

GoodMeasure Integrator Installation Guide for EDM1 MK7A Meters



- Installation of an Integrator requires someone to login to www.GoodMeasure.net and perform online commissioning steps during the installation.
- Please ensure that a process is in place with your program manager or administrator to perform the online commissioning steps while you are on site.
- If you are performing the online steps, check that you have a portable computer that you can use while on site to login to www.goodmeasure.net and that you have been setup with an email address to login with.

The Integrator must be installed by authorised persons in accordance with safe working practices.

The Integrator is designed to be installed under the terminal cover of an EDM1 MK7A Smart Meter. These instructions assume that the meter has been installed and is ready for service.

This guide shows you how to do the following:

1. Setup a hotspot device for temporary Internet access
2. Mount and connect the GoodMeasure Integrator (shortened to Integrator subsequently)
3. Connect the Integrator to the permanent local WiFi network
4. Setup the meter or other device(s) to be read online through GoodMeasure
5. Fit and seal the meter terminal cover
6. Not working? – Troubleshooting



Step 1: Setup a Hotspot Device for Temporary Internet Access

There are three options for providing temporary Internet access. This step can be done at any time before the Integrator hardware installation.

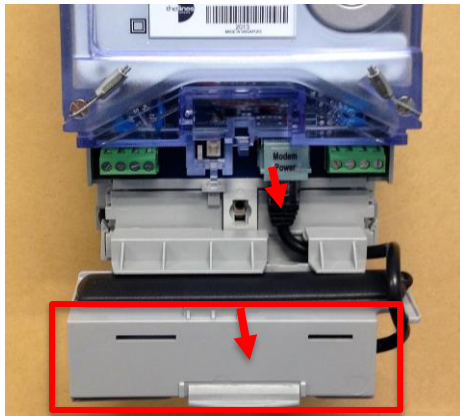
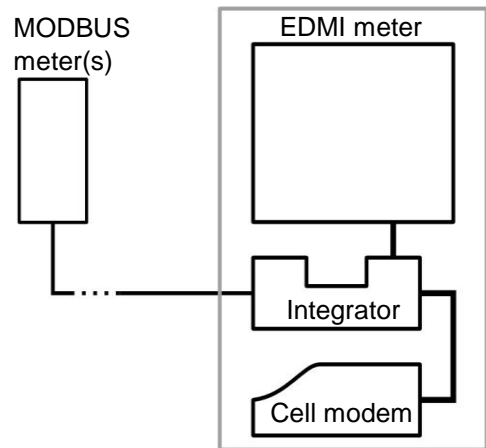
[Note: Some details may vary with different phone or access point makes and models.]

Android smartphone hotspot option	iOS/ iPhone hotspot option
<ol style="list-style-type: none"> 1. Ensure mobile data is enabled 2. Go to phone Settings menu 3. Select Wireless and Networks and then Tethering and Portable Hotspot 4. Tick the box next to Portable Wi-Fi Hotspot 5. Tap Portable Wi-Fi Hotspot Settings 6. Set the SSID to 'goodmeasure' and Password to '12412280' 	<ol style="list-style-type: none"> 1. Ensure mobile data is enabled 2. Go to phone Settings menu 3. Select Personal Hotspot 4. Tap on Wi-Fi Password and edit the password to '12412280' 5. Go back to Settings 6. Select General 7. Select About 8. Select Name and edit the name to 'goodmeasure'

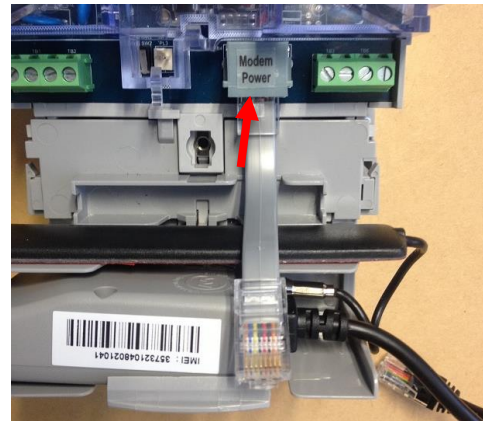
Mobile access point option
<ol style="list-style-type: none"> 1. Ensure the Mobile Access Point has data enabled and a credit balance for SIM data 2. Login using the Mobile Access Point's credentials 3. Locate the Settings menu 4. Locate the Wireless LAN menu and Settings 5. Change the SSID to 'goodmeasure' and the Password/Key to '12412280' 6. Make sure that: Authentication is set to WPA/WPA2-PSK, Encryption Mode is set to AES+TKIP and SSID Broadcast is enabled

