SERVICE BULLETIN ASM-009

Product: Antenna System Monitor

Subject: Firmware 2.30 Release **Date: 08th January 2014**

Description

This Service Bulletin announces the release of baseline 2.30 firmware for the Antenna System Monitor (ASM) series products.

The version 2.30 firmware update file ("FFP") is available for download from the RFI website http://www.rfiwireless.com.au/multicoupling-monitoring/monitoring/antenna-system-monitor-asm3852.html#tab_downloads, and may be flashed into existing ASM models by following the *Maintenance – Firmware Update* process in the Graphical User Interface (GUI) or User Manual.

Product Enhancements

The version 2.30 firmware addresses the following product issues;

i) Improves the webserver GUI serving speed. Users should experience a more responsive GUI.

ii) The Email Server interface has been noted to fail for some types of CONNECT responses. This has been addressed.

iii) In some samples of downloaded History file data, commas have appeared in incorrect locations. This has been resolved.

iv) The performance of uploading CFG files to a unit has been improved.

v) The status of the CAM External Alarm interfaces has been added to the System Summary displayed.

vi) The CAM Status GUI page now includes CAM serial number, firmware version and hardware version information.

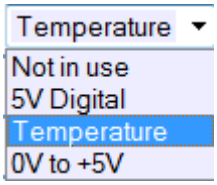
The version 2.30 firmware introduces a new product to the ASM portfolio - the Site Alarm Module (SAM). The SAM is an enhanced version of the Channel Alarm Module (CAM) and provides the following features;

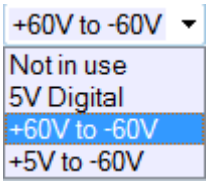
vii) Site Alarm Module (SAM)

Temperature/Analogue/Digital input capability

This allows the four (4) External Inputs to be configured to monitor a range of parameters on the site including temperature, analogue voltages (across two ranges), and digital input states.

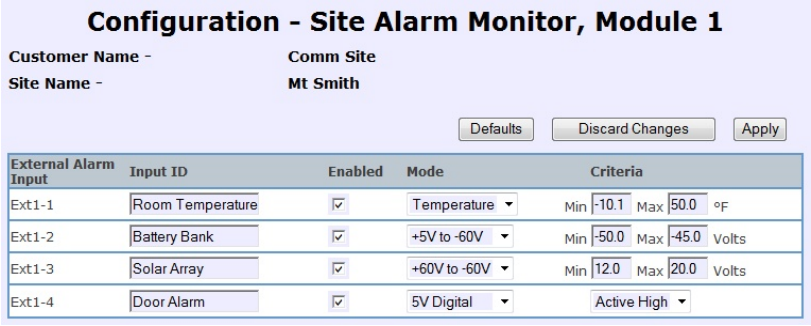
External Input #1 may be configured to read a Digital 5v logic input, Temperature across the range -67° to +257° F or -55° to +125° C, or an analogue voltage within the range 0 to +5vdc.





External Inputs #2, #3 and #4 may be configured to read a Digital (5v) logic Input, an analogue voltage within the range +60 to -60vdc, or (for greater resolution) an analogue voltage within the range +5 to -60vdc.

The two analogue voltage input ranges allow common power and battery supply system voltages such as +12vdc, +24vdc, +5vdc and -48vdc to be monitored, as well as microwave radio RSSI Output levels, solar array voltages, analogue fuel level sensors, and many other types of measurement transducers.



Configuration - Site Alarm Monitor, Module 1

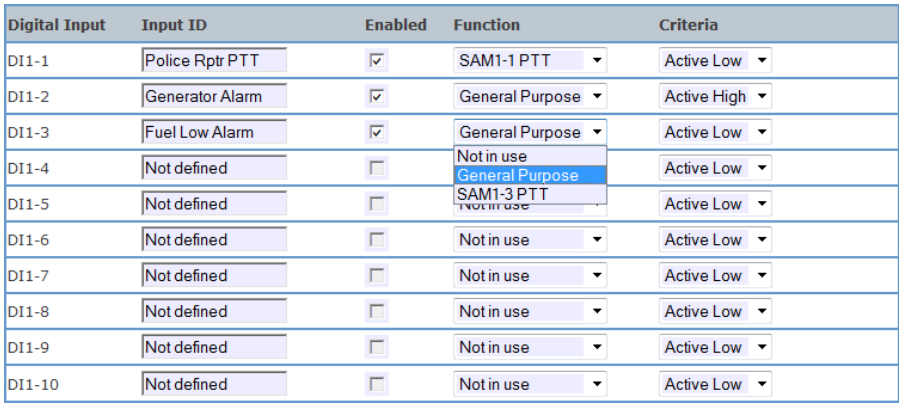
Customer Name - **Comm Site**
Site Name - **Mt Smith**

Defaults | Discard Changes | Apply

External Alarm Input	Input ID	Enabled	Mode	Criteria
Ext1-1	Room Temperature	☑	Temperature	Min -10.1 Max 50.0 °F
Ext1-2	Battery Bank	☑	+5V to -60V	Min -50.0 Max -45.0 Volts
Ext1-3	Solar Array	☑	+60V to -60V	Min 12.0 Max 20.0 Volts
Ext1-4	Door Alarm	☑	5V Digital	Active High

Typical SAM Configuration

Each of the 10 digital inputs associated with the 10 Alarm outputs is now independently configurable. They may be set as a PTT Input, as per the original CAM functionality, or they may be set as a General Purpose Digital Input – and used for monitoring other equipment and alarms at the site.

