

GrayWolf

Sensing Solutions



DirectSense II Wi-Fi + GrayWolfLive QuickStart Guide

October 2022 v1.1

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Overview



DSII probes equipped with WolfRadio can utilize GrayWolfLive to log data directly to the cloud where readings can be viewed online.

To turn on the DSII Probe, use the Power Button on the probe. The probe will show a sequence of 3 lights: **Green**, **Blue**, **Red** and then it will begin flashing periodically.

To turn off the probe, hold the Power Button down for 3 seconds until the LED shows **Solid Red** and then turns off. If the probe will not turn off, hold the Power Button down for 12 seconds to force a reset.

Charging Cradle

On the right side of the cradle there are two inputs (see figure above). The input on the left is a female 10-pin Lemo for connection to an AdvancedSense/WolfPack/Tablet/PC with the appropriate GrayWolf interface cable. The input on the right is for AC power. Only the GrayWolf-supplied power adapter should be used for the charging cradle.

Charger LED Status

Flashing Green = DSII is charging or being powered (LED will pulse once every 5 seconds)

Solid Green = DSII is fully charged*

Solid Blue = Charging cradle is powered but no probe is attached

Flashing Red = A fault is indicated

* If DSII is powered ON and connected to Wi-Fi, the charging cradle LED may never change to **Solid Green**.

Configure DSII Wi-Fi

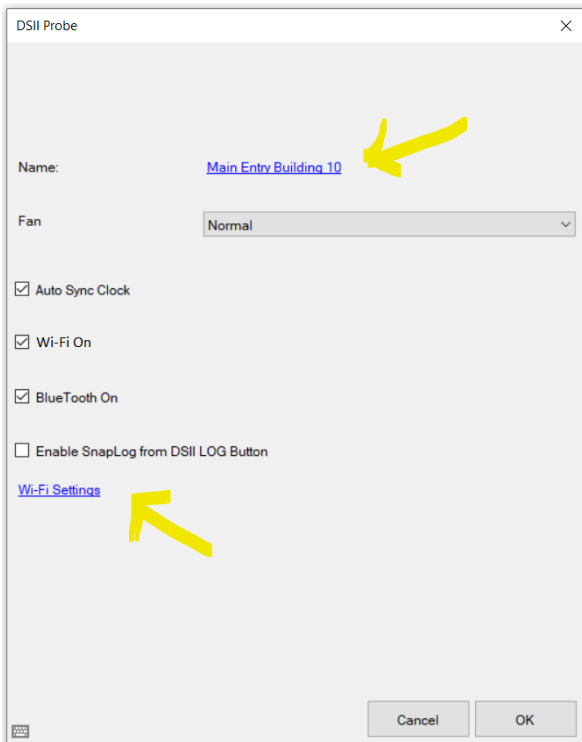
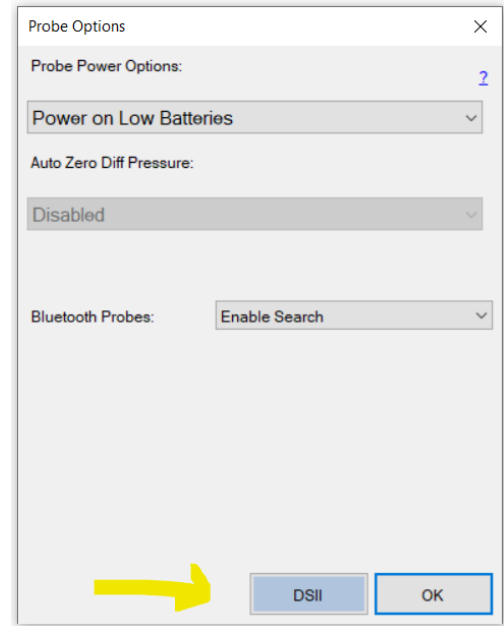
Configure the Wi-Fi on your DSII probe using the supplied USB to Serial Cable and WolfSense LAP 2020.51 (or higher) or the serial cable with an AdvancedSense PRO 2020.40 (or higher). Navigate to the PROBE menu and select PROBE OPTIONS. If a DSII probe is connected, the **DSII Button** will appear. Press the DSII button to begin configuration.

