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LIGHTER SUITE 7.2.1 – RELEASE NOTES

This document describes the SW Release **LIGHTER 7.2.1** for **Laser Marking** devices. It is a maintenance release that fixes some bugs related to embedded PROFINET, limits function, and axes. The upgrade of LM devices to this release is not mandatory.

MODELS SUPPORTED

LIGHTER 7.2.1 is generally compatible with the following LM devices:

- AREX XXX-X64 (AREX400 PRO models)
- AREX XXX-X54 (AREX400 BASIC models)
- AREX XX00-1X42
- AREX20-MW A200-1X53
- UNIQ 1150-1X40
- VLASE XXXX-1X42
- EOX 6X02-1X40 (Windows Embedded 7 only)

SUPPORT FOR PROFINET IO

The embedded PROFINET IO interface in 7.2.1 (N.B. SW license 93ACC1919 required) is fully tested on the following LM devices:

- AREX XXX-X64 (AREX400 PRO models)
- AREX XXX-X54 (AREX400 BASIC models)
- AREX XX00-1X42
- AREX20-MW A200-1X53
- UNIQ 1150-1X40
- VLASE XXXX-1X42
- EOX 6X02-1X40 (Windows Embedded 7 only)

SUPPORT FOR MARVIS™ FUNCTIONALITIES

The MARVIS™ DPM code grading functionalities in 7.2.1 (N.B. SW license 93ACC1918 required) are fully tested on the following LM devices:

- AREX XXX-X64 (AREX400 PRO models)
- AREX XXX-X54 (AREX400 BASIC models)
- AREX XX00-1X42
- AREX20-MW A200-1X53
- UNIQ 1150-1X40
- VLASE XXXX-1X42

 and on the following MATRIX family devices :

- MATRIX 120 X1X-01X
- MATRIX 210N 2XX-X1X (DPM illuminator and YAG filter recommended)
- MATRIX 220 3XX-010 (DPM illuminator and YAG filter recommended)
- MATRIX 300N 4XX-01X (DPM illuminator and YAG filter recommended)
- MATRIX 410N XXX-X1X (DPM illuminator and YAG filter recommended)

Installed FW package is **1.6.3.50** for MATRIX 220 and **1.5.1.606** for the remaining MATRIX models.

IMPORTANT REMARKS

This software distribution includes **Lighter721_RTM_673 installer** (approx. 190 MB) and some utilities and docs.

NEW DRIVER SOFTWARE FOR IMARK-II EMBEDDED SYSTEMS

During installation on **AREX400**, **UNIQ** and **AREX20-MW** models, the iMarkII control board driver software version **1.0.4 15347** will be required to install. NB: driver may not be signed in some PCs (see also known issue #63370). Select '*Install this driver software anyway*' to proceed:
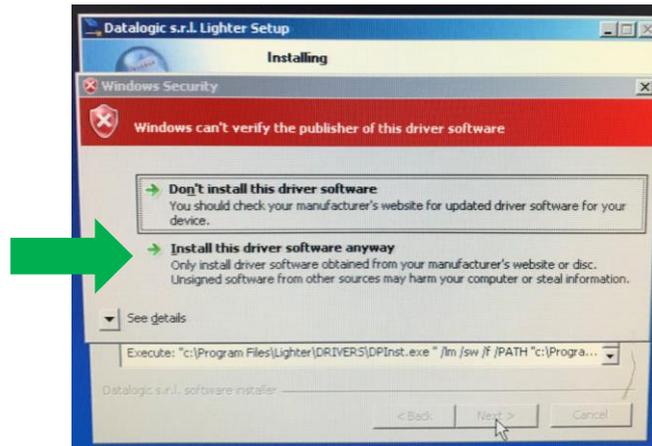
MARVIS™ LICENSE

