# *ST303U 4-Channel Signal Processing USB*

Datalogger

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# 1. Specifications & Dimension

#### 1.1.- Dimension



#### 1.2.- Specifications

Model #	ST303
Туре	4-Channel Signal Processing
Channels	4
Range	-20°C to 70°C
Temp. Accuracy	±0.7°C at 21°C
Resolution	12 Bits
Memory	128K
Interface	USB
# of reading	30,000
Sensor Connection	External
Temperature Sensor	Thermistor-(-20C to 70C)
Voltage Sensor	0-10 DCV
Current Sensor	4-20mA

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#### 1.3.- Typical 4-Channel Connection



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#### 1.4-Voltage Connection



#### 1.5.- Current Connection



#### 1.6.- Temperature Sensor Connection



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# 2. Datalogger Content

Model#	Description	Item
ST303U	Datalogger	2013 12000 2013 12000 2010 1000 2010 1000 2000 2010 1000 2010 1000 2010 1000 2010 1000 2010 1000 2010 1000 2010 1000 2010 1000 2010 2010 1000 2010 20
USB	USB Cable	
SF300	Installation Disk	$\bigcirc$
S1	0-10V Voltage Cable	
S3	4-20mA Cable	
S4	Temperature Cable	

#### 3. Installation Requirements:

- Minimum system requirements for the software -Pentium III - 500 MHz processor or equivalent with 128 Megabytes of RAM.
- Optimal Performance -Pentium 4 or higher
- Operating System Windows XP

## 4. Hardware Setup

- Connect one end of the cable to the datalogger.
- Connect the USB end of the cable to the computer.



• Sensor cable connection.



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#### 5. Software Installation

• Insert the CD into the disk drive.



• Click on **Datalogger setup** to start installation.



• C. Follow the Installation Shield Wizard and click Finish to complete installation.



#### 6. Datalogger Setup

6.1.- Setup the datalogger from PC.

From Window XP: Click on **All programs**, Click on **Siriustech**, Click on **ST DATALOGGER**, Click on **ST Datalogger** to start program.



Figure 6.1- ST301 Datalogger software main menu.

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Click on Logger, click on Setup to enter the setup screen.



#### 6.2. Setup Menu



Figure 6.2- Setup Menu

Setup Menu

#	Item	Description
1.	Product Name	Program will identify model # connected to
		the USB port
2.	Date	Current Date and Time
3.	Maximum Record	Maximum number of records can be store in
	number	one datalogger
4.	Channel 1-4	Channel 1 to 4 display
5.	Temperature(F)	Current real time temperature reading in F
6.	Temperature(C)	Current real time temperature reading in C
7.	Description	Type in description for the datalogger. The
		description will be saved in the datalogger
		memory.
8.		Select sampling interval
	Interval(Duration)	Second(1/2/3/4/5/6/7/8/9/10/15/30/45)
		Minute(1/5/10/20/30)
		Hour(1,2,8)
9.	Start Time	Select Start Date
10.	End Time	Select End Date
11.	Delay Start	Check to enter Start Date
12.	Disable/Enable	Select to enable or disable channel 1-4
	Channel	
13.	Connect	Connection Status:
		Green-Connected
		Red-Disconnect
14.	Battery Status	Battery Status Indicator
15.	Save Setting	Click to save the setting
16.	Cancel	Cancel and exit the menu
17.	Ch1 Real Time	Channel 1 real-time display
18.	Ch2 Real Time	Channel 2 real-time display
19.	Ch3 Real Time	Channel 3 real-time display
20.	Ch4 Real Time	Channel 4 real-time display

#### 6.3.- Starting the datalogger

Description. Ites	I.			
Interval (Duration)	3 sec	-		11.11
) Start Time:	4/9/2009 - 3	:37:10 PM	🔲 Delay Start	(11)
) End Time:	4 /10/2009 - 4	:07:10 AM	Disable/Enab	le Channel 12
Connected	Battery Status	(14)		Save Setting

- 7. Enter Description
- 8. Select time interval
- 12. Disable/Enable Channel

5.0	hanne	l Setting	X
Cha	nnel	Sensor	
1	•	Voltage(0-10V)	•
2	Г	Temperature	•
3	Г	Temperature	•
4	Г	Temperature	<u> </u>
		Apply Ca	ncel

• 15. Click Save Setting

• Click OK to continue



• Setting saved.



• Remove USB to start the datalogger.

Red LED lamp indicates the datalogger is in working mode.

