

# TAT100 Stable firmware

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### CAUTION!



Both firmwares (Modem and BlueNRG) must be flashed into device. Failing so can lead to unexpected device behavior and rapid battery discharge.

## TAT140 BlueNRG & Modem FIRMWARE UPDATE GUIDE

### TATXYZ FIRMWARE UPDATE GUIDE

Download Firmware and Configurator from **STABLE FIRMWARE** or **SHORT-TERM FIRMWARE** pages.

#### After device connection to Configurator:

- 1) Select Update firmware;
- 2) Select to flash Firmware(\*.e.XIM) file;
- 3) Click on file;
- 4) And select Open.

Wait until the device will upload the firmware.



#### When parameters successfully loaded:

- 1) Select Update firmware;
- 2) Select to flash BlueNRG firmware(\*.bin);
- 3) Click on file;
- 4) And select Open.



## TAT100 Stable Firmware and Software

### TAT100 Hardware version identification

- If Serial Number [S/N] is greater than **1122473261**, then device version: **TAT100 HW: 62**.
- If Serial Number [S/N] is less than **1122473261**, then device version: **TAT100 HW: 31**.

**ORDERS AFTER 2022-03-17 WILL BE WITH TAT100 HARDWARE: 62**

 **CAUTION!**

**When updating firmware via FOTA WEB, pay attention to notice above.**

## CHANGELOG

VERSION	RELEASE DATE	CONFIGURATOR CHANGES	FIRMWARE CHANGES
<b>Firmware version: 55.00.16.Rev.569 BlueNRG version: 10.0.3.Rev.00 for TAT100 HW ver.: 31 1.0.3.Rev.00 for TAT100 HW ver.: 62 Configurator version: 1.7.74_E.TAT1_R.7</b>	2024.08.19	<ul style="list-style-type: none"><li>• Added an option to configure TLS functionality.</li><li>• Added an option to configure SMS record sending.</li><li>• Added an option to configure MQTT Azure and AWS support.</li><li>• Added an option to configure I am alive feature.</li></ul>	<ul style="list-style-type: none"><li>• Added TLS functionality feature.</li><li>• Added SMS record sending feature.</li><li>• Added MQTT Azure and AWS support.</li><li>• Added I am alive feature.</li><li>• Fixed X, Y and Z IO elements not being included with First Power On record.</li><li>• Extended On Stop and On Move periodic timers to maximum value of 7 days.</li><li>• Improvements to Static Navigation logic in no GPS situation.</li><li>• New AVL ID 69 value added (4 - no GPS in Static Navigation).</li><li>• Improved Recovery mode trigger logic in Lost Sensor scenario.</li><li>• Added error code when BLE sensor is lost.</li></ul>
VERSION	RELEASE DATE	CONFIGURATOR CHANGES	FIRMWARE CHANGES

<b>Firmware version:</b> <b>55.00.16.Rev.564</b> <b>BlueNRG version:</b> <b>10.4.12 for TAT100 HW ver.: 31</b> <b>0.4.12 for TAT100 HW ver.: 62</b> <b>Configurator version:</b> <b>1.7.74_B.TAT1_R.6</b>	2024.03.12	<ul style="list-style-type: none"> <li>• Fixed configurator crash after firmware update.</li> <li>• Added cell ID I/O elements</li> <li>• Fixed error when disabling BLE features in configuration.</li> <li>• Added GSM area code I/O element</li> <li>• Simplified EYE sensor configuration.</li> <li>• Added Autonomous Alarm System feature.</li> </ul>	<ul style="list-style-type: none"> <li>• Fixed periodic timer starting in Recovery mode.</li> <li>• Improved backup tracker scan procedure.</li> <li>• Fixed issue with GPS fix with First Power On record.</li> <li>• Improved energy management in sleep mode when device is in motion.</li> <li>• Fixed crash on BLE sensor alarm.</li> <li>• Bluetooth scanning and data parsing optimization.</li> <li>• DNS resolve improvements.</li> <li>• Fixed periodic timer starting when tracking scenario selected as None.</li> <li>• Changed default movement sensitivity to 150 mG</li> <li>• Changed default GNSS mode to GLONASS, GPS and GALILEO</li> <li>• Fixed EYE sensor data multiplier for correct data displaying.</li> <li>• Fixed issue if GPRS is lost during record sending.</li> <li>• Fixed GPRS command processing in UDP mode.</li> <li>• Improved received SMS reading process.</li> <li>• Improved connection to Fota process.</li> <li>• Fixed BLE sensor data not being included in periodic records.</li> <li>• Improved static navigation logic.</li> <li>• Improved Bluetooth scan stability.</li> <li>• Added BLE beacons for Recovery mode trigger.</li> <li>• Movement logic rework.</li> <li>• Added condition to stop GNSS search if less than 3 satellites found in the first 60 seconds.</li> </ul>
<b>Firmware version:</b> <b>55.00.16.Rev.545</b> <b>BlueNRG version:</b> <b>10.3.12 for TAT100 HW ver.: 31</b> <b>0.3.12 for TAT100 HW ver.: 62</b> <b>Configurator version:</b> <b>1.7.16_E.TAT100.R23</b> <b>RELEASE</b>	2022.08.23	<ul style="list-style-type: none"> <li>• No changes</li> </ul>	<ul style="list-style-type: none"> <li>• Fixed issue with incorrectly detected SIM slot for eSIM devices.</li> </ul>

