



# TESLA Control Panel

v3.0

## Release Description

### FEATURE ENHANCEMENTS

- Cyber Security enhancements:
  - Added Role Based Access Control (RBAC) for enhanced access management. Support is provided for up to 32 users.
  - Added configurable password complexity and change frequency rules.
  - Added configurable user account validity periods.
  - Added automatic disconnection from an IED if no activity detected for a programmable period of time.
  - Added audit trail for security events monitoring.
- General enhancements:
  - Changed high speed, CDR, swing, and trend record and event log filenames and file formatting to meet NERC PRC-002-2 requirements.
  - Added support for IEEE C37.118.1-2011 (amended by IEEE C37.118.1a-2014) including the addition of P and M class filters.
  - Added support for IEEE C37.118.2:2011.
  - Increased the number of PMU Analog channels to 24.
  - Added frequency and THD support in PMU Analog.
  - Increased the number of supported frequency triggers to 12.
  - Added support for remote firmware update.
  - Enhanced main menu including a search bar for easier management of IEDs.
  - Enhanced Time screen and settings to add auto and manual modes with more flexibility in connecting to different IRIG time modes. Added support for B000 and B001 modes.
  - Improved user communication messages and control capabilities to provide user with more intuitive information.
  - Added a Force Hardware Reset button to the Identification screen.
  - Added silent installation capability allowing installation without user input.
  - Added displaying of coop member status to the Coop configuration screen.
  - Allow graphing of records whether they are on the IED or already downloaded to a local folder in the Record screen.
  - Moved all maintenance features previously available via terminal port (Telnet) access to TESLA Control Panel with access from any communications port.
  - Added resource locking of critical resources (settings, configurations, etc.) to prevent multiple users from overwriting the other's changes.

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## CORRECTIONS TO ISSUES

- **Major:** Fixed issue with crashing when changing the Trend year range.
- **Major:** Fixed issue that caused TESLA Control Panel to crash when retrieving coop records containing df/dt calculations of swing channels.
- **Minor:** Fixed issue with TCP crashing when doing print setting or preview.
- **Minor:** Fixed issue that allowed setting the port number or IP address to the same value on more than one DNP master. This setting can put the IED into a non-responsive state.
- **Minor:** Fixed issue where the incorrect names are displayed for sequence elements on the metering screen in some circumstances.
- **Minor:** Fixed issue where the Setting File date in TCP is not correct if the file is imported.
- **Minor:** Fixed issue where the serial number in the setting file is corrupted when imported into TESLA Control Panel preventing the setting file from loading to an IED.
- **Minor:** Fixed issue where coop record combining failed for users without administrator privileges.
- **Minor:** Fixed issue where the maximum record length setting was modified when the setting file was uploaded to the IED.
- **Minor:** Fixed issue where the user was not prompted to save settings in the Config Edit screen while in offline mode after selecting a new IED. The user's changes were lost.
- **Minor:** Fixed issue where the very first event triggered on a TESLA 4000 was not displayed.
- **Minor:** Added a block to prevent the user from setting the DNP3 or PMU port to 2000 or 7631. Setting to one of these ports can cause the IED to become unresponsive.

## COMPATIBILITY

TESLA Model 4000 Firmware Version	v2.0 and earlier
TESLA Model 4003 Firmware Version	v1.0
TESLA LITE Firmware Version	v1.1 and earlier
IO Expansion Firmware Version	v1.1 and earlier
TESLA Model 3000 Firmware Versions	v2.7 and earlier
TESLA Model 2000 Firmware Versions	v4.1 and earlier
Microsoft Windows	Windows 7 Professional Windows 10 Professional*

Minor releases, designated with a letter suffix (e.g. v3.1a), maintain the same compatibility as the base version (e.g. v3.1=v3.1a).

### NOTES:

- \* USB, serial and modem access to IEDs not compatible with Windows 10 Anniversary (1607), Creator (1703), or Fall Creators (1709) editions.

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## REVISION HISTORY

### v2.8a Rev 1 – 2017-06-30

- **Minor:** Corrected issue where the software was installed to the default folder even if a different folder was entered by the user.

### v2.8a – 2017-03-22

- **Major:** Corrected record combining issue in cooperative mode when the user did not have administrator rights.

### v2.8 – 2016-12-18

- **Enhancement:** Add compatibility with units that support leap second.

### v2.7 – 2016-04-14

- **Enhancement:** For TESLA LITE:
  - Changed minimum harmonic threshold from 3% to 1% to allow triggering and recording below 3%.
  - Increased the high speed recording pre-fault maximum setting to 4 seconds.
  - Added configurable alarm output contact for time sync loss.
  - Added enforcement of minimum record extension lengths to ensure optimum performance.
  - Changed the method of selecting the IED 1A/5A configuration to be consistent with other ERLPhase products.
- **Major:** TESLA LITE - Fixed issue where Watts, VARs and Power Factor do not display correctly in metering or in the record.
- **Major:** TESLA LITE - Fixed issue where “Angle Reference” changes from Va to Ia after setting file is saved under some conditions.
- **Major:** TESLA 3000 - Fixed issue where Trend Alarm Output Contact wasn’t correctly converted from a 36 channel TESLA 2000 to an 18 channel TESLA 3000.
- **Minor:** Fixed issue where the password tab on the utility screen was not displayed if the password file on the IED was missing.
- **Minor:** Fixed issue where users could select “Pre-trigger” and “Normal Record Length” settings that resulted in the triggering event not being captured.
- **Minor:** Fixed issue where Record Graph opened behind TESLA Control Panel when launched from within TESLA Control Panel on Windows 7.
- **Minor:** TESLA 4000 - Corrected summation element naming inconsistencies between the Channel Tree screen and the Logic Function Configuration screen.
- **Minor:** TESLA 4003 - Fixed issue where TESLA Control Panel disconnects from the unit indicating a sample rate change when uploading a new setting file without a sample rate change.
- **Minor:** TESLA LITE - Fixed issue where the Output Contact numbering was 2 to 7 instead of 1 to 6 in the DNP mapping screen.
- **Minor:** TESLA LITE - Fixed issue that prevented frequency from being derived from current channels.

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- **Minor:** TESLA LITE - Fixed issue where the Nominal Level for a voltage input displays 69V even if the setting file opened has this set to something else.
- **Minor:** IO Expansion – Fixed issue where double clicking on a remote record that has already been downloaded results in multiple local records.

## CLASSIFICATION OF CHANGES MADE

The issues fixed in software / firmware upgrades are classified as defined below. While the decision to upgrade installed products is the user's, these classifications provide a guideline for the need and priority of the upgrade.

**Critical:** Critical changes fix issues/problems that prevent the basic operation of the device and have no workaround. Critical changes merit a product upgrade as soon as possible, if that function is being used under the conditions causing the issue

**Major:** Major changes fix problems that prevent the basic operation of the device but do have a workaround. Any major changes merit a product upgrade as soon as possible if the function is being used under the conditions causing the issue and a workaround is not acceptable.

**Minor:** Minor changes fix non vital issues that do not prevent the basic operation of the device and may or may not have a workaround. Product upgrades for such changes are not necessary unless they apply to and are needed by the user.

**Enhancement:** Feature enhancements add a capability or extend existing capabilities of the product. Upgrades for such changes need be made only if and when that feature enhancement is desired.

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