Due to some improvements in MARVIS™ license protection, **on devices where LIGHTER 7.0.1 or 7.0.0 were manually installed as upgrades of existing versions, the existing MARVIS™ FULL / EVAL licenses may be disabled after installing LIGHTER 7.2.1. Laser machines shipped with LIGHTER 7.0.2 or newer pre-installed in factory by DATALOGIC (see laser unit's datasheet) will not be affected.** For more info, contact Technical Support with your device's serial number and SW version at hand (*LaserEditor > Help > About*) before starting the upgrade. Installation of 7.2.1 on 7.0.0 / 7.0.1 devices where MARVIS™ is not used, or already expired, will not affect general LIGHTER functionalities. Installation of 7.2.1 on versions 6.4.0 or older will grant 30 days MARVIS™ evaluation period.

NEW FPGA FOR IMARK EMBEDDED SYSTEMS

If installed on LIGHTER versions ≤ 7.1.1, LIGHTER 7.2.1 will bring new FPGA software for the following LM models:

- AREX XX00-1X42
- VLASE XXXX-1X42
- EOX 6X02-1X40

This upgrade fixes some problems related to slow PCI bus communication, unresponsive mouse/keyboard peripherals, slow operative system, unstable communication with *Fiber Configurator* (for AREX) serial application.
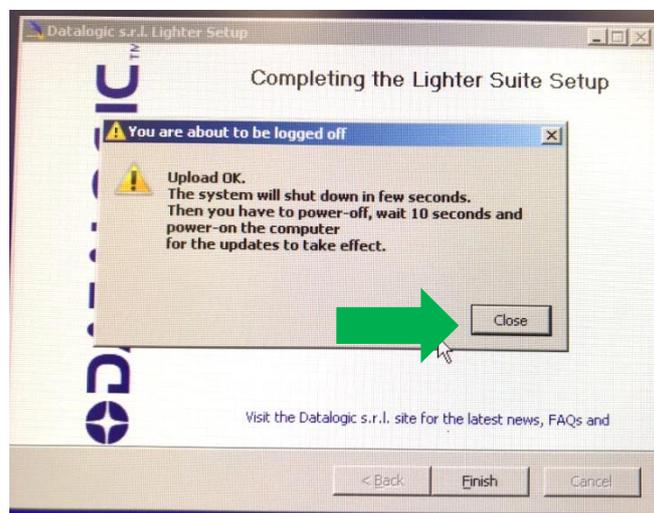
During LIGHTER upgrade, when prompted by a message box "**Updates for your DSP Board are available**", click *OK* to install the updates:
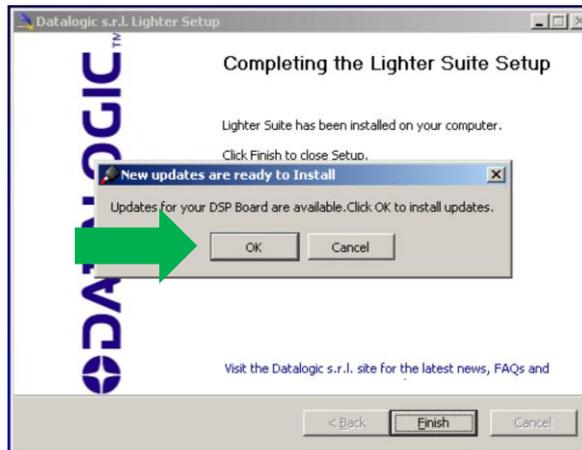
Wait for the process to finish:
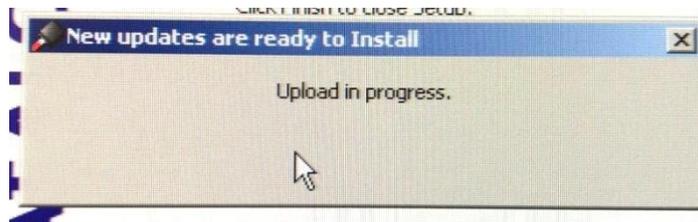
After DSP upgrade, the installer will finish normally and <u>the PC will shut down automatically</u> after a message box "**Upload OK**". Click *Close*, or wait:

