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# Test setup architecture



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2 min



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## HW Architecture

In Figure 1, there is the hardware architecture of the test setup for validating the new watches and for long-term testing.

The current design should cover the following HW modules:

- Bluetooth interface
- Microphone
- External FLASH memory
- Battery
- Accelerometer

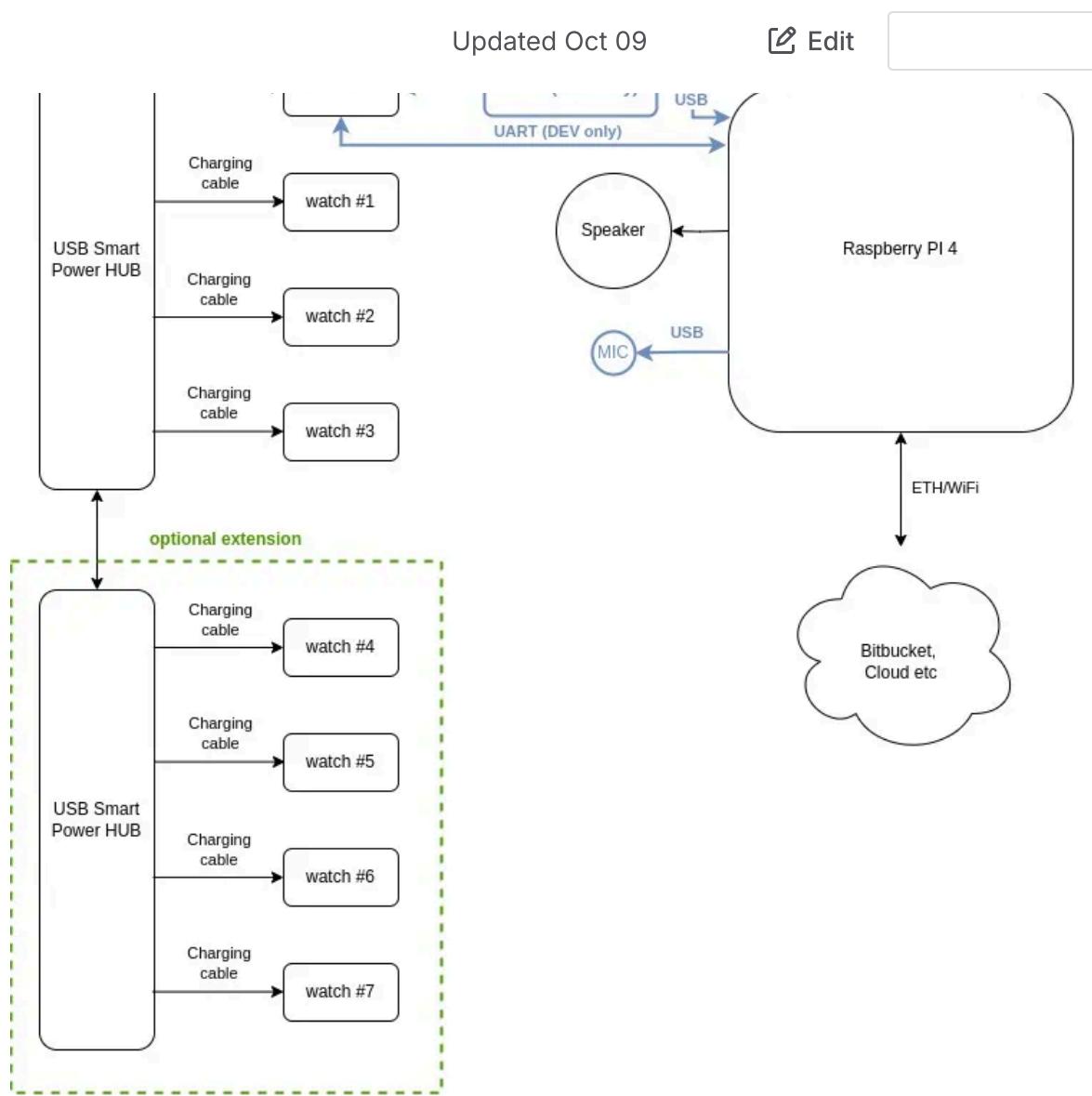


Figure 1

The full list of HW components: [https://docs.google.com/spreadsheets/d/1o6zeVk0HaK3Kn1laNQSOvKt8\\_N3sF6WrpuAzNYonq\\_U/edit?usp=sharing](https://docs.google.com/spreadsheets/d/1o6zeVk0HaK3Kn1laNQSOvKt8_N3sF6WrpuAzNYonq_U/edit?usp=sharing) Connect your Google account