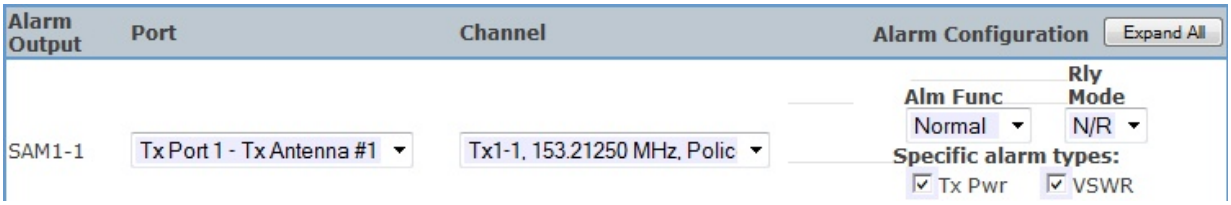


Digital Input	Input ID	Enabled	Function	Criteria
DI1-1	Police Rptr PTT	☑	SAM1-1 PTT	Active Low
DI1-2	Generator Alarm	☑	General Purpose	Active High
DI1-3	Fuel Low Alarm	☑	General Purpose	Active Low
DI1-4	Not defined	☐	Not in use / General Purpose / SAM1-3 PTT	Active Low
DI1-5	Not defined	☐		Active Low
DI1-6	Not defined	☐	Not in use	Active Low
DI1-7	Not defined	☐	Not in use	Active Low
DI1-8	Not defined	☐	Not in use	Active Low
DI1-9	Not defined	☐	Not in use	Active Low
DI1-10	Not defined	☐	Not in use	Active Low

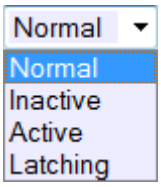
In the example at left, Digital Input #1 has been configured as a PTT monitoring line for one of the Base Stations being monitored on the site.

Digital Input #2 has been set as a general purpose input monitoring a generator alarm, and Digital Input #3has also been set as a general purpose input to monitor the generator's fuel tank

level sensor.



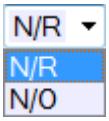
Digital Inputs that have been configured as Base Station PTT monitoring lines may be mapped to the SAM's ten (10) Alarm Outputs in the same method as the CAM, with the Alarm Function being selectable between Normal Operation, manually forced to the Inactive or Active state, or capable of Latched Operation.



In Normal mode, the Alarm Output relay is controlled by the state of the nominated channel's selected Tx Power and/or VSWR alarm state – logically AND'ed with that base station's PTT line (if selected in the Digital Input table on the previous page).

In the Inactive or Active states, the Alarm Output is manually forced to the respective state via the GUI, over-riding the monitored alarm conditions. This is useful for de-activating known alarm conditions until they can be addressed, or to use the Alarm Output to manually control external equipment – such as a starting a generator, or keying a base station for remote monitoring or coverage testing purposes.

Latching mode is ideal for applications such as Antenna Change-Over (ACO), where an initial alarm condition (such as Tx Antenna VSWR) can be used to trigger a permanent Alarm Output state – such as would be used to drive an antenna change-over coaxial relay to select a standby Tx antenna.



The Relay Mode selects the normal state of the Alarm Output and determines the alarm relay contacts' position – Normally Released, or Normally Operated.

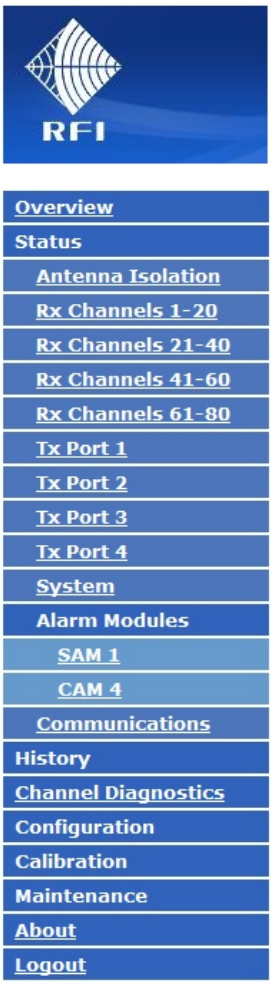
Up to ten (10) Site Alarm Modules may be daisy chained to a single ASM and they appear automatically, in a plug'n'play style, in the ASM GUI menu structure. Their Alarm Status appears on the *Status – System* page in the GUI.

SAMs and CAMs may be randomly mixed on an ASM, with unique module IDs being selected by a rotary switch on the rear of each unit.

For more information on the SAM, please visit the RFI website.

Alarm Summary

Alarm	Status
Fault Summary	FAIL
Antenna Isolation	OK
Rx Power	OK
Tx Power	OK
Tx VSWR	OK
VCO	OK
Internal Supply Rails	OK
Alarm Module External Alarms	FAIL
Alarm Module Digital Input Alarms	FAIL



Upgrading to Firmware 2.30

Note: Please read all Service Bulletins published from the release of the firmware currently operating in your ASM prior to commencing an upgrade to this version 2.30 firmware. Upgrades may require a transition through an intermediate firmware version on the way to reaching this version - or may have other implications for your ASM.

Firmware 2.30 *cannot* be applied to units currently operating firmware earlier than 2.0. Units must be updated to firmware 2.0 or 2.05 prior to attempting an update to 2.30. Units currently running firmware earlier than 2.05 should rename the firmware FPP file to APMxxxxx.ffp" prior to its use. This renaming step is not required once a unit has been upgraded to 2.05 or later.

Information on the firmware upgrade process is also available here;

http://www.rfiwireless.com.au/media/downloads/pdfs/Multicoupling_Monitoring/Monitoring/Service_Bulletin-ASM_FIRMWARE_UPGRADE.pdf

Cost Impact

Firmware version 2.30 is available to RFI customers at no charge.

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