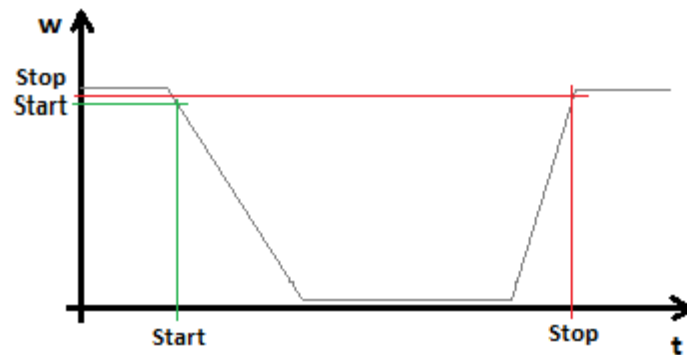
- Analysis panel, Data acquisition: added other 3 triggers modes:
 - o *Load step* (*Trigger 2* from release 1.01.00): points started to be sent when the weight is greater of equal to on value and stopped to be sent when the weight is great or equal to off value



- *Unload step (Trigger 3 from release 1.01.00)*: points started to be sent when the weight is less or equal to on value and stopped to be sent when the weight is less or equal to off value



- *Unload pulse (Trigger 4 from release 1.01.00)*: points started to be sent when the weight is less or equal to on value and stopped to be sent when the weight is greater or equal to off value



- Added SLM license.

3. Release 1.00.00.0003

Date: 05/03/2020

Fix in communication and more.

4. Release 1.01.00.0000

Date: 19/03/2020

Added:

- Scale ID *None* (default value in new installation). If set ASCII commands are sent without 485 ID.
- In demo mode filters sending is not allowed, related button is not enabled.

Changed:

- Filters and triggers descriptions.

Fixed:

- Transmitter's name and firmware release were not read and related fields on the bottom left corner of the form were not filled.
- Calibration points capture buttons texts were not changed when a new language was set.

5. Release 1.02.00

Date: 06/04/2020

1.02.00.0000

Added:

- Spanish, French and German languages.

1.02.00.0001

Incremented width of *Refresh* button in the Analysis panel to allow the text in some languages, like German and French, to fit in the button.

6. Release 1.02.01

Date: 28/04/2020

Fix:

- Fonts management. On PCs with some languages (like Czech) application crashed because was not able to load font files from Font folder.
- Changed a few texts in German and Spanish.

7. Release 1.03.00

Date: 21/10/2020

Added:

- Management of ADC AD7190 (DGT1XS)
- Added management of multichannels rates.
- Switched to Modbus protocol. On start-up ASCII protocol is used to read firmware name and release then if in Config.xml file Protocol is set to Modbus (default) tries to switch to Modbus protocol with PROT command.
- Management of indicators working in Scale mode with more platforms (like DGT4XI/DGT4XIFB).

Fix:

- Rate registered in a capture set is now equal to rate shown in the combo box in Analysis panel.

8. Release 1.03.01

Date: 26/10/2020

Fix:

- Capacity values greater than 65535, as integer without decimals, were wrong managed.

9. Release 1.04.00

Date: 19/02/2021

Fix:

- Checking of received data, application could crash on configuration reception.
- ADC zero value was not managed in captured ADC data.
- Status label (CALIBRATION OK, CAPTURING ...): decreased font size to fit in the available area.
- With more channels last rate in the list of available ones was equal to zero.
- In case a command cannot be executed the communication state machine is reset and the application will restart reading scale parameters.
- Fix in available com ports detection function.
- Animated waiting picture sometimes prematurely disappeared.

Added:

- Added management of DGT4X digital cells indicator. No filters selection.
- Added management of DGT1P indicator.
- Available channels read from indicator.
- Available number of filters read by indicator.
- Added description to weighs and filters. If the description is changed item save icon is enabled to allow to save again the item with the new description.
- Weight/Filter save file dialog: if the item was loaded from file current name is displayed as default one.

Changed:

- Zoom is now managed with mouse wheel. Removed enable zoom check box. Zoom icon is now a button that allows to reset zoom level to 1x.

