

AS300 ALARM & MONITORING SYSTEM

Monitor and Protect Irreplaceable Samples / Valuable Assets



SIMPLE INSTALLATION

It's easy to install the AS300 system. Fit the temperature probes into the equipment from the AS200TX transmitters and set required alarm values. Then program the settings into the AS300RX from a mobile phone. No phone line or line rental is required as the system uses a mobile network of your choice.

MULTIPLE SITES

Multiple linked sites can be alarmed and monitored across the country as the system uses a GSM network. There's no limit to distance or location.



SETUP AND CHANGE SETTINGS FROM A MOBILE PHONE ON AS300RX RECEIVER, ALL PASSWORD PROTECTED.

- Including
 - ◆ Contact Telephone Numbers, Two Telephone numbers allocated to each AS200TX Transmitter.
 - ◆ Outgoing Message.

ACKNOWLEDGE ALARM FROM A MOBILE PHONE

- Including
 - ◆ Alarm text must be acknowledged from mobile phone, if no acknowledgement is received the AS300RX will repeatedly call every 60 minutes until acknowledged.
 - ◆ Once acknowledged, recipient's who have received an alarm text will be sent a message giving telephone details of the acknowledger.

QUERY UNIT FROM A MOBILE PHONE

- Including
 - ◆ Alarm Status of AS200TX Transmitters.
 - ◆ Real Time Values of Input 1, 2 & 3 and Power.
 - ◆ Contact Telephone Numbers and Alarm Log.
 - ◆ Network Signal Strength.

INPUT DATA & ALARM LOG SENT TO WEB SERVER

- Including
 - ◆ Data logged from the AS200TX transmitter can be sent to the web.
 - ◆ Alarm log of input alarms and telephone calls made in the event of an alarm. (Note this feature is an option)

Make an informed decision on what action to take based on instant readings from the equipment monitored. This can be sent at any time to your mobile telephone. This is particularly useful if an alarm occurs when the person is on call or out of the workplace. With no need for a dedicated telephone line or line rental the AS300RX is exceptionally easy to install.



Web Data Analysis & Alarm Log



Mobile Phone



AS300RX



AS200TX



Asper Systems Ltd
Laboratory Alarm & Monitoring Systems

www. : www.asper.co.uk

sales@asper.co.uk

Features

The AS300 system is a new generation of monitoring and alarm systems using the Global System for Mobile Communications (GSM) and wireless technology. The monitoring and data logging system allows laboratory and hospital equipment to be protected. The system ensures the safety and continued effectiveness of medicine produce, blood products and samples at specific refrigeration and freezer temperatures. Due to the high value of many of these goods, Quality Assurance programs increasingly require that storage temperatures are to be verified several times per day and that records be maintained. The AS300 System will meet the alarm, monitoring and logging requirements.

Make an informed decision on what action to take based on instant readings from the equipment monitored. This can be sent at any time to your mobile telephone. This is particularly useful if an alarm occurs when the person is on call or out of the workplace. With no need for a dedicated telephone line or line rental the AS300RX is exceptionally easy to install.

AS300RX Receiver

The AS300RX receiver will accept up to ten AS200TX transmitters, more receivers can be added to the system up to a maximum of nine, allowing alarm and monitoring of ninety pieces of equipment on one system. Additional systems can be added if the requirement is greater than ninety pieces of equipment. The AS300RX receivers uses the GSM network for communications, this allows the receivers to be located anywhere a network signal is present. This is particularly useful if customers equipment is distributed on several sites or different parts of the country. The distance between the AS300RX receiver and AS200TX transmitter is 300m, this distance will be greater or less, dependant on the building the equipment is installed in.

Two telephone numbers can be allocated in the AS300RX for each AS200TX transmitter on the system, this allows the person who is responsible for the equipment to be contacted immediately in case of an alarm.

- Compact size. 170H x 85W x 35W (mm)
- Simple to use.
- 10 Transmitter channels, one transmitter per channel.
- Additional receivers can be added to expand system up to 90, AS200TX.
- Four menus available giving information on the system.
- Last 10 alarms stored.
- All alarms are time and date stamped.
- Acknowledged by mobile phone.
- Up to two telephone numbers can be allocated per AS200TX transmitter.