You may also utilize a web-based tool to configure your DSII probe which can be run on any Windows PC/ Laptop by clicking:

<https://graywolfsensing.com/downloads/dsii/dsii.exe>

You will need to connect the DSII probe to the PC using the supplied USB to DSII cable.

USB Drivers are generally built-in or auto-installed by Windows. If you need to manually install the probe drivers, they are available from GrayWolf's website: <https://graywolfsensing.com/software-drivers/>



The **NAME** field can be used to label the DSII probe or the location of the DSII probe. When the probe first connects to GrayWolfLive, this name will be used to identify the probe but the name can be changed at any time through the GrayWolfLive interface. **Wi-Fi On** must be checked for the probe to connect to a network.

Use the Wi-Fi Settings link to open the Wi-Fi Settings box.

Use the Wi-Fi Settings dialog box to configure your probe to connect to your Wi-Fi network.

Wi-Fi Network – If the Notebook or Tablet PC is connected to a network, the name of the network will appear in the drop-down menu. Alternately, you can type in the network name. The Wi-Fi network name is also known as the SSID or Service Set Identification.

Wi-Fi Password – Enter the password for the Wi-Fi network.

GWL Email – Enter the full email address used to establish your GrayWolfLive account. This email address must match exactly, or the system will not be able to route data to the proper account. This field is not case-sensitive.

MAC ADDRESS: Once the DSII probe has connected to your network, the MAC Address of the Wi-Fi card will be displayed here. This information may be needed by your IT Department if MAC address security or filtering is being utilized.

Use the ADVANCED CONFIGURATIONS OPTIONS to setup additional security options like RADIUS SERVER login credentials and CERTIFICATES or to change the default server address to a custom URL to receive data. To return to sending data to GrayWolfLive, the **Server** address is www.graywolflivesync.com/v1/ and the **Port** is 80.

Press OK to commit the data to the DSII probe. The probe will need to be re-booted for the changes to take effect.

The DSII “WolfRadio” module can connect to 802.11 b/g (2.4GHz) wireless networks.

The DSII is compatible with the following Wi-Fi security Standards:

WPA/WPA2-Personal with a Pre-Shared Key (PSK) a password that is distributed to all users of the network, or Open networks not requiring a password.

WPA/WPA2-Enterprise (PEAP-MSCHAPv2, TTLS-MSCHAPv2) also commonly known as RADIUS server authentication.

Secondary Log-ins or Captive Portals:

For open-networks that require a Secondary Log-In or Captive Portal to log onto the network, the DSII does not have a web-browser or user-interface so it is not possible to respond to prompts or enter additional log-on information.

The simplest solution is to “white-list” the DSII probe’s MAC address by entering in your router’s safe-device or white-list table. Devices that are white-listed will generally bypass the secondary prompt. The MAC address can be obtained through the Configuration Menus as described in Step 1 above.

You may need to consult with your IT department to see if white-listing the device’s MAC address will bypass the captive portal.

Alternatively, a secondary network or hotspot could be utilized. GrayWolf Sales can assist with hotspot selection.

DSII Wi-Fi Connection Status

The DSII probe can take up to 2 minutes to initially connect to the Wi-Fi Network. Once connection is established, the probe LED will **Flash Green** once every 10 seconds and will remain OFF otherwise. This LED operation is different than the normal steady green or blue flashing when the probe is connected to WolfSense software via cable or Bluetooth. Note that the probe can be connected to Wi-Fi and WolfSense software simultaneously, but the once per 10 second green LED flash indicating Wi-Fi connection will take precedence over the standard LED behavior.

If the DSII is operating on battery power, the LED will flash RED to indicate low battery level.