10. Release 1.05.00

Date: 07/04/2021

Added:

- Selection in graphic Analysis panel with average and standard deviation computation of the selected data.
- Tool to fine adjust selected data.
- Check settings management for the scale with check function.
- Test panel with live capturing of the weighs from check indicator with tolerance management.
- Right menu click on single weigh in Analysis panel graphic when there is active selection: a menu with the following items is displayed:
 - o create new weight with selected data
 - o cut selected data

Changed:

- Graphic moving in Analysis tool with mouse when left mouse is kept pressed and selection is not checked.
- Inserted display of overlapped weigh data.
- Filtered value set equal to zero in place of the 1st raw sample value.
- Changed some icons.

Fix:

- Progress bar management.

- With one channel only set operative mode button is disabled.
- Some controls texts were not set in the selected language.
- Some fonts were not properly set.

11. Release 1.06.00

Date: 30/04/2021

Added:

- Data acquisition: new triggers:
 - o 2 photocells high: acquisition starts when 1st photocell is obscured and finished when 2nd photocells changes from obscured to non-obscured status. When photocell is obscured the indicator will read a high level on related digital input.
 - o 2 photocells low: acquisition starts when 1st photocell is obscured and finished when 2nd photocells changes from obscured to non-obscured status. When photocell is obscured the indicator will read a low level on related digital input.
 - o Time 2 photocells high: acquisition for the set time. Also photocells transitions are sent. The relevant transitions are: from non-obscured to obscured status for the 1st photocell, from obscured to non-obscured status for the 2nd photocell. When photocell is obscured the indicator will read a high level on related digital input.
 - o Time 2 photocells low: acquisition for the set time. Also photocells transitions are sent. The relevant transitions are: from non-obscured to obscured status for the 1st photocell, from obscured to non-obscured status for the 2nd photocell. When photocell is obscured the indicator will read a low level on related digital input.
- Check weigher working mode, added:
 - o 2 photocells high. When photocell is obscured the indicator will read a high level on related digital input.
 - o 2 photocells low. When photocell is obscured the indicator will read a low level on related digital input.
- Check weigher: added reference weight computation and auto-zero management.
- Display of cell error status.

Changed:

- Check weigher setting panel: added colours to filters labels, the same colours of the Analysis panel.
- Removed release from top bar and moved to Settings panel
- Renamed *Test* panel to *Check*
- Main form top right icons (iconize, maximize/restore, close)

12. Release 1.07.00

Date: 03/05/2021

Added:

- Management of indicator DGT1PFS: DGT1P fast speed with ADC rate up to 3200Hz. Hw ID is the same of DGT1P but with higher byte equal to 1: 0x011B (283).

13. Release 1.07.01

Date: 21/05/2021

Fix:

- A few fix on check parameters.

14. Release 1.08.00

Date: 14/06/2021

Added:

- Management of indicators DGT1SP (DGT1S Plus) and DGT1SPFB (DGT1S Plus Fieldbus): max ADC rate 400Hz, 1 filter only.
- Management of indicator DGT4XX: like DGT4X but with ADC rate ratio equal to 1, max ADC rate equal to 3200Hz.

Changed:

- DGT1PFS (DGT1P Fast): management of 3 filters in place of 1 only.

15. Release 1.08.01

Date: 17/06/2021

Added:

- DGT4XX indicator management
- Check weighs acquisition (Check panel table): if auto-reset counter is not equal to zero weighs are cleared when counter is equal to auto-reset value and not always after 10 weighs.

16. Release 1.09.00

Date: 30/06/2021

Added:

- DGT1P-BUS indicator management
- Inserted switch to baud-rate 115200 on start communication with the indicator and removed switch to 115200 and back to 9600 on data acquisition. Sometimes the acquisition got stuck.
- Communication log function to save data exchanged with indicator in a file with name Log_YYYY_M_D_H_m_S.log in the Log subfolder.
YYYY: year, M: month, D: day, H: hour, m: minutes, S: seconds of the instant of start communication.
- With DGT1S-PLUS and DGT1P indicators ADC data acquisition is not allowed.
- On start acquisition command only is sent, without reading command status register before and after have sent the command command. Sometimes application got stuck on Start acquisition.
- Max 18 overlapped weighs are allowed.

Fix:

- Commands not always worked when *Read weights* in the Check panel was checked.
- When language was changed texts in the Check panel weren't changed until application restart.