Step 2: Mount and connect the Integrator hardware

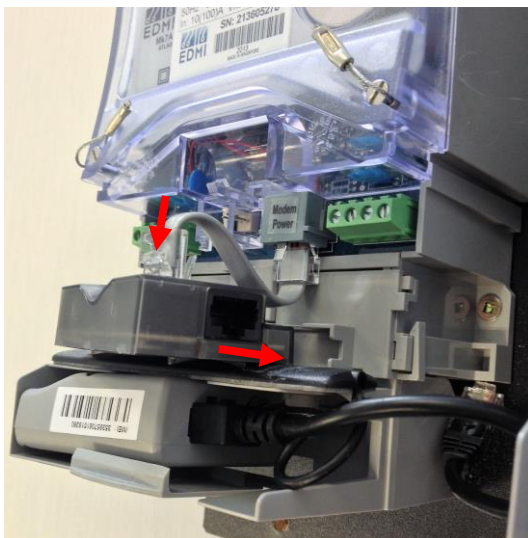
1. Remove the meter terminal cover, the internal modem cover and unplug the RJ45 modem cable connection.
2. Fit the short RJ45-RJ45 interconnect cable provided to the meter.
3. Fit the Integrator into the slot above the modem and plug the interconnect cable into the top Integrator connector.
4. Plug the modem cable into the right hand end of the Integrator.
5. If external MODBUS compatible energy meters or sensors are to be connected, use the supplied orange and white interface cable. Ensure that polarity is correct: orange to the A (or +) terminal, and white to the B (or -) terminal. Then connect to other MODBUS devices using 'daisy chain' interconnections.



1. Remove modem cover and unplug RJ45



2. Fit short RJ45-RJ45 link cable



3. Insert Integrator into terminal cover slot and plug in the interconnect cable.



4. Connect the modem to the Integrator.

Modem cable connection tip: grip the RJ45 end of the cable in right hand and pull gently into a horizontal position. Twist the cable one full turn anticlockwise then rotate plug inwards to insert into the Integrator socket as shown in image 4 above. This twist helps prevent the terminal cover snagging on the cable during reassembly.

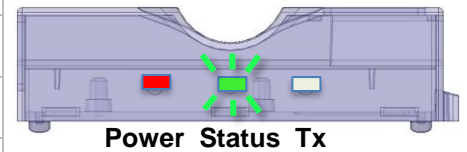
Step 3: Setup WiFi access to the GoodMeasure service

1. Activate the hotspot device you set up in step 1.
2. Switch on the meter (if not already on) and ensure that the **Power** LED on the integrator comes on and is steady **RED**. If not, check the RJ45 interconnections are secure.

Please allow up to a minute for initial connections to be made using cellular devices.

The **Status** LED should then follow this sequence:

Flash RED when no internet connection is available...
Flash RED/AMBER when connecting...
Flash GREEN for up to a minute when successfully connected...
Stay OFF once connected and operating normally
If SOLID GREEN , online firmware update is underway (< 5 minutes).
Please <i>do not interrupt the connection</i> and wait until Status turns OFF .



The following steps may be performed remotely by your organisation's metering manager or administrator. If so they must now login to GoodMeasure to configure the Integrator settings and to connect to a permanently available local WiFi SSID.

NB: The installation process is not complete until the following steps are performed.

If performing these steps yourself, please continue as follows;

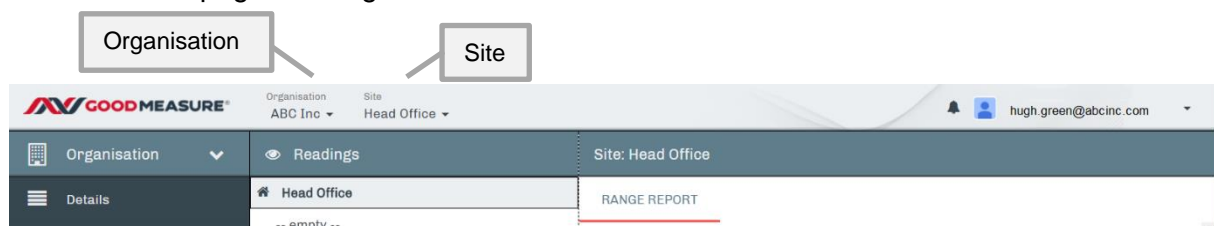
Step 4: Login to GoodMeasure

1. Go to www.goodmeasure.net using a tablet or laptop.
2. Log in using the link in the top right of the screen.

You will need a Google or Microsoft account that has been authorised on your organisation's GoodMeasure account to perform these steps.

