

www.AKCP.com



sensorProbe2 sensorProbe4 sensorProbe8 sensorProbe8-X20/X60 User Manual

Help Version updated till firmware 476

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1) Introduction

A. What is sensorProbe?

The sensorProbe2, sensorProbe4, sensorProbe8 and sensorProbe8-X20 (SP2/SP8/SP8-X20) are intelligent devices for monitoring environmental variables, power, physical threats and security. The units are IP based and include a web interface for configuration. Included in this is a TCP/IP stack, Web server, full SNMP and E-mail support.

Any of our AKCP intelligent sensors can be connected via the RJ45 connections (excluding our sensorProbe+ smart sensors, daisyTemp, 8 port sensor controlled relay, thermocouple or PMS sensors), or you can add dry contact connection for monitoring UPS, security systems and air conditioning status.

B. What's the difference between the SP2, SP4 and the SP8?

The SP2 is a compact unit with 2 x RJ45 sensor inputs. The SP4 has a total of four RJ45 sensor inputs while the SP8 is a larger unit with up to 8 RJ45 sensor inputs.

C. What's the difference between the SP8 and the SP8-X20?

The sensorProbe8-X20 has the 8 RJ45 intelligent sensor ports AND has 20 extra dry contact inputs, where the sensorProbe8 only has the 8 RJ45 sensor ports. More on these extra dry contacts in topic #8 in this section below.

D. What's the difference between the sensorProbe and the sensorProbe+ (SP2+ & SPX+)?

While the lower cost sensorProbe base units provide the basics of sensor monitoring and alerting, our sensorProbe+ family provides more advanced functionality that includes most if not all of the features on our securityProbe base units. The SP+ units support ALL of our newer smart sensor line including the Swing Handle Cabinet locks, the Thermal Map sensors, LCD display, PMS, Modbus, the Sensor Status Lights including the virtual sensors. The SPX+ units are customizable to fit any type of sensor configuration. Please see the sensorProbe+ information on our website for more information on these units.

E. How to use this manual

This manual aims to provide the user with a step by step guide on how to get your unit set up and functioning. It will introduce the primary features of the unit by way of tutorials. You can either go through the whole procedure from start to finish, or, if you wish, use each tutorial as a standalone lesson. The start of each lesson gives an "entry point profile" which details how to get to the start point of the lesson and assumes previous knowledge through completion of previous tutorials.

Important Note:

Throughout this manual you will find "Important Notes" in each section that will relate to the information you are reviewing. Also, in section #7 you find a "Quick Facts" and "FAQ" section that covers common questions and problems you may encounter. If however you need any further assistance please don't hesitate to contact our support team on support@akcp.com



F. sensorProbe2



Front view of the SP2

Back view of the SP2

The SP2 back view shows intelligent sensor ports 1 and 2. Standard 10/100MB Ethernet Port and the 5VDC power input from the AC power adapter.

IMPORTANT NOTE: ALL of our AKCP sensorProbe family of base units now use the 5VDC AC power adapters. This includes the sensorProbe2, sensorProbe4, sensorProbe8, sensorProbe8-X20 and X60. Please <u>ALWAYS</u> check the label on the AC power adapter you are connecting to the sensorProbe unit's power input to make sure you are connecting the correct AC adapter. Connecting the old 7.5V AC power adapter to the 5VDC type units will damage them and will VOID our warranty.

Dedicated UPS: AKCP has always highly recommended that you provide dedicated third party UPS's for the sensorProbe base units. These will protect the units from unstable AC power, outages and power surges. Any AKCP base units that were not connected to UPS's and damaged due to the above issues will also VOID our warranty.

SP2 LED's

If you have setup a sensor on a specific port and then unplug it, the LED will flash showing a "sensor error" this is to warn you that the sensor is no longer plugged in.

The LED's on the sensorProbe2 front panel will display solid green when the sensor is in a normal status. They will flash at a high rate when a sensor goes into an error status or in a high warning status threshold that you have set in the units web UI for that sensor.

Status Indicators

- LED indication for Power
- LED for Network Connectivity
- LED for sensor online and threshold status

Note: The SP2 is also available with Power over Ethernet (PoE) instead of a power supply jack.

6. sensorProbe4 and sensorProbe8



- I. Power Led
- 2. Activity / Link LED
- I 6 LED's indicating online status and network activity

sensorProbe4 Front View



SP4 & SP8 LED's

The LED's on the sensorProbe4 and sensorProbe8 will display a solid green when a sensor is connected and in a normal state. The red LED's will blink slowly when a sensor goes into a warning state and will blink rapidly when the senor enters a critical state. The red LED's will remain solid if the sensor is disconnected, or the sensor is in an error state.



sensorProbe4 Back View

The SP4 back view shows the intelligent sensor ports 1 through 4. Standard 10/100MB Ethernet Port. 5VDC AC power adapter input and External Grounding Stud.

Grounding the Units: AKCP highly recommends you properly ground the units using the GND stud to a proper grounded location on your server cabinet or other grounded position.

The purpose of the grounding is to protect the units from having problems when operating in a very electrically noisy environment. Strong "Electromagnetic Interference's" or EMI can disturb the units proper functionality and also can damage the units.



sensorProbe8 Front View



sensorProbe8 Rear View

The SP4 back view above shows the intelligent sensor ports 1 through 8. Standard 10/100MB Ethernet Port. 5VDC AC power adapter input and External Grounding Stud.

SP2, SP4 and SP8 Memory & System Information

The sensorProbe2, sensorProbe4 and sensorProbe8 contain the following memory devices: Microcontroller 8KB static ram – volatile – user and system information. Microcontroller 4KB EEPROM – nonvolatile – user and system information. Microcontroller 256KB Flash – nonvolatile – system information. 32KB static ram – volatile – user and system information. 1MB Flash - nonvolatile - system information.



G. sensorProbe8-X20 & sensorProbe8-X60



sensorProbe8-X20 Front View

The front view above of the SP8-X20 shows the LED's on the units 8 sensor ports and the 20 extra dry contact inputs. The same description applies to these LED's as outlined above for the sensorProbe8 unit.



The rear view of the SP8-X20 shows the 20 dry contact inputs, the 8 intelligent sensor ports 1 through 8, the 10/100 Ethernet port, the 5VDC AC power input and the GND grounding stud.

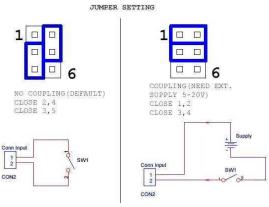
H. sensorProbe8-X20/X60 – 20/60 Extra Dry Contact Inputs

Important Note: Please always contact the AKCP support team prior to opening up the units case. Doing so without prior approval from us will void the warranty on the units.

The 20 & 60 extra dry contact inputs on, for example, the sensorProbe, (or sensorProbe X20/X60) can be configured as <u>inputs only</u> up to 5 Volts in normal operation. In opto-isolation mode they can input up to 30 Volts DC. This will protect these inputs and the unit from high voltages and spikes. Applying more than 5VDC, or AC voltage to the dry contact inputs in the normal mode will damage the unit and void the warranty.

Opto-isolators provide complete electrical separation between the sensorProbe8-X20/X60 and the dry contacts. The base units are therefore protected against possible large voltage spikes caused by lightning for example.

The figure below shows the jumpers (on the dry contact board) set up to provide opto-isolation support. Again, opening up the unit's case without approval will void the warranty. If you wish to have the units configured with this opto isolation, then this should be requested when the unit is ordered from us.







The rear view of the sensorProbe8-X60 shows the 60 dry contact inputs, the 8 intelligent sensor ports, the 10/100 Ethernet port, the 5VDC AC power input jack and the GND ground stud.

Extra dry contact input practical applications:

The extra dry contact inputs can be used to monitor many types of equipment, for example, you can run the connection from warning lights on alarm panels to the dry contact inputs, so that when the warning light on the alarm panel is activated, the dry contact is triggered in the units web interface, thus allowing you to send notifications via emails or SNMP traps.

X20/X60 response or read time. We guarantee the read time is 2 times per second, but actually this will vary more than that depending on the environment (number of sensors online, request http, send mail etc.).

