

# January 2009 AcquiSuite Firmware changes.

Firmware updates for the A8812 have a number of substantial changes. Users should be aware of these changes and how these may impact any custom applications that may have been developed. Although great care has been taken to maintain the previous feature set, users should test the firmware update prior to deploying this firmware on production equipment.

The firmware update will be provided at no cost.

Firmware release for A8812: v02.09.0115

## Overview of changes:

This firmware update includes a major overhaul to the Shark 100 driver, and several updates for additional device ID strings to locate new versions of hardware devices that are supported by existing drivers. The firmware also includes several new device drivers and a number of enhancements and bugfixes.

## New Drivers:

- Added new device id strings for the Obvius R9120 including the -T, -AU, -SN, and -5 options.
- Added device id strings for the Veris E30A BCM
- Added device driver for the Electro Industries Shark 200
- Added device driver for the Eaton IQ250 and IQ260 meter.

## Other Firmware Changes:

- Sorted and updated the device type picklist in the manual device add config page. Added the Power Logic brand name to all the ION, PM, and Schneider Enercept series meters in the manual device add picklist. Now, all devices listed show both the manufacturer and part number. Resorted the list shows the full names.
- Added mapenum and elemof functions to the shared library.
- Added better test on ini file write error.
- Removed some unused code from the old a8923-4 driver (4a4p-m). This was replaced in the new a8923-4 driver (4a4p-m2) several years ago and code was no longer in use.
- Fixed cosmetic issue with A89DC-08 advanced configuration page. Enable/disable options should be numbered 1-8 to match datapoint names. (was 0-7)
- Added modbustcp library function to check error code and return true if the error came from the modbus device itself (not a comms error).
- Modified the drivers for all modbus devices that support the modbus device id (0x11) command to make the VerifyDeviceClass function work much faster. For meters that are offline, this will speed up the verify process because it will eliminate about 8 queries to the meter that the standard device detection procedure will issue.
- Updated DTS305 driver to print the id string in the advanced page. ID string could be used to identify the complete meter part type, however we don't have a full listing of what the possible options are.
- Cleaned up a few syslog messages that report the success/fail of the DTS305 and ADAM module detection.



- Help files: cleaned up a number of minor html syntax items and a few typos in the AcquiSuite internal help documents.
- Updated device detect procedure to properly handle the differences between Shark 100, Shark 200, and Eaton IQ250 and Eaton IQ260. The new function returns proper id string for each. Updated the device detect procedure to escape non-printable id string information to make it printable using % marks.
- Fixed broken advanced page for the acromag 920mb.
- Added a new errorcode ASERR\_DEVICSERIALCHANGE (193) that is written to log files when a modbus device is found to have changed serial numbers. This is usually caused by changing the meter or address conflicts. Modified the logger process to trigger a device type re-probe when the serial number changes and log the event to the data log file for the device.
- Added some extra error testing for the device class validation procedure on ion meters. Added some additional testing to the ion6200 VerifyDeviceClass function to detect devices that claim the register requests are not supported and flag them as device mismatch.
- Cleaned up some html format ant typos on the Shark 100 advanced configuration page. Added Shark 100 help file.
- Major update to shark100 driver implementing:
  - Power & Energy scaling and digit-after-decimal adjustment according to meter's settings (same as Shark200).
  - New Config > Advanced dialog, with table-formatting and bit flags rendered in English (very similar to Shark200).
  - Selectable Datalog Points mode: All, Consumption-only, or None.
  - Horizontal separators added to current readings webpage for easier reading
  - Digits after decimal for Power values set to 3.
  - Added V-switch number to the meter's "Firmware" string. Example: 0045,VSW:2
  - Updated text in Config > Advanced page to match Shark User's Manual.
  - On Config > Advanced page, PT Multiplier value will now display properly if set to 1000. In previous shark driver, would display as 232 (the lower 8 bits of the 12-bit value).
  - Fixed one status field that was not properly decoded.
  - Resetting of min/max values should work (unless user has set the meter's min/max-reset password)
  - Precision (digits-after-decimal) of Phase Angle points changed from 2 to 1 (it's a fixed-point value scaled by 0.1; last digit would ALWAYS be zero).
  - Spelling of point description correct: "magnitude"
  - Modified driver to use varh units for var-hours pos/neg/net/total. and vah units for va-hours total.
  - Fixed typo in Meter type field, map version field and meter configuration field. The original version clipped the upper 8 bits in these diagnostic fields. Fixed typo in the pt multiplier field that caused it to show the wrong value. Fixed enumerated type decoding for the baudrate field for 38.4 and 57.6kbps readings.
- Fixed error in A8911-23 hardware part rev number printing. 0=A, etc.
- Added a second loop to retry all meters that were in 139 no-response mode at the start of the log cycle. This guarantees all meters will be attempted once before the loop abandon timeout kicks in. Earlier versions may generate 139 errors with the same timestamp if the meter is not queried. This would only occur on systems with a large number of meters, set to log once per minute, and most of the meters were off-line or disconnected.
- Updated log vs idle time related issues in logger main event loop. Added debugging message to report when a log cycle took longer than it should to complete. Added optional debugging messages that will print the time it takes to process major tasks in the main event loop. Added a few additional loop break statements when time is running low before next query. Modified maximum time to retry meter queries from 3/4 cycle to 3/5 cycle for log periods of 1-3 minutes. Modified the quite time before log from 5 to 10 seconds.
- Added driver point flag option to allow horizontal line separators to be use after any data point.



- Fixed typo on the word universal in the ADAM 4019 id string.
- Modified the upgrade/reboot dialog message to make it crystal clear that installing the firmware will reboot the AcquiSuite. Note: the modified message will only display on firmware updates installed after v02.09.0115 or later has already been installed.
- Updated debug messages in the device list program to include device's modbus address in syslog to debug shared memory mapping failures.
- Added radio module type strings to the R9120 ModHopper driver for new Australia and 1W radio modules.
- Changed modhopper id strings to more generic versions and enabled leading-string-match only feature. This allows for a simplified list of the 3 base radios R9120-3, R9120-5, R24120-3 as well as all options: AU, SN, T
- Fixed missing dns server close bracket in HTML form. This bug was ignored by some browsers.
- Updated default DNS server to use 70.99.203.62 in new systems
- Tidyconf tool will automatically change the dns server to 70.99.203.62 if the old dns server address is found in the DNS1 or DNS2 configuration options.