At the next power-on after an upgrade to 7.2.1, *LaserEngine* will go in "Simulation mode". Check the following clues:

A. Red *LaserEngine* icon, even when KEY=0 and ENABLE=0.
Popup "***Board initialization failed. Check log tab for details***".
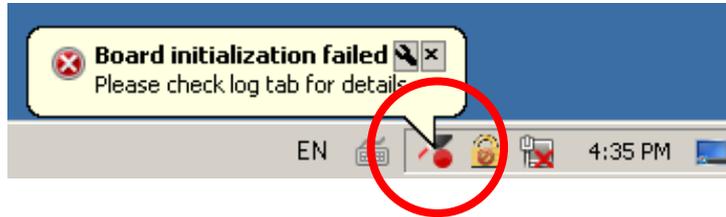
B. Simulator active.
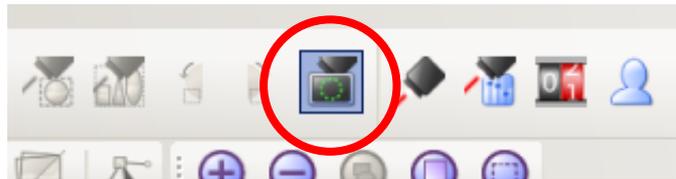
C. Entry in *LaserEngine* log *"ERROR(LE) Platform::initDevices(): Unable to start control board, switching to simulation"*.
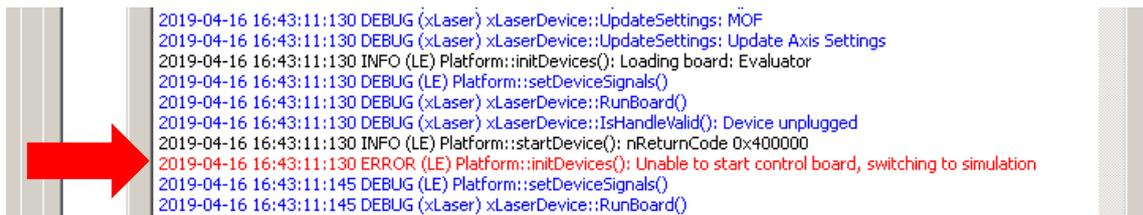
PROCEDURE TO FINISH FPGA UPGRADE

1. Right-click on *LaserEngine* icon in tray bar and **Quit** *LaserEngine*.

2. Re-launch ***LaserEngine*** (double-click) from desktop.

3. The *LaserEngine* icon should now turn green (if KEY=0 and ENABLE=0) and the laser will be usable.

4. Double click on "**save-data**" batch file on desktop. A message box informs to restart or shutdown the system in order to permanently save data. Press OK.

5. **Shut down** the system in order to save the new settings

WARNING!
DO NOT turn **OFF** or **UNPLUG** the system while Windows® is shutting down.
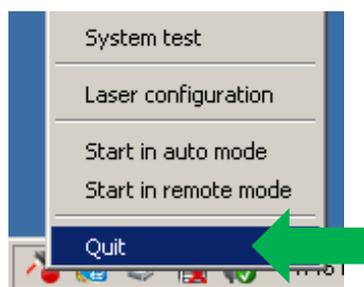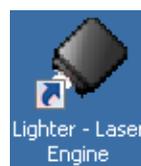
6. WAIT until the system shuts down automatically (black screen).
7. **Power off** the system to complete installation.
8. At following restart, *LaserEngine* icon will be green steady (with KEY=0 and ENABLE=0) and the system will not be in simulation mode anymore.