I. sensorProbe8-X20/X60 – DCW & PoE Type Units



DCW Units - sensorProbe8-X20 & X60 DCW – The DCW power inputs are circled in the above image. The DCW <u>internal</u> power supply option is only available on the X20 and X60 units. The dual inputs can provide redundant power to the units when connecting two separate voltage sources. The DCW units support +/- 48VDC operating voltage.

PoE Units - sensorProbe2, sensorProbe4, sensorProbe8 & SP8-X20/X60 – These units can be ordered with the PoE option where the units can be powered by a PoE enabled network switch. The PoE module supports IEEE 802.3af and IEEE 802.3at.

2) Installation - Applies to the entire family of the sensorProbe base units

Assigning an IP address

These units are plug and play devices that will easily connect to your existing network setup. Every unit ships with a default IP address. This is **192.168.0.100.** The first steps you will need to undertake to install your unit will be to assign it an IP address to match your current network configuration. Before starting this, ensure you have the following items:-

1. RJ45 CAT5 yellow crossover cable with RJ45 male connection



- 2. A PC with Ethernet card or LAN socket. Make sure you re-configure your PC or laptop's network IP address to be in the same network subnet of the unit. For example, you can set your laptop's IP to be 192.168.0.101,
- 3. AC power socket for the unit to connect to using the 5VDC AC power adapter that is included.
- a) Connect the unit via the CAT5 crossover cable to the Ethernet / LAN port on your computer. When connecting the unit (after configuration) to your network switch make sure the extension LAN cable is a straight through configured LAN cable and does not exceed 300 meters or 1000 feet.
- b) Open your web browser and go to the default IP address http://192.168.0.100

Important Note: We do not support any version of the Internet Explorer browser when accessing the units web UI. This applies to ALL of our base units. You will need to connect using either Chrome or the Firefox web browser.

Important Note: All units are shipped with the default web interface fixed IP address of 192.168.0.100. We strongly recommend you change this to avoid problems with duplicate IP addresses on your network. Please see the section in this manual on how to setup a new IP address on the unit.

		Go Links »
Address http://192.168.0.100		
Web Images Video News Maps Gmail more Input the default IP address	Google"	iGoogle Sign in _ △
Adventising	Google Search (I'm Feeling Lucky) Language Tools Programs - Business Solutions - About Google - Go to Google Thailand Make Google Your Homepagel e2007 Google	
		8

In some cases your computer might not be able to connect to this default IP address. In this situation you need to set up your computers routing table to allow access to this. <u>See here for this process</u>.



c) You will now be presented with the following login screen.

<u> АКСР</u>			AKCP sensorProbe	2 v 2.0		
Location: Sys Location					Current Sy	stem Time: 28/9/07 05:56:24
Summary	Sensors	Traps	Mail	Network	System	Help
			Log In			
			User Type Administ	rator 🗸		
			Password			
			Login			
			©2003 AKCP Inc. All rights rev	Werl		
		Selec	ct "Administrate	or" and log in		
		00100		or and log in		
		using	<mark>j default pass</mark> w	ora "public"		
1						

d) After logging in you will be taken to the main summary page as shown below.

АКСР			AKCP sen	sorBroha	2 2 0				Admin Log Off
ANCP			ANGP Sen	SorProbe	2 V 2.0				
Location: Sys Local	lion							Current System Tin	ne: 28/9/07 06:06:02
Summary		Traps		Mail		Network	Syster	n 🍸	Help
Auto refresh (sec.)	0 Start		Online S	tatus of Sens	ors				Last Refresh: 5 secs
Port	Туре		Description			Reading	Status	Action	Graph
1									
2			- Delor	(240 messages					
1 28/	9/07 06:05:49 Trap sent to :10.1.2.2	22 Uumidity2 is now Sonsor Err		(240 messages	9				
	9/07 06:05:49 Trap sent to :10.1.2.2								
	9/07 06:05:49 Trap sent to :10.1.2.2								
	9/07 06:04:49 Trap sent to :10.1.2.2								
	9/07 06:04:49 Trap sent to :10.1.2.2								
	9/07 06:04:49 Trap sent to :10.1.2.2								
	9/07 06:03:49 Trap sent to :10.1.2.2								
	9/07 06:03:49 Trap sent to :10.1.2.2								
	9/07 06:03:49 Trap sent to :10.1.2.2								
	9/07 06:02:49 Trap sent to :10.1.2.2								
			<prev olde<="" td=""><td>est Newest</td><td>Next ></td><td></td><td></td><td></td><td></td></prev>	est Newest	Next >				
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			manna Akce	the All rights rou	ion cod				
			@2003 AKCP	Inc. An Ignis let	erved.				
			©2003 AKCP	Inc. All rights re-	served.				



e) From the summary page select the "Network" tab. After entering your new IP address click "save"

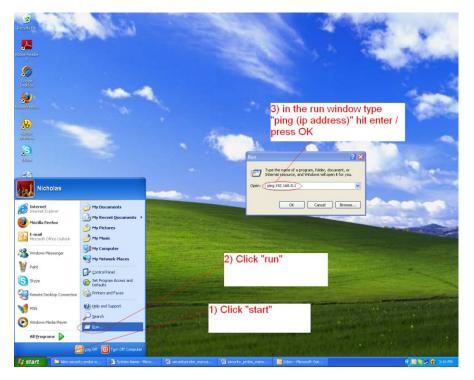
AKCI	P sensorProbe2 v	2.0	
Traps	Mail	Network	
IP Address	Network Settings		
IP Address Subnet Masi		-	
Default Gateway	10.1.1.2		
Domain Name Serve	192.168.0.1		Select the
Use DHCF	Do Not Use DHCP 🗸		"Networks tab
Ethernet MAC IE	00-0B-DC-00-59-5B		
Ethernet Puplex Mode	e 10 Mbps Half Duplex		
/	Save Reset		

Input new IP address

Testing your new IP address

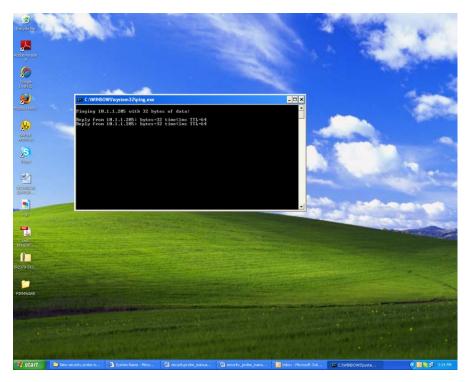
We now need to test that your new IP address has been assigned successfully. We will do this via the "ping" command.

1. Click start/run.....





2) You will now get an MS DOS command prompt which shows the ping results. If this is unsuccessful you will receive a "request timed out" message.



Having connection problems? Important Technical Notes:

Unknown IP Address - If you have an existing sensorProbe base unit and do not know the IP address you can use the IPSet utility on our website (support portal). Connect the unit directly to your PC or laptop using the yellow cross over cable, start the IPSet exe, and then power cycle the unit.

Unknown Web UI Password - If you do not know the admin password for your sensorProbe, then note the MAC address, send this directly to support@akcp.com and we will generate the master login password for your unit.

Reset To Factory Settings - If you are still having problems connecting to the unit, you can try using the Configure utility to reset the unit back to the factory default settings. Take note that our Configure utility factory reset <u>does not reset the web UI login passwords</u> for security reasons.

Admin Password Problems - If you are experiencing an issue where you are getting logged out of the web UI, then cannot log back in please try the following.

Send the request to support for the master log in password along with the MAC ID of your unit and use this to log back into the units web UI.

When you have the "use the same password for web interface and SNMP" enabled (YES). Then if you want to change the Admin password you would change this in the SNMPset community as this will also be used for the Admin log in password if this is set to YES.

Therefore, it is the SNMP set community password that is used for administrator log in. To use a different password than the SNMP community, you would need to change the below parameter to NO as shown in the screen shot below on the next page.





