User Guide





EvaluatIR

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Unpacking and Powering the Product

The product comes boxed with a USB lead.



Software can be downloaded from the GSS site ref: <u>https://www.gassensing.co.uk/wp-content/uploads/2020/01/EvaluatIR-Application.rar</u>

You will need to purchase 2 Alkaline AA batteries to power the unit Unscrew the battery cover using a small Philips screwdriver.





Insert the batteries as per the directions on the battery compartment Replace and screw down the battery cover The unit is now ready for use



Installing the Software

Locate a suitable PC running the latest version of Windows 10. The software has been extensively tested on this platform and no guarantee can be given as to successful operation on other platforms. The software will not run on Android or IOS platforms Download the software

Double click on the software to install – if there are any safety warnings then please click to clear

Open the file browser and navigate to the SEP software

Double click to open and extract to the desktop. You may be prompted to install a suitable set of software for extraction

The software is now ready to use

Configuring the EvaluatIR

Plug the Evaluation platform into the supplied USB lead and plug the lead into the PC where the software is installed.

The green LED will now illuminate





Double click the software to launch the application
The screen will look like this

GSS EvaluatIR Application 1v3	_		\times
EvaluatIR Download Connect Download not connected 0 Records Dowloaded	 All Rec Last 	cords	
Configuration No EvaluatIR Connected		SS ing Solution	
Options	Clear	Exit	

Click on the Connect button to access the pull down menu

Click on the pull down menu to access the communication port that the Evaluation Platform is connected to. It may not appear as COM3 but if you are unsure of what communication port the platform is attached to then go to the "device manager" on your machine and plug / unplug the EvaluatiR. This will show you which port the device is connected to.

		\times
Conne	ection	
I		~
COM	3	
OK		Cancel

Click connect



The application will now show the unit is connected, the battery level and the memory status.

EvaluatIR Download Disconnect Records to download = 0 Download Connected 0 Records Dowloaded Last Configuration EvaluatIR EvaluatIR EvaluatIR EvaluatIR Set Time Take a measurement every 300 seconds Switch on CO2 Sensor for 8 seconds per measurement The CO2 Measurement will be compensated for pressure variation The CO2 sensor will autocalibrate every 8 days assuming a backround level of 450 ppm Battery Charge Memory Used Loggang Disabled Options Config Start View	🛃 GSS EvaluatIR Applicat	ion 1v3		-		\times
EvaluatIR EvaluatIR Date-Time 00:35:20 01/01/00 Take a measurement every 300 seconds Switch on CO2 Sensor for 8 seconds per measurement The CO2 Measurement will be compensated for pressure variation The CO2 sensor will autocalibrate every 8 days assuming a backround level of 450 ppm Battery Charge Memory Used Options	Disconnect	Records to download = 0	Download	-	ecords	
Memory Used Logging Disabled Options	EvaluatIR EvaluatIR Date-Time 0 Take a measurement e Switch on CO2 Sensor The CO2 Measurement The CO2 sensor will au	very 300 seconds for 8 seconds per measurement will be compensated for pressure v tocalibrate every 8 days				
	Memory Used Options	View	Logging		Exit	

If this is a new setup or new batteries have been installed the time field will be showing zeroes

Push the set time button to set the Evaluation Platform clock to the PC time. Note that this will now run independently and is used to time stamp the internal measurements for subsequent read out. It will not be updated with respect to PC time or daylight saving time unless the set time button is pushed with the unit connected to the PC The default configuration for the Evaluation Platform is shown in the display. If the default configuration is to be changed click on the "Config" button to display the setup screen.



