# IoT Device BOM

Version: 4/3/2019

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| ID | Category | Check | Description | Protocol | Location | Power | Topic (mqtt) | Label | Components | Cost |
|---|---|---|---|---|---|---|---|---|---|---|
| | **LONG RANGE PRESENCE DETECTOR** | | | | | | | | | |
| 161 162 | LoRa to Wifi Protocol Presence Hub | | Wise Whisper Hub Whisper Node ESP8266 e12 MCU | LoRa > Serial > Wifi | Garage | 3VDC XFR | Sub: 4517/house/auto/status/161 Sub: 4517/house/auto/status/162 | Auto Beacon Hub | Whisper Node LoRa ESP8266 MCU Enclosure 100 x 60 x 25 PCB USB Wall Transformer | 20 3 2 3 10 |
| 161 | LoRa Protocol Client Presence Sensor | | Car Presence Indicator Whisper Node - LoRa | LoRa | X3 | 3VDC Battery | Sub: 4517/house/auto/status/161 | Auto Beacon ID: 161 Whisper LoRa Node | Whisper Node LoRa Enclosure 100 x 60 x 25 PCB Batteries | 20 2 3 2 |
| 162 | LoRa Protocol Client Presence Sensor | | Car Presence Indicator Whisper Node - LoRa | LoRa | 328i | 3VDC Battery | Sub: 4517/house/auto/status/162 | Auto Beacon ID: 162 Whisper LoRa Node | Whisper Node LoRa Enclosure 100 x 60 x 25 PCB Batteries | 20 2 3 2 |
| | **MAILBOX DELIVERED INDICATOR** | | | | | | | | | |
| --- | ESP-NOW to Wifi Protocol  Hub Mailbox | | ESP-NOW to WIFI Mailbox Hub | ESP-NOW > WIFI | Garage | 3VDC XFR | MAC: {0x36, 0x33, 0x33, 0x33, 0x33} | Mailbox Opened Hub ESP-NOW > Wifi Hub | ESP8266 E12 MCU (Qty 2) Enclosure 100 x 60 x 25 PCB USB Wall Transformer | 6 2 3 10 |
| 151 | ESP-NOW Proto Battery Powered Opened/Closed Door Sensor | | Mailbox Open Alert ESP8266 e12 | ESP-NOW Client | Mailbox | 3VDC Battery | Sub: 4517/house/mailbox/status/151 | Mailbox Opened Sensor ID: 151 ESP-NOW Client | ESP8266 E12 Reed Switch Enclosure 100 x 60 x 25 PCB Battery - LiFePO4 | 2 2 2 3 5 |
| | **MOTION DETECTOR SYSTEM** | | | | | | | | | |
| --- | ESP-NOW to Wifi Protocol  Hub Motion Detectors | | ESP-NOW to WIFI Motion Detector Hub | ESP-NOW > WIFI | | 3VDC XFR | MAC: {0x36, 0x33, 0x33, 0x33, 0x34} | Motion Hub ESP-NOW > Wifi Hub | ESP8266 E12 MCU (Qty 2) Enclosure 100 x 60 x 25 PCB USB Wall Transformer | 6 2 3 10 |
| 614, 615 | ESP-NOW Client Motion Detector | | Motion Sensor - Battery Powered | ESP-NOW Client | | 3VDC LiFePo Battery | Sub: 4517/house/motion/status/614 | Motion Detector ID: 614, 615 | ESP8266 E12 Motion Sensor Enclosure 100 x 60 x 25 PCB LiFePo4 Battery | 3 7 2 3 5 |
| | **TEMPERATURE SENSOR SYSTEM** | | | | | | | | | |
| ---- | ESP-NOW to Wifi Protocol  Hub Temperature | | ESP-NOW to WIFI Mailbox Hub | ESP-NOW > WIFI | | 3VDC XFR | MAC: {0x36, 0x33, 0x33, 0x33, 0x35} | Temperature ESP-NOW > Wifi Hub | ESP8266 E12 MCU (Qty 2) Enclosure 100 x 60 x 25 PCB USB Wall Transformer | 6 2 3 10 |
