Controller v3.4.0-1185 Release Notes

New Features:
- Support for Samsung Lithium Gen3 systems.
- Support for new generation mSensor. p/n 9100-252, 9100-254
- mSensor ohmic profile selection.
- Support for new generation MX Controllers. p/n 9100-0258 to 9100-0263

Improvements:
- Samsung Lithium: new warning alarms for SOC, SOH and Cell voltage variation.
- SNMP: new fields available for configuration. Improved support for standard SNMP fields.
- LX Controller LCD: now shows system name
- The front USB Port or SD Card slot can be disabled
- Assure SMTP: resend data button available.
- Assure SMTP: immediate sending of high priority alarms.
- DNS are now displayed in configuration reports if set manually.
- Sample rate can be changed on LX+ Controllers when in lithium mode.
- Web UI shows better error messages when User's login session has expired.
- New SOC and SOH measurements for lead-acid systems.
- Samsung Lithium: use of cell terminology instead of block
- Controllers can now be reset to factory defaults using a button sequence on the front panel.
- Relay status changes are logged to the event log.
- Lithium voltage variation displays in mV.
- Support for USB sticks formatted with exFAT file system.

Security Improvements:
- Improved rate limiting for the Web UI.
- LDAP: API level validation of the password against password requirements.

Controller v3.3.1-1181 Release Notes

Bug Fixes:
- Fixed logging in certain timezones

Controller v3.3.0-1180 Release Notes

New Features:

- Samsung Lithium mode
New cell temperature and temperature variation warnings added as Controller level alarms. Alarm status and stats available on Controller ModbusTCP interface.

Improvements:
- Samsung Lithium mode can now specify the number of strings to map when using multiple cabinets with a single primary UPS.
- Added the ability to use multiple NTP servers.
- Assure SMTP emailing improvements, such as smaller attachment files.
- HTTPS self-signed certificates now use a unique Controller specific name.

Controller v3.2.0-1167 Release Notes

New Features:
- Samsung Lithium Warranty logging.
- Active Directory user authentication via LDAP.
- Assure connection option added: UDP.

Improvements:
- Default time between alarm emails to Assure is now 60 minutes.
- No default recipient address for email exports to Assure.

Controller v3.1.1-1168 Release Notes

Improvements:
- Controller connection to Assure via email now supports Lithium systems.

Controller v3.1.0-1167 Release Notes

New Features:

- A Controller can now transmit data to Assure via email.
- LX Plus models are supported.

Improvements:
- Controller software version is available over modbus.
- Timezone database upgraded.

Security Improvements:
- SNMP defaults to V3, auth and encryption. There are now no default v2 community strings.
- Other security improvements.

Controller v3.0.3-1162 Release Notes

New Features:

- Alarm timings can be changed for charge and float block voltage alarms.
- System measurements; disk health, cpu health and free disk space are now being sent to Assure.
- Lithium: Support for Samsung U6A3 systems.

Improvements:
- Lithium: an unusually long modbusTCP response will no longer result in additional measurements being missed.
- Lithium: Comms error alarm added.
- Lithium comms error count added to Network page.
- Inform User when they are connecting to Assure before changing the Controller's name.
- SSH port is closed.
- Controller favicon reflects latest branding.

Controller v3.0.2-1158 Release Notes

Improvements:
- Default Lithium discharge and charge logging rates and durations have been changed.

Controller v3.0.1-1154 Release Notes

Improvements:
- Controller software will better recover from interruption.

Controller v3.0.0-1148 Release Notes

New Features:
- Support for Samsung Lithium battery systems.
- Support for Telit global modem.
- A strings alarm state is indicated on the Overview screen by the colouring of its name.

Improvements:
- PowerShield branding has been updated.
- The Controller operating system has been updated to support new CPU modules.
- Newly mapped Hub's will have their digital input named #2 to match the case label.
- Current calibration page will prompt User to 'Update sensor type' when gain settings are changed, to avoid the possibility of needing to calibrate twice.
- It is now possible to choose LAN or Cellular Modem for connecting to Assure when both are installed.
- Outdated DES privacy protocol for SNMPv3 is no longer an option.

- The Controller will show 'busy' at the Cloud tab and hold off sending data for a period if Assure reports that it is busy.