If the DSII is able to connect to your Wi-Fi network but unable to send data, it will flash the LED **RED** 9x then pause. This usually indicates that the email address entered for GrayWolfLive is incorrect or that a firewall or router configuration issue is preventing connection. It may also indicate that your router is not currently connected to the internet.

The DSII will attempt to reconnect to the network if the Wi-Fi signal or internet connection is lost. The DSII will only quit these attempts after approximately 10 minutes initially. Once a successful connection is made, should it be subsequently lost, the DSII will attempt to re-establish connection indefinitely on AC power or on battery (until the DSII probe battery level is insufficient to continue).

Fixed and Long-term Monitoring

The DSII charging cradle may be wall-mounted and used as a security stand for long-term monitoring. The cradle should be plugged in to the GrayWolf-supplied AC Charger for continuous use.

The charging cradle mount contains a security tab insert which will prevent unwanted removal of the probe from the wall. Consult GrayWolf's [training videos](#) or contact GrayWolf Tech [Support](#) for more info.

When the DSII is used as a fixed or long-term monitor, activate the POWER BUTTON IGNORE feature to prevent building occupants from accidentally turning off the probe. To activate this feature: Power on the DirectSense II probe and watch for the initial **GREEN, BLUE, RED** Startup LED sequence. Once that is complete, press and hold the LOG BUTTON until you see the LED turn solid **RED** with quick flashes of **GREEN**. You must perform this operation within the first 30 seconds of the probe being on. In this mode, the normal Power Button function is ignored; to turn off the probe you must press and hold the power button for more than 12 seconds.



WolfSenseMobile App

GrayWolf offers a FREE app for reviewing and logging live readings collected by your Wi-Fi-equipped DSII probe (as well as Bluetooth connected devices). The app may be downloaded from GOOGLE PLAY and APPLE APP STORE by searching “WolfSense Mobile” or by using the links below. To use the app, you must sign-in to your GrayWolfLive account using the READINGS MENU / SELECT DEVICES and select LOG-IN to GRAYWOLFLIVE CLOUD.

A quick start guide to using the app can be found here:

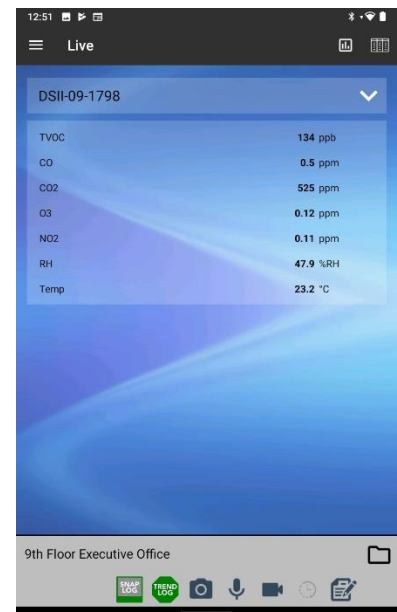
<https://graywolfsensing.com/wolfsense-mobile-app-quick-start/>

Apple Store Link:

<https://apps.apple.com/us/app/wolfsense-mobile/id1522804523>

Android Store Link.

<https://play.google.com/store/apps/details?id=com.graywolfsensing.wolfsensemobile>



Using GrayWolfLive

If you do not have a GrayWolfLive account, please contact [GrayWolf Sales](#) to setup an account.

Enter <https://us.GrayWolfLive.com> into any web-browser to access GrayWolfLive. All devices which are registered with the email address you signed up with, will be displayed in the Live Readings view.