Sensors	V	Traps	M	N	lail	. M.S.	Network	System
				System	Settings			
		System De	scription	sensorP	robe8 v2.0 S	P8476 1	41118	
		Syste	em Name	Sys Nan	ne			
		System	Location	Sys Loc	ation			
		System	n Contact	Sys Cor	ntact			
		Data Collectio	on Period	5	minutes			
		Disp	lay Logo	On 🔻				
	S	end Email/Trap or	n boot up	Off				
	Delay Time	for Email/Trap or	n boot up	0	sec			
				Save	Reset			
				Passwor	d Settings			
		Password	checking	Enable				
Use the same	e password fo	or web interface a	nd SNMP	No 🔻	-			
				Save	Reset			
			SN	MP Comm	unity Settin)s		
	,	New SNMP get Co	mmunity					
	Confirm I	New SNMP aet Co	mmunity				S	

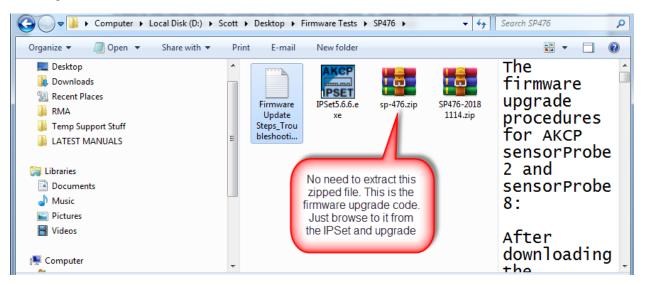
Important Note:

If you're still having trouble connecting to your sensorProbe, or opening your unit's web interface, please see the FAQ in section #7 at the end of the manual for more help.

3. Upgrading the firmware

It is important that you make sure your sensorProbe base unit(s) are running on the latest, officially released firmware that is on our website. You can download the latest firmware by connecting to our website <u>https://www.akcp.com/support-center/firmware-updates/</u> and log in using the account information you have previously setup on our support portal. All of our entire family of sensorProbe base units use the same firmware.

When you download the firmware it will come in compressed .zip package. Extract this to your desktop into a folder named firmware. When you open this folder you will see something like the following:



You can see one of these files is a program named IPSet. This utility will upload the firmware to your unit. Double click the program to boot it.



When IPSet loads you will be met with a screen similar to this:-

Adobe Reader TEC						1
cet Stated With Oracl.		Automatical Moratily En Firmware Up Password En	er MAC IP Address		2	
File name: Files of type:	sp2:379	Status Open Cancel		N N N N N N N N N N N N N N N N N N N	4	
AKCP Introduces t Deckup	5		Online help Rc	nuting table detail		
cacti integrati Iogo	🕼 jacarta_manual-Micr 🕼 Doc	aurent5-Marcol 🔮 security probe near		 Sys Name - Microsoft 	# IPSet Ver. 5.5.8.0,	e N Subs PM

- 1) Select firmware upgrade
- 2) Type in the IP address of your unit
- 3) Type in your SNMP write community or administrator password (default is public)
- 4) Click browse, a new window will pop up
- 5) Select the zipped firmware file, click open (again, no need to unzip this file as explained above).

	ically Get MAC • Enter MAC • Upgrade	MAC Address	. 100 Set
Password	Enter firmware C:\Documen	s file (.zip) ts and Settings\nicholas\Desk	Browse
	🔲 Send 1 pa	age per package.	
		Clie	ck "update"

6) When complete the message "upgrade complete" will be displayed



Problems updating firmware that is very old to the latest release.

You may experience a problem when trying to update your sensorProbe2 or sensorProbe8 to the latest firmware if the firmware on your base unit has not been updated for a very long period of time NOTE: This does not apply to the sensorProbe4 units as they use the newer 256 AT-mega memory.

If you try to update your unit and receive this error below in the IPSet utility, then you will need to update your unit in one or two steps, depending on how old the firmware version is you are running on the unit. It is important to use the same IPSet version that is included in each firmware package and not the latest version.

Please download either of these older versions of firmware depending on if you have a sensorProbe2 or sensorProbe8 unit, then update the unit with each and then to the latest version that is on our web site.

1st sensorProbe2 update: - <u>http://www.akcp.com/wp-content/uploads/2010/04/SP2_371.zip</u> 2nd sensorProbe2 update: - <u>http://www.akcp.com/wp-content/uploads/2010/04/SP2_398.zip</u> 1st sensorProbe8 update: - <u>http://www.akcp.com/wp-content/uploads/2010/04/SP8_371.zip</u> 2md sensorProbe8 update: - <u>http://www.akcp.com/wp-content/uploads/2010/04/SP8_398.zip</u>

	Enter pa	ssword and file	e to upgrade	firmware	
C Manually	cally Get MAC Enter MAC Upgrade	MAC Address	51 . 2	. 5	· Set
Password *****	Enter firmware f		smit\Deskto	Browse	Update
> cannot gel	ctionI hsorProbe model. firmware version date has not com				
> Test conne > Getting se > cannot gel > System up	nsorProbe model. firmware version				~
> Test conne > Getting se > cannot gel > System up > readyI	nsorProbe model. firmware version		Roul	ing table deta	× ×



3) Setting up a sensor and Downloading Sensor Data

For the purposes of this manual and tutorials we will cover setting up a dual temp / humidity sensor. The first part of the tutorial will cover the basic installation and settings for the sensor. The second part will explain how to go about setting up various notifications such as SNMP traps.

Basic setup

a) Plug in your sensor to the RJ45 port 1 (sensor 1). The unit will automatically detect the presence of the sensor and configure it.

b) Now return to the web browser and input the IP address of your unit. Then log in as administrator.

АКС	CP		AKC	CP sensorProbe	2 v 2	2.0			Admin Log Off
Location: Sys	Location							Current System Ti	ime: 28/9/07 08:31:02
Sum	nmary	Sensors Traps Mail Network System Help							
Auto refresh ((sec.) 0 Start			Online Status of Sen	ors				Last Refresh: 8 secs
Port		Туре	Descrip	ption		Reading	Status	Action	Graph
1		Humidity mperature	Humidity1 De Temperature1			41 % 76 *F	Normal Normal	-	<u>View</u> View
2	<u></u>		<u>remperaturer</u>	Description		-	-		- view
-				Sys Log (240 message	5)				
1	28/09/07 07:43:41	Trap sent to :10.1.2.22	23, Humidity1 is now Sensor Normal						
2	28/09/07 07:43:41	Humidity sensor on R	J45#1 is 42 %, status is now Sensor Nor	rmal					
3	28/09/07 07:43:41	Trap sent to :10.1.2.23	23, Temperature1 is now Sensor Norma	1					
4	28/09/07 07:43:41	Temperature sensor	on RJ45#1 is 77 degrees, status is now	Sensor Normal		Dual temp	/ hum		
5	28/09/07 07:43:39	Trap sent to :10.1.2.22	23, Humidity1 is now Sensor Error			sensor dis	alayod		
6	28/09/07 07:43:39	Humidity sensor on R	J45#1 is Not Plugged In, status is now S	ensor Error		sensor us	Jiayeu		
7	28/09/07 07:43:39	Trap sent to :10.1.2.23	23, Temperature 1 is now Sensor Error						
8	28/09/07 07:43:39	Temperature sensor	on RJ45#1 is Not Plugged In, status is no	ow Sensor Error					
9	28/09/07 07:43:35	Trap sent to :10.1.2.23	3, Humidity1 is now Sensor Normal						
10	28/09/07 07:43:35	Humidity sensor on R	J45#1 is 42 %, status is now Sensor Nor	rmal					
			< Pre	V Oldest Newest	Next	t >			
	©2003 AKCP Inc. All rights reserved.								

c) You will now see the summary page looking something like this:-

You will see the temp/humidity sensor displayed in the summary page.

c) From this page select the "Sensors" tab. This will bring you to the following page:-

					Admin Log Off
<i>АКСР</i>		AKCP sensorProbe2	2 v 2.0		
Location: Sys Location					Current System Time: 28/9/07 08:44:32
	Sensors	Traps Mail	Network	Syn	stem Help
		Sensor Settings			
Environmental		Н	midity Sensor Settings		
Temperature	Olive La	Port	1		_
Humidity	Click	Description	Humidity1 Description	1	
Water Detector	sensors	Current Reading			
Airflow Sensor		Status			
Contacts & Drivers	tab	Sensor Online/Offline			
Dry Contacts & Drivers		Go Online/Offline			
4-20 mAmp Dry Contacts (3 - 12)		Critical High	80		
		Warning High	60		
Power		Warning Low	15		
AC Voltage Detector DC Voltage Sensor		Critical Low	10		
Relay	Select				
Security Sensor	concor	Rearm			
Security	sensor	Reading Offset	0		
Motion Detector	from menu		Save Reset		
Alarm Security					
Siren & Strobe Light		Sensor Controlled Relay S	ensor Controlled Siren	Sensor Status Filters	
Settings					
cameraProbe Integration					
Autosense					
CARGO DE CAR					
		©2003 AKCP Inc. All rights res	erved.		
		-			





