

Setting Up Your APS ECU

This document is intended as a quick guide to setting up Splash Monitoring and assumes your micro-inverters are already connected to the PV panels and electrical grid according to the manufacturer's installation manual.

Installation Guidelines

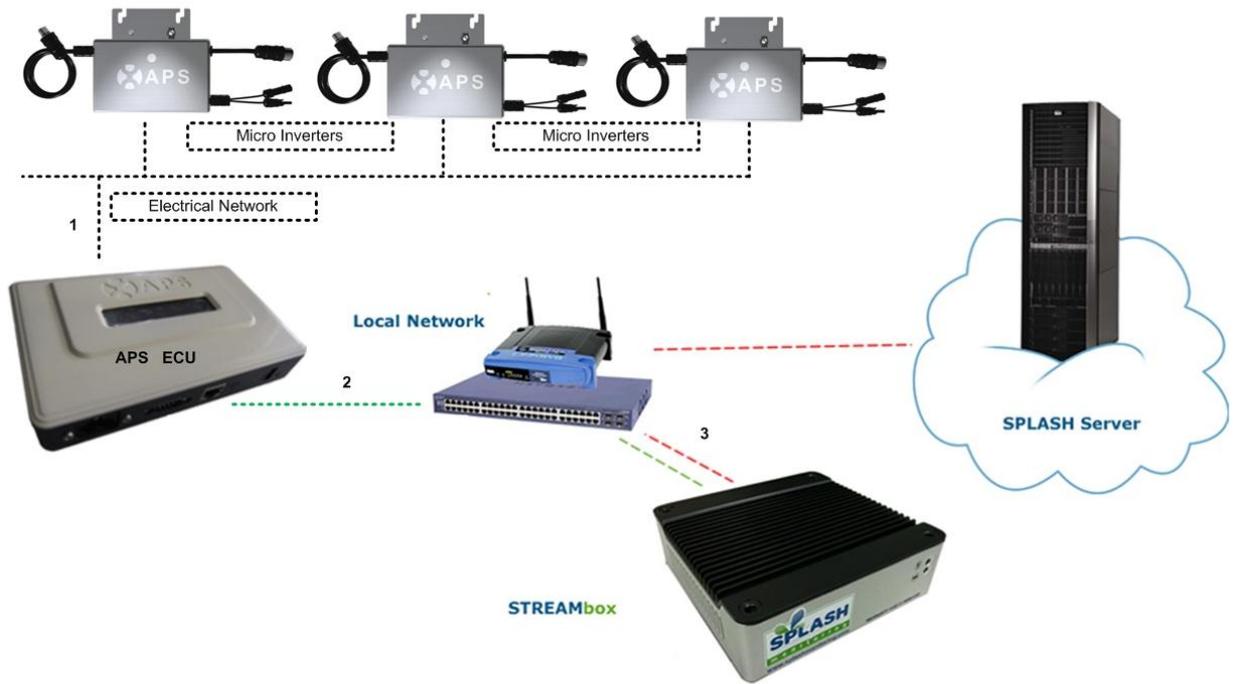
We have found the most reliable long-term results are achieved when the Streambox, its power supply and the ECU are installed well away from daily operational areas. The problem is that the loss of the Splash Monitoring service is not immediately obvious, so it can be many days or weeks before someone realises that their system is not being updated. There is an alert which optionally sends an email alert to one or more nominated recipients, but it is always prudent to minimise the risk of disruption by following these guidelines:

- If possible, install the equipment and power supplies well away from daily operational areas such as someone's desk or work bench.
- Try and secure the equipment by attaching it to a wall or shelf with screws, Velcro or double sided tape. This should prevent it from slipping and becoming disconnected.
- Always secure the STREAMbox power cord to the STREAMbox using the P clip supplied. The P clip should be located on the back of the STREAMbox using one of the existing jack posts, as illustrated:



- Always ensure the LAN cables you use are in sound condition with their retaining clips intact, and make sure they are securely fitted to the equipment by giving them a gentle tug.
- Always ensure that all cables are secured using cable ties to protect them from accidental snagging.
- Never stretch cables to the point where any movement could cause them to become dislodged.
- Always install the STREAMbox with the ridged heat sink outwards and the side vents unobstructed. It doesn't matter what orientation is used; horizontally on its bottom (the flat black surface); or vertically on its side.
- The equipment and power supplies will be labelled 'DO NOT SWITCH OFF', but you should inform people with access to the installation area that this equipment should not be turned off; for example cleaning and maintenance personnel.

