TWinSoft Release Notes

TWS: 12.8.3.1810

General enquiries or enquiries regarding permission for use of material contained in this document should be addressed to:

Ovarro SA
Waterloo Office Park, Building M
Drève Richelle, 161 Box 35
B-1410, Waterloo
Belgique

E: sales@ovarro.com
T: +32(0)2 387.42.59

Drève Richelle 161, Waterloo Office Park Building M, Box 35, 1410 Waterloo | Belgium (No. RLE (Nivelles) 0886.847.541)

Revision History

Version	Date	Description
1.00	19/09/2024	Initial version
1.01	14/10/2024	Release 12.8.1
1.02	07/11/2024	Release 12.8.2
1.03	07/04/2025	Release 12.8.3

Author	Reviewer 1	Reviewer 2	Reviewer 3	Approver
Maya Eloi-Blezes	Gil Weber			Maya Eloi-Blezes

Contents

A. VERSIONS

TWinSoft build number: **1810**
WebformStudio 2.0   **12.8.3.1810**
TBox MS32 OS version: **1.51.634**
TBox MS32-S2 OS version: **1.51.634**
TBox LT2 / TG2 OS version: **1.51.634**
TBox Nano OS version: **1.04.100**
MS32 LINUX version: **2.6.27-6.1**
MS32-S2 / -LT2 LINUX version: **4.14.298-1.3**
LINUX modules version:

> *bootstrap*
>> MS-CPU32-S2 and LT2/TG2 with OS >= 1.42 ver. **3.7.1-5g**
>> LT2/TG2 with OS >= 1.47.554 ver. **3.7.1-6-lt2**
>
> *Libraries associated to security:*
> *libssl*
>> MS-CPU32(-S2) and LT2/TG2 with OS < 1.29 ver. **0.98.g**
>> MS-CPU32(-S2) and LT2/TG2 with OS >= 1.30 ver. **1.0.1h**
>> MS-CPU32(-S2) and LT2/TG2 with OS >= 1.38 ver. **1.0.1r**
>> MS-CPU32(-S2) and LT2/TG2 with OS >= 1.44 ver. **1.1.1b**
>> MS-CPU32(-S2) and LT2/TG2 with OS >= 1.46 ver. **1.1.1g**
>
> *openvpn*
>> MS-CPU32(-S2) and LT2/TG2 with OS >= 1.44 ver. **2.4.7**
>> MS-CPU32(-S2) and LT2/TG2 with OS >= 1.50 ver. **2.4.12**
>
> *dropbear-server*
>> MS-CPU32 ver. 2016.74
>> MS-CPU32-S2 and LT2/TG2 with OS >= 1.42.459 ver. 2020.80
>> MS-CPU32-S2 and LT2/TG2 with OS >= 1.50.592 ver. 2022.80
>> MS-CPU32-S2 and LT2/TG2 with OS >= 1.50.598 ver. 2022.83-80
>
> *proFTPd*
>> MS-CPU32(-S2) and LT2/TG2 with OS >= 1.50. ver. ~~1.3.7~~ **-> 1.3.3-4**
>> MS-CPU32(-S2) and LT2/TG2 with OS >= 1.51.629 ver. **1.3.7**
>
> *busybox*
>> MS-CPU32 ver. 1.11.24
>> MS-CPU32-S2 and LT2/TG2 with OS >= 1.48.575 ver. 1.34.1

TBox MS16 OS version: **3.29.735**
TBox LITE OS version: **3.34.794**
TBox WM, LP 4xx OS version: **3.34.794**
TBox LP100, LP200 OS version: **2.00.230**
TBox LP 300 OS version: **3.34.792**
Flocom OS version: **3.34.792**

> **All new features and corrections require the highest version of OS to run in your CPU.**
> **When receiving a TBox CPU, check its current version using TWinSoft doing a:**
> ***"Communication" → " RTU Identification"***

READ IMPORTANT INFORMATION NEXT PAGE REGARDING <u>DOWNGRADE</u>.