NOTE ON MS VISUAL C++ REDISTRIBUTABLES

LIGHTER 7.2.1 installer will install the following SW:

o Microsoft Visual C++ 2010 x86 Redistributable Setup
File: vc100redist_x86.exe
Version: 10.0.40219.1

o Microsoft Visual C++ 2013 Redistributable Setup
File: vcredist_x86.exe
Version: 12.0.30501.0

o Microsoft Visual C++ 2017 Redistributable (x86)
File: vc_redist.x86.exe
Version: 14.16.27027.1

If newer versions of any redistributables are found installed ex. on a laptop, LIGHTER Suite installer will abort with '*Cannot install 'Microsoft Visual C++ […] Redistributable […]' Installation stopped*' :
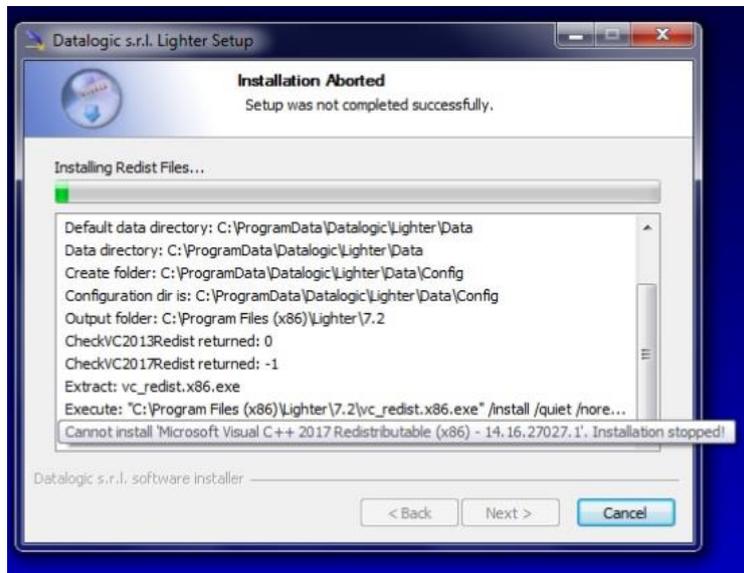
You can apply the workaround of uninstalling the newer redistributables, launch and finish LIGHTER Suite installer, and finally reinstalling your redistributables.

NOTE ON WINDOWS XP

Windows XP or Windows XP PRO on embedded or non-embedded computers are not supported anymore.

NOTE ON WINDOWS 10

Windows 10 is not officially supported. You may experience some problems in accessing/writing to the *Data* folder (ex. known issue #95906).

NEW FEATURES & IMPROVEMENTS

- In the script engine, the `SymbolResult::lasercode` property was removed to fix bug #102729. New property is **`SymbolResult::code`**.

- TcpServer script app upgraded to v. 1.3. Modified source code of TCP MARVIS™ commands F6 81, F6 82 and F6 83 to use new property `SymbolResult::code`

- Upgraded driver software "*Datalogic Automation – Laser Marking (iMarkII) DspBoard*" to version **1.0.4.15347** (NB: driver may not be signed in some PCs, see Known Issue #63370)

- (86900) MARVIS Application Note : Extended Layer and Ring document not supported

CHANGES & FIXES

- (76937) [AREX400] [Laser Editor] [Limits] : The projection of limits is interrupted by moving an object and an '*Overrun Erro*r' is shown

- (90181) [Profinet] Freeze Engine Arex 3 in Laser Warning/WarmUp condition

- (94342) [EIP] [PNIO] Bits "MARVIS Status" not activated (address 38 Input Memory Map)

- (95226) [Profinet] Entering/exiting repeatedly from 'Remote mode' occasionally crashes Engine. *LaserEngine.exe* process must be then killed with Windows Task Manager.

- (95622) [EthernetIP] Engine stuck / cannot mark when "Reader Error" condition

- (95676) [Profinet] Multiple 'Stop Axis' commands fail after axis movement (stuck Engine). After 'Stop Axis', a command 'Reset Axis' is recommended.