## SW architecture

In Figure 2, there is the software architecture of the test setup.

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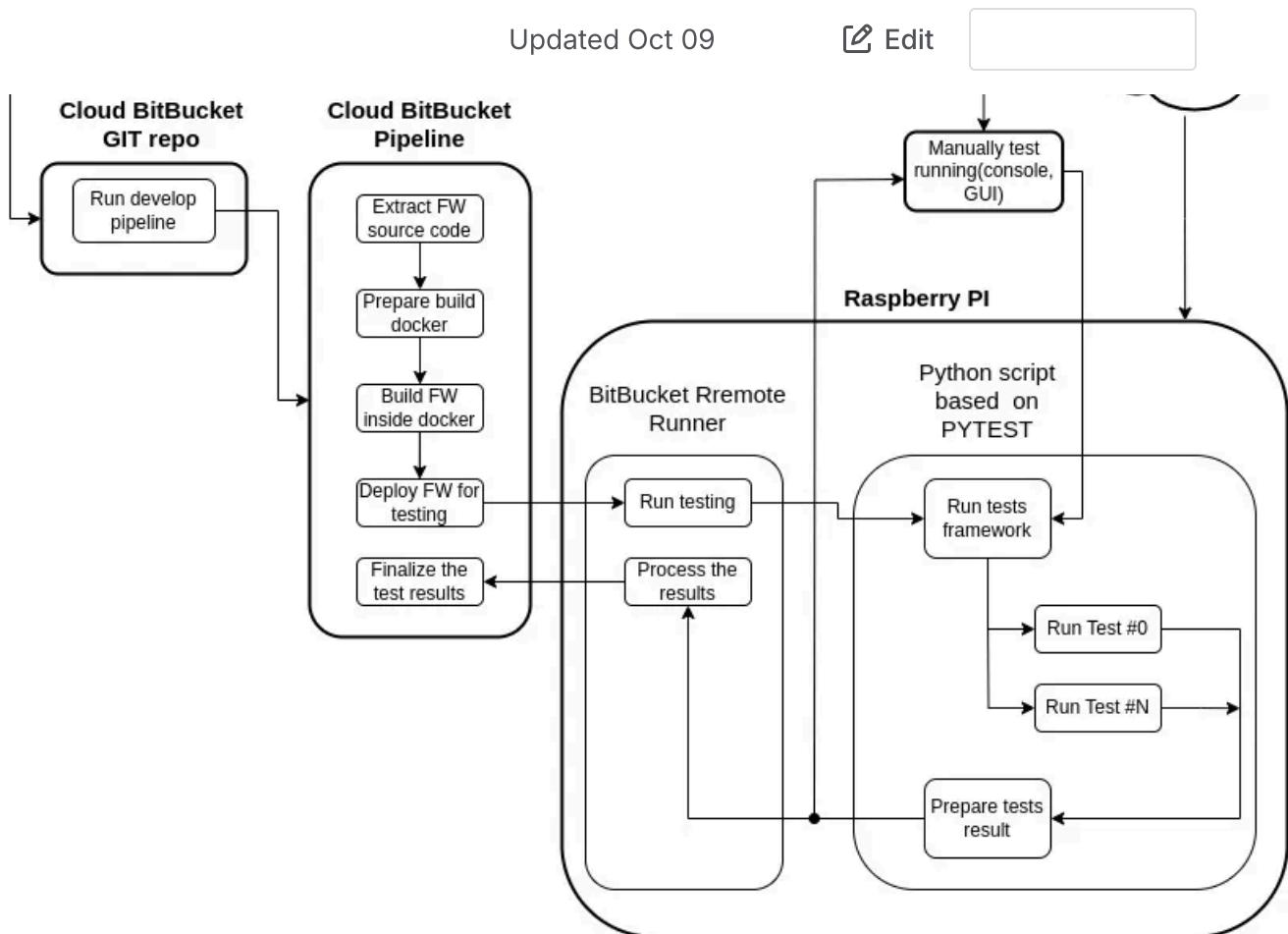


Figure 2.