**Firmware version:**  
**55.00.16.Rev.543**  
**BlueNRG version:**  
**10.3.12 for TAT100 HW ver.: 31**  
**0.3.12 for TAT100 HW ver.: 62**  
**Configurator version:**  
**1.7.16\_E.TAT100.R23**  
**RELEASE**

2022.08.08

- Updated Teltonika Configurator version to set Central device default IMEI to 3000000000000000
  - Added Recovery mode option
  - Added I/O element of Recovery Mode
  - Added more options of movement sensitivity threshold [50-1000mG]
  - Configurator for BLE FW and Backup FW was merged into one.
  - SMS command created for getting device statistics
  - Protection from writing other devices FW
  - Added condition to prevent modem waking up at midnight if scheduler is configured
  - Added reconfiguration mechanism that lets FW work with / without SMPS filterMissing
  - Fixed issue of missing 4th sensor's data with Monitoring operand
  - Fixed too frequent / unnecessary scans with all sensors configured as monitoring
  - Fixed sensors scan starting with monitoring operand when Backup tracker is configured
  - Backup tracker scan not starting right after
  - Time synchronization every 24 hours
  - Fixed LBS data sending issue
  - New AVL ID 20015 for Modem UpTime (in seconds)
  - Added response sending if recovery command is sent through GPRS
  - The next periodic record after Recovery mode deactivation being sent with AVL ID 20012 - fixed
  - Reduced EQ Core update frequency
  - Fixed battery consumption issue when GSM is jammed.
  - LED status changed from constant on to blinking mode to save the battery
  - Added Recovery mode feature
  - Implemented Recovery mode activation from the Backup tracking alarm
  - Added EYE sensors support
  - Fixed Minor bugs regarding the sensors
  - Fixed Short period Recovery Mode records
  - Extended Backup Tracker: Central device IMEI range
  - Backup tracker: Scanning logic has been changed, scan duration is not configurable anymore, it is up to 60 seconds by default now.
  - Implemented Record timestamp shift feature
  - Fixed BLE sensor records with wrong event ID being sent
  - Fixed BLE sensor record duplicates with On change operand
  - Fixed BLE sensor On Exit record not generating when switching to sleep mode
  - Fixed Custom1 sensor data in SMS being sent as NaN (*empty*)
  - Fixed duplicate BLE sensor data after waking up
  - Changed required packets amount in backup tracker scenario and minimal scan duration
  - Fixed backup tracker alarm not triggering just before wakeup
  - Fixed backup tracker not detecting enough packets during BLE scan
  - Periodic records do not affect backup tracker alarm record generation
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**Firmware** 2021.12.2  
**version:** 1  
**55.00.16.Rev.**  
**522**  
**BlueNRG**  
**version:**  
**10.2.21.Rev.0**  
**1**  
**Configurator**  
**version:**  
**1.7.16\_R.TAT1**  
**00.R2**

- Improved battery safety features
  - Fixed stuck download during FOTA update
  - Fixed device not restarting to update FW after FOTA download
  - Improved main device packet filtering
  - Improved battery voltage measurement
  - Fixed the device not restarting after FOTA WEB update when it happens at the same time as periodic record
  - Fixed random statistic losses
  - Fixed GNSS module status not being accurate in Teltonika Configurator
  - Improved static navigation mode
  - Fixed scheduler time resync timer not working properly
  - Fixed statistic not being deleted from RAM
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**Firmware** 2021.10.1  
**version:** 9  
**55.00.15.Rev.**  
**519**  
**BlueNRG**  
**version:**  
**10.2.14**  
**Configurator**  
**version:**  
**1.7.16\_R.TAT1**  
**00.R2**