Basic Connectivity



The diagram above shows the connectivity between the various devices. The connections are:

- 1 – ECU (controller with integrated web interface) connected to the same grid line as the micro-inverters.
- 2 – CAT5 or CAT6 LAN cable between the ECU and your Network Access Device.
- 3 – CAT5 or CAT6 LAN cable between the STREAMbox and your Network Access Device.

Network Access Device: This may be a Router, ADSL Modem, Switch or other network device connected to the Internet.

Choosing an IP Address:

By default the STREAMbox will scan IP addresses aaa.bbb.ccc.210 through aaa.bbb.ccc.219, where aaa.bbb.ccc is the network address provided by your router. You can find this address by going to the command prompt on your network attached Windows PC and typing "ipconfig /all" at the command prompt. You should see something like:

```
C:\WINDOWS\system32\cmd.exe
> ipconfig /all

Windows IP Configuration

   Host Name . . . . . : ECOAKLW001
   Primary Dns Suffix . . . . . : ecd.local
   Node Type . . . . . : Unknown
   IP Routing Enabled . . . . . : No
   WINS Proxy Enabled . . . . . : No
   DNS Suffix Search List . . . . . : ecd.local
                                       ecd.local

Ethernet adapter Local Area Connection:

   Connection-specific DNS Suffix . . : ecd.local
   Description . . . . . : Realtek RTL8168C(P)/8111C(P) PCI-E G
igabit Ethernet NIC
   Physical Address . . . . . : 00-21-9B-00-7E-F2
   Dhcp Enabled . . . . . : Yes
   Autoconfiguration Enabled . . . . . : Yes
   IP Address . . . . . : 192.168.12.12
   Subnet Mask . . . . . : 255.255.255.0
   Default Gateway . . . . . : 192.168.12.1
   DHCP Server . . . . . : 192.168.12.6
   DNS Servers . . . . . : 192.168.12.6
   Lease Obtained . . . . . : Friday, 9 March 2012 9:04:54 a.m.
   Lease Expires . . . . . : Saturday, 17 March 2012 9:04:54 a.m.
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Take the first three octets from the Default Gateway address (192.168.12) in the above example and add .210 to the end. Therefore the IP address for the ECU in this example will be 192.168.12.210.

Also make a note of the Subnet Mask; Default Gateway address; and DNS Servers address.

Setting up the ECU

As it comes from the factory, the ECU is pre-programmed to acquire an IP address from your router (DHCP) and it will display this address on its front panel. Unless your supplier has already changed it, you will need to change this to one of the static IP addresses the Splash Monitoring STREAMbox uses to scan for solar devices. By default these are <network>.210-219, where <network> is the first three octets of the IP address you determined above, ie. 192.168.12 in this example.

Access the ECU by entering the IP address displayed on its front panel into the web browser on your PC.

You should see the ECU's Home page

1. Click the "Administration" link on the top right.
2. Click the "Network Connectivity" underneath "Administration".
3. Uncheck "Use DHCP".
4. Enter the chosen IP Address in the slot under "IP address for interface 0:" (ie. 192.168.12.210)
5. Enter the Subnet mask in the "Netmask" box (ie. 255.255.255.0).
6. Enter the Default Gateway address under "Gateway IP" (ie. 192.168.12.1)
7. Enter the DNS Servers address under "Primary DNS Server" (ie. 192.168.12.6). If this address was not displayed on your PC use the same address as the Default Gateway above.
8. Leave the "Secondary DNS Server" blank.
9. Check the entries carefully then click the "Update" button.
10. You should get "Set IP address successfully!".
11. The Language must be set to "English" or the STREAMbox will not recognise the values it receives.
12. This completes the mandatory settings for Splash Monitoring, but you can go on to set up the date, time and timezone, but this is not essential as we don't use these values.
13. Connect the STREAMbox to the network and power it up.
14. After about 5 minutes log onto the Splash Monitoring web site and enter your fingerprint into the Dashboard and click "Scan". If the installation was successful you will see data from the inverter appear.
15. If you have data on the Dashboard then you can go on to configure your site as described in the "Getting Started" document.