ЛКСР		AKCP sensorProbe2	v 2.0		Admin Log O
Location: Sys Location					Current System Time: 28/9/07 08:44:3
Summary	Sensors Traps	Mail	Network	Syn	stem Help
		Sensor Settings			
Environmental		Hur	nidity Sensor Settings		
Temperature		Port	1		
Humidity	Click	Description	Humidity1 Description		
Water Detector	sensors	Current Reading			
Airflow Sensor			Normal		
Contacts & Orivers	tab 🛛 🖉	Sensor Online/Offline Go Online/Offline	Online		
Dry Contacts & Drivers			Online 🗸		
<u>4-20 mAmp</u> Dry Contacts (3 - 12)		Critical High	80		
Power		Warning High	60		
AC Voltage Detector		Warning Low	15		
DC Voltage Sensor		Critical Low	10		
Relay	Select	Rearm	2		
Security Sensor	sensor	Reading Offset	_		
Security		Reading Offset	0		
Motion Detector	from menu		Save Reset		
Alarm Security		Sensor Controlled Relay Se	nsor Controlled Siren	Sensor Status Filters	1
Siren & Strobe Light		Sensor Controlled Relay Se	isor conditied siter	Sensor Status Filters]
Settings					
cameraProbe Integration					
Autosense					
		©2003 AKCP Inc. All rights rese	ved.		

In this example we have selected the humidity sensor from the sensor menu on the left. The sensors highlighted in green indicate that they are currently connected to the unit. In this case you can see there is a temp and humidity sensor connected (dual sensor) and so they are highlighted in green in the menu.

Hun	Humidity Sensor Settings						
Port	1						
Description	Humidity1 Description						
Current Reading	40 Percent						
Status	Normal						
Sensor Online/Offline	Online						
Go Online/Offline	Online 🗸						
Critical High	80						
Warning High	60						
Warning Low	15						
Critical Low	10						
Rearm	2						
Reading Offset	0						
	Save Reset						
Sensor Controlled Relay Se	nsor Controlled Siren Sensor Status Filters						

e) This window is used for configuring the sensors parameters. These parameters are explained below :-

Description :- The name of the sensor. Use a meaningful name such as "humidity sensor office1"

Go Online/Offline :- This takes the sensor on or offline without unplugging it from the unit

Critical high :- The %age humidity level at which it is critically high



Warning high :- the %age humidity level at which it is high

Warning low :- the %age humidity level at which it is low

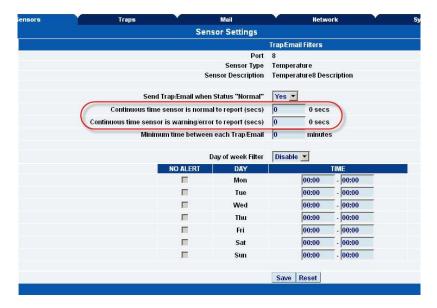
Critical low :- the %age humidity level at which it is critically low

Rearm :- Used to prevent the sensor from flickering between two states. For example if the "High Warning" threshold for the temperature sensor is set to 80 degrees and the sensor were to vary between 79 and 80 you could be faced with a very large number of emails, traps, and events logged. The Rearm parameter prevents this by forcing the temperature to drop by the Rearm before changing the state back to normal. In this example if the Rearm is set to 2 then, the sensor would have to drop from 80 down to 77 before the status would change from that back to normal.

Reading offset :- This will adjust the reading by your offset amount.

In our example we have set the parameters as indicated in the screenshot above. Once you have done this click on "save".

For information on setting up other sensor types please refer to the manual for your specific sensor. This will give you guidance in setting up the parameters specific to your sensor.



Sensor Status Filters: - By clicking on the "Sensors Status Filters" button shown in the image above on page #16, you can then adjust the continuous time the sensor is in a warning, error, or normal state before the unit sends the alerts. This feature was added to eliminate false warnings.

Important Note: Sensor Status Not Changing – If after setting up your sensors and alert thresholds in the sensorProbe units web UI, you don't see the sensor status changing, always check the "Rearm" and the "Offset" settings as these will delay the sensors from changing to the new status thresholds.

Important Note: Our units and sensors are fully SNMP compliant, so they can be integrated into most any third party **NMS** (Network Management System) software. You will need our latest MIB file and also our OID manual for this which both can be downloaded from our support portal using these links:

http://www.akcp.in.th/downloads/Manuals/AKCP%20OID/akcp.mib http://www.akcp.in.th/downloads/Manuals/AKCP%20OID/AKCP%20SNMP%20OID%20Manual.p df



Memory & Downloading Sensor Data

The sensorProbe's hardware has data logger memory where it stores the sensor data.

It can save 8,640 points per sensor. So, if you set your collection time period for 15 minutes you can save up to roughly 3 months of data on the unit. When the memory is full, the oldest data will be overwritten. Please keep in mind the dual temperature/humidity sensor is equal to 2 data points.

There are three ways to download the sensor data from the sensorProbes. The preferred option would be to use our AKCPro Server software which can be downloaded from our website here: https://www.akcp.com/products/akcpro-server/

Please check and review the AKCPro Server product manuals on our support portal for the technical information, including installing and setting up the server software.

The other two options are using the dataCollect or dataDownload utilities. Please send a request to our support team if you would like to use either of these utilities.

Make sure when running these utilities your network firewall is not blocking the port these run on.

The first is called dataDownload, which is a command line program that will download all the sensor readings stored on the sensorProbe. This downloaded data is stored in a text file and can then be easily imported into a spreadsheet program, such as MS Excel.

After running this utility, the data will be stored in a directory called datadownload located on your C: drive of your PC and this will have the data for each port in it.

Or you can use our dataCollect utility that allows you to poll the sensor data directly from a PC on the same LAN as your sensorProbe in real-time.

You can collect an unlimited number of readings and you can collect data from multiple sensorProbes simultaneously.

Summary	Sensors		Traps		Mail		Network	Syste
Auto refresh (sec.) 0 Start				Humidity1	escriptic	on Graph		
	Hum	nidity (%)						
	100							_ 100
	80	-6						<mark>-</mark> 80
	60							100
	60							- 60
	40							_ 40
	20	-						- 20
	0							
	U	3:57 10:12	16:27 22:42	4:57 11:12		23:42 5:57	12:12 18:27	0:42 6:57
		Feb 15 Feb 15 Mon Mon	Feb 15 Feb 15 Mon Mon	Feb 16 Feb 1 Tue Tue	6 Feb 16 Tue	Feb 16 Feb 17 Tue Wed	Feb 17 Feb 17 Wed Wed	Feb 18 Feb 18 Thu Thu
		Wort Wort	WOIT WOIT	106 106	Tue	106 0060	vveu vveu	
					on auto-sca v - Zoom ou			
				Dov	vnload Data	D		
					y1 Descript			
					e high data: je low data:			
				Instantan	eous high d	ata: 62		
					eous low da idity is now:			
				denire Press		NDF03		



Using Remote Syslog to download sensor data

Another way to get and log all the data in real time from the unit is use the remote syslog on the unit.

You can use the remote system log feature to push out the sys log in real time to a remote server, or PC, then this information can be imported into a data base or other program.

There are two types of third party remote syslog utilities that we recommend. One is "rsyslog" and the other "Kiwi" remote syslog.

There is no MS-Windows version of rsyslog and there is no GNU/Linux version of Kiwi.

So, we recommend rsyslog for the GNU/Linux users and the Kiwi for the users of the Microsoft operating systems.

