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.

Bug Fixes:
- Upgrade display no longer gets stuck on 'upgrading' even though the upgrade is actually complete.
- Fixing the default sort display on a variety of tables; measurement logs, alarm and alarm history.
- Limits and Inputs page now correctly disable edits controls when not logged in.
- Edit limit panel form validation improvements.
- No longer show a validation error when attempting to set the date after 2017-01-01.
- String State Unknown and Device Comms Error no longer show a misleading value in the alarms screens.
- Log Duration filter on the measurement logs screen no longer shows decimal places.
- String state thresholds diagrams now scale correctly when viewed on a phone

Controller v2.7.0-1032 Release Notes

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

Bug Fixes:
- Fixed generating a Configuration Report after a hub's current sensor has been calibrated.

Controller v2.6.0-1002 Release Notes

New Features:
- Support for Gen4 Hubs.

Bug Fixes:
- Fixed generating a Configuration Report on systems that are set to show temperatures in Fahrenheit.

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
  .

Bug Fixes:
- Measurement log download will now convert temperature measurements units.
- Various limits are now correctly removed when a string's settings are changed in a way that would remove that limit.
- A corrupted, timestamp in the first row of a measurement log file will no longer break measurement log download.
- Some TRP limit settings will now correctly come into affect immediately after changing them.
- Alerts configuration; alarm selection no longer shows alarms that should not be there.
- Alerts configuration; an error will no longer occur when a blank delay is specified.
- Fixed validation for new strings' block count.
- String state settings now lists strings in alphabetical order.
- Ohmic baselines graph will now display correctly after many strings are deleted.

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.

Bug Fixes:
- "Restore Complete" event now correctly appears in the event log after restoring a backup.
- An active TRP signal relay no longer shows briefly as inactive when the page is loaded.
- Controller cloud client now better handles restoring of a backup from a different controller.
- System log download now correctly includes some system logs.

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.

Bug Fixes:
- User supplied limits when creating a string are no longer ignored.
- Unable to map NiCad strings.

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.

Bug Fixes:
- Manufacturing date being off by a day in certain situations.
- Event log download will now match the filter used on screen.
- Extra alarms will no longer raise when restoring a backup or template.

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

Bug Fixes:
- Controller MX relays no longer toggle on power up
- Clicking "Force Ohmic Baseline Measurements" on the Ohmic Baseline screen will no longer miss out some strings in certain circumstances
- Setting an ohmic baseline now sets a permanent baseline instead of temporary baseline
- ModbusTCP and RTU now returns zero instead of a random value for blocks that have not been mapped or do not exist
- ModbusRTU cards no longer show as Not Available after a string is deleted
- Modbus returns correct ripple voltage
- Event log csv download will now succeed when there are more than 1000 events
- Configuration report will no longer fail if current calibration has not been completed
- Configuration report shows correct error values for ohmic baselines instead of NaN
- A Hub relay will clear immediately when TRP alarms are cleared
- CSV downloads will no longer have unnecessary zero bytes which was resulting in large files
- Correct capacity for monthly measurement log storage
- LCD will no longer intermittently show 'None' alarms when modbus tcp is overloaded
- Relay configuration string list is now sorted
- EMIO-220S RS485 cards are detected
- Duration alarms no longer have a raise time

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.

Bug Fixes:
- Ohmic in progress banner will no longer disappear and reappear when a small string is having its ohmic measurements taken.

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

Bug Fixes:
- Network settings subnet mask validation fixed for Internet Explorer.
- Device Comms Error alarms can now correctly be mapped to a relay for specific strings instead of always mapping to all strings.

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

Bug Fixes:
- Ohmic Measurement Error alarm will no longer raise when ohmic readings are made on small strings.
- Daily log files no longer have a row from the next day in them.
- Ambient Median Temperature will no longer display as ERR on the overview screen when the string is configured to have no ambient temperature sensors.

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

Bug Fixes:
- Fix issues with LCD display of values
- Fix broken links in Upgrade page
- Replace instances of the text 'Powershield Controller' with 'Controller'

Controller v1.1.1-162 Release Notes

New Features:
- Include Modbus User Guide Rev C

Improvements:
- Better Modbus TCP connection handling

Bug Fixes:
- Fix incorrect version number when software changed
- A factory reset will no longer turn unbranded mode off.
- Unbranded mode will no longer show the Powershield logo in the browser tab or bookmarks.
- String delete process has been improved to avoid system problems in rare circumstances.

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)

Bug fixes:

- Remove Log files when a string is deleted
- Fixed dim Alarm LED on Controller front panel however an additional hardware fix can also be required
- Fix measurement log roll-over time (local time 11:59pm)
- Fix Modbus RS-485 settings
- Fix partial ohmic limits API call (this affects Link when downloading limits)
- Fix when impedance schedule is off API call does not return impedance devices (this affects Link when adding a system and Link is determining the measurement types available)

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