

Site Alarm Module (SAM)



What is the SAM?



Site Alarm Monitor - Front View



Site Alarm Monitor - Rear View

The SAM and the APM

- The Site Alarm Monitor (SAM) is an option to the Advanced Power Monitor (APM). The SAM adds additional functionality to the APM installation, enhancing the APM's own features.



What is it for?

- The SAM may be used to enhance the Advanced Power Monitor's existing RF measurement and alarm capabilities, using the SAM's External and Digital Inputs to allow the monitoring of other customer equipment at a site.
- The SAM's Alarm Outputs can be used to provide individual alarm relay outputs that are activated by the APM's monitoring, such as "low RF output power" on a transmitter, or "high VSWR" on an antenna.

What can it do?

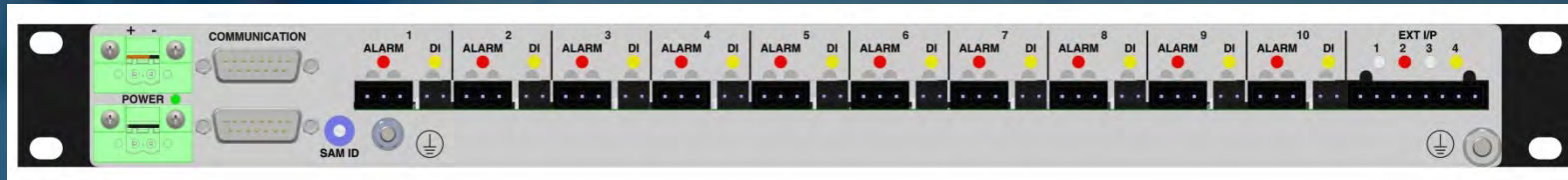
- The SAM may be used to monitor;
 - the site's temperature, or battery temperature....
 - a solar array's output voltage, or a backup battery's voltage, or a power supply's voltage....
 - the building door, a movement detector, or other security devices....
 - other detectors on the site - such as a generator fuel tank low level indicator, a radio link's RSSI indicator level....
 - the alarm outputs from other equipment - such as Mains fail, rectifier fail, base station alarms, microwave link fail....
 - the "PTT" lines of base stations to monitor their operational status....

What can it do?

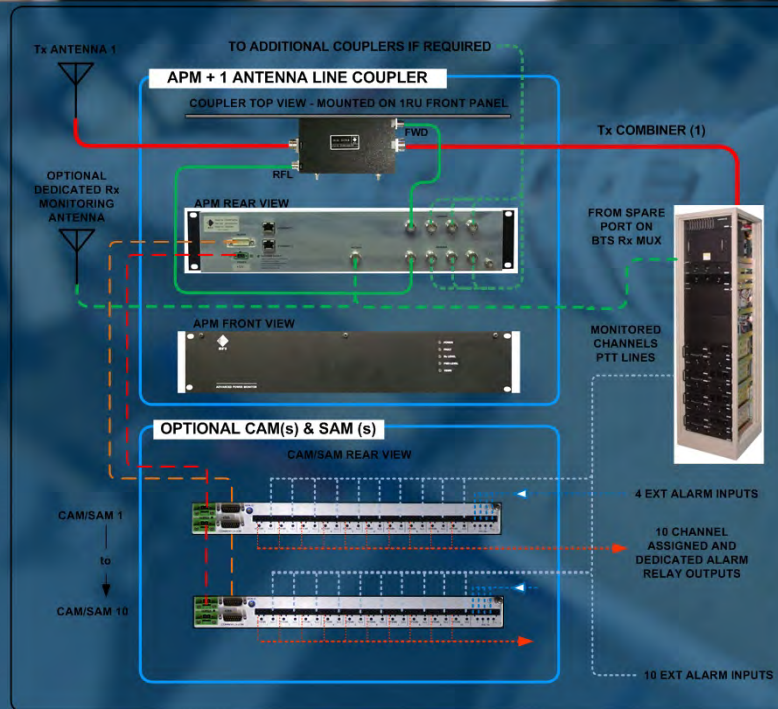
- The SAM may be used to locally (or remotely) control;
 - an standby antenna's change-over relay....
 - the starting of a generator....
 - the keying of a base station for coverage or maintenance testing....
 - the activation or cycling of hot/standby equipment change-over....
 - disabling equipment for management or fault finding purposes....
 - backup power systems' control for cycling, routine testing or maintenance activities....

Installation

- The SAM uses common and readily available “Phoenix” style connectors for all of its Inputs and Outputs connections, making it easy to install.....



