|  |  |  |
| --- | --- | --- |
| **Module** | **Pin No.** | **Purpose** |
| SIM900A | Serial 3 | GSM/GPRS |
| D25 | Sleep (HIGH) |
| PA6E-CAM | Serial 0 | GPS |
| D27 | Enable (HIGH) |
| ESP8266-12 | Serial 2 | Wi-Fi |
| D28 | Enable |
| D26 | Reset |

**Aurassure Infra – v 1.1**

*PIN Assignment*

**SENSOR Board Connections:**

For Analog sensors - NO2, O3, CO, SO2, CO2, Noise, UV Radiation, 2 ADCs ADS7828 is used.

1. ADC 1 (Address (A0,A1) - 00) -

Channel 0 - NO2 Auxilary

Channel 1 - NO2 Working

Channel 2 – O3 Auxilary

Channel 3 - O3 Working

Channel 4 - CO Auxilary

Channel 5 - CO Working

Channel 6 – SO2 Auxilary

Channel 7 - SO2 Working

2. ADC 2 (Address - 10) -

Channel 0 - CO2 Sensor - SEN0219

Channel 1 - Noise Sensor - INMP401 (ADMP401) - <http://www.rhydolabz.com/sensors-other-sensors-c-137_148/mems-microphone-breakout-inmp401-admp401-p-1567.html>

Channel 2 - UV sensor -

<http://www.rhydolabz.com/sensors-light-imaging-c-137_142/ultraviolet-sensor-module-analog-op-p-2031.html>

3.Dust sensor (SEN0177) is connected to Serial 1.

4. DHT22 sensor in ADC 3.

5. SparkFun Luminosity Sensor Breakout - TSL2561 - I2C

<http://www.rhydolabz.com/sensors-light-imaging-c-137_142/sparkfun-luminosity-sensor-breakout-tsl2561-p-1991.html>

6. FAN - D9 (Controlled speed @ analog Write 150)

**Power Management Features**

Different Power Modes

* Normal Mode (Grid Powered or Solar Powered with Battery Fully Charged)
  + Everything ON
  + Transmission Interval – 1 mins
* Power Saver Mode (Only Battery Powered and Battery Power > 50%)
  + GSM – Sleep
  + GPS – Complete Sleep
  + Fan Off for 3 Mins
  + Transmission Interval – 5 Mins
* Turbo Boost Mode (Battery Power < 50% and Battery Power > 20%)
  + Transmission Interval – 15 Mins
* Battery Power Down Mode
  + Fan Off
  + GSM Module Sleep
  + GPS Sleep