Live Readings

[View Gauges »](#) [View Graphs »](#)

Show Details

Latest Readings Refresh

Device	When	Last Local Time	Parameter	Probe	Reading	Unit	Live Data
OFFICE-ATX	32 seconds ago	22-Sep-20 02:33:45 PM	Carbon Monoxide	DSII 09-1370	1.9	ppm	View
	32 seconds ago	22-Sep-20 02:33:45 PM	Carbon Dioxide		893	ppm	
	32 seconds ago	22-Sep-20 02:33:45 PM	Relative Humidity		48.4	%RH	
	32 seconds ago	22-Sep-20 02:33:45 PM	Temperature		75.6	°F	
Equipment Closet	54 seconds ago	22-Sep-20 02:33:23 PM	Relative Humidity	DSII 09-1001	29.5	%RH	View
	54 seconds ago	22-Sep-20 02:33:23 PM	Temperature		31.6	°C	

For information on using the features of GrayWolfLive, refer to the GrayWolfLive Quick Start guide or contact [GrayWolf Sales](#) for training.

NOTE: Device data is automatically stored in GrayWolfLive for 1 year and thereafter erased. To permanently retain data you must EXPORT or STORE using one of the methods described in *Saving and Reviewing Data Recorded in GrayWolfLive* below.

Changing Units Displayed by your DSII Probe

GRAYWOLFLIVE™
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DASHBOARD LIVE READINGS **DEVICES** ALERTS ACCOUNT LOG OUT ?

Devices

OFFICE-ATX (DirectSense II P) Include Inactive

Device Name: OFFICE-ATX
Type: DirectSense II Probe [Edit](#)
Serial Number: 09-1370
Last Activity: 50 seconds ago
Last Result: Ready
Battery: On AC Power

Notes:

Latest Reading 22-Sep-20 03:43:20 PM 57 seconds ago Refresh

Parameter	Reading	Unit
Carbon Monoxide	1.3	ppm
Carbon Dioxide	859	ppm
Relative Humidity	51	%RH
Temperature	76.5	°F

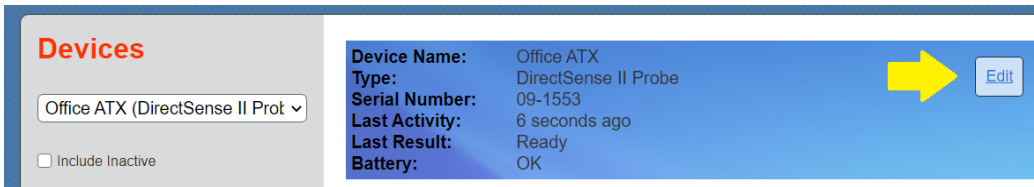
[View Live Readings »](#) [View Instrument Datalogs »](#)

Temperature °C on DSII [Change Units»](#)

From the main **DEVICES** menu, choose the Device from the drop-down list on the left side of the screen. The most current set of readings will be displayed. Choose the desired unit for each parameter from the drop-down list and click the **Change Units** button. The changes will take effect once the next data set is synced to GrayWolfLive.

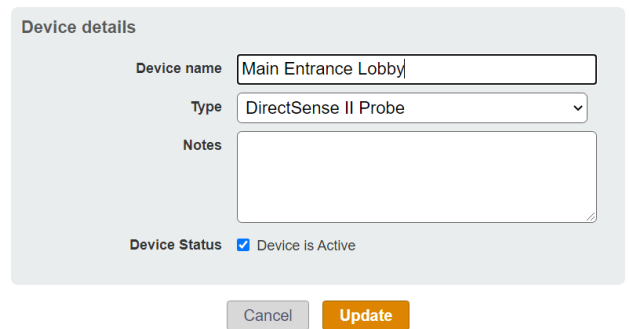
Renaming your DSII Probe

From the main **DEVICES** menu, choose the Device from the drop-down list on the left side of the screen. The Device Summary window will be shown which will display the DSII Probe Serial number as well as its last connection, status, battery status. Choose the EDIT button in the upper right corner of the summary window.



Enter the new name in the Device Name field and click on UPDATE. The new name will be shown on Live Readings, Gauges, Graphs and Logged Data.

You may also mark devices as ACTIVE/ INACTIVE. INACTIVE devices will not be shown in your LIVE READINGS view.