Controller v2.10.0-1142 Release Notes

New Features:
- A configuration backup is periodically sent to the cloud when applicable.
- A process to facilitate replacing a Controller using data it has already sent to the cloud when applicable.
- Discharge and charge logs are now sent to the cloud when applicable.

Improvements:
- When a Controller's cloud keepalive is disabled, the snapshot request button on the cloud will be disabled.
- The default ohmic schedule interval for a Powershield 8 system is now 4 weeks.

Controller v2.9.1-1138 Release Notes

Bug Fixes:

- Interruption of configuration backup no longer causes a locked configuration

Controller v2.9.0-1137 Release Notes

Improvements:
- Impedance is disabled by default for new NiCad strings.

Controller v2.8.3-1134 Release Notes

Improvements:
- New system alarm which detects D.0 stepping CPUs.
- New advanced LAN setting (ARP ignore) to improve compatibility with rare network environments.

Controller v2.8.2-1123 Release Notes

Improvements:
- SNMP Traps can now be configured to send to more than one destination.

Controller v2.8.1-1100 Release Notes

New Features:
- Support for QA-5 cpu module.

Controller v2.8.0-1032 Release Notes

New Features:
- Support for SNMPv3.

Improvements:
- Measurements screen graphs now rescale when values leave the y-axis range
- WiFi country code can now be searched for by keyboard.
- Cloud: button to re-send configuration to the cloud.
- Cloud: keepalive is on by default and can be disabled in cloud settings.
- CT Calibration table is now sorted by string name.
- System configuration is now re-sent to the cloud following a backup restore.

Controller v2.7.0-1032 Release Notes

New Features:
- Support for Gen5 Hubs.
- Support for alternative Q7 Module on the Controller LX.

Controller v2.6.0-1002 Release Notes

New Features:
- Support for Gen4 Hubs.

Controller v2.5.0-975 Release Notes

New Features:
- Hub relays can now be configured as alerts.
- The Controller buzzer can be configured as an alert and can be muted from the Controller UI.
- Alert Relays can be tested manually.

Improvements:
- Alerts configuration; alarm and string selection improvements.

- TRP settings are displayed regardless of TRP being active or not.

Security Improvements:
- NIST security recommendations for SSL/TLS
- Improved validation for WiFi settings

Controller v2.4.1-10 Release Notes

Security Improvements:

• Upgrade Nginx to 1.20.1

Controller v2.4.0-918 Release Notes

New Features (Not for general use):
- Support for Dual CT Hubs.

Improvements:
- New strings default to having 1 ambient temperature.

Controller v2.3.1-879 Release Notes

New Features:
- New disk health measurement and system alarm.
- Restore a backup created by the Controller Service App.

Security Improvements:
- Improved validation for SNMP and NTP settings.
- Renewed shell access key.

Improvements:
- Added generic current transducer options.
- NiCad string voltage options updated.
- MX Controllers will repair file systems at startup.

Controller v2.3.0-841 Release Notes

Security Improvements:
- Configuration changes via API requests require user to be logged in.
- Web UI jQuery library has been upgraded to v3.5.1

Improvements:
- Diagnostic logging can be enabled from the *System Log Download* page and is off by default.
- Operating system logging has been reduced.
- String groups can be split up into individual strings.
- An event log message will be added when a Controller is restarted.

Controller v2.2.0-797 Release Notes

New Features:
- PowerShield Cloud support via LAN or Cellular Modem
- WiFi support
- Create and review 'Key Limits' as part of string settings setup

Security Improvements:
- Installer password must be a minimum of 6 characters long
- Recover screen on Service Port only
- Modbus is disabled by default (Note: a Controller upgraded from an earlier release will still have Modbus enabled)
- SNMP is disabled by default (Note: a Controller upgraded from an earlier release will still have SNMP enabled)
- HTTP options support removed
- HTTP cookies SHA-1 no longer used

Improvements:
- String State logic changes to further reduce excessive Charge/Discharge recording for environments with significant current spikes, removing the need for String State Timings
- Ohmic measurements, including baselines can now be started for a string when another string is in progress
- ModbusTCP merge writes setting added
- ModbusTCP handles multiple queries in a single packet
- Controller's serial number and manufacturing date displayed on System page
- Controller can be restarted from the system page
- Voltage readings below 10v display to 3 decimal places
- Relay configuration added to configuration report
- Charge/Discharge logging default parameters have changed (NOTE: This will change the parameters of controllers that have been left with default settings)
- Time duration limits are now shown as days, hours and minutes instead of seconds
- Alarms which have been orphaned now are given an estimated lower time

- USB Backup contains measurement logs in the same format as the Web interface measurement log download
- USB Backup now contains files so that it can be imported into Link v4.3 or later
- String State Threshold changes are added to the event log
- WiFi settings changes are added to the event log

Controller v2.1.1-667 Release Notes

Bug Fixes:
- ModbusTCP responds with correct Unit Identifier.
- Modbus maximum request size increased to 125 registers.

