Type of data: ASCII Strings (ready to use data)

Type of Protocol: TCP

Data separator: character – comma i.e. ‘ **,** ’ (CSV format)

Each of below data is separated by data separator i.e. “Comma”

String format:

**Now,date,time,imei,signal strength,voltage,latitude,longitude,SENSOR1\_<value>,SENSOR2\_<value>,SENSOR3\_<value>,SENSOR4\_<value>,SENSOR5\_<value>,SENSOR6\_<value>,GPIO1\_<state>, GPIO2\_<state>, GPIO3\_<state>, GPIO4\_<state>, GPIO5\_<state>, GPIO6\_<state>$**

|  |  |
| --- | --- |
| Now | Start of string |
| Date | format ddmmyy |
| Time | format hh:mm |
| Imei | format 15 digit imei |
| Signal strength | format +/-SS dBm |
| Volatge | format X.xx V |
| Lattitude | format “LL.LLLLLL” |
| Longitude | format “LL.LLLLLL” |
| SENSOR1 | Value from sensor - 0 to 1024 |
| SENSOR2 | Value from sensor - 0 to 1024 |
| SENSOR3 | Value from sensor - 0 to 1024 |
| SENSOR4 | Value from sensor - 0 to 1024 |
| SENSOR5 | Value from sensor - 0 to 1024 |
| SENSOR6 | Value from sensor - 0 to 1024 |
| GPIO1\_state | Either “GPIO1\_on” or “GPIO1\_off” |
| GPIO2\_state | Either “GPIO2\_on” or “GPIO2\_off” |
| GPIO3\_state | Either “GPIO3\_on” or “GPIO3\_off” |
| GPIO4\_state | Either “GPIO4\_on” or “GPIO4\_off” |
| GPIO5\_state | Either “GPIO5\_on” or “GPIO5\_off” |
| GPIO6\_state | Either “GPIO6\_on” or “GPIO6\_off” |
| $ | End of string |

**Command From Server Side..**

1. To trigger realy:

Command Format : imei,GPIOX\_state (where state can be “ON” or “OFF”, X can be 1 to 6)

Reply from Tracker: imei,date,time,GPIO1\_state,OK

2. To read Sensor:

Command Format: imei,READ\_SENSORS

Reply from Tracker: imei, date,time,SENSOR1\_<value>,SENSOR2\_<value>,SENSOR3\_<value>,SENSOR4\_<value>,SENSOR5\_<value>,SENSOR6\_<value>,OK

3. to know location:

Command Format: imei,GET\_LOCATION

Reply from Tracker: imei,date,time,LATTITUDE,LONGITUDE,OK

Initializing FONA....(May take 3 seconds)

Attempting to open comm with ATs

---> AT

<--- RDY

---> AT

<--- AT

---> ATE0

<--- ATE0

---> ATE0

<--- OK

---> ATI

<--- SIM5300E R15.51

OK

---> AT+CPMS="ME","ME","ME"

<--- +CPMS: 0,100,0,100,0,100

FONA is OK

Checking for network connection...

---> AT+CREG?

<--- +CREG: 0,1

---> AT+CGDCONT=1,"IP","internet"

<--- OK

Disabling GPRS

---> AT+CLTS=1

<--- OK

---> AT&W

<--- OK

---> AT+CGATT=0

<---

---> AT+CHTTPSSTOP

<---

Enabling GPRS

---> AT+CIPSHUT

<--- SHUT OK

---> AT+CGDCONT=1,"IP","internet"

<--- OK

---> AT+CIPMODE=0

<--- OK

---> AT+CGATT=1

<--- OK

Connected to cellular!

---> AT+CCLK?

<--- +CCLK: "18/12/22,17:19:06+22"

---> AT+GSN

<--- 861715030101431,

---> AT+CSQ

<--- +CSQ: 16,0

---> AT+CBC

<--- +CBC: 0,92,4089

Now,221218,17:19,861715030101431,-81dBm,4.00V,$

---> AT+CIPSHUT

<--- SHUT OK

---> AT+CIPMUX=0

<--- OK

---> AT+CIPRXGET=0

<--- OK

AT+CIPSTART="TCP","173.8.145.131","8871"

<--- OK

<--- CONNECT OK

sent