Method 1: Quick Download Links

Use this method to permanently store data in .csv format on your PC or other storage device. From the main **LIVE READINGS** screen, select the **View** link in the Live Data column for the Device you are interested in retrieving data from.

GRAYWOLFLIVE.com
GrayWolf Sensing Solutions

DASHBOARD LIVE READINGS DEVICES ALERTS ACCOUNT LOG OUT ?

Live Readings

[View Gauges »](#) [View Graphs »](#)

Show Details

Latest Readings							
Device	When	Last Local Time	Parameter	Probe	Reading	Unit	Live Data
General Office - 2611	1 minute ago	26-Oct-20 05:51:56 PM	Nitrogen Dioxide	TG501(3)	0.00	ppm	View
	1 minute ago	26-Oct-20 05:51:56 PM	Ozone	TG501(3)	0.00	ppm	
	1 minute ago	26-Oct-20 05:51:56 PM	Nitric Oxide	TG501(3)	0.0	ppm	
	1 minute ago	26-Oct-20 05:51:56 PM	Temperature	TG501(3)	22.2	°C	
Equipment Closet	16 seconds ago	26-Oct-20 03:53:28 PM	Relative Humidity	DSII 09-1001	28.6	%RH	View
	16 seconds ago	26-Oct-20 03:53:28 PM	Temperature		30.4	°C	

From the Period column, select the link for the time period you would like to download. The data download will start automatically and provide a .csv file containing all the logged parameters for the selected

Live Data Summary for General Office - 2611

Click on the current measurement for any parameter to view a graph over the indicated period of time. Click on the period description (ie Last Hour) to download the current readings to your PC.

Live Data (Averaged)				
Period	Nitrogen Dioxide ppm	Ozone ppm	Nitric Oxide ppm	Temperature °C
Last 15 Minutes	0.00	0.00	0.0	22.2
Last Hour	0.00	0.00	0.0	22.4
Last 8 Hours	0.00	0.00	0.0	22.3
Last 24 Hours	0.00	0.00	0.0	22.0
Last Week	0.00	0.00	0.0	22.1
Last Month	0.00	0.00	0.0	22.0
Last 6 Months	0.00	0.00	0.0	22.0
Last Year	--	--	--	--

[REVIEW DATA](#) [ADDITIONAL DATA SETS](#) [Delete](#)



Method 2: STORE DATA in GRAYWOLFLIVE

Use this method to permanently store logged data in GrayWolfLive. Live data is normally erased after 1 year. If you store data in GrayWolfLive it is available indefinitely.

From the main **DEVICES** menu, select a device from the drop down list on the left side of the screen and select the **Store Instrument Data** button.

The screenshot shows the GrayWolfLive web interface. At the top, there is a navigation bar with the following items: DASHBOARD, LIVE READINGS, DEVICES (highlighted with a yellow arrow), ALERTS, ACCOUNT, LOG OUT, and a question mark. Below the navigation bar, the 'Devices' section is active, showing a dropdown menu with 'Equipment Closet (DirectSense)' selected. A checkbox for 'Include Inactive' is present. The main content area displays details for the 'Equipment Closet' device, including its name, type (DirectSense II Probe), serial number (09-1001), last activity (58 seconds ago), last result (Ready), and battery status (External). Below this, there is a 'Notes' section and a table of the latest reading from 26-Oct-20 03:45:26 PM. The table has columns for Parameter, Reading, and Unit. At the bottom of the device details, there are three buttons: 'View Live Readings', 'View Instrument Datalogs', and 'Store Instrument Data', with a yellow arrow pointing to the 'Store Instrument Data' button.

Parameter	Reading	Unit
Relative Humidity	28.7	%RH
Temperature	30.5	°C

Enter a name for the data in the **Save As** field and optionally input a description. You may store all data or a specific time range of data. Saved data will permanently remain on the GrayWolfLive platform (as opposed to Live Data which is erased after 1 year). Saved data can be accessed in GrayWolfLive by double-clicking the file name from the Locations panel on the left side of the screen. This data may be emailed directly from GrayWolfLive or be accessed from within WolfSense PC (version 4.0 or higher) by clicking the GWL button. Once data is opened in WolfSense PC, it may be used in Advanced Report Generator reports.