- (95695) [Profinet] Protocol error 2 occurred with "Stop axis command " when "Reset axis" command is performing

- (95819) [EthernetIP] [Profinet] "Stop auto focus" command fails (while "start autofocus" command is executing)

- (95948) Occasional crash Engine after manual 'Quit' command. *LaserEngine.exe* process must be killed with Windows Task Manager

- (96461) Stuck engine after "Stop system" command (while "Command executing" is executing)

- (96654) [Profinet] [EthernetIP] "Reader Error" signaled when Engine "Start in auto mode"

- (96885) [Lighter Suite] [Remote mode] : By connecting with the Hercules client in TCP, with the PLC already connected to the laser marker in PNIO, Laser Engine crashes

- (97133) [ProfiNet] [Axis Movement bit] : By performing a movement of the X axis, the bit relative to the R Axis Movement (in the Input area) changes from 0 to 1

- (97146) [ProfiNet] [Command Executing bit] [Start Marking bit] : With the laser marker in Interlock error, sending the Start Marking command, the Command Executing and Start marking bits change from 0 to 1 and it is no longer possible to send other commands

- (97183) [ProfiNet] [Axis Movement bit] : Forcing an Interlock error during the movement of the X axis, the bit relative to the X Axis Movement (in the Input area) remains at 1

- (97349) [LaserEngine][Home Search] Homing fails with "Invalid Home Search" for a specific Customer configuration

- (98142) [EthernetIP] "Stop axis" fails the second time it is sent consecutively

- (98463) [LaserEngine] [TCP/IP-EIP-PNIO] [Open Document From Device] [Preview] : Reopening the same document, after changing the content via TCP, the preview isn't updated

- (99701) [Supervisor mode] [Laser Editor] [Remote mode] : Opening Laser Configuration, after having previously opened Laser Engine, Laser Editor on the generic PC crashes

- (99721) [Profinet] command "Stop X axis " fails, when X axis is moving

- (99722) [Profinet] [EthernetIP] [AREX400 PRO] If *Laser Configuration* is opened, the LAN configuration is changed to the first connected one (non-connected are ignored).

- (99989) [Laser Engine] [TCP/IP] [Open Document From File System command] : Starting from any script or any sequence document, the 'Open Document From File System' command isn't executed

- (100235) [Profinet] Executing a Start Marking command when Laser Engine is in 'Error' state, blocks the Laser Engine in EXECUTING status (with also the Start Marking mirroring bit=1)

- (100251) [Profinet] "Stop system" command fails (stop marking)

- (100270) [Lighter Suite] [Remote mode] [TCP-IP]: By connecting with the Hercules client within 5 s, Laser Engine crashes occasionally

- (100323) [Profinet] "Safe Laser Off" external command succeeds but leaves 'Start Marking' mirroring bit high.

- (100427) [Laser Engine] [TCP/IP] [CBox error] [Start Marking command] : The command returns an ACK instead of a NACK

- (100559) [Laser Engine] [Troubleshooting] : In the Event Tracing section, the Reader error is notified whenever the Interlock switch is opened/closed

- (100573) [Laser Engine] [TCP/IP] [Move Axis command] : Applying the Move Axis command during a reset axis, the axis stops and the Move Axis command isn't ignored

- (100585) [AREX400 PRO] The modification of the reference LAN for PNIO from the *Laser Configuration* is not effective if the LAN is not connected.

- (100997) [Profinet] Crash *LaserEngine* when exiting remote mode

- (101043) [Lighter Suite] [Remote mode] : By disconnecting the Laser Engine with a connected client TcpIp, Laser Engine freezes

- (101098) [Profinet] Active process won't close after LaserEngine in "Remote Mode" is quit

- (101202) [Profinet] [EIP] During a PNIO connection through a switch, if the PLC is turned off and then back on (or HW recompiled), the PLC cannot reconnect to Laser Engine

- (101212) [Engine][Profinet] When the Laser Engine is set in 'Start in Remote Mode', when the Laser Marker is turned on and the PLC is already on, Laser Engine crashes numerous times before connecting

- (101750) [Profinet][Engine] After generating an Interlock Error during the execution of a XLP with MARVIS verification, LaserEngine keeps HIGH the executing bit and the Mirroring bit of the Start Marking command.