Contact the person who administers these installations or sales@goodmeasure.net if you are unsure which account to use.

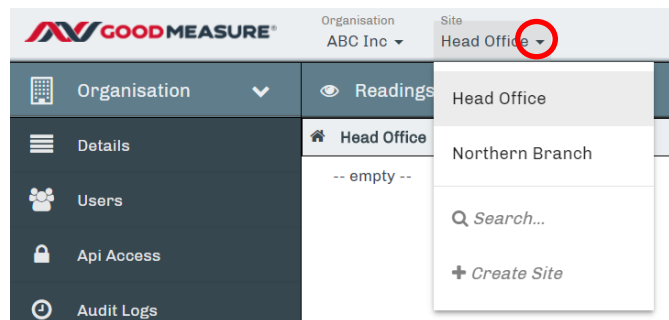
You will see a page heading like the one below.



Step 5: Creating or selecting a Site in GoodMeasure

When a new Integrator is installed, it must be added to a Site to enable data collection from devices connected to it. Follow the steps below to select the site or add a new site.

1. Click the down arrow for the site menu.
2. Click the site name if it already exists or click **+ Create Site**.
3. For a new site, enter the site name and location details and click Save. (top right)



Step 6: Integrator configuration

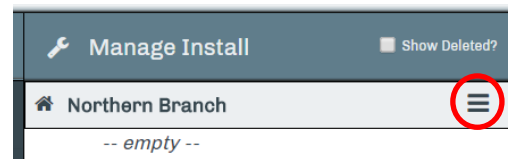


This step requires an Integrator to be powered on and able to communicate with the Internet through a local tethering point such as a smart phone hotspot that has the GoodMeasure default SSID and Password already setup. For details of these settings see Step 1 and check the status lights as per Step 3.

1. Select or create the appropriate site as described in the previous section.
2. Click the Install tab.



3. Click the site menu symbol then click **Install New Gateway**.



4. Enter the 16-digit Integrator **Serial Number** found on the side label of the GoodMeasure Integrator.
5. Click **Scan for and add Gateway**.
6. Enter a name for the new Integrator e.g. "Main Meter Integrator" in the **Location/Name** field.

Step 7: Configure permanent WiFi access



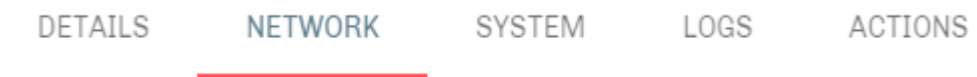
It is critical that the following steps are achieved.



Each Integrator that is installed needs a permanent, stable internet connection via the local WiFi once the hotspot/tether has been removed. A green flashing or blank STATUS LED on the Integrator (See Step 3) will confirm this.

1. Select the Install  tab
2. Select the Integrator device from the middle menu



3. Select **NETWORK** on the right side of the screen



4. GoodMeasure will display a list of WiFi access points that the Integrator can see.
5. In the **Visible SSIDs** list Click the  button next to the preferred access point
6. Enter the WiFi access point password in the password field
7. Click the **Save** button
8. Click the connect  button under the **Configured** list to switch connection to the newly selected access point.
9. Repeat steps 3 to 5 to add any additional alternative WiFi access points if required.
10. Deactivate the temporary WiFi hotspot/tether that was setup in Step 3.

Step 8: Device setup

1. With the Install tab selected, click the  menu button next to the desired Integrator



2. Select **+Add New Device**
3. Select the required device type from the drop down list e.g. **EDMI Atlas Series Mk7 (Generic)**, then click **Next>>** at the upper right.
4. Fill in the following device fields and click **Save**.

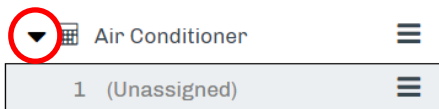
Required fields:

- a. **Location/Name** – This is a user defined label. It is recommended that this name includes a reference to the device itself e.g. “House meter”
- b. **User ID** – Supplied by Meter Owner
- c. **Password** – Supplied by Meter Owner
- d. **Serial** – The serial number of the meter
- e. **Port** – This is the Port on the GoodMeasure Integrator that the device is physically connected to.
 - i. If the EDM I meter is wired to the **Integrator** using a GoodMeasure supplied cable, it is **Port 6**. If using a **Coupler**, use **Port 1**.

