

March 2010 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: v02.10.0305

Overview of changes:

This firmware update includes a number of minor changes as well as an overhaul in the data uploading component of the system. This firmware adds support for the AcquiSuite Module system.

Onboard IO input changes:

- Updated firmware version to 1.11.
- Modified broken wire alarm threshold to 3.75mA (was 3.99mA)
- Updated the ADC divisor to a slightly slower rate to make readings a little more stable.
- Added an update to clear the broken wire alarm when changing an input mode from 4-20mA to any other mode (usually unconfigured). This fixes a cosmetic problem where changing the mode on a disconnected 4-20mA input would leave the LED blinking. Updated the ADC divisor to a slightly slower rate. This should make readings a little more stable.
- Updated Modbus register handler for new pulse mode passthrough. Changing mode to non-pulse/status disables passthrough and sets it to 0. Writes to passthrough register of value 0 are always allowed to let you turn off the feature even when pulse mode is not configured on the input.
- Added pulse-passthrough mode feature to the onboard io
- Added status registers to keep firmware in line with standalone flex io module.

Other Firmware Changes:

- Added an option to the online firmware update page to prompt and install beta test firmware from the Obvius server, when available.
- Fixed a bug in the ION 7xxx and 8xxx drivers that would cause invalid (1970) dates in the log file data if the system starts up and the meter is never available. The update allows the driver to log error 139 error messages on startup with the correct time stamp.
- Added workaround to Shark 100 driver. This stops all writes to clear the min/max values on the meter.
- Added feature to remove ppd.tbd from temp directory to free up buffer space on GSM modem calls.
- Fixed a bug in the log print function that could truncate entries from the Veris E30 in some circumstances.
- Changed a8812io/a8332 input 4/20mA mode to flat line at 4mA, and only mark the data invalid when the broken wire alarm is in effect. This should work well with the new io module firmware that turns on broken wire alarm at 3.75mA.
- Modified system firmware page to handle display and upgrades for AcquiSuite modules.
- Added persistent "reboot required for changes to take effect" message on firmware update page.



- System Logs manager uploaded to keep current + 2 logs for debug, modem, upload logs. Old logs can be compressed. This will allow the last several call sessions to be recorded. "Purge System Logs" button deletes all parts of all logs.
- System log viewer shows one part or all parts of the logs and compressed logs.
- Added support for loading OEM supplied AcquiSuite modules.
- Added feature to allow up to 4 target addresses for uploading data to database/webserver(s).
- Connection test tool now sends a MODE=STATUS request to the target webserver(s) and does not send the TEST message any more.
- Added specific handling for different http response codes, errors 400,402,403,407,409. Refer to the http response documentation in the push upload kit when updating server scripts to generate more specific error codes. This feature should be backwards compatible with previous scripts that return 401, 404, and 406 errors only.
- Added TCP socket keepalive option to the Modbus/TCP to detect idle connections from remote devices that may have crashed or otherwise become disconnected without proper TCP socket close.
- Modified the GSM connect sequence to use AT+GCATT to enable/disable GPRS data services before and after every call attempt. This is to assist with an issue that appears to happen when the modem is disconnected mid-call. It appears that this also has the advantage of showing an error when GPRS is not enabled on the SIM card.
- Added a test to check for free space on the /tmp ramdisk, to verify it is not completely full. Watchdog poke happens if ram disk is not full.
- Fixed some HTML table and line errors in several configuration pages.
- Added ATT on all the Cingular GPRS help pages to avoid confusion since ATT bought Cingular.
- Modified the ppp report page to use number vs name for ip route report. This prevents a stall when DNS is not working correctly. Also updated code to flush stdout to send updates back to the browser as they happen to make it easier to figure out which step caused the stall.
- Moved modem reset procedure to a separate subroutine. Call modem reset from signal handler on termination to catch modems that cause lockup of ppp dial script.
- Fixed a bug that prevented the alarms from working correctly in some templates created with the Modbus Framework editor. Appears to be a problem with templates having 10+ data points.
- Removed sensor network enable checkbox in the modbus/setup page from A8811 systems.
- Added Modbus ID strings for the E30 power meter to handle new name that Veris assigned (Square-D and Schneider version)
- Added lcdcontrast command line tool. Tool sets output of PWM1 for 0 - 100% and can be used on the new A8810 project to set the LCD contrast ratio.
- Added call to set led contrast pwm on A8810 hardware platform at startup.
- Added a few minor things with the loggerconfig.ini parameters BASEMODEL, FULLMODEL, and auto-update procedure in tidyconf config file cleanup tool. These values may be used by the AcquiSuite Module system to determine compatibility.
- Fixed a bug in the device class for sensor type 18.
- Added the AcquiSuite Module system. This allows for custom firmware images (cramfs files) to be loaded onto the AcquiSuite to augment the system functionality. Specific AcquiSuite modules are not included in this release, however the firmware will allow modules to be added at any time in the future.