Either can be dlownloaded from these links below:

http://www.rsyslog.com

http://www.kiwisyslog.com/kiwi-syslog-daemon-download/

You can install and open the Kiwi Syslog program and set the UDP in the Input settings like in the screen shot shown below:

Kiwi Syslog Si		anager (Version	8.3.15)					- 8
e Edit <u>V</u> iew								
	🖸 🖸	isplay 00 (Defa	ult) 💌					
	Time	Priority	Hostname			4550		
		Local0.Critical	10.1.1.71					
				Humidity Port 2 is 37 %, s				
		Local0.Critical		4-20mA Port 3 is 20.0 mA 4-20mA Port 3 is 7 7 mArr	85			
-03-2008 09	9:40:49	LocalO.Notice	🖌 Kiwi Syslog I	Daemon Setup				
					UDP		UDP input options	
			M Dir Schedules Formatling Cautom Bie Cautom Bie DNS Cecha DNS CEC	g to file formats formats on o p ge count ge count ge count ge count the monitor	▼ Listen for UDP Syst UDP Port (1 - 65535): Bind to address: Data encoding:	log messaget 514 System T		
		Ē				Help	K Cancel Apply	
		Ja	h h					
				100% 0 MPH				 09-03-200

Now you would set the Remote Syslog in the sensorProbe. The Remote Syslog IP Address is the IP address of the PC that has the Kiwi Remote syslog program running on it. The Remote Syslog Port is the same port on the Remote syslog program.

It should be showing you the syslog in real time and any entry that is logged in the unit, should shown on your server. You can also export the data to a text file.



4) Notifications

1. Setting up a trap

The SP2 / SP8 can send an SNMP trap message to two different hosts. Whenever the status changes for a sensor that is online, a trap message can be sent.

To get to the entry point of this tutorial, complete the following:-

- 1) log into the web interface as administrator
- 2) from summary page select the Traps tab

a) After going to the "traps" tab you can see the two traps ("Trap 1", "Trap 2")

ЛКСР	АКСР	sensorProbe2 v	v 2.0					Admin Log Off
Location: Sys Location						Curre	ent System Time	: 28/9/07 09:33:58
Summary Senso	ors (Traps)	Mail	<u>× </u>	Network		System		Help
		Trap Settings						
		(Trap 1)						
	Send Trap	On 🗸	~					
Traps tab	Destination IP	10.1.2.223						
Trapo tap	Community	public		Trap	1			
	Send Keep Alive Trap	Off 🛩						
	Keep Alive Trap Resend Interval (mins)	5 5 mins						
		Save Reset						
		Trap 2						
	Send Trap	Off 🗸						
	Destination IP	255.255.255.0	- 1	Trap 2				
	Community		-					
		Save Reset						
50 C								
	Resend Warning and Error Traps	On 🛩						
	Resend Interval (secs)	Investor many	re					
		100 1111113, 0 300	ua -					
		Save Reset						
								1
	@2003	3 AKCP Inc. All rights reserve	ved.					

b) The traps have various fields you need to set. These are explained below.

Trap 1	
Send Trap On 👻	-toggle on/off
Destination IP 10.1.2.223	00
Community public	SNMP
Send Keep Alive Trap	
Keep Alive Trap Resend Interval (mins) 5 5 5 mins	settings
Save Reset	
A "heartbeat" message	
that informs the user	
the unit is online	



Send Trap :- toggles whether the SNMP trap is on or off

Destination IP :- The destination IP address that the trap message will be sent too.

Community :- This is the Community of the host that will receive this trap. This is often set to *public*

Send Keep Alive Trap :- Will send a trap message at your preset time interval. This is useful for informing the user as to whether the unit is still online, or for if you require collection of data at regular intervals regardless of the sensors status.

Keep Alive Resend Intervals :- The time interval in which you want the keep alive traps to be sent.

A different trap message is sent for each sensor type such as temperature, humidity, and switch.

The trap messages include 6 var bind fields that include the current sensor status (Normal,

Critical High, Warning High, Critical Low, Warning Low, and sensorError), the current sensor

value, the level exceeded, the sensor index, the sensor name, and the sensor description.

2) Setting up E-mail notifications

As well as, or instead of, using SNMP traps you can also be notified of a sensors change in status by an e-mail report.

To get to the entry point of this tutorial do the following :-

- 1) point your browser to the IP address of your unit
- 2) Log in as administrator
- 3) Click the "Mail" tab from the summary page.

Important Note: office365, TLS and SSL SMTP email servers. We do not support MS office365 on any of our units. This is due to Microsoft frequently changes their security algorithms causing the email alerts on the units to stop working.

The lower cost sensorProbe units also do not support TLS or SSL type SMTP servers, for example gmail, Hotmail etc. Our sensorProbe+ units fully support the TLS and SSL type SMTP servers. You can check the details on these units here: https://www.akcp.com/products/sensorprobe-plus/

The sensorProbe base units do support email alerts sent via Microsoft Exchange Server. However, the sensorProbe's only support basic authentication. MS Exchange by default, when a connecter is set up uses TLS, then basic. You have to uncheck this option on your Exchange server for the email alerts to be sent via MS Exchange Server.

Important Note: Problems Sending Email Alerts. Here below is a checklist when having issues sending email alerts from the sensorProbe units.

Try changing your SMTP server from the domain name to the IP address of the server. The SMTP server domain or IP is entered is incorrectly. *(continued on next page)*



The send mail option is not enabled in the Mail settings page.

The timeout period entered is too low.

The gateway IP is not entered, or is incorrect in the network page.

The mail from address is not set.

The mail server is not responding. Try to ping it.

The mail from address is not validated in the mail server. Check your server settings.

The mail server settings prohibit it from accepting connections form the device IP

The mail server is an SSL type, which is not supported by the sensorProbe units.

To setup the email alerts, first click on the "mail" tab and this brings you to a new page. From here you can setup the various e-mail parameters.

Admin Log Off AKCP sensorProbe2 v 2.0
Current System Time: 1/10/07 05:08:25
Mail Network System Help
Mail Settings
Send Mail Off
IP Server
MTP Port 25
plication Disable 🖌
gin Name
tassword
il Subject
Timeout 15 seconds
Its (secs) 60 1 mins, 0 secs Email
live Equal On V
/al (mins) 65535
Silve Reset
Email Address Configuration
Mail From
Recipient
Mail Cc1
Mail Cc2
Mail Cc3
Mail Cc4
Mail Cc5
Save Reset
Mail Status
cent Mail No Status
Message
Test Mail

You can now set up the individual Email options from the fields shown below.

	Mail Settings
Send Mail	Off 🗸
SMTP Server	
SMTP Port	25
SMTP Authentication	Disable 🗸
SMTP Server Login Name	
SMTP Server Password	
Email Subject	
Timeout	15 seconds
Resend Intervals (secs)	60 1 mins, 0 secs
Maximum Times to Resend	⊙ 0 O Unlimited
Send Keep Alive Email	On 💌
Keep Alive Email Resend Interval (mins)	65535
	Save Reset

Send Mail :- This toggles whether the send Email option is on or off.

SMTP Server :- The address of your SMTP server

SMTP Authentication :- check this option if your SMTP server requires authentication

SMTP Server Login Name :- The user name to login to your SMTP server

SMTP Server Password :- The password used to login to your SMPT server

E-mail subject :- The subject you wish to have for the e-mail. Eg. "sensorProbe notification"

Timeout :- You can increase the timeout for SMTP servers that have poor connectivity. It is best to leave this number as low as possible while still allowing for communication with the SMTP server to continue.

Resend Intervals :- The time between which the e-mails will be sent

Maximum Times To Resend :- Set the number of times you wish for the notification e-mails to be resent.

Send Keep Alive Email :- This option will tell the unit to send a heartbeat e-mail. This is useful to tell if the unit is still online or not. It is also used when you require collection of data at regular intervals.

Keep Alive Email Resend Interval :- The amount of time between which the keep alive emails are sent.

After setting your parameters click the save button.

Below this you will see there is anther section. This is for configuring who the e-mails are to be sent too.

Email Address Configuration					
Mail From					
Mail Recipient					
Mail Cc1					
Mail Cc2					
Mail Cc3					
Mail Cc4					
Mail Cc5					
	Save Reset				

Mail From :- The email address which you would like the e-mail to appear from. Due to anti-spam features of some SMTP servers this address must be authorized on the SMTP server otherwise the server may deny the email.

Mail Recipient :- The email address of the person you wish for the email to be sent to.