> **IMPORTANT**
>
> As far as **MS-CPU32(-S2)**, **-LT2** and **-TG2** are concerned, updating OS to 1.50 or higher carries out an important update of SSL, OpenVPN and LINUX too, required to improve cyber security.
>
> From that moment, a downgrade to OS 1.47 or smaller is not possible using TWinSoft.
>
> It requires the tool "*Monitor32*" to downgrade the OS.
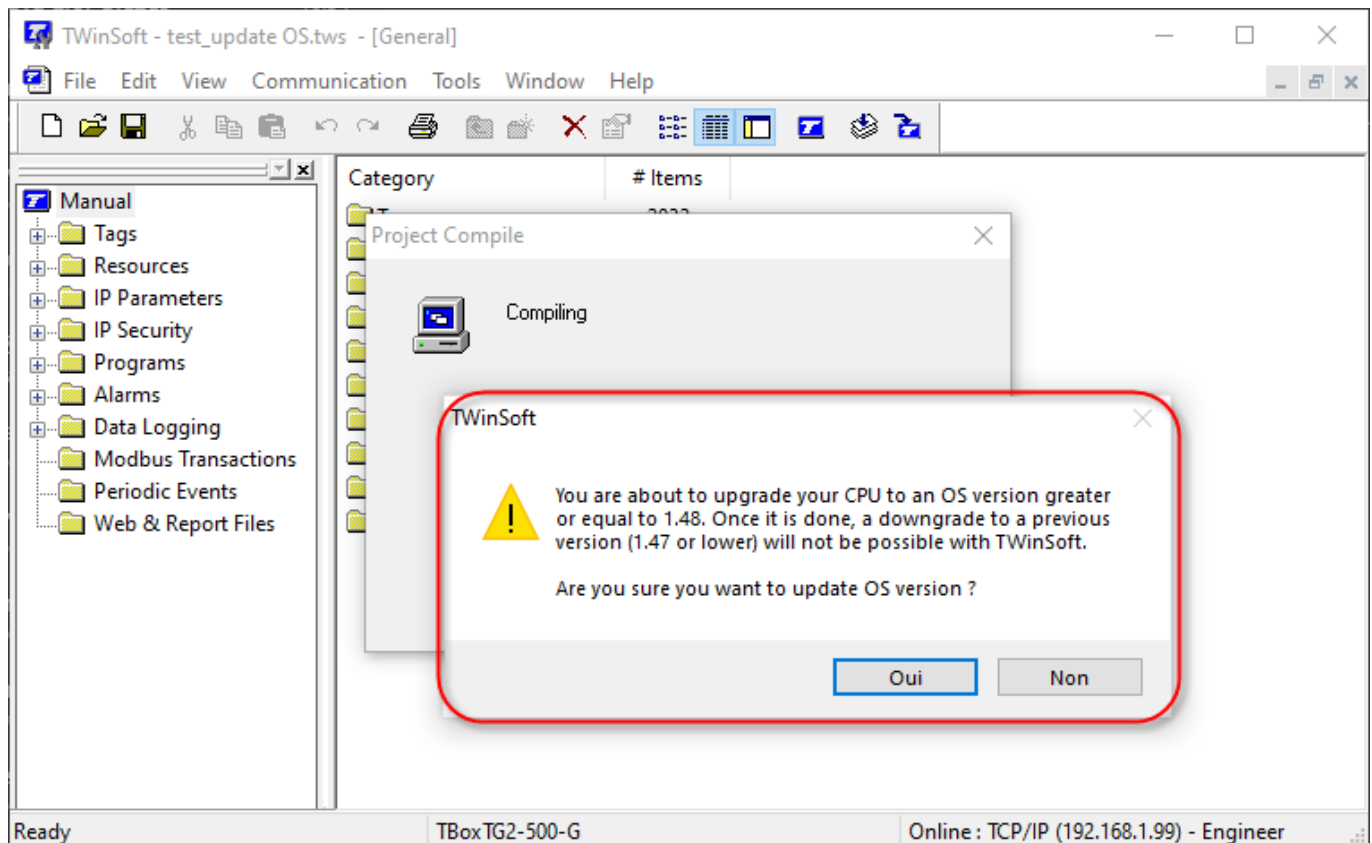
Trying to downgrade is prevented when this not possible (as of TWinSoft 12.00)
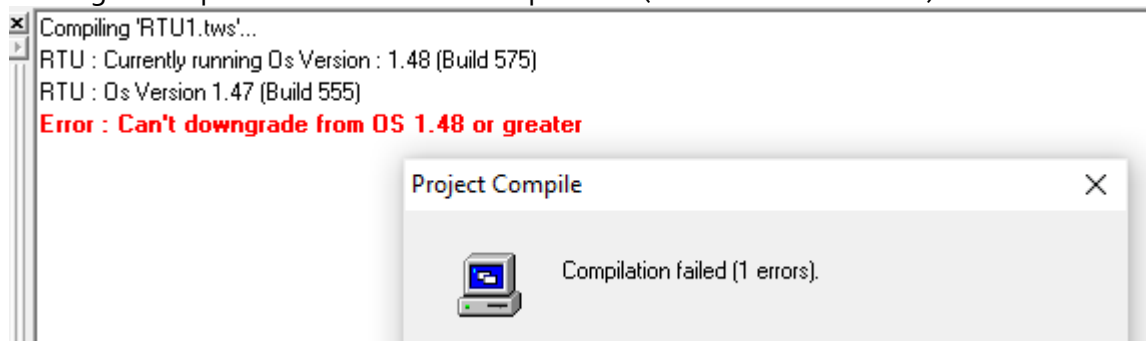
A downgrade using *Plug&Go* (on SD card) is also protected and will not be executed. Seen in tracelog:

B. IMPORTANT – TWinSoft Installation.

TWinSoft Suite requires some windows components to run properly. When required, these components are installed during setup <u>if connected to Internet</u>.