AS200TX Transmitter

The AS200TX transmitters will in the event of equipment failure, alarm and send data to the AS300RX receiver. The AS200TX transmitter will also display the alarm input and an audible alarm will be activated. The AS300RX receiver will display the unit number and input of the activated transmitter. The alarm menu in the receiver will log the alarm time and date stamp it. Up to two telephone numbers will be texted giving details of the transmitter alarming and current temperature. The AS300RX receiver can be texted at any time to get details of current values in the AS200TX transmitter.

Up to three inputs are available on the transmitter. A common configuration would be to use input 1 to monitor the air temperature of the equipment, input 2 to monitor the sample temperature and input 3 to monitor the door open / closed condition. This configuration of the inputs will give maximum protection. All data will be recorded if web logging is employed on the system.



- Compact size. 110H x 65W x 27D (mm)
- Simple to use.
- Inputs available : Temperature, and Volt Free Contact.
- Temperature range -200°C to $+100^{\circ}\text{C}$.
- Temperature transmitter resolution 0.1°C .
- Temperature transmitter accuracy better than 0.1°C across the full range.
- Front panel display of I/P1, temperature, time delay, unit number ID and alarm parameters.
- Temperature high and low alarms.
- Audible and visual indication of an alarm.
- Adjustable time delay for temperature alarm. (0 to 90 minutes)
- Mains power failure alarm.
- Alarm information sent to the receiver AS300RX, giving details of transmitter unit and fault.
- Status and alarm indication on transmitter.
- Temperature, high & low alarms and delay time data transmitted every 15 minutes. This increases to every 10 minutes when in alarm..
- System self test.
- Rechargeable battery backup.
- Easy calibration procedure / Auto calibration reminder customer set. Settings ; None, 6 months or 1 year.
- Designed bracket for easy installation and positioning.



Data Logging & Alarm Log for the AS300RX Receiver

The AS300RX can log data which can be sent to a server, this data can be down loaded to a computer and stored. The data collected can be analysed using our data analysis software. The data interval stored will be every 15 minutes this is the interval that the AS200TX transmits its data to the AS300RX receiver. An alarm log is also kept giving details of all telephone calls to contact and acknowledgement personal, which are time and date stamped.

Datadump

Managing your remote data

Login

Username:

Password:

Login

Datadump

Managing your remote data

Received	Device ID#	Ident File No.	Serial	Alarm Message	Firmware
2010-12-30 13:25:24	35762002254454	588 8784 2016257	1000	Gas Square ULT	2683U19194
2010-12-12 12:48:21	35762002254454	588 8784 2016257	1000	CBM Alarm and Monitoring System	2683U19194
2010-12-11 12:48:28	35762002254454	588 8784 2016257	1000	CBM Alarm and Monitoring System	2683U19194
2010-12-10 12:48:28	35762002254454	588 8784 2016257	1000	CBM Alarm and Monitoring System	2683U19194
2010-12-09 12:48:28	35762002254454	588 8784 2016257	1000	CBM Alarm and Monitoring System	2683U19194
2010-12-08 12:48:54	35762002254454	588 8784 2016257	1000	CBM Alarm and Monitoring System	2683U19194
2010-12-07 10:43:47	35762002254454	588 8784 2016257	1000	CBM Alarm and Monitoring System	2683U19194
2010-12-06 18:43:08	35762002254454	588 8784 2016257	1000	CBM Alarm and Monitoring System	2683U19194
2010-12-05 10:43:18	35762002254454	588 8784 2016257	1000	CBM Alarm and Monitoring System	2683U19194
2010-12-04 10:43:43	35762002254454	588 8784 2016257	1000	CBM Alarm and Monitoring System	2683U19194

PDF selected files and download

Download Here (File Control)

Data Dump

Data from the AS300RX will be sent to the server once every 24 hours. The data can also be sent on demand by the user. To access the data a username and password is required. The data is organised into zip files and can be downloaded to the customers computer.

