**Getting Started with the**

**DCE-ESP8266-Temp/Humidity Sensor Board**

Background:

This document is intended to guide a user through using the DCE-ESP8266-Temp/Humidity Sensor Board (DCE-TH) with the preprogrammed Demo Code. The Demo code was written in Arduino and available on our GitHub. The intention of the demo code is to exercise most of the built-in functionality of the DCE\_TH. The demo code will get you up and running as well as give you some general trouble shooting tips. The unit requires an optional +5V power cord that is sold separately or can be sourced locally for a country’s socket and plug requirements. The instructions below assume use in the USA and all images will be shown using an optional US power source.

The DCE-TH is intended to measure Ambient Temperature and Humidity in the surrounding area. The device also has a programming port and expansion port broken out on header pins so the unit can be reprogrammed simple as well as additional accessories can be added such as a light sensor, relays or anything else you can image. An enclosure is sold separately as well. Do to the versatile nature of this device a project box cannot be recommended. Never submerged the device in water or allow the DCE-TH to come into direct contact with water.

Initial Setup:

Prerequisite: You will need a smart phone/tablet/ or computer on your WiFi network to complete the setup.

1. Remove the device from it’s packaging and place on a non-conductive surface.
2. Plug the devices power cord into a 5V supply such as a Micro USB phone charger. You will see numerous LED lights turn on and potentially turn off for a second. The BLUE and RED LED’s lights will remain illuminated. These 2 LEDS indicate AC power, 5VDC, and 3.3VDC are all functioning properly. The unit will take a minute or two to fully boot up. Once fully booted an Orange LED will come on. This is the Error light indicating the unit was unable to connect to a WiFi network.
3. Take out your smart phone or tablet and go to the WI-FI settings page of your device. You should see DCE-TH-xxxx as a network option. If you do not see this network show up in your list of local networks reboot the unit and try again.
4. Once you see the DCE-TH-xxxx (the 4 x’s will be different for every unit and are the last 4 digits of the MAC Address) option choose it from the network menu on your Smartphone or tablet. Do not click out of the WI-FI menu on your Smartphone or tablet.
5. Once your Smartphone or tablet connects to the DCE-TH you will be prompted with the DCE-TH WiFiManager configuration page.
6. Click on the Configure WiFi button in the WiFiManager page to scan for open SSID networks in the area. (This may take a minute.) At this time the WiFiManager is still in beta and a bit buggy. If the page goes white or does not load a new page power cycle the DCE-TH and try again. We have found this works better with Smart phones and Tablets then PC’s and Laptops.
7. Choose your WI-FI SSID form the scanned list or manually enter it.
8. Click in the password box and enter the WI-FI password for the SSID you chose and press the onscreen save button.
9. The menu on your Smartphone or tablet should disappear if successful and the Green LED should light up on the DCE-TH. (This can take a minute or two.) Your DCE-TH is now connected to your WI-FI network and ready for you to operate with any device on the same network. If the menu on your smartphone or green LED does not illuminate on the DCE-TH remove power from the DCE-TH and start again. (A failure usually occurs when an improper password has been entered or you are out of range of the WI-FI network.) Port forwarding is possible with this device to use it outside your network as well but for the demo that will not be discussed.
10. Connect your Smartphone or table to the same SSID you joined on the DCE-TH.
11. You can either get the IP address of the DCE-TH from your routers routing table or if your network supports MDNS the DCE-TH will show up on your network as DCE-TH-xxxx.local. (the 4 x’s are your unique ID on the red sticker attached to the back of the board.) If your board came with a QR code attached to the ESD bag you can scan the QR code to load the default web page.
12. Open a web browser from any internet connected device on the same network as the DCE-TH and enter either the IP address you found in your routers routing table or type in http://DCE-TH-xxxx.local in the address bar and hit the go/search button in your web browser. You should be taken to a web page that is running on the DCE-TH. Here you will see the current reading from the Temp/Humidity sensors as well as various data. As of right now the firmware is Hardcoded to CST/CDT time zone. There is a way to push an Over the Air update to the unit to change your time zone but that is not discussed in this document.
13. You will see 2 buttons at the bottom of the webpage. One button takes you to the Json Data page and one button takes you to the OTA firmware update page.

Supplemental:

We will be publishing an advanced guide to reprogram the DCE-ESP8266-Temp/Humidity Sensor Board with your own code using the DCE-ESP8266-01-PROGRAMMER and write your own code to use the board however you want to but there is none published as of this documents writing. This is for advanced users only right now.

Factory Reset:

To reset the DCE-ESP8266-Temp/Humidity Sensor Board to factory settings discount power from the Micro USB jack. Insert a Jumper wire from Pin 12 and GND on the Left Connector above the Micro USB jack. Reapply power to the board. The Orange LED should light and stay lit. After 10-15 seconds if the green LED does not come on you have properly reset the unit. You can now remove the jumper wire and start back at the beginning of this document to join a new network with your DCE-ESP8266-Temp/Humidity Sensor Board.

Debugging:

Using an FTDI +3.3V cable you can attach to a UART port on the DCE-ESP8266-Temp/Humidity Sensor Board. Diagnostic information will be printed out to this port during operation and can be used to troubleshoot operations.

Help Me Please!

Email [Techsupport@domcoelectronics.com](mailto:Techsupport@domcoelectronics.com) for support issues with your DCE-ESP8266-Temp/Humidity Sensor Board.