With old versions of Windows, Windows Installer 4.5 is a prerequisite to TWinSoft installation. If connected to Internet it will be downloaded, then installed. After that a reboot is required and TWinSoft setup will keep on running upon restart.

<u>The following versions of Windows are concerned:</u>
- **Windows Vista, Vista SP1**
- **Windows Server 2008**

If not connected to Internet, the package can be downloaded at the following url:

Runtime : following three packages are required with all versions of Windows:

VC++ 2008 :http://download.microsoft.com/download/5/D/8/5D8C65CB-C849-4025-8E95-C3966CAFD8AE/vcredist_x86.exe

VC++ 2010 :http://download.microsoft.com/download/1/6/5/165255E7-1014-4D0A-B094-B6A430A6BFFC/vcredist_x86.exe

.Net 3.5 :http://download.microsoft.com/download/c/d/c/cdc0f321-4f72-4a08-9bac-082f3692ecd9/DotNetFx35Client.exe

.Net 3.5 for Windows 8 or Windows 8.1: Off line installation is not possible:

⚠ Important

There is no download for the .NET Framework 3.5 for Windows 8 or Windows 8.1. You must enable the .NET Framework 3.5 in Control Panel by following the instructions provided in this article.

C. System Requirement

TWinSoft runs under Windows W7, W8, W10, W11 and W2012, W2016, W2019, W2022 (see above for pre-requisites).

	Windows XP, VISTA and 2003 Server are not supported anymore.

D. Update OS / Kernel with -MS32 -LT2

The 32 bits RTU (MS-CPU32(-S2), -LT2/TG2) runs LINUX, several libraries and drivers.
New Operating System may also require and update of LINUX component(s). The version of the different modules is checked automatically when updating the OS in TBox.

As of TWinSoft 12.6.0 and OS 1.48.575
– This version includes for *TBox MS32-S2* and *TBox-LT2* new LINUX modules. When updating OS, it updates LINUX and its components.
It is not allowed from then to downgrade < 1.48.

As of TWinSoft 12.2.0 and OS 1.44.480
– This version includes for *TBox MS32-S2* and *TBox-LT2* new LINUX modules. When updating OS, it updates LINUX and its components.
It is not allowed from then to downgrade < 1.44.

As of TWinSoft 12.00 and OS 1.38.423
– This version includes for *TBox MS32-S2* and *TBox-LT2* a new LINUX version (4.9.6). When updating OS, it updates LINUX and its components.
It is not allowed from then to downgrade < 1.38.

As of TWinSoft 11.01-SP1 and OS 1.29.314
– With these versions, TWinSoft updates also cURL and OpenSSL libraries.
It is not allowed from then to downgrade < 1.23.

As of TWinSoft 10.07 and OS 1.17.xxx
A new procedure of package, OS and application update assures more reliability.
– It works when OS 1.17 runs already in the TBox, then not during the first upload.
– In case a downgrade to OS < 1.17 is required, it can only be done using TWinSoft 10.07 or higher; afterwards a lower version of TWinSoft can be used with lower version of OS.
– **To update OS from 1.17 or lower to 1.23 or higher, do it in 2 steps:**
  upload 1.xx -> 1.23
  upload 1.23 -> higher

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E. Known Issues

TMA files support maximum 247 Sampling Tables

Above this quantity, the tables will not be included into the TMA file.

No problem to retrieve more than 247 tables with TView using "Download Scheduling".

Camera

A camera with Ethernet port and TCP/IP protocol can be connected to TBox.

Working with *TBox MS16* and *TBox LITE*, there are some camera time out issues we cannot bypass. It is due to the mechanism of data transfer of some camera (frames sent by half packet, without known reason). This limit today to use to camera with slow image size, like **D-LINK DCS900**, or **AXIS 207**.

Working with *TBox MS32(-S2)*, *TBox LT2* or *TBox TG2* as there is much more resource and it runs LINUX, we don't encounter those problems.

