

# **nodeG5 - iotasset.json config guide**

## **COM-ETH**

Firmware version: fw\_nodeG5\_v2.2  
Guide release date: 8MAR2024

Filename :	iotasset.json
Location :	/user

### 1. Introduction

The file 'iotasset.json' contains the assets configuration that is read by the COM-ETH master program to parse specific data from serial-ascii (COM) and Ethernet (ETH) devices. Acquired data is then inserted into local database for downstream IoT cloud clients.

### 2. IoTasset name definitions

COM-ETH IoTasset is defined by JSON objects inside JSON array "COMETH".

Below is the list of IoTasset names that should be defined in each JSON object.

<b>IoTasset name</b>	<b>Description</b>
Key	Define the data tagname
IOTMODE	Define the data handling mode

Below is the list of COM-ETH names that should be defined in each JSON object.

<b>COM-ETH name</b>	<b>Description</b>
COMETHTYPE	Define the communication mode/channel
IPADDR	Define the Ethernet(ETH) device IPv4 address
IPPORT	Define the Ethernet(ETH) device IP port
CMDSTRING	Define the command string to send
CMDENDCHAR	Define the handling of end character
ECHOMODE	Define the handling of echo from devices
DATATYPE	Define the data type to convert from raw data

Optional names:

POLLCYCLE	Define the multiples of Poll Period for any IoTasset
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Note: Poll Period is set at web config page 'IoT-Hardware')

### 3. IoTasset JSON object setup information

#### “Key”：“value”

value	Description
string	Unique name for this data value eg temperature, voltage, pressure, rpm

#### “IOTMODE”：“value”

value	Description
0	Send to cloud immediately (priority data)
1	Store to local database for local IoT client processing

#### “COMETHTYPE”：“value”

value	Description
SER_A	SERIAL PORT A
SER_B	SERIAL PORT B
TCP	TCP socket (Ethernet)
UDP	UDP socket (Ethernet)

#### “IPADDR”：“value”

value	Description
n1.n2.n3.n4	Ethernet device IPv4 address

#### “IPPORT”：“value”

value	Description
integer	Ethernet device IP port

#### “CMDSTRING”：“value”

value	Description
string	Command string to send eg “1*STOP”

#### “CMDENDCHAR”：“value”

Value	Description
LF	Append end char to command string: <0x0A>
CRLF	Append end char to command string: <0x0D><0x0A>

#### “ECHOMODE”：“value”

value	Description
E0	Echo filter off (no echo from COM-ETH device)
E1	Echo filter on (echo expected from COM-ETH device)

**Note: COM-ETH device’s respond string should be terminated by char <LF> (ASCII 010 or 0x0A). Only digits [0-9] chars will be parsed from the respond string.**

#### 4. Data Type definitions for COMETH

##### **“DATATYPE”:"value”**

value	Description
BOOL	Boolean value, ie 0 or 1
DEC	Decimal number eg 96.51, 10.1, 2000

#### 5. Example for IOT asset configuration

```
{
  "COMETH":[
    {
      "Key":"Temperature",
      "IOTMODE":"1",
      "COMETHTYPE":"SER_A",
      "CMDSTR":"TEMP",
      "CMDENDCHAR":"LF",
      "ECHOMODE":"E1",
      "DATATYPE":"DEC"
    },
    {
      "Key":"WindSpeed",
      "IOTMODE":"1",
      "COMETHTYPE":"TCP",
      "IPADDR":"192.168.1.101",
      "IPPORT":"70",
      "CMDSTR":"WIND",
      "CMDENDCHAR":"LF",
      "ECHOMODE":"E1",
      "DATATYPE":"DEC"
    },
    {
      "Key":"Humidity",
      "IOTMODE":"1",
      "COMETHTYPE":"UDP",
      "IPADDR":"192.168.1.105",
      "IPPORT":"77",
      "CMDSTR":"HUMI",
      "CMDENDCHAR":"LF",
      "ECHOMODE":"E0",
      "DATATYPE":"DEC"
    }
  ]
}
```

#### 6. Methods to upload 'iotasset.json' file to nodeG5

-Upload the iotasset.json file from your computer using the 'Upload iotasset.json' button in the 'IoT Hardware' tab.

-Put the iotasset.json file in /user folder of USB drive.  
Plug the USB drive into any USB-A port and click the 'Upload to nodeG5' button in the 'Management' tab.

-Use SCP/Putty console or WinSCP.

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