Mail Cc1-5 :- Up to five additional e-mail addresses may be added.

When you have filled in your required fields remember to click "Save".



At the bottom of the page you have two further options.

Mail Status				
Status of most recent Mail	No Status			
Last Error Message				
	Test Mail			

Status of most recent Mail :- This can be either "No Status" "Success" or "Failure"

Last Error Message :- This is a debugging aid. If the email is not successfully sent, you may find the reason for the problem here.

Test Email :- Useful when you first set up the SMTP settings to ensure they are working, or anytime thereafter. Before a test mail can be generated ensure the previous fields described have been completed.

Important Note:

If you are still having problems connecting to your SMTP email server, then please check the additional trouble shooting tips in the FAQ section #7 at the end of this manual.

5) System settings

Network settings

The networks settings page allows you to change network settings for your unit such as the IP address etc.

To get to the entry point of this tutorial complete the following :-

- 1) Point your web browser to the IP address of your unit
- 2) Log in as administrator
- 3) From the settings page, select the network tab.

Important Note:

You can change your default HTTP port on the unit is using via this SNMP set command:

snmpset -m all -v1 -c <community> <ipaddress> .1.3.6.1.4.1.3854.1.2.2.1.91.0 u <port>

You can still use port 80 for web access as well.



After clicking the "Network" tab you will be taken to this page :-

АКСР		AKCB	sensorProbe2 v	2.0		Admin Log Off
MACP		ANGP	SelisorFlobez v	2.0		
Location: Sys Location						Current System Time: 1/10/07 07:11:48
Summery	Sensors	Traps	Meil	(Network	System	Help
			Network Settings			
		IP Address	10.1.1.178			
		Subnet Maşk	255.255.0.0	Net	twork tab	
		Default Gateway	10.1.1.2	-\		
		Domain Name Server	192.168.0.1			
	Network settings	Use DHCP	Do Not Use DHCP 😽			
	Network settings	Ethernet MACID	00-0B-DC-00-59-5B	1		
		Ethernet Duplex Mode	10 Mbps Half Duplex /			
			Save Reset			
		Sys	stem Date & Time Settings			
		RTC Battery Status	Good			
		Time Zone	(GMT-05:00, DST observe	ed) Eastern Time (US & Ca	nada)	~
		Date and Time Settings	[(dd/mm/yy hh:mm:ss ex.	01/10/07 07:11:47)	
		Use NTP	One-time 🛩			
		NTP Server 1				
		NTP Server 2				
			Save Reset			
			AKCD Inc. All sights			
		@2003	AKCP Inc. All rights reserve	90.		

Once on this page you can setup the network settings as indicated below :-

Network Settings					
IP Address	10.1.1.178				
Subnet Mask	255.255.0.0				
Default Gateway	10.1.1.2				
Domain Name Server	192.168.0.1				
Use DHCP	Do Not Use DHCP 🗸				
Ethernet MAC ID	00-0B-DC-00-59-5B				
Ethernet Duplex Mode	10 Mbps Half Duplex				
	Save Reset				

IP Address :- Use this to change the IP address of your unit

Subnet Mask :- Use this to assign the subnet mask of your unit

Default Gateway :- Assign the default gateway of your device

Domain Name Server :- IP address of your DNS. Used if you wish to use a DNS address for your unit instead of accessing via the IP address.

Use DHCP :- The unit can use DHCP to assign its IP address, or it can use a statically assigned IP address. To use DHCP choose "Use DHCP" from the list box and press set. To stop using DHCP choose "Do Not Use DHCP" from the list box and press set. Statically assigning an IP address also turns off DHCP. You can force the SP2 / SP4 / SP8 to voluntarily give up its IP lease and request a new IP lease by choosing Use DHCP from the list box and pressing "set".



Ethernet MAC ID :- This is the MAC address of your unit. This is a read only field

Ethernet Duplex Mode :- The duplex mode and speed of your unit. This is a read only field also.

Ensure you apply your new settings by clicking on the "save" button.

Below this, there are some further settings for the time and date.

Sys	tem Date & Time Settings
RTC Battery Status	Good
Time Zone	(GMT-05:00, DST observed) Eastern Time (US & Canada)
Date and Time Settings	(dd/mm/yy hh:mm:ss ex. 01/10/07 07:11:47)
Use NTP	One-time 🗸
NTP Server 1	
NTP Server 2	
	Save Reset

RTC Battery Status :- This field displays the status of the Real Time Clock battery on the unit. If the status displays "Bad", you must replace the battery; otherwise, when the SP2, SP4 or SP8 do not have mains power, the clock will stop running. Therefore, you must re-configure the system time settings on every reboot.

Date and Time Settings :- Enter the new date and time in this field. The date and time use the following format : date/month/year (dd/mm/yy) and hour:minute:second (hh:mm:ss)

Time Zone :- Select time zone that is corresponding to your location from this list box.

Use NTP :- An NTP (Network Time Protocol) is used to synch your units clock over a network. There are many options in this list box. The details for each one are as follows:

- **Do Not Use NTP** select this option to turn off the time synchronization feature.
- One Time the time is synchronized once the Save button is pressed.
- On System Start Up the time is synchronized once the cameraProbe8 is turned on or reboot.
- Once a Month/Week/Day/Hour the time is automatically synchronized every month, week, day, or an hour, respectively.

NTP Server 1 and 2 :- Set the IP address of the NTP servers to be used. The NTP will synchronize the time with the server that has less number of the stratum.



2) System tab

From the systems tab you can input various settings for the unit. These settings are mostly optional.

To get to the entry point of this tutorial complete the following :-

- 1) Point your browser to the units IP address
- 2) Log in as administrator using your admin password
- 3) From the summary page click on the "System" tab

Important Note: The AKCP sensorProbe units are shipped with the system passwords disabled, so we strongly suggest you always enable password checking and change the default Administrator passwords and or the SNMP communities. The default Admin password / SNMP write community is public.

When you arrive at the settings page you will see the following screen :-

<u> АКСР</u>		АКСР	sensorProbe2 v	2.0		Admin Log Off
Location: Sys Location					Current Sy	stem Time: 2/10/07 01:25:51
Summary	Sensors	Traps	Mail	Network	System	Help
		(System Settings			
		System Description		79 310807	\	
Sucto	em settings	System Name	Sys Name			
Syste	en seungs	System Location			System tal	b
		System Contact	Sys Contact			
		Data Collection Period	,			
		Display Logo	On 🗸			
		Send Email/Trap on boot up	Off 🗠			
		Delay Time for Email/Trap on boot up	,			
			Save Reset			
			Password Settings			
		Use Password	off 🗸	Decen	ord	
		New User Password		Passw		
		Confirm New User Password		setting	S	
		New Admin Password		_		
		Confirm New Admin Password				
			Save Reset			
			SNMP	1		
	SNMP	SNMP Port	Reset To Default			
	_	SNMP Trap Port	Reset To Default			
		Clear Syslog	Syslog			
		Remote Syslog		Syslog		
		Remote Syslog IP Address	192.168.0.1	- , ,		
		Remote Syslog Port	Save Reset			
			Save Keset			
		©2003	AKCP Inc. All rights reserve	ed.		



The first section is entitled "System Settings"

	System Settings		
System Description	sensorProbe2 v 2.0 SP2379 310807		
System Name	Sys Name		
System Location	Sys Location		
System Contact	Sys Contact		
Data Collection Period	1 minutes		
Display Logo	On 🗸		
Send Email/Trap on boot up	Off 🗸		
Delay Time for Email/Trap on boot up	0 sec		
	Save Reset		

System Description :- This is an MIB II value set when the microcode for the unit was installed. It includes the build time and version of the microcode. This is a read only field.

System Name / Location / Contact :- These are used to identify the system. They are accessed via standard SNMP utilities. The SNMP utilities use these to get information about the unit.

Data Collection Period :- This controls how often data is collected for use in the graph function.

Display Logo : Turn off displaying the logo by using this option. This option can be turned off to allow the web pages to be loaded faster.

Send Email / Trap on boot up :- Use this option to send an Email and SNMP trap each time the system boots up.

Delay Time for Email / Trap on boot up :- The time in seconds to delay before sending the boot up Email or trap.

Remember to click the "Save" button after making any changes.

