ESP32 Comm Flow

**Initialize ESP32**

(Test ESP32 Connection)

**AT\r\n**

Return:

AT\r\n

\r\nOK\r\n

Or

AT\r\nERROR\r\n

(Turn of echo)

**ATE0\r\n**

Return:

ATE0\r\n

\r\nOK\r\n

Or

ATE0\r\nERROR\r\n

(Turn off Sleep Mode)

AT+SLEEP=0\r\n

\r\n\OK\r\n

**Initialize ESP32 Networking**

(Switch ESP32 to the station mode)

**AT+CWMODE=1\r\n**

Return:

\r\nOK\r\n

Or

\r\nERROR\r\n

(Connect to AP)

**AT+CWJAP=[<ssid>],[<pwd>]\r\n**

**AT+CWJAP=”MEAMA HARDWARE”,”meama202020”**

Return:

WIFI CONNECTED\r\n

WIFI GOT IP\r\n

\r\n

OK\r\n

[WIFI GOT IPv6 LL]\r\n

[WIFI GOT IPv6 GL]\r\n

OR

If SSID or Password is incorrect :

+SWJAP:4\r\n\r\nERROR\r\n

**(Get IP and MAC)**

**AT+CIFSR\r\n**

**Return :**

**+CIFSR:STAIP,"192.168.31.109"\r\n**

**+CIFSR:STAMAC,”10:52:1c:57:c4:bc”\r\n**

**\r\nOK\r\n**

**(Get list of WiFis)**

**AT+SWLAP**

**(Check AP signal strength)**

**AT+SWLAP=”SSID”**

**AT+SWLAP=”MEAMA HARDWARE”**

**Response :**

**+CWLAP:(4,"MEAMA HARDWARE",-45……**

**\r\n\OK\r\n**

**(disconnect from WiFi)**

**AT+SWQAP\r\n**

**WIFI DISCONNECT\r\n**

**\r\nOK\r\n**

**If WiFi AP is down it sends**

**WIFI DISCONNECT**

**Initialize ESP32 MQTT broker connections**

(Configure MQTT User Conf)

**AT+MQTTUSERCFG=<LinkID>,<scheme>,<"client\_id">,<"username">,<"password">,<cert\_key\_ID>,<CA\_ID>,<"path">\r\n**

Return:

\r\nOK\r\n

Or

\r\nERROR\r\n

(Connect to MQTT broker)

**AT+MQTTCONN=<LinkID>,<"host">,<port>,<reconnect>\r\n**

Return:

\r\n+MQTTCONNECTED\r\n

Or

\r\nERROR\r\n

If user or user or pass which was configured MQTT broker will not authorize the client and it will return

\r\n +MQTTDISCONNECTED\r\n

(Subscribe to MQTT broker’s topic)

**AT+MQTTSUB=<LinkID>,<"host">,<port>,<reconnect>\r\n**

Return:

\r\nOK\r\n

Or

\r\nERROR\r\n

If client receives a packet it receives

\r\n+MQTTSUBRECV