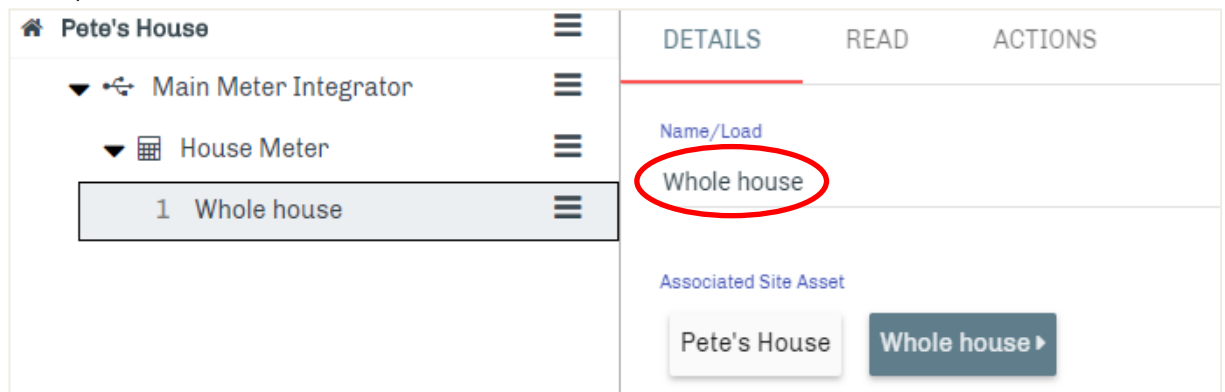
Prefilled fields – only change as necessary

- a. **Baud Rate** – This must match the device settings
- b. **Framing** – This must match the device settings

5. Click on the down arrow for the Device



6. Click **(Unassigned)** for the desired Device channel and name the channel (e.g. Whole house).



7. **Repeat** this process (Step 8) for every meter or sensor connected to the Integrator.

NB: Where the **Coupler** is used to connect additional EDM I meters to an Integrator, use **Port 1** when setting up the new device.

Step 9: Confirm that it works

1. Select “Readings” from the main menu
2. Select the Channel name from the middle menu e.g. “Whole house” from Step 8.6
3. Check that all of the properties appear as you would expect
4. Check that they all make sense
5. If the reading doesn’t work, try Step 11 Troubleshooting or contact your administrator

Organisation: embrium | Site: Pete's House

Channel: Whole house

READ | REPORT | CHART | HEAT MAP | LOGS

Cumulative	
Property	Value
Energy Active Export	0.00 kWh
Energy Active Import	783.78 kWh
Energy Active Sum	783.78 kWh
Energy Reactive Export	50.07 kvarh
Energy Reactive Import	1.05 kvarh
Energy Reactive Sum	51.12 kvarh
Instantaneous	
Property	Value
Current	0.89 A
Frequency	50.00 Hz
Power Active	0.20 kW
Power Apparent	0.21 kVA
Power Factor	0.95 PF
Power Reactive	-0.06 kvar
Voltage	237.50 V

Step 10: Fit and seal the meter terminal cover

1. Ensure all cables are secure and tucked in as far as possible.
2. When re-fitting the terminal cover, it may be necessary to trim the internal plastic rib to prevent snagging.



3. Secure the terminal cover once it is fully attached and fit the cover seal.

Step 11: Not working? – Troubleshooting

If Status LED doesn't follow the proper sequence (Step 3) or "Gateway unavailable"

- If permanent WiFi isn't yet setup, verify that the hotspot device is working
 - Check hotspot device has mobile data enabled and there is a positive data balance
 - Check **SSID** and **Password** settings of hotspot device are correct (see Step 1)
 - Check Integrator and hotspot device are not too close or too far from each other (greater than 1m and less than 10m)
- Verify the permanent local WiFi access point
 - Check that other devices, such as a cell phone, are able to connect to the Internet through the local WiFi access point
 - Check that the local WiFi **SSID** and **Password** settings have been correctly entered into the Integrator as per Step 7.
 - Check that the WiFi signal level is in the range of **-30 to -80dB** (use the 'Network' tab in GoodMeasure from Step 7 to view signal strength)
- Verify building WiFi settings
 - Check with the site owner that no restrictions or limitations have been applied to the site's WiFi access

If GoodMeasure is unable to read data from the EDM1 meter...

- Check Step 8 that the device has correct meter details:
Port=port2, Baud rate=9600, framing=8n1, User ID and password correct,
Serial=meter serial number.

If GoodMeasure is unable to read attached MODBUS RS485 devices...

- Check that the interface cable is inserted into Integrator RJ12 socket
- Check device connections use the correct polarity e.g. that the orange and white/red and green Modbus cable supplied is installed the right way around at the meter.
- Check that:
 - The correct device address is selected in Step 8 (starting with the default '1' then changed to another address)
 - There are no other devices with the same address
 - Settings are compatible between the Integrator and devices including: baud rates, framing, and addresses

End