The next section is used for setting a user password, or changing the admin password.

SP2/SP4/SP8/SP8-X20 Manual



: ACKP Bangkok Offi								System Time: 23/7/1
Summary	* Sensors	* Traps		Mail	Netwo	rk	System	Hel
				System Settings				
			Description			-		
		-	stem Name	AKCP sensorProbe2 Online	Demo Unit			_
			m Location	ACKP Bangkok Office			he lack of the	
			em Contact				rmware version	
			tion Period				This determine	1. The second
			isplay Logo	Off 🗾			this unit has th	ne 🛛
		Send Email/Tra		On Warning/Error 🗾			der mega128	
		Delay Time for Email/Trap	on boot up			m	emeory chip.	
				Save Reset				
				Password Settings	_			
		Passwo	d checking		Т	he User we	b interface log	nin
				Save Reset			the same as t	
			S	NMP Community Settings			unity and the	
		New SNMP get	Community				the SNMPset	
		Confirm New SNMP get	Community	🖤 🔜 🣥 community string. This the default				
		New SNMP set	Community					
		Confirm New SNMP set	Community					
				Save Reset	You	set the we	b log in passw	ords
				SNMP			NMP Commu	
		SNM	P Trap Port	Reset To Default	100 M	Settings, b	y enabling the	
				Syslog	"Pa	ssword che	cking here. O	n the
		C	lear Syslog	Clear	nev	ver SP2's (r	nega256 chip)	you
		Rer	note Syslog	Off 💌			ate login pass	
		Remote Syslog	IP Address	10.10.10.162	fro		P communitie	sas
		Remote	Syslog Port	161		explain	ned above.	
				Save Reset		1004		

Depending on which version of sensorProbe2 you have your System page may appear different. The sensorProbe2 units that were shipped prior to October of 2009 have the older memory mega128 chip. If this is the case your screen will appear like the screen shot shows above. This System page will also show in the sensorProbe8 interface on units shipped prior to July 1st 2011.

Important Note: The sensorProbe4 units all use the AT-Mega256 memory.

Note: To allow the User to login without having to enter a password use "public" in the SNMP get.

The User web interface login password is the same as the SNMPget community and the Admin is the same as the SNMPset\get community string. You set your web interface login passwords in the SNMP community settings by enabling the "Password checking" above then entering your passwords into these fields.

Admin Password Problems - If you are experiencing an issue where you are getting logged out of the web UI, then cannot log back in please try the following.

Send the request to support for the master log in password along with the MAC ID of your unit and use this to log back into the units web UI.

When you have the "use the same password for web interface and SNMP" enabled (YES). Then if you want to change the Admin password you would change this in the SNMPset community as this will also be used for the Admin log in password if this is set to YES.



Therefore, it is the SNMP set community password that is used for administrator log in. To use a different password than the SNMP community, you would need to change the below parameter to NO as shown in the screen shot below.

Sensors Traps	Mail	Network	System
	System Settings		
System Description	sensorProbe8 v2.0 SP847	6 141118	
System Name	Sys Name		
System Location	Sys Location		
System Contact	Sys Contact		
Data Collection Period	5 minutes		
Display Logo	On 🔻		
Send Email/Trap on boot up	Off v		
Delay Time for Email/Trap on boot up	0 sec		
	Save Reset		
	Password Settings		
Password checking	Enable V		
Use the same password for web interface and SNMP	No 🔻		
	Save Reset		
SN	MP Community Settings		
New SNMP get Community			
Confirm New SNMP aet Community			

АКСР АКСР	sensor P robe2	v 2.0				Adm	in Log Off
Location: AKCP 7th Floor					Current Sys	tem Time: 22/8/10	14:44:37
Summary Sensors Traps	Mail	M	Network	Syste	m	Help	
	System Settings						
System Description	sensorProbe2 v 2.	2413j 1061	0				
System Name	Scotts Test Lab SP2						
System Location	AKCP 7th Floor						
System Contact	Scott Farnum						
Data Collection Period	15 minutes						
Display Logo	On 💌		Note the j	on the end of			
Send Email/Trap on boot up	Off 🗾		the firmwa	are version.			
Delay Time for Email/Trap on boot up	0 sec		This confi	rms that the			
	Save Reset		unit has	the newer			
	Password Settings		mega256 r	nemory chip	1		
Password checking	Enable 💌						
Use the same password for web interface and SNMP	Yes 💌						
	Save Reset		-		-		
s	NMP Community Settings	8	The SP2 u	ith the newer			
New SNMP get Community				memory chip			
Confirm New SNMP get Community				u to separate			
New SNMP set Community				communities			
Confirm New SNMP set Community				veb interface			
	Save Reset			asswords			
Web	Interface Password Sett	ings	loginp	03500103			
New User Password							
Confirm New User Password							
New Admin Password							
Confirm New Admin Password							
	Save Reset						
	Syslog						
Clear Syslog	Clear						
Remote Syslog	Off 💌						
Remote Syslog IP Address	192.168.0.1						
Remote Syslog Port	514						
	Save Reset						

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Note the j on the end of the firmware version above. Or there will be no letter on the end of the firmware version. This confirms that the unit has the newer AT-mega256 memory chip. The SP2 / SP4 / SP8 with the newer AT-mega256 memory chip allows you to separate the SNMP communities from the web interface login passwords

Password Checking: Toggle whether the password is required or not.

Important Note: Change your SNMP communities and enable password checking - AKCP strongly recommends you change the SNMP communities on the sensorProbe units from the default to ensure security.

Use the same password for the web interface and SNMP: Ties the SNMP communities to the web interface login passwords.

New User Password :- Type in the password for the user account **Note:** To allow the User to login without having to enter a password use "public" in the User password.

Confirm New User Password :- Confirm the new password for the user account New Admin Password :- Type in the password you wish for the admin account Confirm New Admin Password :- Confirm the new password for the admin account

Next you have the options for resetting the SNMP trap settings

SNMP				
SNMP Port	Reset To Default			
SNMP Trap Port	Reset To Default			

SNMP Port :- Use this option to reset the SNMP port setting to its default

SNMP Trap Port :- Use this option to reset the SNMP Trap Port to its default setting

Important Note:

Your SNMP port default is 161 and the SNMP TRAP port default is 162. You can set your SNMP ports with the following commands:

snmpset -m all -v 1 -c <community> <ipaddress> .1.3.6.1.4.1.3854.1.2.2.1.99.0 u <new snmp port>

snmpset -m all -v 1 c <community> <ipaddress> .1.3.6.1.4.1.3854.1.2.2.1.100.0 u <new snmp trap port>



System Log Parameters

Finally you have the option for setting up the system log parameters.

Syslog			
Clear Syslog	Clear		
Remote Syslog	Off 🗸		
Remote Syslog IP Address	192.168.0.1		
Remote Syslog Port	514		
	Save Reset		

Clear Syslog :- Used to clear the system log of the messages for the unit

Remote Syslog :- You can set up the unit to send its syslog message in a standard format acceptable to a remote syslog server. For example, the Logalot system from Somix.

Remote Syslog IP Address, Remote Syslog Port :- You can set the IP address and port of the remote syslog server to which the unit will send the log messages.

Important Note:

One way to export your sensor data in real time to a remote location is with the "Remote Syslog" feature. If you want to use the "Remote Syslog" feature for this, please find more detailed information on how to set this up in the FAQ section #7 at the end of this manual.

6) Making your unit visible to the internet

So far the manual has simply covered the basic set up. The setup we have just created will allow you to access your unit on a Local Area Network (LAN). We have setup SNMP traps so that your SNMP software, such as Whatsup Gold, or HP Openview can collate information from your unit.

However, what if you wish to be able to remotely access your unit from anywhere in the world? This is possible; however, the following steps are only an outline guide. Your exact setup and configuration will often depend on your network equipment and setup. You are going to need access to your router, if you are using one and knowledge of whether your IP address is static or dynamic.

Simple setup

a) Lets imagine that your unit is connected to a router on your network, and the following IP addresses are assigned.

Your units IP address is the default 192.168.0.100.