#### 6.4.- SCALING AND OFFSET

	ogger	1014	*****	пер	_		
	Setu	P		Ctrl+E			
	Dow	nload R	ecords	Ctrl+D	- H		
	Test	COM P	ort		+		
Prod	ST30	)3R01 S	icaling/Offs	et			
Maxin	um Re	cord N	umber:	15000	_		
303R01 Scali	ng/Offset						
1 <b>303R01 Scali</b> aling/Offset :	ng/Offset Off	011 _	]				
303R01 Scali aling/Offset : etting	ng/Offset Off	itin lier	]	Offset		Ilwit	
303R01 Scali aling/Offset : etting Channel 1 :	ng/Offset Off Mu 1	Off Itiplier 1	2	Off3et	Mg	Unit Mg	_
1303R01 Scali aling/Offset : etting Channel 1 : Channel 2 :	ng/Offset Off Mu 1 1	ON _	2	Offset	Mg %	Unit Mg %	
303R01 Scali aling/Offset : etting Channel 1 : Channel 2 : Channel 3 :	ng/Offset Off Mu 1 1	off	] 2 0 0	OffSet 2 0	Mg % mm	Unit Mg % mm	
303R01 Scali aling/Offset : etting Channel 1 : Channel 2 : Channel 3 : Channel 4 :	ng/Offset Off Mu 1 1 1 1	Itiplier		Offset 2 0 0	Mg % mm kg	Unit Mg % mm kg	

User can use Multiplier and Offset functions to convert reading into other unit of measurement.

Formula- (Input Value X\* Multiplier) + Offset= Value(Unit)

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Ex).

- Input Value=0.1V
- Multiplier=100
- Offset=0
- Unit=dB
- (Input Value X\* Multiplier)+Offset=Display Value(Unit)
   (0.1V \* 100 )+ 0 = 10 (dB)
- 0.1V\*100+0=10dB

## 7. Datalogger Data Download



A. Click on the icon to start the **Download** menu.

or

Click on Logger, Click Download Records to start the Download menu.



7.1.-The software will establish the connection between PC and the datalogger.

🔁 Data Logger		<b>_</b> 7 ×
File Logger View Window Help		
Data Logger     File     Connecting to the logger     Connecting COM1		
Status	8/24/2006	1:57 PM

Figure 7.1.- Establishing Connection

7.2	Data	logger	Found.
		6	



Figure 7.2.- Datalogger Found.

#### 7.3.- Download all the records.



Figure 7.3.- Downloading Record

7.4. Click Save to save the data file in .adc format. Data can be exported in .txt or Excel format.

🗟 Data Logger - [Download Data F	rom Logger]	_ # X
File Logger View Window Help		- 8 ×
Product Name: ST303R01	Description: Sirius ST303	
Interval (Duration): 1 Second	Start Time: 8/24/2006 2:05:09 PM End Time: 8/24/2006 2:11:49 PM	
Total Record Number: 400		
CH 1: Voltage(0-10V)	Date Time Reading	
Save as		
Save in	My Documents 🖌 🗧 🖆 🖽 -	
My Recent Documents Desktop My Documents My Documents	110ForSalePics      Sirius S.adc     My eBooks     Misic     My Music     My Skype Received Files     sta0x_debug     ST202_2006.08.20     ST301AL_Software     ST301AL_Software     ST301AL_Software     ST301AL     Group Additional Additiona Additional Additional Addita	
My Network Places	File name:     Sirius     Save       Save as type:     ADC count only (".adc)     Cancel	
Status	8/24/2006 2:191	РМ

Figure 7.4.- Enter .adc file name

7.5. After the .adc file is saved, the retrieved data will be display in both the graphic and data format for viewing. Click on the any data record set (A), will correspond to the exact point on the graphic(B).



Figure 7.5.

#### 7.6. Channel Selection



Figure 7.G.

Click on View, Click on Display Options to select Channel 1-4 to display on the screen.

#### 8. Using Other Software Functions

#### <u>8.1.-FILE</u>

- Open

   Click on **Open** to open the file in .adc format.
- 2. Export Data to Excel File -.adc format file can be saved in Excel format for editing.
- 3. Print-

-The display data set can be send to the printer by click on the **Print** command.

4. Exit

- Click on **Exit** the ST303 datalogger program.

#### 8.2.-Test COM Port

Click on **Logger**, click on **Test COM** port to test the validity of the communication port.

File	Logger	View Window	Help
3	Setu	P	Ctrl+E
-	Dowr	nload Records	Ctrl+D
	Test	COM Port	
	ST30	3R01 Scaling/Offs	iet

#### Valid Com Port



#### 9. Warranty

Sirius Technologies, Inc. equipment is warranted for a period of twelve (12) months from the date of purchase to be free of defects in material or workmanship. This warranty does not apply to damage resulting from accident, alteration, abuse, loss of parts or repair by other than Sirius Technologies, Inc. The equipment will be repaired or replaced, at our option, without charge to the owner for parts or labor incurred in such repair. This warranty shall not apply unless the equipment is returned for our examination with all transportation charges prepaid to:

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