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F. Security Advisories

All information on how to secure TBox can be found in the document "***Cyber Security - Best practice***" accessible on our helpdesk:
https://ovarro.atlassian.net/wiki/spaces/OPSKR/pages/3737466/T8.01.+Guide+of+Good+Practice+for+Security

If you are not registered to helpdesk yet, send a request to be at support.tbox@ovarro.com

F.1. TWinSoft 12.5.0.1562

This release of TWinSoft + OS includes fixes related to vulnerabilities that might be published through CVEs.
It is also available in the cyber security zone on our web site:
https://www.ovarro.com/en/europe/cyber-security/
We do advise you to update your TBox or make sure they are not accessible if you are concerned by below cases:

- Publication TBOX-SA-2021-0001
  Weak encryption mechanism of project file.

- Publication TBOX-SA-2021-0009
  Code execution on host machine through TPG.

> All files composing the .tpg file (Pack&Go) will now all be extracted in the same directory as where TWinSoft document is extracted.
>
> It means if you use Pack&Go to do backup of your project and you wish to maintain a tree structure with your files, it will not be possible anymore.

- Publication TBOX-SA-2021-0010
  Fix for Sequoia vulnerability.

All information on how to secure TBox can be found in the document "***Cyber Security - Best practice***" accessible on our helpdesk: https://servicedesk.ovarro.com/servicedesk/
If you are not registered to helpdesk yet, send a request to be at support.tbox@ovarro.com

F.2. TWinSoft 12.5.1.1563

- TLS/SSL version vulnerability (ref 7109)
  It concerns all services providing an encrypted communication using the TLSv1.0 and/or TLSv1.1 protocols. There is a vulnerability using those protocols.
  As of OS 1.47.554, TLS 1.0 and 1.1 have been disabled, only TLS 1.2 and 1.3 are now supported.

F.3. TWinSoft 12.6.0.1695

- Busybox updated (ref 7187)
  Updated to ver. 1.34.1.

  The vulnerabilities are :
  - man - CVE-2021-42373
  - lzma/unlzma - CVE-2021-42374
  - ash - CVE-2021-42375
  - hush - CVE-2021-42376, CVE-2021-42377
  - awk - CVE-2021-42378, CVE-2021-42379, CVE-2021-42380, CVE-2021-42381, CVE-2021-42382, CVE-2021-42383, CVE-2021-42384, CVE-2021-42385, CVE-2021-42386

  All fixes in 1.34 of busybox.

- TCP_timestamps, uptime of host can sometimes be computed (ref 7010)
  This vulnerability is not critical for TBox as its uptime is not a critical info.
  It is fixed with LINUX 4.14.

F.4. TWinSoft 12.7.2.1752

This release of TWinSoft + OS includes fixes related to vulnerabilities that might be published through CVEs.
It is also available in the cyber security zone on our web site:
https://www.ovarro.com/en/europe/cyber-security/
We do advise you to update your TBox or make sure they are not accessible if you are concerned by below cases:

- Publication TBOX-SA-2023-0001
  Vulnerability: the use of MD5 encryption to hash password. This is an insecure encryption algorithm.
  Workaround: block SSH through firewall or disable SSH access by emptying its password.
  Solution: as of OS 1.50.598, MD5 is not used anymore and system user account is disabled.

- Publication TBOX-SA-2023-0002
  Vulnerability: TBox is missing authorization for running some API commands which could reveal sensitive information.
  Workaround: no workaround.
  Solution: as of OS 1.50.598, sensitive information cannot be revealed without authentication.

- Publication TBOX-SA-2023-0003
  Vulnerability: linked to the use of OpenVPN. An attacker could setup a local OpenVPN and push a malicious script into TBox.
  Workaround: no workaround.
  Solution: as of OS 1.50.598, it prevents to setup user defined configuration scripts.

- Publication TBOX-SA-2023-0004
  Vulnerability: an insufficient entropy and improper authorization is set on a token being used for authentication. An attacker may gain access to a user account and access the source code.
  Workaround: block SSH through firewall or disable SSH access by emptying its password. Setting a password on the TWinSoft document will prevent accessing the application as the document is then encrypted.
  Solution: as of OS 1.50.598, it fixes entropy and file permissions.

- Publication TBOX-SA-2023-0005
  Vulnerability: TWinSoft configuration tool store sensitive information as plaintext in memory. An attacker with access to the application source could obtain plaintext password of SSH user account and engineers user account.
  Workaround and Solution: The workaround against this vulnerability is to set a document password so that only intended person can load the document.

F.5. TWinSoft 12.8.0.1806

This release of TWinSoft + OS includes fixes related to vulnerabilities.
It is also available in the cyber security zone on our web site 1 month after the release is done:
https://www.ovarro.com/en/europe/cyber-security/
We do advise you to update your TBox or make sure they are not accessible if you are concerned by below cases:

- Publication TBOX-SA-2023-0003 updated
  Vulnerability: linked to the use of OpenVPN. An attacker could setup a local OpenVPN and push a malicious script into TBox.
  Workaround: no workaround.
  Solution: as of OS 1.51.631, it prevents to setup user defined configuration scripts.

