CAT Application Server
API Documentation

Overview

This document describes the API for fetching data from CAT application server. A request can be made by sending an HTTP GET request to the URL:

http://10.0.0.10/api/{API_endpoint}

where the **API endpoints** are those listed in this document. A response is returned in JSON format. [Ps. Please connect Ethernet (lan line) or wifi (TESA_AP3, TESA_TOPGUN2.4, TESA_TOPGUN5G, dd-wrt, dd-wrt-vas (pass: tesatopgun)] before call these API)

Example

To retrieve the last 5 data points of pressure data for Team 1.

Request: HTTP GET http://10.0.0.10/api/temperature/1/3

Response:


```
{
   "statusCode":"00",
   "statusDesc":"Success",
   "data":[
      {
         "sensID":4534,
         "val":25.6,
         "date":"2018-01-08T14:53:13.955+01:00"
      },
      {
         "sensID":4535,
         "val":25.6,
         "date":"2018-01-08T14:53:30.15+01:00"
      },
      {
         "sensID":4536,
         "val":25.6,
         "date":"2018-01-08T14:53:46.78+01:00"
      }
   ]
```

```
}
```

Team Data Request API

The team data request API is for requesting data obtained from the sensors of each team. Each request returns the last N or all data points along with the data points' timestamp.

Pressure: /pressure/{TeamID}/{N?}

Parameters

Parameter	Description	Data Type	Required
TeamID	Team ID	INT	True
N	Number of data points	INT or "All"	False (default=1)

Response

Parameter	Description	Data Type
statusCode	Status code	STRING
statusDesc	Status description	STRING
data	Array of pressure data	PressureData array

PressureData

Parameter	Description	Data Type
sensID	Reference ID	STRING
val	Pressure (hPa)	STRING
date	Date and time of the data	STRING

Temperature: /temperature/{TeamID}/{N?}

Parameters

Parameter	Description	Data Type	Required
TeamID	Team ID	INT	True

N	Number of data points	INT or “All”	False (default=1)

Response

Parameter	Description	Data Type
statusCode	Status code	STRING
statusDesc	Status description	STRING
data	Array of temperature data	TempData array

TempData

Parameter	Description	Data Type
sensID	Reference ID	STRING
val	Temperature (°C)	STRING
date	Date and time of the data	STRING

Humidity: /humidity/{TeamID}/{N?}

Parameters

Parameter	Description	Data Type	Required
TeamID	Team ID	INT	True
N	Number of data points	INT or “All”	False (default=1)

Response

Parameter	Description	Data Type
statusCode	Status code	STRING
statusDesc	Status description	STRING
data	Array of humidity data	HumidData array

HumidData

Parameter	Description	Data Type
sensID	Reference ID	STRING
val	Humidity (%)	STRING
date	Date and time of the data	STRING

Gyroscope: /gyroscope/{TeamID}/{N?}

Parameters

Parameter	Description	Data Type	Required
TeamID	Team ID	INT	True
N	Number of data points	INT or “All”	False (default=1)

Response

Parameter	Description	Data Type
statusCode	Status code	STRING
statusDesc	Status description	STRING
data	Array of gyroscope data	GyroData array

GyroData

Parameter	Description	Data Type
sensID	Reference ID	STRING
val_x	Gyroscope X-axis (°/s)	STRING
val_y	Gyroscope Y-axis (°/s)	STRING
val_z	Gyroscope Z-axis (°/s)	STRING
date	Date and time of the data	STRING

Accelerometer: /accelerometer/{TeamID}/{N?}

Parameters

Parameter	Description	Data Type	Required
TeamID	Team ID	INT	True
N	Number of data points	INT or “All”	False (default=1)

Response

Parameter	Description	Data Type
statusCode	Status code	STRING
statusDesc	Status description	STRING
data	Array of accelerometer data	AcceleroData array

AcceleroData

Parameter	Description	Data Type
sensID	Reference ID	STRING
val_x	Accelerometer X-axis (G)	STRING
val_y	Accelerometer Y-axis (G)	STRING
val_z	Accelerometer Z-axis (G)	STRING
date	Date and time of the data	STRING

Magnetometer: /magnetometer/{TeamID}/{N?}

Parameters

Parameter	Description	Data Type	Required
TeamID	Team ID	INT	True
N	Number of data points	INT or “All”	False (default=1)

Response

Parameter	Description	Data Type
statusCode	Status code	STRING
statusDesc	Status description	STRING
data	Array of magnetometer data	MagnetoData array

MagnetoData

Parameter	Description	Data Type
sensID	Reference ID	STRING
val_x	Magnetometer X-axis (mGauss)	STRING
val_y	Magnetometer Y-axis (mGauss)	STRING
val_z	Magnetometer Z-axis (mGauss)	STRING
date	Date and time of the data	STRING

LED8: /leds/{TeamID}/{N?}

Parameters

Parameter	Description	Data Type	Required
TeamID	Team ID	INT	True
N	Number of data points	INT or “All”	False (default=1)

Response

Parameter	Description	Data Type
statusCode	Status code	STRING
statusDesc	Status description	STRING
data	Array of LEDs data	LedData array

LedData

Parameter	Description	Data Type
sensID	Reference ID	STRING
val	LEDs status	STRING
date	Date and time of the data	STRING

Digital Input N: /din{M}/{TeamID}/{N?}

Parameters

Parameter	Description	Data Type	Required
TeamID	Team ID	INT	True
N	Number of data points	INT or “All”	False (default=1)
M	Digital Input ID	INT (1,2,3,4,5)	True

Response

Parameter	Description	Data Type
statusCode	Status code	STRING
statusDesc	Status description	STRING
data	Array of digital input data	DinData array

DinData

Parameter	Description	Data Type
sensID	Reference ID	STRING
val	Digital input status	STRING
date	Date and time of the data	STRING

Status Code

Status Code	Reason
00	Success
01	Cannot find the given TeamID
02	Cannot find the requested data