## Test Configuration

```

1  {
2      "_comment": "BT Addr from the watch screens",
3      "devices_list": {
4          "1A": "E8A995",
5          "2A": "B36088",
6          "3A": "",
7          "4A": "",
8          "1B": "",
9          "2B": "",
10         "3B": "",
11         "4B": ""
12     },
13
  
```

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```
16
17 "quick_tests": {
18     "check_bt_advertising": true,
19     "check_bt_connect": true,
20     "reset_watch": true,
21     "check_fw_version": true,
22     "check_update_fw": true,
23     "check_charging_on_off_status": true,
24     "check_status_code": true,
25     "check_err_code": true,
26     "check_dev_id": true,
27     "check_dev_model": true,
28     "check_mic_gain": true,
29     "check_bt_addr": true,
30     "check_is_monitoring_off": true,
31     "check_mode": true,
32
33     "check_bt_characteristics": {
34         "check_read_monitor_data": true,
35         "check_write_time_in_ms": true,
36         "check_write_mic_gain": false,
37         "check_write_mic_record_on_in_product_mode": false,
38         "check_write_mic_record_on_in_develop_mode": false,
39         "check_write_delete_all_events_files": true,
40         "check_write_delete_all_audio_files": false,
41         "check_write_watch_mode": false,
42         "check_write_monitoring_state": true,
43         "check_write_reboot": true
44     },
45
46     "monitoring_on": {
47         "check_is_monitoring_on": true,
48         "check_play_sound": true,
49         "check_download_events": true,
50         "check_parsing_events_file": true,
51         "check_cough_events": true,
52         "check_heartbeat_event": true,
53         "check_battery_event": false,
```

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```
56     "check_curr_event_file_idx": true,
57     "check_curr_event_file_len": true,
58     "check_curr_events_num": true,
59     "check_status_code": true,
60     "check_err_code": true,
61     "check_ml_err_code": true
62 },
63 "monitoring_off": {
64     "check_is_monitoring_off": true,
65     "check_play_sound": true,
66     "check_download_events": true,
67     "check_parsing_events_file": true,
68     "check_no_cough_event": true,
69     "check_no_heartbeat_event": true,
70     "check_no_battery_event": true,
71     "check_no_cough_burst_event": false,
72     "check_no_cough_oasis_event": false,
73     "check_cough_num": true,
74     "check_no_change_in_curr_event_file_idx": true,
75     "check_no_change_in_curr_event_file_len": true,
76     "check_no_change_in_curr_events_num": true,
77     "check_status_code": true,
78     "check_err_code": true,
79     "check_ml_err_code": true
80 }
81 }
82 }
```

## Final list of components:

1. Raspberry Pi 5 8GB x 1
2. Raspberry Pi DigiAMP+ x 1
3. MEGA4 - 4-Port USB 3.1 PPPS Hub for Raspberry Pi 4 x 2
4. Pioneer TS-G1020F 10 cm (3.9 Inch) Coaxial Speaker (2-Way, 210 W) Black x2

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7. Mini USB Microphone × 1
8. SanDisk MicroSD Card (Class 10 A1) × 1
9. Official Raspberry Pi Micro-HDMI Cable × 1
10. Raspberry Pi USB Extension & Shield Cable × 3
11. Pure Copper RJ45 Cat5e Ethernet LAN Cable (2m) × 1
12. Lanberg Wall Mounted Rack Cabinet 9U 60x45x51.23cm Gray × 1
13. Acoustic Foam Sound Insulation

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