- (101752) [Engine][Profinet] External Start Marking crashes LaserEngine when connected via PNIO and Engine is in Auto Mode

- (102729) [ActiveX][Laser Engine] Registration of the ActiveX 'LaserCode' class fails inside Lighter 7.2.0 *.DLL

- (102789) [Profinet] Enabling 'Troubleshooting' causes Stop Axis commands (move, reset and autofocus) to be unable to fulfill Fieldbus handshake protocol

- (102944) [Profinet] Changing Laser Engine status "to Local" during event based command with fieldbus protocol causes application crash

- (105077) [LaserEngine] : Laser Engine crashes on startup when troubleshooting DB is near its max size

- (106334) [Laser Engine] [Z Axis tab] [Laser Test] Repeatedly clicking Start / Stop button, the button's status is inconsistent with the Engine status

- (107689) [Profinet] LaserEngine stuck after command "Stop axis"

- (108260) [VLASEII] [UniQ] [Lighter Suite] [Remote mode] : By clicking the To Remote mode button, Laser Engine crashes

- (107496) [Profinet] [Laser Engine] L.E. does not reply to the PLC within 3 RTI cycles, causing a PNIO disconnection

KNOWN ISSUES

- (46973) EDITOR: AIMING BEAM rest position with CLONES property doesn't work correctly

- (47430) ENGINE: by REMOTE MODE and in WAIT FOR START state, if I press EXTERNAL START, the system begins the marking.

- (48420) ENGINE: in MoF mode, when set some values of DISTANCE parameter, the system doesn't work correctly (or even crashes)

- (48652) EDITOR - Datamatrix with Contour + Pocketing + Angle is not filled correctly

- (48980) EDITOR: 'Send marking on selection' command disables the objects after mark all enabled objects, in addition to selected object.

- (49232) VLASE-20IR - Lighter 6.2.3 15944 - "Bad marking error" in MOF for scale X > 101.8

- (49236) Lighter 6.3.1 16272 - Material DB changes not transferred to XLPs in Engine

- (49417) Lighter 6.3.1 16272 - DXF rescaled after importing

- (61766) When 'Set I/O port' command is sent to turn on only OUTPUT 1 (or only OUTPUT 12), also OUTPUT 12 (or OUTPUT 1) is turned on at the same time

- (63370) During Lighter installer, a driver installation message appears. Select 'Install his driver software anyway' to proceed.

- (62750) ENGINE: When the wrong 'Move and rotate document' command is sent, no command can be sent

- (63634) If the photocell doesn't have the reflector in front (and no signal goes back to it from reflector), by pressing and releasing the Stop from the Command Box, the marking doesn't stop and starts again

- (65815) [ULYXE] ENGINE: no status refresh after pressing STOP button with external CBOX

- (67437) Disconnection is caused from Supervisor to Laser Marker when Supervisor requests to open a XLP file not present in LaserEngine

- (70599) Ulyxe USB driver digital signature not recognized on some Win10 PCs (starting Windows 10 version 1607).

- (71759) import filter AI (Adobe Illustrator) & PDF does not respect scale

- (76351) [LaserEditor][LaserEngine] With %V[…] command, multiple global counters values in XLP are permutated randomly. Use %v[…] (lowercase) instead.

- (77433) [Lighter][Std-RS232] NULL config.txt file blocks the execution of the Std-RS232 script (*Result of expression 'value' [undefined] is not an object*).

- (79730) [Axis] [Laser Engine] [AREX-20MW] Script Axis.move() function call generates a delayed Axis movement

- (79741) [LaserEditor][PRJ import] Wobble parameter is applied incorrectly when importing Smartist 4.1 files

- (80013) [MARVIS][QualityGradeTraning] In QGT, if the symbol contains references to local/global variables or time strings, code match will fail because the variables are not updated.