AS300 Alarm and Monitoring Data Analysis - [10/11/2010 to 16/11/2010]

File Edit Reporting Window Help

Serial Number: 0

First Reading: 10/11/2010 13:46:42

Last Reading: 16/11/2010 15:29:43

No. of Readings: 167

Probe 1

Max Temp (°C): 21.6

Min Temp (°C): 11.1

Average Temp (°C): 16.1

Probe 2

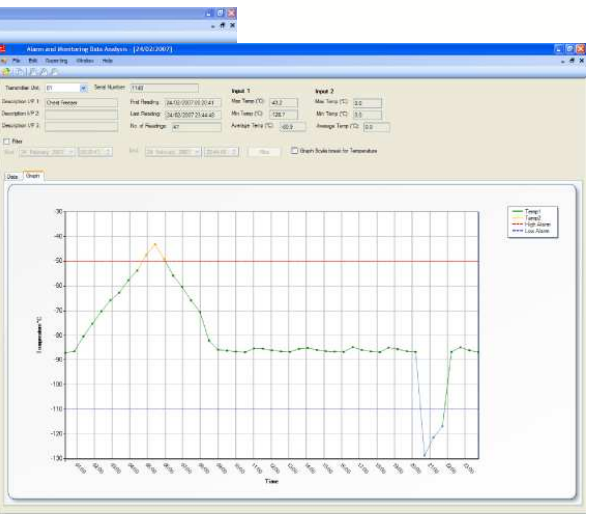
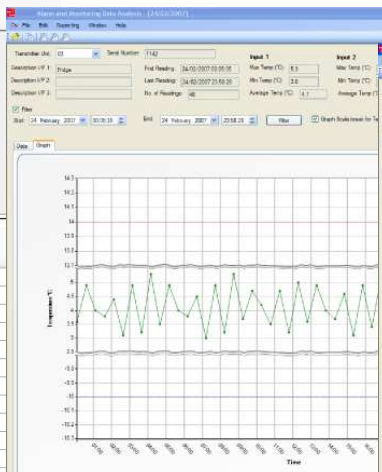
Max Temp (°C): 21.7

Min Temp (°C): 11.1

Average Temp (°C): 16.0

Start: 10 November 2010 13:46:42 End: 16 November 2010 15:29:43

Time	Probe 1 Actual Temp (°C)	Probe 1 Upper Limit (°C)	Probe 1 Lower Limit (°C)	Probe 1 Time Delay	Probe 2 Actual Temp (°C)	Probe 2 Upper Limit (°C)	Probe 2 Lower Limit (°C)
10/11/2010 13:46:42	15.2	28.0	-199.0	1	14.9	99.0	-199.0
10/11/2010 14:47:05	15.9	28.0	-199.0	1	15.7	99.0	-199.0
10/11/2010 15:47:28	15.3	28.0	-199.0	1	15.0	99.0	-199.0
10/11/2010 16:47:52	14.8	28.0	-199.0	1	14.6	99.0	-199.0
10/11/2010 17:48:15	14.4	28.0	-199.0	1	14.4	99.0	-199.0
10/11/2010 18:48:39	13.8	28.0	-199.0	1	13.9	99.0	-199.0
10/11/2010 19:49:02	13.3	28.0	-199.0	1	13.4	99.0	-199.0
10/11/2010 20:49:26	12.7	28.0	-199.0	1	12.7	99.0	-199.0
10/11/2010 21:49:49	12.5	28.0	-199.0	1	12.4	99.0	-199.0
10/11/2010 22:50:13	12.2	28.0	-199.0	1	12.2	99.0	-199.0
10/11/2010 23:50:36	12.1	28.0	-199.0	1	12.0	99.0	-199.0
11/11/2010 00:50:59	11.9	28.0	-199.0	1	11.9	99.0	-199.0
11/11/2010 01:51:23	11.9	28.0	-199.0	1	11.8	99.0	-199.0
11/11/2010 02:51:46	11.8	28.0	-199.0	1	11.8	99.0	-199.0
11/11/2010 03:52:16	11.6	28.0	-199.0	1	11.6	99.0	-199.0
11/11/2010 04:52:33	11.3	28.0	-199.0	1	11.3	99.0	-199.0
11/11/2010 05:52:57	11.1	28.0	-199.0	1	11.1	99.0	-199.0
11/11/2010 06:53:20	11.4	28.0	-199.0	1	11.4	99.0	-199.0
11/11/2010 07:53:44	11.7	28.0	-199.0	1	11.5	99.0	-199.0
11/11/2010 08:54:09	12.3	28.0	-199.0	1	12.2	99.0	-199.0
11/11/2010 09:54:31	12.5	28.0	-199.0	1	12.3	99.0	-199.0
11/11/2010 10:54:54	12.7	28.0	-199.0	1	12.6	99.0	-199.0
11/11/2010 11:55:17	13.0	28.0	-199.0	1	12.9	99.0	-199.0