- Publication TBOX-SA-2024-0001
  Vulnerability: improper check allows to inject scripts through firewall configuration, allowing an attacker to gain root access.
  Workaround: no workaround.
  Solution: as of OS 1.51.631, it correctly forbid such injection.

G. News & Fixes

1 New GSM module

1.1 GSM CAT-M1

A new LTE-M "world wide" GSM module is available.
It is available for MS-CPUS32(-S2) ONLY with the reference **MS-GSM-M1**

1.1.1 Technical specifications

- Worldwide LTE-M/NB-IoT modem
  - o Including AT&T and Verizon
- Eighteen Band LTE (5G/4G)
- Quad Band E/GPRS (2G) fallback
- 3GPP Rel.14 compliant
- IP mode communication (through APN)
- Send/Receive SMS
- 1 RS232/RS485 port non isolated

1.1.2 Stickers

There is no changing on front stickers compared to models with previous GSM module. Only the side sticker has changed
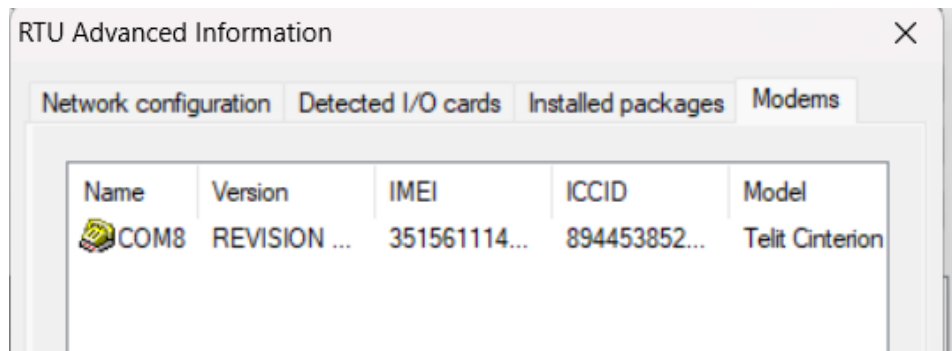
MS-GSM

This new module requires TWinSoft 12.7 + OS 1.50.607 or higher

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1.1.3 Information about the GSM

In RTU Identification -> Advanced ... you can find all information about the GSM:

Revision: firmware revision of the GSM
IMEI: unique identifier of the GSM
ICCID: unique identifier of the SIM card
Model: model of the GSM

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2 New Hardware modules

Two new RTU in the LT2 family are available with TWinSoft 12.8.0.1804.
With the references: **LT2-510-yy** and **LT2-520-yy.**
Also the TG2 is included in the LT2 family and will become LT2.

2.1 LT2 510

2.1.1   Technical specifications

- Ethernet
- USB
- RS232
    o Standard : 3 wires
    o -S : full serial port
- RS485
- 4W-2 Modem
- 10 x Digital Input/Outputs
    o 3xDigital Inputs 'Counter'
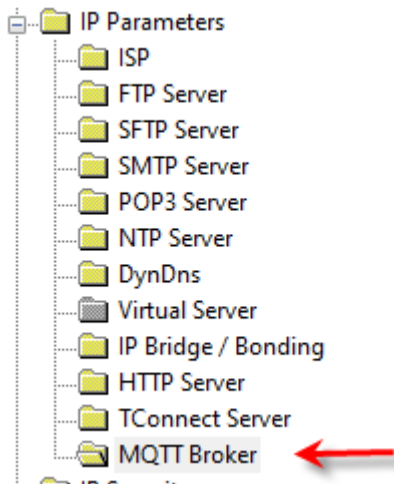- Backup battery charger