| 131, 132 | ESP-NOW Client Battery Powered Temperature Sensor | | Temperature Sensor - Battery Powered | ESP-NOW Client | | 3VDC Battery | Sub: 4517/house/temperature/status/131 or 132 | Temperature Sensor ID: 131, 132 ESP-NOW Client | ESP8266 E12 DS18B20 Enclosure 100 x 60 x 25 PCB Battery - LiFePO4 | 2 2 3 5 |
| | **PRESENCE DETECTOR SYSTEM** | | | | | | | | | |
| | BLE Beacon Hub | | RPI BLE Hub | BLE | | 3VDC XFR | | | Raspberry PI Model 3B    Enclosure and USB Adapter | 35 |
| | Thing | | Personal Presence Beacon | BLE | Marcus Sandra Noah | 3VDC Coin Cell | Pub: 4517/presence payload: id or all (Request current status) Sub: 4517/presence/status/id | | Radius Network Dot Beacon | 14 |
| | **VOICE MODULE** | | | | | | | | | |
| 821,822 | Thing | | Little Buddy Talker Module | Wifi/MQTT | | 5VDC XFR | Pub: 4517/house/lb_talker/821 payload:  text-string, device origin Sub: 4517/house/lb_talker/status/821 | Little Buddy Talker Module ID: 821,822 | ESP8266 E12 MCU Enclosure 100 x 60 x 25 PCB USB Wall Transformer Little Buddy Talker External Amplified Speaker | 3 2 3 10 25 15 |
| 811 | Thing | | Text to Speech Module | Wifi/MQTT | Office | 5VDC XFR | Pub: 4517/house/talker/811 payload:  text-string, device origin Sub: 4517/house/talker/status/811 | Text to Speech Module ID: 811 | ESP8266 E12 MCU Enclosure 100 x 60 x 25 PCB USB Wall Transformer EMIC Text to Speech Module External Amplified Speaker | 3 2 3 10 60 15 |
| | **SENSORS** | | | | | | | | | |
| 411 | Wifi Protocol Reed Relay Sensor | | Garage Door Closed ESP8266 e12 MCU | Wifi/MQTT | Garage | | Pub: 4517/garage/door/down Payload: Door1 or Door2 Sub: 4517/garage/door1/down/status supply: Door1 Up / Door1 Down Sub: 4517/garage/door2/down/status supply: Door2 Up / Door2 Down | Garage Door Status Module ID: 411 Reed Contact Module | ESP8266 E12 MCU Enclosure 100 x 60 x 25 PCB USB Wall Transformer | 3 2 3 10 |
| 171 172 | Wireless MQTT Client | | Light/Temp/Humidity Sensor ESP8266 e12 MCU | Wifi/MQTT | Garage | 3VDC XFR | Pub: 4517/house/multisensorlth/(1 or 2) Payload: light/temperature/humidity Sub: 4517/house/multsensorlth/status/(1 or2) | Light/Temp/Humidity Sensor ID: 171 Multi-Sensor | ESP8266 E12 MCU Light Sensor Temperature and Humidity Sensor PCB USB Wall Transformer | 3 2 5 3 10 |
| 511 | Wireless MQTT Client | | Daylight Sensor | Wifi/MQTT | Basement | 3VDC XFR | Pub: 4517/house/lightdark/1 Payload: daynight Sub: 4517/house/lightdark/status/1 | Daylight/Night Sensor ID: 511 | ESP8266 E12 MCU Light Sensor Temperature and Humidity Sensor PCB USB Wall Transformer | 3 2 5 3 10 |
| 611 612 | Wireless MQTT Client | | Motion Sensor | Wifi/MQTT | Garage | 3VDC XFR | Sub: 4517/house/motion/status/611 | Motion Detector ID: 611 <br><br> Motion Detector ID: 612 | ESP8266 E12 MCU Motion Sensor Enclosure 100 x 60 x 25 PCB USB Wall Transformer | 3 2 2 3 10 |