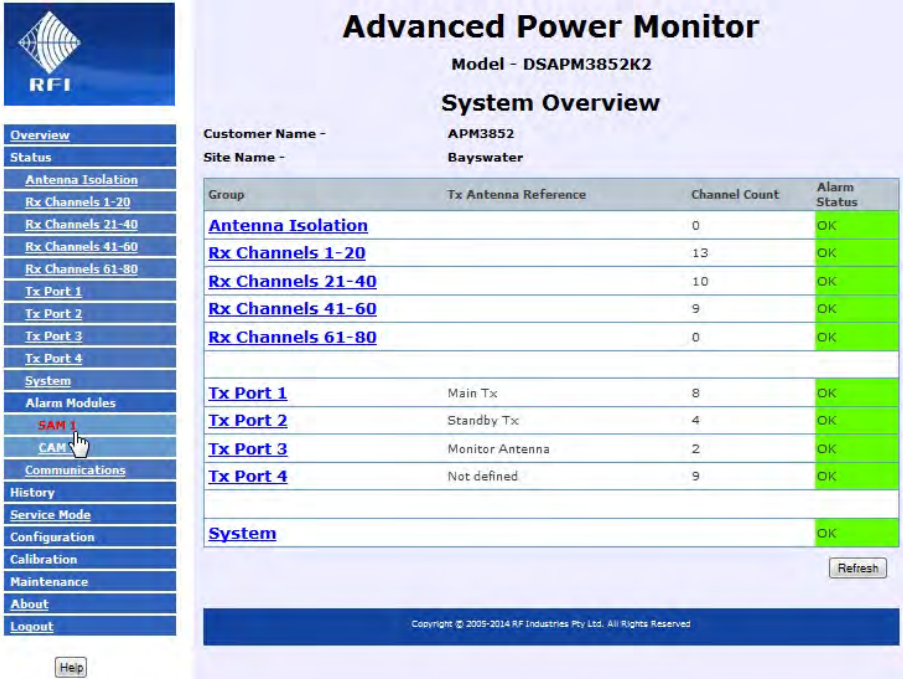
Installation



- The SAM conveniently connects to the Advanced Power Monitor, using a power and a data comms cable supplied with the SAM.
- Up to ten (10) SAMs may be “daisy-chained” onto one Advanced Power Monitor.

Configuration

SAMs appear automatically in the Advanced Power Monitor (APM) Graphical User Interface (GUI) menu structure when they are connected. Each SAM has a unique ID number that is set from a rotary switch on the rear of each module.



Advanced Power Monitor
Model - DSAPM3852K2

System Overview

Customer Name - APM3852
Site Name - Bayswater

Group	Tx Antenna Reference	Channel Count	Alarm Status
Antenna Isolation		0	OK
Rx Channels 1-20		13	OK
Rx Channels 21-40		10	OK
Rx Channels 41-60		9	OK
Rx Channels 61-80		0	OK
Tx Port 1	Main Tx	8	OK
Tx Port 2	Standby Tx	4	OK
Tx Port 3	Monitor Antenna	2	OK
Tx Port 4	Not defined	9	OK
System			OK

Refresh

Copyright © 2005-2014 RF Industries Pty Ltd. All Rights Reserved

Connectivity

- To access and use the GUI, a web browser such as Internet Explorer, Mozilla, or Firefox is used. Connection to the APM (and SAM) may be;
 - “locally” via a computer using an Ethernet cable
 - “locally” via a wireless router connected to the APM and the computer’s wireless modem (i.e. WiFi)
 - “remotely” via a customer’s Local Area Network (LAN)
 - “remotely” via a site linking backbone (such as microwave links, fiber, or other link technologies)
 - “remotely” via a cellular modem if the APM/SAM site is within coverage of a cellular network
 - “remotely” via a satellite link (ideal for *very* remote sites)

Configuration

- The APM Graphic User Interface (GUI) allows each of the SAM's inputs and outputs to be configured independently.

External Alarm Input	Input ID	Enabled	Mode	Criteria	
Ext1-1	Room Temperature	<input checked="" type="checkbox"/>	Temperature	Min -5.0	Max 40.0 °C
Ext1-2	Battery Bank	<input checked="" type="checkbox"/>	+5V to -60V	Min -50.0	Max -45.0 Volts
Ext1-3	Solar Array	<input checked="" type="checkbox"/>	+60V to -60V	Min 10.8	Max 16.2 Volts
Ext1-4	Door Alarm	<input checked="" type="checkbox"/>	5V Digital	Active High	

Digital Input	Input ID	Enabled	Function	Criteria
D11-1	Police Rptr PTT	<input checked="" type="checkbox"/>	SAM1-1 PTT	Active Low
D11-2	Generator Alarm	<input checked="" type="checkbox"/>	General Purpose	Active High
D11-3	Fuel Low Alarm	<input checked="" type="checkbox"/>	General Purpose	Active Low
D11-4	Not defined	<input type="checkbox"/>	Not in use	Active Low
D11-5	Not defined	<input type="checkbox"/>	Not in use	Active Low
D11-6	Not defined	<input type="checkbox"/>	Not in use	Active Low
D11-7	Not defined	<input type="checkbox"/>	Not in use	Active Low
D11-8	Not defined	<input type="checkbox"/>	Not in use	Active Low
D11-9	Not defined	<input type="checkbox"/>	Not in use	Active Low
D11-10	Not defined	<input type="checkbox"/>	Not in use	Active Low