2.2 LT2 520

2.2.1   Technical specifications

- Ethernet
- USB
- RS232
    o Standard : 3 wires
    o -S : full serial port
- RS485
- 4W-2 Modem
- 10 x Digital Input/Outputs
    o 3xDigital Inputs 'Counter'
- 4 x Analog Inputs (4..20mA and 0..10V)
- Backup battery charger
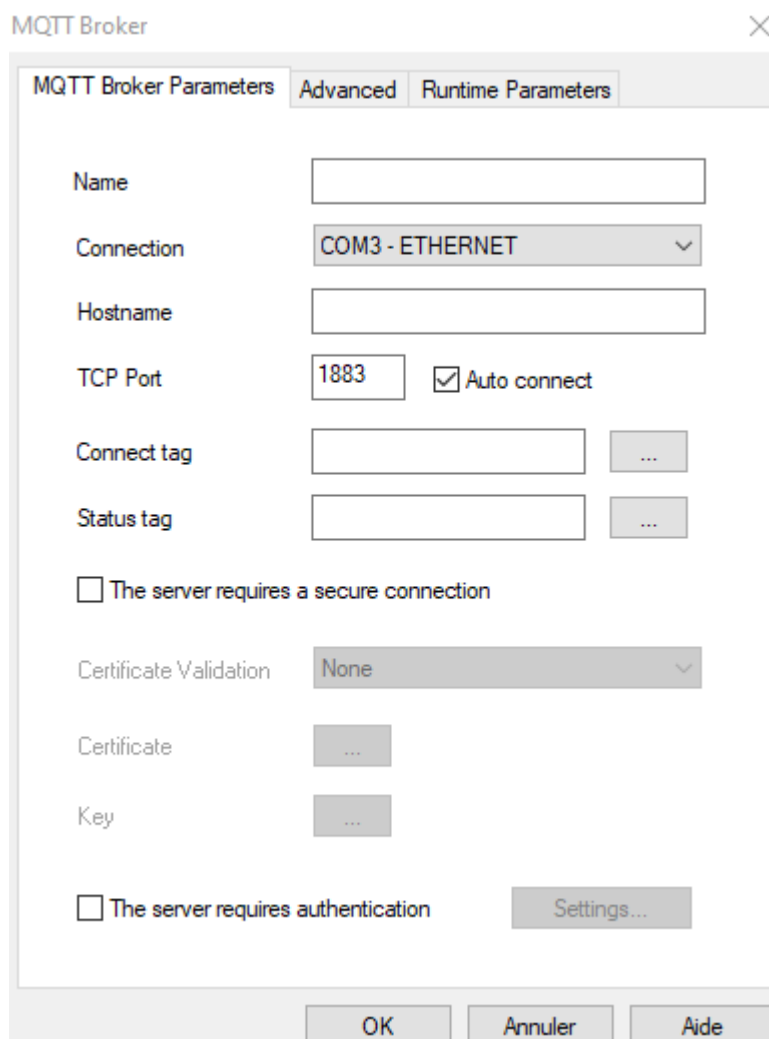
3 MQTT Embedded

3.1 IP parameter

The Configuration of the broker/server TBox will connect to is included now in the IP Parameters folder.

It is composed to a :

- o Tab parameters
- o Advanced Tab
- o Runtime parameters Tab

Name: Give a name to your Broker
Connection: Select the port you want the broker to use to establish communication.
Hostname: enter IP address or url of the broker/server.

TCP Port: enter the IP port used by the server. The default ports used by MQTT are:
- o 1883: unencrypted MQTT
- o 8883: encrypted MQTT

Auto connect : will connect at start-up of TBox.

Connect tag: digital Tag used to activate the connection to the MQTT broker.

Status tag: Analog 16 Bits "signed" Tag. It returns status of the connection to the broker/server.

The server requires a secure connection: If checked , enter the certificates imposed.

The server requires authentication : If checked , enter login/password

MQTT Version: currently a choice between 3.1 (default) and 3.1.1.

Keep alive: time between each ping request message to the broker (default 30 sec) max. 3 600 sec.

Clean session: if checked will instruct the broker to clean all messages and subscription on disconnect. When unchecked will keep messages with QoS 1 and 2

Client Id auto generated: if option checked(default) the system will generate an ID for the client device.

Client Id: unique name that you will give to your client to be identified by the broker. (Max. 23 characters). A prefix can be configured, for example **tbox_xxxxxx** and the broker will accept only ID with this prefix.

Last will topic: Enter the path for the last will topic.

Last will message: write the message that you wish the broker to subscribe when it loses the session.

Qos: quality of service of the transaction.

Last will retained: message will be saved by the broker for the specified topic. When subscribing this topic, this allows receiving allows the "last known value".