- Fixed fake movement detection on startup
- Fixed problem when the device is stuck in **On Stop** tracking mode after reconfiguration
- Added Power-On reason data and fixed version changes to device statistics
- Fixed Backup tracker issue where the alarm mode is not immediately activated when the central device disappears
- Fixed empty GSM I/O elements
- Fixed an issue where UTC is added after each reconfiguration
- Added record printing to `Dump log`
- LBS data is not included in records if GNSS fix was caught
- Fixed NTP timesync failure if offset is zero
- Improved record creation (wake up from sleep) during **Backup tracker** alarms

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- Improved GNSS module control with `Static Navigation` and LBS
  - Added prevention from inappropriate record generation if the battery is low (HW watchdog)
  - Added statistic element for USB connected uptime
  - Added timestamp to BlueNRG serial prints
  - Minor improvement for BlueNRG firmware update via configurator
  - Added filter for LBS `cell_id` duplicates
  - Improved Bluetooth sensor record creation with `'On Change'` operand
  - Added Bluetooth sensor support
  - Added condition to skip LBS data update if location source is only GNSS
  - Increased retries of `AT+#` command in order to avoid empty LBS data from modem
  - Changed `Open link timeout` to 15s
  - Fixed an issue where the tracking mode would change from the scheduler to periodic
  - Improved logic for multiple FOTA Web tasks update in the same connection
  - Implemented rule for additional connection to FOTA Web after baseband firmware update
  - Added accelerometer version information inside `'info'` serial command
  - Fixed an issue with battery voltage I/O element when record saving is overlapping with a firmware update
  - Fixed Scheduler record sending at midnight
  - Fixed missed LBS values inside I/O elements
  - Fixed an issue when GNSS speed is not zero while the device is in a stationary position
  - General minor improvements

<b>55.00.10.Rev. 509</b> <b>BlueNRG:</b> <b>10.2.3_Rev.00</b> <b>1.7.16_E.TAT1</b> <b>00_04</b>	2021.05.1 0	<ul style="list-style-type: none"> <li>• Added Test Connection button</li> <li>• Temporarily removed Secondary Server Settings</li> <li>• Tracking Period default value changed to 28800 (s)</li> </ul>	<ul style="list-style-type: none"> <li>• Implemented Test Connection feature.</li> <li>• Added BlueNRG logging to DUMP files</li> <li>• Added LBS data logging to DUMP files</li> <li>• Added protection that blocks FMB firmware flash to AT devices</li> <li>• Added time-sync update with <i>asset purpose</i> command</li> <li>• Improved periodic record timer logic</li> <li>• Improved battery voltage measurement</li> <li>• Improved periodic GPRS data sending while USB is connected to the device</li> <li>• Disabled SMPS filter</li> <li>• Fixed record sending when movement is triggered at all times</li> <li>• Improved NTP time-sync</li> </ul>
<b>55.00.05.Rev. 510</b> <b>BlueNRG:</b> <b>0.1.7</b>	2020.12.0 3	<ul style="list-style-type: none"> <li>• Removed tracking scenarios</li> <li>• Removed speed source parameter</li> <li>• Removed record saving/sending without TS parameter</li> <li>• Removed LED Indication parameter</li> <li>• Removed NTP resync parameter</li> </ul>	<ul style="list-style-type: none"> <li>• Implemented FOTA support.</li> <li>• Improved GNSS position capturing.</li> <li>• Reworked Periodic and Scheduler tracking counters.</li> <li>• Implemented device logging via USB.</li> <li>• Implemented statistics acquisition to flash memory.</li> </ul>
<b>55.00.05.Rev. 507</b> <b>BlueNRG:</b> <b>0.1.5</b>	2020.09.2 9	<ul style="list-style-type: none"> <li>• Implemented GNSS Source configuration. Available options: BeiDou, GLONASS, Galileo and GPS.</li> <li>• Added I/O elements: Data Mode, GSM Signal, GNSS Status, GNSS PDOP, GNSS HDOP, Speed, GSM Cell ID, GSM Area Code, Battery Voltage, Active GSM Operator, ICCID, Coordinates ISO6709.</li> <li>• Added SMS command authorization via Login and Password logic.</li> </ul>	<ul style="list-style-type: none"> <li>• Implemented 'Codec 8', 'Codec 8 Extended' and 'Codec 12' protocols.</li> <li>• Implemented NTP, NITZ and GNSS time synchronization sources.</li> <li>• Implemented ability to send GPRS data from device via TCP or UDP channels.</li> <li>• Implemented connection to server timeouts.</li> <li>• Ported TLS encryption functionality from other Teltonika devices.</li> <li>• Implemented Periodic and Scheduler tracking.</li> <li>• Implemented BlueNRG firmware update via GPRS. This function will be used to reflash BlueNRG firmware via FOTA WEB.</li> <li>• Added GSM number authorization logic.</li> </ul>