- (80607) [Laser Engine] [Laser Configuration] [MARVIS] [Images] : The default Image saving path in some INZ files is incorrectly : C:\ProgramData\Datalogic\Lighter\Data\ReaderConfig\Images\"

- (81322) [Rotor axis] Some vectorial graphics with holes are marked with extra lines on a rotor device when Sector Size >0.

- (87390) [VLaseII] [Lighter Suite] [Driver PCI] : After upgrade to 712, the installation of the new driver ends after the Laser Engine is started.

- (87885) [AREX3] [Lighter Suite] [Driver PCI] : After upgrade to 712, the initialization of the control board isn't successful the first time

- (88046) [Lighter Suite] [iMark platform] [Start marking signal] : By releasing the external Stop command from the Cbox, a start event will be notified in the System test window

- (88238) [ActiveX] When connected via ActiveX to Laser Engine with an external application, it is impossible to reconnect after a physical disconnection of the cable unless you exit and re-enter 'Remote Mode'

- (88426) If INCREASING MOTOR STEPS is set in Axis configuration, the DIRECTION of generic movement must be reversed compare to DECREASING MOTOR STEPS

- (88789) [Ulyxe DSP] [Laser Engine window] [Statistics tab] : By turning the KEY of the Cbox from 1 to 0, the Marking OK event is notified

- (90299) [MARVIS] [MATRIX 220] [Ext illuminator] If "Internal Lighting = Disabled", external illuminator is not activated [also ref. #85956]

- (91762): [TcpServer] If an object is BLOCKED, the command 'Move and Rotate Document' does not move the document starting from its origin

- (92779) [Product with iMarkI] After changing the correction parameters in Laser Configuration, the limits don't work the first time they are started

- (92781) [Product with iMarkI] After changing the parameters in Laser Configuration, the Laser Test doesn't work the first time it is started

- (93586) [AREX400] [Axes] If the board is started with DISABLE_Z HIGH, the axis won't move when DISABLE_Z is removed.

- (94407) [Laser Editor] [Import Script button] By opening the script, the .png files, in the .zip folder, aren't imported (manual import will work)

- (94853)(95214)(98579)(99676) *WinSAT* Windows scheduled task can produce errors/disconnections in TCP-IP / PNIO / EIP, and should be disabled manually.

- (95520) [Editor] IMPORTED type objects cannot be cloned

- (95906) Impossible to create new Global String (or, generally, write in the *Data* folder) in laptop's Windows 10 if the application *LaserEngine* is not launched "as administrator"

- (95935) [Supervisor] In REMOTE MODE, match/grade messages in Status Bar of Remote Engine are not shown

- (95944) [EthernetIP] [Profinet] Reset Z Axis fails in LaserEngine GUI visualization if system is already in home

- (96306) [Ulyxe DSP] [Lighter Suite] [Limits on selection] By selecting a second object, with the limits of a first object projected, the limits of the second object aren't projected

- (96595) [Profinet] [Ethernet] MARVIS "Validation" window not updated in Remote Mode

- (97205) [ProfiNet] [Ready to mark bit] : With the laser marker in WAIT FOR START state, the Ready to mark bit (in the Input area) changes from 0 to 1 instead of remaining at 0

- (98182) [Editor] Rectangular Datamatrix is physically 12x36 cells, but labeled incorrectly (12x32) in field "Size"

- (98318) [Laser Engine] [Ring document] [Limits] : With the MARVIS enabled (but not used), the movement of the R axis to project the limits of a document isn't realized

- (98323) [Profinet] "Set autofocus" command fails via fieldbus; it works via Engine GUI.