4 Modem options

Found in the "Advanced" section on the parameters tab.
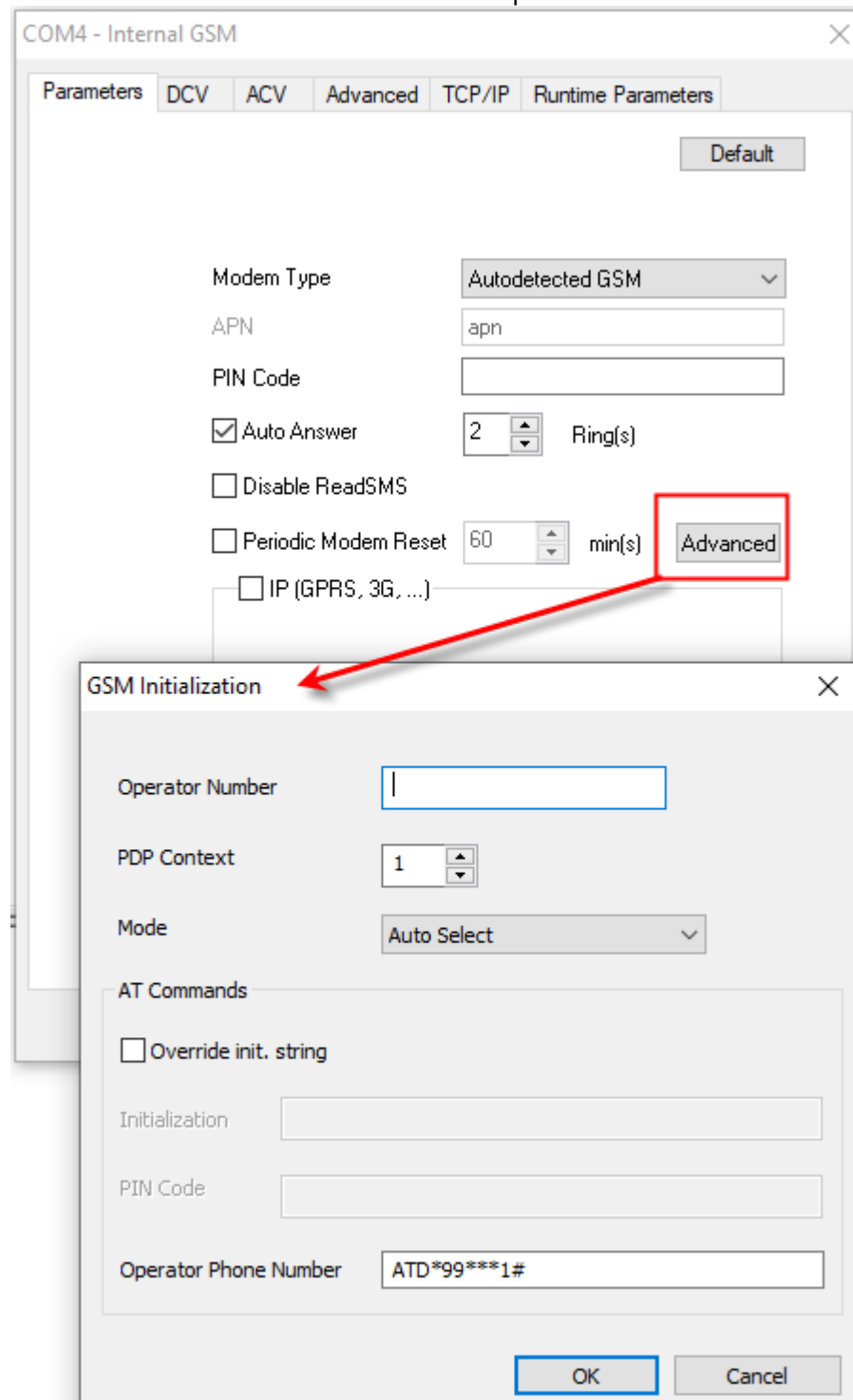
In the GSM Initialization
Operator Number : Force the operator (https://www.imei.info/carriers/)
PDP context : (default=1)

Mode : choices between Autoselect (default) **,** 2G,3G,4G,CAT.M1,CAT.NB

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5 Fixes & Enhancements

5.1 TWinSoft 12.8.0.1806 + OS 1.51.631

TWinSoft (TBOX-348):Legacy OS
Old legacy OS from Legacy TBox were reduced.

TWinSoft (TBOX-347): Security
Security Wizard does not handle "certificate validation" properly.
Corrected.

TWinSoft (TBOX-346):Framework
Remove dependency to .Net 3.5 Framework and switch to 4.6.2.
Corrected.

TWinSoft (TBOX-345):Security
Inform customer when checking the option "certificate validation".
Corrected.

TWinSoft (TBOX-344):Security
In the sending window, Security area, a shield for "HTTP disable" is present.

New H/W (TBOX-291): LT2
Introducing LT2-510 and LT2-520.

OS32 (TBOX-274): Modbus
Some Modbus function do not correctly check access level.
Corrected.

OS32 (TBOX-273): Security
File path filtering should allow to write relevant files for application updates.
Corrected.

OS32 (TBOX-267): Firewall
Input parameters of firewall configuration are not checked before iptables shell commend in executed.
Corrected.