Data Analysis

Data analysis software allows the user to look at the data in numerical and graphical forms. Information at the top of the screen is displayed for the selected unit. Information includes, Serial Number, First Reading, Last Reading, Number of Readings, Max Temp, Min Temp and Average Temp for I/P1 and I/P2.

The data in the columns displays information on Date, Time, Temperature Input 1, Temperature Input 2, High Alarm Set-point, Low Alarm Set-point and Delay Time. Graphs with scale breaks can be displayed by simply clicking on the graph tab.

The alarm log gives historical information of time, date, call direction, telephone numbers, alarm input and whether the call was successful or failed.

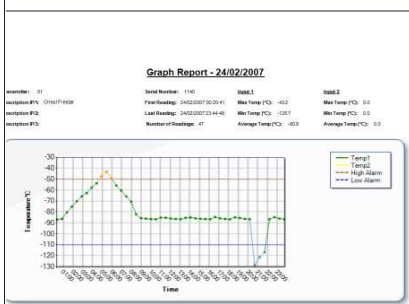
Reporting

Print out of the data can be done in three ways.

- ◆ **Transmitter Report** prints the data column view.
- ◆ **Graph Report** prints the graph view.
- ◆ **Summary Report** prints the "header" information for each transmitter and alarm log.

Transmitter Report - 240229007

Time	Temp1	Temp2	High Alarm	Low Alarm	Delay
10/11/2010 13:46:42	15.2	14.9	28.0	-199.0	1
10/11/2010 14:47:05	15.9	15.7	28.0	-199.0	1
10/11/2010 15:47:28	15.3	15.0	28.0	-199.0	1
10/11/2010 16:47:52	14.8	14.6	28.0	-199.0	1
10/11/2010 17:48:15	14.4	14.4	28.0	-199.0	1
10/11/2010 18:48:39	13.8	13.9	28.0	-199.0	1
10/11/2010 19:49:02	13.3	13.4	28.0	-199.0	1
10/11/2010 20:49:26	12.7	12.7	28.0	-199.0	1
10/11/2010 21:49:49	12.5	12.4	28.0	-199.0	1
10/11/2010 22:50:13	12.2	12.2	28.0	-199.0	1
10/11/2010 23:50:36	12.1	12.0	28.0	-199.0	1
11/11/2010 00:50:59	11.9	11.9	28.0	-199.0	1
11/11/2010 01:51:23	11.9	11.8	28.0	-199.0	1
11/11/2010 02:51:46	11.8	11.8	28.0	-199.0	1
11/11/2010 03:52:16	11.6	11.6	28.0	-199.0	1
11/11/2010 04:52:33	11.3	11.3	28.0	-199.0	1
11/11/2010 05:52:57	11.1	11.1	28.0	-199.0	1
11/11/2010 06:53:20	11.4	11.4	28.0	-199.0	1
11/11/2010 07:53:44	11.7	11.5	28.0	-199.0	1
11/11/2010 08:54:09	12.3	12.2	28.0	-199.0	1
11/11/2010 09:54:31	12.5	12.3	28.0	-199.0	1
11/11/2010 10:54:54	12.7	12.6	28.0	-199.0	1
11/11/2010 11:55:17	13.0	12.9	28.0	-199.0	1



Summary Report - 240229007

Unit	Serial Number	First Reading	Last Reading	No. of Readings	Max Temp (°C)	Min Temp (°C)	Average Temp (°C)
Probe 1	35762002254454	10/11/2010 13:46:42	11/11/2010 11:55:17	167	21.6	11.1	16.1
Probe 2	35762002254454	10/11/2010 13:46:42	11/11/2010 11:55:17	167	21.7	11.1	16.0

