

데이터 입력/출력



양방향 통신(IOT)
CTypes 프로그램, 전원
MQTT

라즈베리파이

제어 컨트롤러



데이터저장



실시간 모니터링



데이터저장

데이터저장

• 도커를 이용한 Grafana 설치

```
docker run -itd -p 3001:3000 --name=grafana_3001 grafana/grafana
```

Username: admin

Password: admin

[System 2] HTTP 통신



Tuya 수질 Sensor



헤이홈



Tuya 수질 Sensor DB

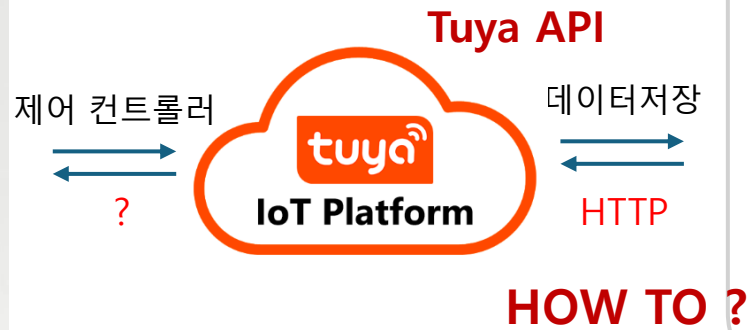
id	t	temp_current	ph_current	tds_current	ec_current	salinity_current	pro_current	orp_current	cf_current	rh_current	created_at
1	1730723914710	230	798	169	338	197	998	131	338	0	2024-11-04 12:38:34
2	1730723944906	230	798	169	338	197	998	132	338	0	2024-11-04 12:39:04
3	1730723975144	230	798	169	338	197	998	132	338	0	2024-11-04 12:39:35
4	1730724005356	230	798	169	338	197	998	132	338	0	2024-11-04 12:40:05
5	1730724035553	230	798	170	340	198	998	132	340	0	2024-11-04 12:40:35

[System 2] Tuya IoT Platform

데이터 입력/출력



8-in-1 Water Quality Tester

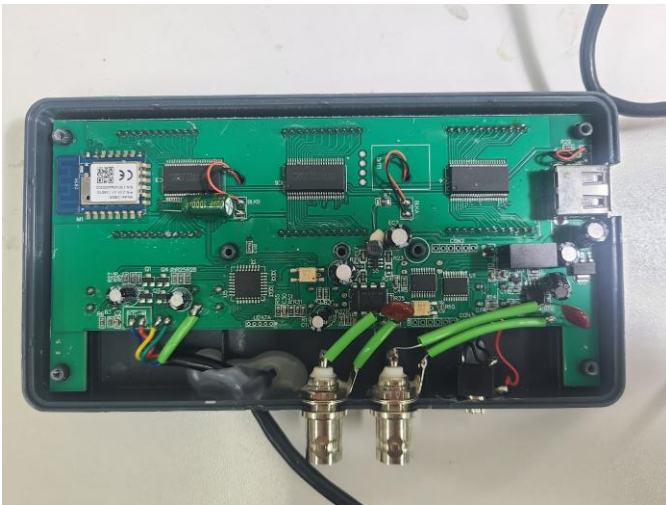


라즈베리파이



Grafana Dashboard

<http://bombzoo-home.iptime.org:3000/d/de2xifwo534sga/ph-8in1?from=now-6h&to=now&timezone=browser>

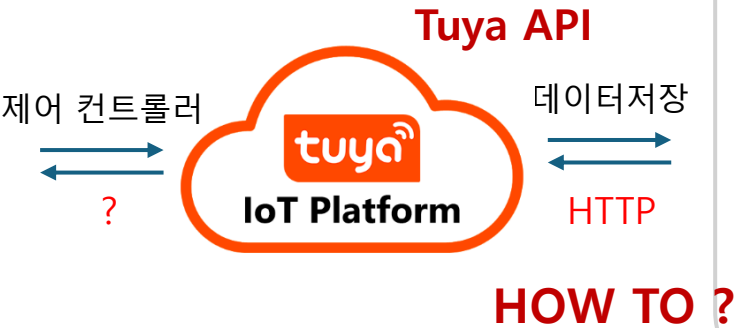


[System 2] 헤이홈 IoT Platform

데이터 입력/출력



8-in-1 Water Quality Tester



라즈베리파이