TWinSoft, OS (TBOX-266, TBOX-265): OpenVPN
OpenVPN script in advanced configuration of VPN should generate a compilation error.
Forbidden command will generate compilation error.
Corrected

OS32 (TBOX-212): Modbus Transactions
Remote Tag processing on CPU's RS485 often ends in error with a status 'NOT READY' (5) or 'BUSY' (6).
Corrected.

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TWinSoft (TBOX-209):Legacy
Unable to create an "I/O card" / "Remote Device" on a DRIVER (CPU16/LP/CPU3).
Corrected.

OS32 (TBOX-203): API HTTP
In GetTags HTTP API, an unknown tag should return null and not the value "Unknown Tag".
Corrected.

OS32 (TBOX-183): DHCP
Hostname should be provided into DHCP requests.
Corrected.

OS32 (TBOX-163): GSM
Hooklink reset should asks modem to unregister from network.
Corrected.

OS32 (TBOX-147): API HTTP
Period mode is missing in GetsamplingTableList TAPI.
Corrected.

OS32 (TBOX-48): GSM
Some AT commands may not respond in time, implement AT retry mechanism.
Corrected.

OS32 (TBOX-46): QR code
There is no clear message when a QR code in not ready.
Corrected.

MQTT(TBOX-14): Embedded in OS >= 1.51.629
Configuration is made in the IP parameters

GSM (TBOX-13):Modem
Allows to configure registration settings : Force operator, change PDP context.

5.2 TWinSoft 12.8.1.1807

TWinSoft (TBOX-402): TView
TWinSoft cannot be loaded anymore by TView of Web Form Studio (1.0).
Corrected

5.3 TWinSoft 12.8.2.1809 + OS 1.51.632

TWinSoft (TBOX-413): The MQTT port number is not updated to new value.
Corrected

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OS32 (TBOX-408): Code Pin runtime parameter issue.
Corrected

OS32 (TBOX-416): Failsafe application not working for LT2 targets.
Corrected

TWinSoft (TBOX-209): Unable to create new remote device.
Corrected

5.4 TWinSoft 12.8.3.1810 + OS 1.51.634

TWinSoft (TBX-124): Pager.dat
Add SMSC for French Polynesia

TWinSoft (TBX-122): MQTT
The TCP port of MQTT Broker is reset when enabling/disabling secure connection.
Corrected.

TWinSoft (TBX-120): XBR Repository
Ensure XBR it can be versioned.

TWinSoft (TBX-115):SSH
Recurring SSH Error after long compilation.
Corrected.

TWinSoft (TBX-114): Pager.dat
Add SMSC for AIRMOB

WebForm Studio 2.0 (TBX-98): Keyboard
Incorrect text in Webform Studio 2.0 from keyboard.
Corrected.

WebForm Studio 2.0 (TBX-97): Objects
A wrong SVG attribute in WF2 objects trigger additional HTTP request from the browser (since Chrome 131).
Corrected.

WebForm Studio 2.0 (TBX-96): JavaScript
Tag values are not available in "OnReady" event.
Corrected.

WebForm Studio 2.0 (TBX-95): Chart2
Curve is displayed out of Canvas with high number of curves.
Corrected.

WebForm Studio 2.0 (TBX-94): TableOfTags
Cannot enter text with Keyboard.
Corrected.

WebForm Studio 2.0 (TBX-93): MainObject
Local time display is not working through TConnect.
Corrected.

WebForm Studio 2.0 (TBX-92): Login
Problems with login window overlay.
Corrected.

WebForm Studio 2.0 (TBX-91): DynamicLabel
When transitioning between login/logout there is an error on the dynamic label.
Corrected.

TWinSoft (TBX-84): Internal Register
The import/export of tag in TWinSoft do not work with special character in text tag default value.
Corrected.

TWinSoft (TBX-68): Certificates
When importing a pack of CA + CRL from TConnect only the last CRL is imported.
Corrected.

OS32 (TBX-64): GSM-4W-2
With Modem MS-GSM-4W-2 If HookLink forced at 0, ModemState stay at 66.

OS32 (TBX-62): MQTT
When MQTT payload is overloaded by an Addon, an extra slash is added in topic.
Corrected

TWinSoft (TBX-61): MQTT
Allow | (pipe) character into topic name.
Corrected.

WebForm Studio 2.0 (TBX-58): Layout
Warning should be displayed when wrong value is entered in Layout.
Corrected.

WebForm Studio 2.0 (TBX-50): Login
Cant confirm password with Enter when opening protected TWS apps in Web Form Studio 2.0.
Corrected.

TWinSoft (TBX-49): POU
TWinSoft crash when opening a huge POU/Basic program.
Corrected.

TWinSoft (TBX-43): MQTT
Should be able to configure same topic for a tag and for LWT.
Corrected.