

November 2011 AcquiSuite/AcquiLite Firmware changes.

Firmware updates for the A7810, A8810 and 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 A7810, A8810, A8812: v02.11.1116

Overview of changes:

This firmware update includes a number of minor changes as well as several new drivers.

New Drivers

- Added driver support for the Schneider Electric 7650 power meter.

Major features

- Added feature to allow firmware updates and AcquiSuite Modules to be uploaded with a web browser.
- Added support for US Robotics 5637 USB/Telephone line modem.
- Added support for Radicom USB/Telephone line modem.

Other Firmware Changes:

- Added additional status messages to the upload process to show on LCD.
- Fixed a problem with data upload procedure that would cause it to wait for an hour for a bad NTP server response before restarting the data upload process. New procedure now sets a short time limit on the NTP update procedure.
- USB modems: Warn the user if no modem is present, but either dial-in or dial-out is enabled.
- LCD menu "Upload Data Now", when selected, now causes an immediate exit from the menu tree; status messages from the upload cycle should begin to display immediately, w/o the user having to manually exit the menu tree.
- USB modems: If modem-connecting takes > 10 seconds, we status of the dialin/out-process is updated every 3 seconds saying we are still waiting, to make it clear to user we are still trying to connect despite lack of modem LEDs and speaker.
- Improved ppp status messages.
- Senddata application uses new LCD display interface for status messages.
- Updates to the LCD menu system. USB modems: LCD manager now looks for status events, and allows certain status events to preempt normal LCD display.
 - Preemption is only allowed if a button hasn't been pressed in the last 3 seconds.
 - Preemption is never allowed if the user is in a menu.
 - When a status change occurs, the system preempts the normal rotating LCD messages, and shows the status change for ~15 seconds; after this time, the LCD resumes rotating but the most recent status change is still shown as part of the normal rotation.
 - LCD shows status of: dialin/dialout, the current upload-cycle, and the rungetty daemon.
 - LCD now centers messages in the LCD – looks better. Does not apply to menus or lcdprint.
 - The Select button has a new behavior: If the Select button is HELD, the display's normal rotation will be



HELD (paused). The intent is to allow the user some control of preemption of messages by giving them the ability to freeze the display e.g., so they can copy down a particular message. While Select is held, the display will also scroll at a slower rate for easier reading.

- The "Upload Data Now" menu item now bails out of the menu system when selected -- this lets the user immediately see the modem and upload status messages without having to manually exit the menu tree.

- PPP dial-in: Fixed PPP dial-in to require PPP peer to authenticate itself using an AcquiSuite DAS user/password. Previously, incoming PPP connection was accepted regardless of user/password, but authentication was checked at web UI. - Now, authentication is checked at both PPP connection and webUI. PPP calls without correct authentication will be disconnected and a message to this effect ("Bad PPP User/Password") will appear on the LCD briefly.
- Added feature to provide a method to post messages on the LCD screen.
- Changes to the modem monitor application (rungetty) to support calls on USB modems, watchdog updates.
- Updates to watchdog process and library to support modem use.
- Fixed USB modem hotplug error when modem has been QUICKLY hotplugged so that the kernel assigns it a different tty-name.
- Added tcp keepalive library to allow multiple applications to use the service easliy.
- Multiple changes to modem configuration menus for USB modem support.
- Added "Have disk" feature to allow firmware updates to be loaded into the AcquiSuite using a web browser.
- Updated Dent PowerScout 3, 18 driver to show values with 0 to 5 digits after the decimal depending on the scale factor used by the meter. (original driver was fixed at 2 digits after the decimal.)
- Updated Dent PowerScout 3.18 driver to show frequency and power factor at 2 decimal places for all scale factors, per vendor documentation.
- Process run time printed in system log when run by a controlling application such as senddata.
- Modified watchdog handle in application code to prevent it being inherited by child process.
- Data uploader socket read error message clarified
- Uploader now prints ip address of actual connection and not just proxy server if a proxy is used.
- Obvius HTTP upload protocol (default) is always the default unless otherwise selected.
- Fixed configuration file download in obvius http protocol where a proxy was not used if specified.
- Increased system level watchdog timeout that is allowed by applications. Actual timeouts used by apps was not changed.
- Much work on hot-plug for USB devices.
- Added feature to require specific versions of operating system components for AcquiSuite modules.
- Added support options for AcquiSuite upload module protocol functions..
- Module manager feature now available to AcquiSuite modules.
- Updated to the latest version of telsh.
- Tidylogs now run on modem connection test as well as standard upload.
- Cosmetic fix to clean up rdate prefix in output strings.
- Improvements to the process list advanced page.
- Fixed alarm call to restart phone monitor process if it gets stuck.
- Fixed channel enable/disable options in data upload configuration page in non MSIE browsers.
- Added feature to allow cgi configuration page to display an error html dialog and then automatically redirect to a proper config page.
- Added additional debugging information to the http upload protocol if the upload fails. (avoid the need to set as 'full debug' in the configuration menu.
- XML uploader now sends hostname/port for proxy server support.
- Prefix upload log entries with the channel number to make the log file easier to read.
- Modem setup page has options related to USB modems.
- Renamed "Modem Configuration" page to "Modem Setup" for consistency.
- Changed A8911-23 driver to support new temperature range of -30 +70 in the advanced page of the driver.
- Changed hostname and proxy fields to the same length in the ip setup page.
- Modem setup page change, setup string may now contain punctuation such as: ", ' , ` (backtick), \$, \, and other punctuation characters. These are needed to support new USB & wireless modems.



- Setup/Upload: Parameters on the Log File Data --> Setup/Upload page -- in particular, passwords -- should now be able to include a wider range of punctuation and special characters, such as " , ' ` (backtick), \$ (dollar), \ (backslash), space, &, <, > and ; (semicolon). Characters in uploader parameter fields are now properly encoded as HTML-character-entities (e.g., &) when generating the Setup/Upload page for the browser. Characters in these fields are also properly quoted when storing into loggerconfig.ini. Spaces are still trimmed from the BEGINNING and END of parameters (since these are hard to see).
- Updated procedure to quote and escape strings used in scripts running on the AcquiSuite/AcquiLite.
- Added procedure to be used to sanitize user input before saving text strings to an INI file.
- PVP inverter driver: Updated the "drive", "voltage", and "temperature" string tables with the latest information provided in PVP "260kW" manual 97-600100-28-B-Online071111.
- Purge System Logs button: When clicked, also purge Kernel Boot Log (dmesg); Previously we were not purging all but kernel messages.
- Provided support for PVPI's Modbus register map version 2 inverter upgrades. This firmware has been tested with a PVPI inverter configured to have Modbus register map version 2 and configured to be a "PVP260" model. The advance configuration page routines check for a Modbus map version before before reading of the Modbus map version 2 registers.