The screenshot shows the 'Live Data Detail for Equipment Closet' page. At the top, there is a link to '<< BACK to Summary'. Below this, there are three input fields: 'Save As:' with the value 'Equipment Closet Log', 'Description:' with the value 'Data logged from EQ close!', and 'Date Range:' with a checked 'All Data' option and a date range from '10/26/2020 9:49 PM' to 'UTC Time Zone'. There are 'SAVE' and 'Cancel' buttons. Below the input fields, there is a table of 'Live Data' with columns for Date Time, Relative Humidity %RH, and Temperature °C. A 'Refresh' button is located at the top right of the table.

Date Time	Relative Humidity %RH	Temperature °C
10/26/2020 3:49:31 PM	28.7	30.4
10/26/2020 3:48:31 PM	28.7	30.4
10/26/2020 3:47:31 PM	28.7	30.5
10/26/2020 3:46:31 PM	28.7	30.5
10/26/2020 3:45:31 PM	28.7	30.5
10/26/2020 3:44:30 PM	28.6	30.5

Method 3: EXPORT DATA

Use this method to export data in .csv format. From the main **LIVE READINGS** menu, select the **View** Select the **REVIEW DATA** button.

Live Readings

View Gauges »
View Graphs »

Show Details

Latest Readings							
Device	When	Last Local Time	Parameter	Probe	Reading	Unit	Live Data
OFFICE-ATX	32 seconds ago	22-Sep-20 02:33:45 PM	Carbon Monoxide	DSII 09-1370	1.9	ppm	View
	32 seconds ago	22-Sep-20 02:33:45 PM	Carbon Dioxide		893	ppm	
	32 seconds ago	22-Sep-20 02:33:45 PM	Relative Humidity		48.4	%RH	
	32 seconds ago	22-Sep-20 02:33:45 PM	Temperature		75.6	°F	
Equipment Closet	54 seconds ago	22-Sep-20 02:33:23 PM	Relative Humidity	DSII 09-1001	29.5	%RH	View
	54 seconds ago	22-Sep-20 02:33:23 PM	Temperature		31.6	°C	

[Refresh](#)

Live Data Summary for OFFICE-ATX

Click on the current measurement for any parameter to view a graph over the indicated period of time.

Live Data (Averaged)				
Period	Carbon Monoxide ppm	Carbon Dioxide ppm	Relative Humidity %RH	Temperature °F
Last 15 Minutes	0.5	1,505	35.7	78.4
Last Hour	0.6	1,495	36.0	77.9
Last 8 Hours	0.7	1,555	37.0	77.7
Last 24 Hours	0.6	1,551	37.0	77.7
Last Week	0.7	1,254	37.7	76.8
Last Month	1.5	1,100	36.7	75.3
Last 6 Months	--	--	--	--
Last Year	--	--	--	--

[Refresh](#)

REVIEW DATA
ADDITIONAL DATA SETS
Delete

Select the **EXPORT** button to save the data in .csv format.

Live Data Detail for OFFICE-ATX [<< BACK to Summary](#)

STORE DATA
EXPORT
Delete

Live Data				
Date Time	Carbon Monoxide ppm	Carbon Dioxide ppm	Relative Humidity %RH	Temperature °F
10/21/2020 11:14:18 AM	0.5	1500	35.3	77.7
10/21/2020 10:54:07 AM	0.6	1490	36.3	78.4
10/21/2020 10:33:55 AM	0.6	1476	36.1	76.6

[Refresh](#)

Use the **STORE DATA** button to save the data in GrayWolfLive as described in method #2 so it may be opened in WolfSense PC, included in an ARG (Advanced Report Generator) Report or emailed to a customer directly from the GrayWolfLive website.