Your computers IP address is 192.168.0.200

Your routers IP address is 192.168.0.300

b) To find out your routers external IP address go to www.whatsmyip.com



Lets imagine your routers external IP address is 278.67.04.09

c) You now need to setup port forwarding on your router. This varies depdning on your routers model. Generaly you need to point your browser to your routers IP address (in this case 192.168.0.300). This will then allow you to log into your routers administration interface. You can find how to go about doing this for your router on <u>www.portforward.com</u> For an example of how to do this for a commonly used router follow this link :-

http://www.portforward.com/english/routers/port_forwarding/Linksys/WRT54G/HTTP.htm

You need to setup your routers HTTP forwarding to port 80. This will then mean when you access your router using the external IP address you will be forwarded to your units internal IP address.

d) To test this, open your web browser, and go to your external IP address (in our example 278.67.04.09). If your using a dynamic IP address, its best to check it again before doing this as it may have changed since the start of this tutorial.

e) To make this easier you could use a dynamic DNS (Dynamic Name Server). This means you no longer need to remember IP address's or use <u>www.whatsmyip.com</u> to find out your IP address. You will instead register a domain name (for example <u>mysensorProbe2.homeip.com</u>). This will then automatically point your routers external IP address (e.g. 278.67.04.09). This will require you to register the domain name and open an account with a DNS server provider. We recommend <u>www.dyndns.com</u> as they allow up to 5 free domain names to be registered.

f) If you have set everything up correctly you will now be able to access your unit from anywhere in the world by simply pointing your web browser to your DNS address.

Setting up your PC's routing table

*To set up the routing table, open a DOS window (start, run type *command* press enter) and at the command prompt enter.

>route add 192.168.0.100 10.1.1.20

Where 10.1.1.20 is the IP address of the Ethernet interface on the PC that the unit is plugged into with the crossover cable.

Now ping* 192.168.0.100 to see if the connection was successful.

7. Quick Facts and FAQ:

Question:

How does the SP2 and SP8 record the sensor data and how much can it store?

Answer:

The sensorProbe2 will record and store the changes for the dry contacts and sensors as the units hardware has a data logger where it stores this data in memory. It can save 8,640 points per sensor. So, if you set your collection time period for 15 minutes for example, then you can save data up to 3 months on the unit.

Question:

Can you please tell how often the sensorProbe unit interrogates each sensor to obtain the sensor's readings?

Answer:

This really depends on the sensor type that you have connected to the unit. The switch type sensor interrogates with the sensorProbes more than 2 times per second. The temperature and analog type sensors interrogate 1 time per second.



But all of the readings depend on the environment like the number of sensors you have online and your email and SNMP trap alert settings.

Question:

Is there a way to reboot the sensorProbe unit's web interface remotely?

Answer:

Yes, you can reboot the unit's web interface remotely using this SNMP command and OID here: snmpset -m all -v 1 -c <community> <IPaddress> .1.3.6.1.4.1.3854.1.2.2.1.106.0 i 1

Question:

Is there any way to edit the content of the email alerts that are sent out from my sensorProbe unit?

Answer:

Yes, we have have added a separate e-mail notification function. You can set this by using the following SNMP command:

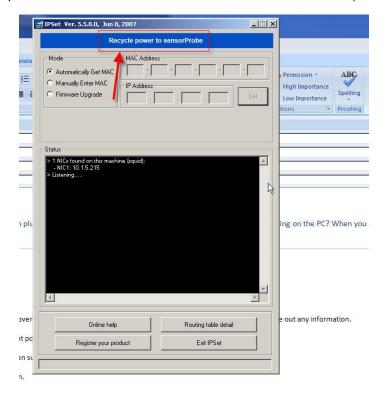
snmpset -m all -v 1 -c <community> <ip address> .1.3.6.1.4.1.3854.1.2.2.1.112.0 I <separate> When <community> is admin password <ip address> is ip address of the unit <separate> is for the separate e-mails or not if this value is 1 it will have the separate e-mails if this value is 0 it will not have the separate e-mails.

Question:

I have forgotten the IP address that my sensorProbe is configured with. Is there a way I can determine this IP?

Answer:

Yes, you can unplug the power cord, then plug it back in, to cycle the power on the sensorProbe while you have the IPSet utility software running on your PC. When you open the IPSet utility, it will say "Recycle power to sensorProbe" as shown in this screen shot below):





When the sensorProbe is powered up, the IPSet will capture its IP address, then you will be able to click on the flashing button to open the web interface. You can download the IPSet utility by logging into the AKCP web site with you units MAC ID.

Question:

Is there a way to reset my unit back to the factory default settings?

Answer:

Yes, you can reset the unit back to the factory default settings using our utility called "configure". You can download this from our web site. when you reset the unit, please do this with it directly connected to your PC with the cross connect cable. If you get the unit reset, please run the latest firmware update as well with the utility. You can download this from the same link above.

Question:

I am still having trouble connecting to the unit and opening the web interface, what could be the problem and what should I try?

Answer:

Try clearing the cache and refreshing your browser with the ctrl + F5 key. Are you using HTTPS? The sensorProbes, nor IPSet do not support HTTPS. This only available on the sensorProbe+ units. Make sure your unit is configured with the same network subnet as the PC/laptop.

Question:

I have assigned the gateway IP, and when I click Save, it reverts back to the default IP?

Answer:

This happens when the device is not able to find the IP entered. When the IP is entered the device searches for the IP and will accept it if it is found, or else it will revert back to the default IP.

Question:

I have an alert condition from one of my sensors attached to my sensorProbe unit, in that the base unit (SP8) started to send e-mail alerts. Before I was able to fix the problem, my SMTP server was clogged with several hundreds of messages waiting in the outbound queue to be sent. Is there a way to add a parameter to the base units web interface that defines the interval between successive e-mail alerts in order to limit the rate at which these alerts are being sent and keep the SMTP server operational?

Answer:

Yes, we have the "Minimum time between each Trap/Email" feature in the Sensor Settings > Sensor Status Filters button. This feature can limit the traps and e-mails that the unit will send. A similar parameter also exists on the sensorProbe's web interface called "Resend Intervals (secs)" and another one called "Maximum Times to Resend" which will also limit the alerts being sent.

Question:

I am having trouble connecting the sensorProbe to my SMTP email server, what could be the problem?

Answer:

Here is some things to check when having trouble with SMTP server connections and saving your settings.

Try changing your SMTP server from the name to the IP address of the server. The SMTP server is entered is wrong.

The send mail option is not enabled in the Mail settings page.



The timeout period entered is too low. The gateway IP is not entered in the network page The mail from address is not set The mail server is not responding The mail from address is not validated in the mail server The mail server settings prohibit it from accepting connections form the device IP The mail server is an SSL type, which is not supported by the sensorProbe units.

Question:

I am using Microsoft Exchange Server, but the Exchange server fails to receive the email alerts from my sensorProbe unit, does my sensorProbe support MS Exchange Server?

<u>Answer:</u>

Yes, the units do support MS Exchange Server. However, the sensorProbe's only support basic authentication. MS Exchange by default, when a connecter is set up uses TLS, then basic. You have to uncheck this option.

Question:

Is there a way to download my sensor data, or push this out in real time to my PC?

Answer:

Yes, you have several options for collecting, downloading and storing the data from the sensorProbe units. See the section in this manual that covers this.

You can graph each sensors output readings and then download that data as a text file, so you can import it into say an Excel spreadsheet. We always recommend using our AKCPro Server for storing the sensor data from our base units.

We also have the two utilities that allow you to download the sensor data. The first is called dataDownload, which is a command line program that will download all the sensor readings stored on the sensorProbe. This data is then stored in a text file and can then be easily imported into a spreadsheet program, such as MS Excel.

Or you can use our dataCollect utility that allows you to poll the sensor data directly from a PC on the same LAN as your sensorProbe in real-time. You can collect an unlimited number of readings and you can collect data from multiple sensorProbe's simultaneously.

Question:

I am not too familiar with SNMP or what OID's to use with your products. How would I find out more about this and what OID's to use?

Answer:

We have an OID manual that includes basic information on SNMP and were to find out more information on this. The manual also includes all our OID's and related information. You can download our MIB and OID manual from these links:

Click here for the MIB file. (Last update: 6 July 2017) Click here for the latest AKCP OID Manual (for all units)

Please contact <u>support@akcp.com</u> if you have any further technical questions or problems.

Thanks for Choosing AKCP!