Alarm Output	Port	Channel	Alarm Configuration	Expand All
SAM1-1	Tx Port 1 - Tx Antenna #1	Tx1-1, 153.21250 MHz, Polic	Alm Func: Normal, Rly Mode: N/R Specific alarm types: <input checked="" type="checkbox"/> Tx Pwr, <input checked="" type="checkbox"/> VSWR	Collapse
SAM1-2	Alarm not in use	Alarm not in use	Configure Alarm Detail	
SAM1-3	Alarm not in use	Alarm not in use	Configure Alarm Detail	
SAM1-4	Alarm not in use	Alarm not in use	Configure Alarm Detail	
SAM1-5	Alarm not in use	Alarm not in use	Configure Alarm Detail	
SAM1-6	Alarm not in use	Alarm not in use	Configure Alarm Detail	
SAM1-7	Alarm not in use	Alarm not in use	Configure Alarm Detail	
SAM1-8	Alarm not in use	Alarm not in use	Configure Alarm Detail	
SAM1-9	Alarm not in use	Alarm not in use	Configure Alarm Detail	
SAM1-10	Alarm not in use	Alarm not in use	Configure Alarm Detail	

Monitoring

- The SAM Inputs and Outputs, and associated alarms, are presented in the APM GUI, and are also available as relay outputs, SNMP Alarm Traps, and SMTP (Email) messages.

Alarm Summary

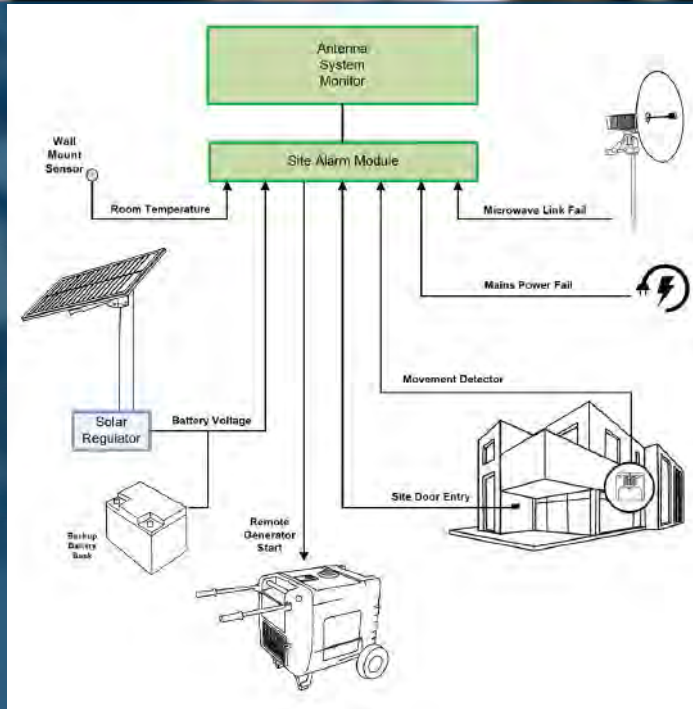
Alarm	Status
Fault Summary	FAIL
Antenna Isolation	OK
Rx Power	OK
Tx Power	OK
Tx VSWR	OK
VCO	OK
Internal Supply Rails	OK
Alarm Module External Alarms	FAIL
Alarm Module Digital Input Alarms	FAIL

External Alarm Input	Input ID	Input Value	Status
Ext1-1	Room Temperature	219.7 °C	FAIL
Ext1-2	Battery Bank	4.91 V	FAIL
Ext1-3	Solar Array	2.68 V	FAIL
Ext1-4	Door Alarm	High	FAIL

Digital Input	Input ID	Function	Status
DI1-1	Police Rptr PTT	PTT	Inactive
DI1-2	Generator Alarm	General Purpose	FAIL
DI1-3	Fuel Low Alarm	General Purpose	OK
DI1-4	Not defined	Not in use	
DI1-5	Not defined	Not in use	
DI1-6	Not defined	Not in use	
DI1-7	Not defined	Not in use	
DI1-8	Not defined	Not in use	
DI1-9	Not defined	Not in use	
DI1-10	Not defined	Not in use	

Alarm Output	Port	Channel	Status
SAM1-1	Tx Port 1 - Tx Antenna #1	Tx1-1, Police West	Inactive
SAM1-2	Alarm not in use		Inactive
SAM1-3	Alarm not in use		Inactive
SAM1-4	Alarm not in use		Inactive
SAM1-5	Alarm not in use		Inactive
SAM1-6	Alarm not in use		Inactive
SAM1-7	Alarm not in use		Inactive
SAM1-8	Alarm not in use		Inactive
SAM1-9	Alarm not in use		Inactive
SAM1-10	Alarm not in use		Inactive

Summary



The Site Alarm Monitor (SAM) enhances the capabilities of the Advanced Power Monitor (APM), and provides a convenient way to monitor and/or control equipment on a communications site.

More Information

For additional support information on the APM series products including;

- APM Marketing Sheet
- APM Design Guide
- APM Application Note
- APM User Manual
- APM Firmware File (*.FFP)
- APM SNMP MIB Files
- SAM Marketing Sheet
- SAM Temperature Sensor Marketing Sheet

Please visit the RFI website at:

<http://rfi-motorola.com/AdvancedPowerMonitors.aspx>