Controller v2.1.0-601 Release Notes

New Features:
- HTTPS. The Controller's web UI can now be configured to only be accessible over HTTPS.
- NTP (Network Time Protocol) Support.
- A Controller can now configure mSensors and Hubs to be spares.

Improvements:
- Offline import for Link. Data is saved to the USB/SD Card when performing a USB backup.
- Changing a limit will no longer interrupt ohmic measurements.
- Service Port IP address now shows on the Controller LX LCD.

Controller v2.0.1-499 Release Notes

New Features:
- Support for new Controller MX

Improvements:
- Small strings now have a delay between impedance measurements to allow them to cool down.
- Alarm search when configuring alerts has been improved.
- Sensor Replacement can now replace old hub models with new hub models.
- ModbusRTU speed of 9600 has been added.
- Service Port IP address is set to 169.254.30.1

Controller v1.3.2-371 Release Notes

Improvements:
- Network > Modbus speed setting now offers baud rates 9600 and 28800.

Bug Fixes:
- Continuous and discharge log files will be written to after restoring a configuration template.

Controller v1.3.1-328 Release Notes

New Features:
- String state timing can be used to avoid excessive string state changes when in an environment with current spikes.
- Backup - Configuration Template. A template can be created to quickly deploy to other similar Controllers.
- The password for the Installer user can be changed.

Improvements:
- Port 2 Modbus library change to improve port 2 communication robustness.
- Security improvements, closed Redis port and require key to SSH into Controller.
- String groups' names can be changed.
- Time zone database updated.
- Diagnostic download now includes more server logs.
- Backup and diagnostic download files are now encrypted.
- Backup now includes all measurement logs.
- LCD displays correct temperature units and ambient temperature values

Controller v1.2.0-265 Release Notes

New Features:
- Thermal Runaway Protection (TRP)
- Configuration Report
- Hysteresis for String State Thresholds

Improvements:
- Improved defaults for String State Thresholds
- Improved defaults for limits: String Current, Block Temperature, Block Temperature Variation, Ohmic Rise, Ambient Temperature Variation, Ambient-Block Differential
- Network adapter MAC address shows in LAN network settings page
- Alarm History page now shows alarm times in region agnostic format
- Improved direction information popup on the CT calibration page

- Modbus settings speed and stop bits use choices are limited to valid values
- Measurement Logs page will function with up to 50,000 log files

Controller v1.1.2-181 Release Notes

New Features:
- Allow mapping of TRP Hubs

Improvements:
- Better handling of Modbus errors

Controller v1.1.1-162 Release Notes

New Features:
- Include Modbus User Guide Rev C

Improvements:
- Better Modbus TCP connection handling

Controller v1.1.0-149 Release Notes

New features:
- Sensor Replacement
- Recovery Mode
- SNMP Traps
- Unified Error Codes:
  - Error codes are displayed instead of ERR now
  - Error codes are consistent across different sensors

Improvements:
- Ohmic Baselines: Outliers uses ticks instead of flags
- Mapping and Detect: Improved reliability in noisy environment, UI improvements (including legend)
- Measurements Page: System Alarms indicator
- Measurements Page: String Alarm counts
- Software Update: Improved UI
- Limits: Changing a limit will no longer stop in-progress ohmic jobs
- System Diagnostic Download: Available to Installers now
- Alarm History: finer grained alarm duration display

- Event Log: more event messages (ohmic baseline operations)
- Restore: improved backup file error detection
- LCD network status 'Not connected' message added*
- SNMP MIB now available via SNMP configuration page
- Added system name to title bar
- Added support for new Hub (internal model type 19, new measurement status registers)

*LCD network status is not guaranteed to be in sync with the physical connection status due to the operating system behavior.