| 231, 232 | Wireless MQTT Client | | Moisture Sensor | Wifi/MQTT | | 3VDC LiFePo Battery | Sub: 4517/house/moisture/231 or 232 | Moisture Sensor ID: 231, 232 | ESP8266 E12 Moisture Sensor Enclosure 100 x 60 x 25 | 3 7 2 |

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|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | PCB | 3 |
| | | | | | | | | | LiFePo4 Battery | 5 |
| **ACTUATORS - SONOFF** | | | | | | | | | | |
| 210 | Wireless MQTT Client | | Garage Lights<br>Sonoff Switch | Wifi | Garage | 120VAC | 4517/garage/lights/switch (on/off)<br>4517/garage/lights/switch/status (on/off) | | Sonoff AC Switch | 7 |
| 211 | Wireless MQTT Client | | Driveway Lights<br>Sonoff Switch | Wifi | Garage | 120VAC | 4517/driveway/lights/switch (on/off)<br>4517/driveway/lights/switch/status (on/off) | | Sonoff AC Switch | 7 |
| **ACTUATORS - RELAY CONTACT** | | | | | | | | | | |
| 311 | Wireless MQTT Client | | Garage Door 1 and 2<br>Relay Contact | Wifi | Garage | 5 XFR | Pub: 4517/garage/doors Payload: "1" or "2"<br>Sub: 4517/garage/doors/status<br>Supply: Door1 or Door2 | Garage Door Control Module<br>ID: 311<br>Dry Relay Module | ESP8266 E12 MCU<br>Enclosure 100 x 60 x 25<br>PCB<br>USB Wall Transformer<br>Relay Module | 3<br>2<br>3<br>10<br>2 |
| 321 | Wireless MQTT Client | | Fireplace<br>Relay Contact | Wifi | Family Room | 5 VDC XFR | 4517/house/fireplace/id Payload: 0 or 1<br>4515/house/fireplace/status/id | Fireplace Control Module<br>ID: 321<br>Dry Relay Module | ESP8266 E12 MCU<br>Enclosure 100 x 60 x 25<br>PCB<br>USB Wall Transformer<br>Relay Module | 3<br>2<br>3<br>10<br>2 |
| **ANNUCIATORS** | | | | | | | | | | |
| 101, 102 | Wireless MQTT Client | | System Clock | Wifi/MQTT | Office | 5VDC XFR | Pub: 4517/house/sysdatetime<br>payload: "datetime"<br>Sub: 4517/house/sysdatetime/status | Little Buddy Talker Module<br>ID: 101, 102 | ESP8266 E12 MCU<br>Enclosure 100 x 60 x 25<br>PCB<br>USB Wall Transformer | 3<br>2<br>3<br>10 |
| 711 | Wireless MQTT Client | | Buzzer | Wifi/MQTT | | 5VDC XFR | Pub: 4517/house/buzzer/Devic_id<br>payload: "Originating Device"<br>Sub: 4517/house/buzzer/status/device_id | System Buzzer<br>ID: 711 | ESP8266 E12 MCU<br>Enclosure 100 x 60 x 25<br>PCB<br>USB Wall Transformer<br>Buzzer | 3<br>2<br>3<br>10 |
| **HUBS AND EDGE PROCESSORS** | | | | | | | | | | |
| | Edge | | Edge Processor Unit<br>Raspberry PI | Wifi | Office | 5VDC XFR | | | Raspberry Pi 3B<br>USB Wall Transformer | 35<br>10 |
| | Broker | | MQTT Broker ()<br>Raspberry PI | Wifi/MQTT | Office | 5VDC XFR | | | Raspberry Pi 3B<br>USB Wall Transformer | 35<br>10 |
| | UI | | Status Panel<br>Raspberry PI & Display | | | | | | Raspberry Pi 3B<br>Enclosure | 35 |