

# TECHNICAL DOCUMENT

ref: 1Cv2

**Subject:** Inverter Logs Extraction

**Updated:** 22 September 2016

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## Purpose:

To walk you through the process of extracting the detailed logs out of the inverter.

## Why is it required?

1. If you wish to tabulate the data in your own format for analysis (eg produce graphs and compare performance trends).
2. [Installers] If your customer calls you with any issue with the solar system you have installed, you have the ability to diagnose the problem without going to the site.
3. If it appears the inverter might be under-performing, EnaSolar engineers can interpret these logs to determine where and what the problem could be. Please ensure that you have completed your own initial analysis and can discuss with EnaSolar where you understand the fault may lie.
4. If there is a confirmed fault with an inverter, the EnaSolar's RMA approval process requires all three logs (Five Minute, Daily and Event) to be supplied.

## What are the Logs?

The logs are data that is saved in the inverter memory to allow technical analysis of the performance of the inverter.

There are three types of logs:

1. The *Five Minute Log*: holds up to 32 days of information, after which each successive day is overwritten. In most cases each entry is an average of the system performance during the preceding five minutes.  
  
Note: There is also a less comprehensive report available: The '5 Minute Log' is an abbreviated version that only shows the power generation (every five minutes). This can be accessed from the *Charts* section of the reporting screen.
2. The *Daily Log*: holds up to 14.9 years of generation data (number of kW generated and number of hours/minutes generated per day).
3. The *Event Log* – holds up to 3,072 records and indicates events that occur in the inverter. When combined with the Five Minute Log, the Event Log provides an indication of system performance and functionality. The inverter records both normal and abnormal events, so any recorded event may not necessarily mean there is a fault with the inverter.

The data in all of these logs is rolling (ie as new entries added, the oldest data is overwritten). The Five Minute Log and Event Log are used to conduct a critical analysis of the inverter performance, and require comprehensive PV system understanding and experience, as well as knowledge on how the inverter records those attributes and what they mean.



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## How to extract the comprehensive inverter logs?

### Option 1 - Via the Wi-Fi Network (you can ask your customer to do this):

1. Tap on the front panel of the inverter four times to find the IP address. It will look something like: 192.168.1.100
2. Open a web browser and type in the address bar:  
`http://ipAddress/service.htm`  
where *ipAddress* = IP address from the inverter's network screen.
3. Click on the *Five Minute Log* link and download the file. This may take several minutes.

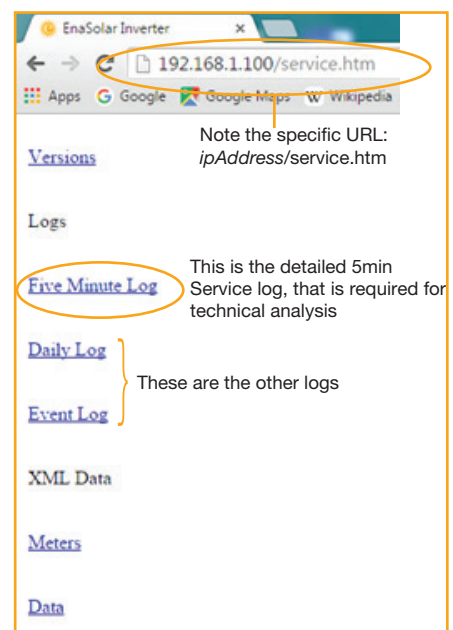
WAIT until the Five Minute Log has completely finished downloading (if you don't allow it to finish, then you will lose some data). You can save the file once it has finished downloading.

4. Open the file to check that it contains columns of data before leaving the site.

The downloaded logs are Comma Separated Values (.csv) files and can be opened in Microsoft Excel.

5. Download the other logs as required:
  - a. Click on the *Daily Log* link to download the file.
  - b. WAIT until the download has finished before opening the file to check that it contains data. You can save the file once it has finished downloading.
  - c. Click on the *Event Log* link to download the file.
  - e. WAIT until the download has finished before opening the file to check that it contains data. You can save the file once it has finished downloading.
6. The files can then be sent as attachments in an email.

Note: If the inverter is not connected to the Wi-Fi or the Network screen says Wi-Fi Access Point Not Found Key: 12345 please refer to Technical Document: 5J – Wi-Fi Configuration.



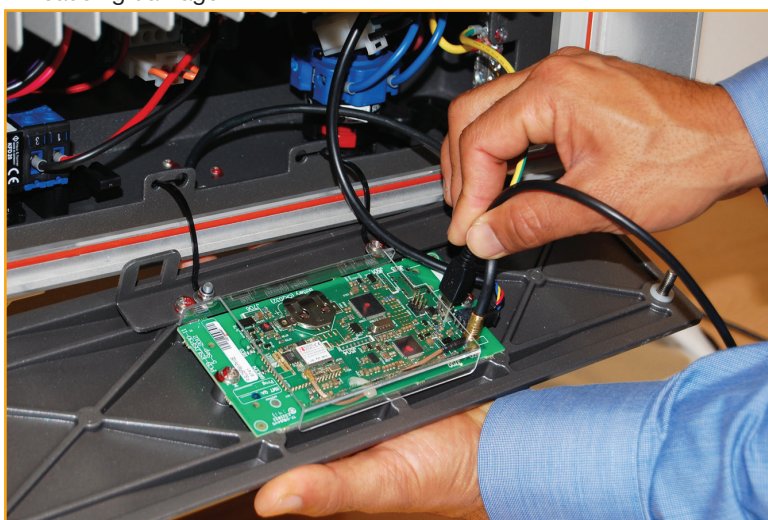
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## Option 2 – By using the Solar Installation Utility (USB connection via Laptop)

1. Turn the inverter AC and DC switches to the OFF position.
2. Undo the four front panel screws and let the front panel hang from the two plastic hangers. Note: earlier versions of the inverter may not incorporate the plastic hangers. Exercise caution to prevent strain on the cables and causing damage.



**WARNING:** Live mains and DC voltage is present once the front panel is removed. Ensure necessary safety precautions are taken to prevent electrocution or equipment damage.

3. Using the EnaSolar Inverter Configuration Software, go to *Logs* and on the *Five Minute Log* tab click on the *Read All* button.
4. Once the Five Minute Log has been downloaded, click on the *Export* button and save the file.
5. Select the *Daily Log* tab and click on the *Read All* button.
6. Once the Daily Log has been downloaded, click on the *Export* button and save the file.
7. Select the *Event Log* tab and click on the *Read All* button.
8. Once the Event Log has been downloaded, click on the *Export* button and save the file.



**Be sure to finish each download and save the file before completing others.**

**Multiple downloads cannot be actioned – data will be lost if another one is started before the working one has finished.**