17. Release 1.10.00

Date: 27/10/2021

Added:

- Boards DFWEX, DFWLX and DGX
- Platform stability flag (~)
- Management of not calibrated platforms. NOT CALIBRATED message is displayed in the status label just under GROSS value
- Management of unsupported commands: FUNCTION NOT AVAILABLE message is displayed in the status label just under GROSS value

Fix:

- Analysis panel: on reception ADC rate was not read, only filters were read. Now ADC rate is read from indicator as well
- Switch platform button was disabled with uncalibrated scales
- Start calibration and scale setup reception buttons were disabled with uncalibrated scale

- Theoretical calibration *Load cell capacity* and *Input dead load* unit labels set in accordance with the selected scale unit
- Switching to an uncalibrated platforms weight values are removed and some buttons (zero, tare, ...) are disabled

18. Release 1.11.00

Date: 04/02/2022

Added:

- Reading of ADC points per mV/V (registers 30145-30146) from indicator to have better conversion from ADC to mV/V in calibration points
- Loadcells panel (dependent channels mode):
 - o visualization of percentage loadcells loading and indication of cells in error, in unbalance error or excluded
 - o management and clearing of loadcells equalization
 - o acquisition of unbalance configuration
 - o reading/settings of unbalance parameters
- Inserted in Scale panel advanced settings (autozero, autozero percentage, zero percentage, ..., peak filter)
- Top display: added over-load (red OL) under-load (red UL) indicators
- In case the serial baud-rate cannot be set to 115200 the application asks the user to reboot the indicator. If the user clicks No the application tries again to communicate but could fail.
- Management of indicators unmanageable by the tool, like DGT1SP and DGT1P. When an unmanageable indicator is connected Setting panel is displayed with the message saying that the indicator cannot be manage by XSpeedTool
- Management of the minimum firmware release of the connected indicator. If the indicator has a release lower than the minimum required Setting panel is displayed with the message saying that the indicator with that release cannot be manage by XSpeedTool

Indicator	Minimum fw release
DGT4X	01.08.00
DGT4XX	01.15.00
DGT1SX	01.08.00
DGT1PFS	01.13.01
DGT1P-FB	01.17.00
DFWEX	01.00.00
DFWLX	01.00.00
DGX	03.06.00

Fix:

- Check settings not directly managed, like autoreset list counter, were cleared
- Digital load cell 1 in error was not signaled
- Indicator firmware release computed from BCD value was not correct

19. Release 1.12.00

Date: 04/02/2022

Changed:

- Fine filter in Analysis panel: reduced decimals from 3 to 2 (as in indicator)
- Fine filter: increased maximum value from 100 to 600
- Selective 1 filter in Analysis panel: changed the input style from free text to up/down mode

20. Release 1.12.01

Date: 11/04/2022

Fix:

- Automatic license activation by code didn't work, the application could be activated by e-mail only.

21. Release 1.13.00

Date: 08/06/2022

Added:

- Management of R51 firmwares buffered weighs
- Automatic divisions of captured data in single weighs

22. Release 1.14.00

Date: 21/07/2022

Added:

- Management of stability filter unlock divisions, where available
- Management of output status register in multiscales mode with management of load cells error
- Sending parameters for current scale only. In scale panel when more scales are configured checkbox *Send current scale only* is visible. If checked when Send button is clicked capacity, divisions, stability and zero tracking settings and other parameters are sent to the selected scale only.

Changed:

- In case of cell error, scale panel controls are now active to allow to store new cell check voltage reference value in indicators with cell checking feature (DGT1SX family)
- OIMLR51 firmware: set display weight filters the same as check filters to have XSpeedTool displayed weight more stable

Fix:

- Crash reading buffered weighs
- Peak filter not set if the scale doesn't have it (digital cells releases). Application crashed.
- Graphic split function with filters active didn't work
- Shown cell error for a non-configured channel (example after have changed from 4 to 1 channel and channel 4 was in error, issue in DGT4X)
- Buffered weighs buttons text font
- Buffered weighs controls had texts always in English

23. Release 1.14.01

Date: 19/10/2022

Development:

- Migrated from Visual Studio 2015 to Visual Studio 2022

Fix:

- OIMLR51 firmware: check configuration parameters are sent after filters settings, otherwise check parameters are not saved