System Specification and Functions

AS300RX RECEIVER

Number of AS200TX Transmitters per AS300RX Receiver

- ◆ 10 AS200TX,
System expandable to 90 AS200TX

Built in Communications

- ◆ 2 Telephone numbers allocated for each AS200TX transmitter.
- ◆ 5 Telephone numbers allocated per receiver.
- ◆ Web access for data and alarm history (Option)

GSM Signal

- ◆ Visual indication of signal strength. Audible and visual indication if network strength is lost or low.

Memory

- ◆ Over 4000 readings

Battery Back Up

- ◆ Rechargeable Batteries

External Dimensions

- ◆ 160H x 90L x 50D mm

FUNCTIONS INITIATED FROM MOBILE PHONE

- ◆ Enable or Disable AS300RX.
- ◆ Setup Telephone Numbers, mobiles and land lines.
- ◆ Enquire Details from AS200TX transmitters Including Alarm Status, Temperature Readings, Alarm Log, Transmitter Signal Strength, GSM Signal Strength, Setup Values, Telephone Numbers and OGM Programmed, Amount of Credit in Sim Card.
- ◆ Acknowledge Alarms.
- ◆ Test Alarm Function.

Passwords

- ◆ Master and Acknowledger 4 digit password.
- ◆ Lock switch on receiver, disabling change of settings by mobile phone.

Telephone Alarm Messages

- ◆ Up to two telephone numbers can be programmed into the AS300RX for each AS200TX on the system. A text message will be sent to a mobile or a voice message sent to a land line. An additional five telephone numbers can be programmed into the AS300RX for power fail or test alarms. The outgoing message (OGM) can be up to 90 characters long and the value and input alarming is tagged on to the end of the OGM.

Sim Card

- ◆ Low Credit Warning text message and visual, audible warning on GSM Unit. (*Sim Credit Warning only available on O2 and Vodaphone*)

Display

- ◆ Scrolling display of Sim Number, Sim Credit, Signal Strength. (*Sim Credit only available on O2 and Vodaphone*)
- ◆ Four Menu's :- System, Alarm Log, AS200TX Temperature Readings and Transmitter Information.



CALIBRATION

A calibration service can be offered for all our products.

SERVICE AND SUPPORT

We service and repair all of the electronic products we manufacture. All our goods carry a 2 year return to base warranty. If one of our products needs repair while under warranty, we will repair or replace it

ALARM & MONITORING APPLICATIONS

- ◆ ULT FREEZERS
- ◆ LN2 STORAGE
- ◆ INCUBATORS
- ◆ ISOLATORS
- ◆ CLEAN ROOMS
- ◆ FREEZERS
- ◆ FRIDGES
- ◆ COLD ROOMS
- ◆ CULTURE ROOMS
- ◆ CLIMATE MONITORING
- ◆ CRYOGENICS
- ◆ COMPOST
- ◆ TEMPERATURE, -200°C to +100°C

AVAILABLE FROM AS300SA

- ◆ HUMIDITY, 0 to 100%RH
- ◆ PRESSURE 0 to 100Pa
- ◆ CO2, 0 to 20 %
- ◆ OTHER APPLICATIONS AND RANGES AVAILABLE

AS200TX TRANSMITTER

Inputs

- ◆ Temperature and Volt Free.
- ◆ Temperature Range +100°C to -200°C.
- ◆ Temperature resolution 0.1°C.
- ◆ Temperature Accuracy 0.1°C.

Display

- ◆ Transmitter Unit Number
- ◆ Time Delay
- ◆ Temperature Input 1

Battery Back Up

- ◆ Rechargeable Batteries

Alarms

- ◆ High and Low Alarms.
- ◆ Adjustable Time Delay For Temperature Alarms (0 to 90 mins).
- ◆ Power Fail Alarm.
- ◆ Status & Alarm information on transmitter.

Data

- ◆ All data transmitted including temperature, high & low alarms and delay time every 15 minutes.

External Dimension

- ◆ 110H x 65W x 27D mm