- (99664) [Profinet] When in Auto Mode, commands which change the loaded layout provoke a misalignment between the Laser Engine Preview and what will be marked

- (101401) [AREX 20 MW] [Laser.inz] C_off and C_jump unexpectedly altered to 3000 us

- (101760) [Engine][Profinet][Marvis] After generating a Reader Error with Engine in Auto Mode, the following marking does not make an acquisition and reports 'Unknown Code Type', while the 'Reader Error' state persists

- (102610) [AREX400] [AREX400][Axes][Sequences] 'Set out' before 'Move axis' makes the axis lose steps

- (104310) [Profinet] PNIO stack will crash after a random time since connection with an ABB Master Node

- (106556) [LaserEditor] [Global variables] Mutiple global counters in Editor are incremented by 1, whereas in Engine by the # of counters

- (107695) [Profinet] [EIP] [TCP] After 'Load document' command, document list indicator in LaserEngine is not updated. Marking preview is anyway updated and file marked correctly.

- (108073) [EthernetProtocol] The WINDOWS shortcut of *EthernetProtocol* should be removed due to missing file (PDF removed since v. 7.2.0)

- (108182) [LaserEditor] Reversed datamatrix codes with Filling='Dot' are offset in XY

- (107501) [Laser Engine][Axis] When moving the Z Axis by pressing instantly the directional key, the height displayed is changed, but the phisical position is not changed

- (107616) [Profinet] Communication lost after PLC power cycle (or network switch power cycle). It is then necessary to power cycle the laser or switch *LaserEngine* Remote>Local>Remote.

DOCUMENTATION & TOOLS

The relevant support files and documentation are installed together with the LIGHTER SUITE applications (*Barcode Reference*, *EtherNet IP User Guide*, *Laser Dashboard Script Manual*, *Project Editor User Guide*, *StdRS232 Protocol manual*, *LIGHTER TCP Server Manual*, *LIGHTER Suite User Guide, Profinet IO User Guide*) in "C:\Program Files … \Lighter\7.2\Docs".

LIGHTER 7.2.1 installer will be published on DATALOGIC website (*Products > Lasermarking Systems*) and on Partner Extranet.

RELEASE HISTORY

- **LIGHTER 7.2.1**

Suite for AREX XX00-1X42, AREX A200-1X53, UNIQ 1150-1X40, VLASE XXXX-1X42, EOX 6X02-1X40, AREX XXX-XX4.

- **LIGHTER 7.2.0**

First suite with embedded PROFINET IO. Suite for AREX XX00-1X42, AREX A200-1X53, UNIQ 1150-1X40, VLASE XXXX-1X42, EOX 6X02-1X40, AREX XXX-XX4.

- **LIGHTER 7.1.3**

First suite with MARVIS™ support for MATRIX 220. Suite for AREX XX00-1X42, AREX20-MW A200-1X53, UNIQ 1150-1X40, VLASE XXXX-1X42, EOX 6X02-1X40, ULYXE 1066-1XXX, AREX XXX-XX4.

- **LIGHTER 7.1.2**

Suite for AREX XX00-1X42, AREX20-MW A200-1X53, UNIQ 1150-1X40, VLASE XXXX-1X42, EOX 6X02-1X40, ULYXE 1066-1XXX, AREX XXX-XX4.

- **LIGHTER 7.1.1**

Suite for AREX400 models only (AREX XXX-X64, AREX XXX-X54).

- **LIGHTER 7.1.0**

Suite for AREX400 models only (AREX XXX-X64, AREX XXX-X54).

- **LIGHTER 7.0.2**

Suite for AREX XX00-1X42, AREX20-MW A200-1X53, UNIQ 1150-1X40, VLASE XXXX-1X42, EOX 6X02-1X40, ULYXE 1066-1XXX.

- **LIGHTER 7.0.1**

Suite for AREX XX00-1X42, AREX20-MW A200-1X53, UNIQ 1150-1X40, VLASE XXXX-1X42, EOX 6X02-1X40, ULYXE 1066-1XXX.

- **LIGHTER 7.0.0**

First suite with MARVIS™ DPM code grading functionalities, for AREX XX00-1X42, AREX20-MW A200-1X53, UNIQ 1150-1X40, VLASE 1X09-1X42.