🛃 Configure EvaluatIR	_		×
SEP ID EvaluatIR			
Logging Long Term Logging			
Take a measurement every	300	seco	nds.
Integration time for CO2 sensor is	8	seco	inds.
O Continuous Logging			
Take a measurement every		seco	nds.
Pressure CO2 Reading is compensated for	r pressure v	variation.	
CO2 Autocalibration	8	-	
Autocalibration every		days	
Assumed background To switch off autocalibr Autocalibrate every 0 d		ppm	
Refresh Sa	ive	Close	•

The ID of the Evaluation Platform may be set to a user requirement by deleting and reentering a specific ID. This will be output on the retrieved file data to indicate where the data was retrieved from. This is subject to a maximum character length of 20. The Evaluation Platform can then be set up to log and average at specific intervals – the logging period and the integration (averaged) time can be set It can also be set to free run where a non-integrated (averaged) measurement of all sensors at a specific time.

The sensor can also be set up to provide a pressure compensated CO2 value. This uses the internal pressure sensor to compensate the CO2 value for any pressure variations. Note that this is only used to correct the output when it is downloaded It can therefore be changed to download both corrected and uncorrected versions of the same dataset.



The Evaluation Platform can also be set to force a background zeroing of the sensor to a user defined value at a period set by the user

Once the values are set, they may be saved by hitting the save button. Cancel exits without saving, Refresh updates the values to the last saved configuration. On Saving the application will return to the default screen and show the updates to the Evaluation Platform configuration.

GSS EvaluatIR Applie	cation 1v3					
EvaluatIR	Download					
Disconnect	Records to downloa	d = 0	Download	Al Re	ecords	
Connected	0 Records Dowload	ed		◯ Last		
Configuration						
EvaluatIR				-	~	
EvaluatIR Date-Time	14/01/20 10:15:43		Set Time	G	5	5
	or for 8 seconds per measu		line			
Switch on CO2 Sens The CO2 Measurem The CO2 sensor will assuming a backrour	or for 8 seconds per measu ent will be compensated for autocalibrate every 8 days		tion			
Switch on CO2 Sens The CO2 Measurem The CO2 sensor will	or for 8 seconds per measu ent will be compensated for autocalibrate every 8 days			d Disabled		
Switch on CO2 Sens The CO2 Measurement The CO2 sensor will assuming a backroun Battery Charge Memory Used	or for 8 seconds per measu ent will be compensated for autocalibrate every 8 days			g Disabled		
Switch on CO2 Sens The CO2 Measurem The CO2 sensor will assuming a backrour Battery Charge	or for 8 seconds per measu ent will be compensated for autocalibrate every 8 days			g Disabled Clear	Exit	
Switch on CO2 Sens The CO2 Measurement The CO2 sensor will assuming a backroun Battery Charge Memory Used Options	or for 8 seconds per measu ent will be compensated for autocalibrate every 8 days nd level of 450 ppm				Exit	



Recording Data

Once the Evaluation platform has been configured it can now be used to record data Push the start button and the Evaluation Platform will start logging indicated by the logging enabled script in the application.

🖳 GSS EvaluatIR Applica	ation 1v3		_		×
EvaluatIR	Download Records to download = 0	Download	All Re	ecords	
Disconnect Connected	0 Records Dowloaded		🔿 Last		
Configuration					
GSS SEP			-	~	
EvaluatIR Date-Time	13:37:18 02/12/19	Set Time	G	SS	
The CO2 Measureme	or for 8 seconds per measurement nt will be compensated for pressure utocalibrate every 8 days	variation			
Battery Charge					
Memory Used	×	Logging	Enabled		
Options					
Config Stop	View		Clear	Exit	

The evaluation platform can now be disconnected from the USB and will record data autonomously

The LED will flash briefly at a reading point. Note that if the measurement interval is long then this will happen infrequently.



Retrieving Data

Launch the application as before Plug the USB lead into the Evaluation Platform and the PC Connect as before The APP will show the number of data points that have been stored since the Evaluation Platform was armed (started).