24. Release 1.15.00

Date: 01/02/2023

Changed:

- Some texts in some languages didn't fit in the available area. Now font size is adjusted to make them fit the area.
- Check fw: improved read weighs function (100 weighs/min can be read)
 - o Communication timer interval is switched from 100ms to 30ms
 - o If indicator auto-reset counter parameter is not zero only the registers related to that counter are read ($4 + 2 * (\text{auto-reset value})$ in place of 24)
 - o If indicator auto-reset counter is not zero the reset queue function is skipped
 - o Weighs total counter is checked in place of weighs queue counter

Fix:

- ADC rates in multi-channels configurations were not correct for DGT4X and not rounded up to the nearest multiple of 5 for DGT4XX.

	Wrong ADC rates	Right ADC rates
DGT4X 2 channels	3, 5, 10, 20, 35, 60, 90, 200	3, 5, 10, 20, 35, 60, 90, 205
DGT4X 3 or 4 channels	3, 5, 10, 20, 35, 60, 90	3, 5, 10, 15, 30, 45, 100
DGT4XX 2 channels	3, 6, 12, 22, 42, 72, 110, 245	3, 6, 12, 20, 40, 70, 110, 245
DGT4XX 3 or 4 channels	3, 6, 12, 22, 36, 56, 122	3, 6, 12, 20, 35, 55, 120

- Check fw: when buffered weighs were read *Read weighs* check box was unchecked but the function was not disabled

25. Release 1.16.00

Date: 25/10/2023

Changed:

- Removed license. From now on the tool does not require any license.
- Created RiceLake version with RL logo (on the top left corent of the application window) and without authot data in the Settings panel.
- Analysis panel graphic: if ADC rate is greater or equal to 1000Hz time is displayed with 4 decimals in place of 3.
- On start-up independent channels mode is selected in place of j-box mode.
- On start-up first tool (Analysis) is selected. Before no tool was selected.
- On start-up in the Scale panel 4 channels (max analog channels) are loaded in the selection list, before were loaded 16 channels.

Add:

- Analysis panel: added checkbox "Last filter only" to display only last filter data and not all filters data overlapped.
- Analysis panel Check configuration data: added box with package weight. It is used just to display a horizontal line in the graphic, it is not a true parameter.
- Off-line function. On the left side of the window, just above progress bar, a slide has been added to allow to work off-line, with no connected indicator.
- Scale panel: new *Backup configuration* and *Restore configuration* buttons. The first allows to receive the whole connected indicator configuration and save it in a file (mot format, can be loaded by DiniTools). The second allows to read the configuration from a file and send it to the connected indicator, at the end of the transmission the indicator is restarted.
Backup file default name set equal to fwname_rr.ss.bb_yyyyMMdd_hhmm.mot.
 - fwname: name of the firmware of the connected indicator
 - rr release
 - ss sub-release
 - bb bug-release
 - yyyy year
 - MM month
 - dd day
 - hh hour
 - mm minutes
- Adjusted button texts size on language change.
- Management of up to 8 calibration points for indicators different from 3590X. For DGT4X release 1.23 or greater is required.
- Inserted stability/stuck filter checking. When Analysis/Refresh or Analysis/Send button is pressed if the set filters could generate unstable or stuck weight a warning message is shown.
- Read load cell theoretical data after a calibration. For DGT4X release 1.23 or greater is required.

Fix:

- Loadcells panel: bargraphs GUI management.
- Analysis, Loadcells and Test panels: some fonts were different from other panels ones.
- Check configuration: reference weight was not properly managed.
- Analysis in check mode: zero reference weight subtracted from calculated package weight, if configured.
- Scale panel: Set mode button was not disabled with disconnected indicator and its font, color were not set.
- When Set mode is clicked if junction box mode is selected and the connected indicator has analog load cells, it is checked to have set at least 2 channels.
- Setting the maximum number of calibration points (8) the application crashed on calibration procedure.
- When a calibration point is removed following points are cleared, they were displayed again after a point acquisition.
- Analysis graphic data were not really shown in x10.
- Scale panel GUI management: calibration points were not well stacked if Scale panel was not the displayed one.
- Scale panel: dead load in theoretical calibration was not managed with 1 more decimal.
- Acquisition of a weigh from digital load cells indicator was stopped too early.