EvaluatIR	Download				
Disconnect	Records to download = 0	Download	Al Re	ecords	
Connected	0 Records Dowloaded		🔘 Last		
Configuration					
EvaluatIR			-	CC	
5 I UD 0 I T	me 14/01/20 10:15:43	Set Time		50	
		Set Time		sing Solutio	-
Take a measureme Switch on CO2 Se The CO2 Measure The CO2 sensor w assuming a backro	ne 14/01/20 10:15:43 ent every 300 seconds nsor for 8 seconds per measureme ment will be compensated for pres ill autocalibrate every 8 days ound level of 450 ppm	ent			-
Take a measureme Switch on CO2 Se The CO2 Measure The CO2 sensor w	ent every 300 seconds nsor for 8 seconds per measureme ment will be compensated for pres ill autocalibrate every 8 days	ent sure variation			-
Take a measureme Switch on CO2 Se The CO2 Measure The CO2 sensor w assuming a backro Battery Charge Memory Used	ent every 300 seconds nsor for 8 seconds per measureme ment will be compensated for pres ill autocalibrate every 8 days	ent sure variation	Gas Sen		-
Take a measureme Switch on CO2 Se The CO2 Measure The CO2 sensor w assuming a backro Battery Charge	ent every 300 seconds nsor for 8 seconds per measureme ment will be compensated for pres ill autocalibrate every 8 days bund level of 450 ppm	ent sure variation	Gas Sen		-



The download can be set to retrieve either all records or a number of last records. Select the download button. The next screen will ask for a location to save the file to and the file name.

🖳 Save Log File					\times
$\leftarrow \rightarrow$ \uparrow \blacksquare > This PC > Document	ts >	~ č	> Search D	ocuments	
Organise 🔻 New folder				== -	?
Leading Solutions Accounts	Name		Date modified	Туре	
MK Electronics	Arduino		21/05/2017 17:40	File folder	
Photoccasions	Custom Office Templates		20/05/2017 12:42	File folder	
Gas Sensing Solutions Ltd	eM Client		26/11/2019 15:32	File folder	
Graeme Addison - Supply and Dem	📑 Garmin		20/07/2019 22:05	File folder	
-	GSS		27/03/2019 16:12	File folder	
OneDrive - Gas Sensing Solutions Ltc	Leading Solutions		26/04/2019 14:57	File folder	
GSS Engineering	Notes		21/05/2017 17:40	File folder	
This PC	OneNote Notebooks		23/05/2019 13:05 28/01/2019 11:42	File folder File folder	
3D Objects	Personal		26/04/2019 15:03	File folder	
Desktop					
🗄 Documents 🗸	<			_	>
File name:					~
Save as type: txt files (*.csv)					~
∧ Hide Folders			<u>S</u> ave	Cancel	

Once these have been input select the save button

The data will now download, and the green progress bar will move across the lower screen. When complete a box will appear indicating that download is complete. This can be cleared as required

Note that if a file name that is already is use is used then the data will be appended to the old file.

Download	×
Download Comp	lete
0	K

The data file can now be accessed via a spreadsheet solution for subsequent analysis



Advanced Functions – for Experienced Users Only

The Evaluation Platform provides a gateway to the sensor advanced setting functions By pressing the "View" button the sensor screen is accessed

By pressing Poll, the sensor is accessed and read according to the setup parameters



Specific commands can be sent directly to the sensor or via the EvaluatIR. Please see the user manual for the specific sensor fitted for details of these commands



Troubleshooting

The EVALUATIR can be configured easily and will operate "out of the box" In the event of any issues please try the following troubleshooting steps :-

Unit does not log	Check batteries are correctly inserted
	Replace batteries
	Check settings
	Check logging is enabled
Unit does not retain real	Check batteries are correctly inserted
time clock settings	Replace batteries
Unit does not connect to	Ensure software is installed correctly – if necessary, please
PC	de-install and re-install as required
	Check the correct com port has been selected as per the
	device manager note above
Unit flattens batteries	Set logging to a longer period to reflect the measurement
prematurely	frequency required

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