

## GridDuck Hardware Specifications

GridDuck has integrated wireless gateways, ZigBee plugs, relay switches and sensors from a range of OEM (Original Equipment Manufacturer) partners, including Develco and Owon.

All of these devices are accessible via our dashboard and API.

### Wireless Hub

GridDuck's wireless hub connects your appliances to our dashboard via Wi-Fi or Ethernet.

#### Specifications and Features

- Dimensions: 102 x 102 x 28 mm
- Wall/table mount
- External adapter 5V DC, 2 Amp
- Ethernet connection
- ZigBee 2.4 GHz
- Wi-Fi 2.4 GHz



### 3G Wireless Hub

GridDuck's wireless hub connects your appliances to our dashboard via Wi-Fi, Ethernet or mobile network (if ethernet or Wi-Fi is unavailable).

#### Specifications and Features

- Dimensions: 102 x 102 x 28 mm
- Wall/table mount
- External net adapter 5V DC, 2 Amp
- Ethernet connection
- ZigBee 2.4 GHz
- Wi-Fi 2.4 GHz
- Cellular 2G/3G (EU)
- Backup battery



## Smart Plug

GridDuck connects your appliances to our Wireless Hub, measures electricity consumption and automatically switches appliances on/off to save energy.

### Specifications and Features

#### General

- Dimensions: 41mm diameter, 45mm height
- Colour: white
- Plug types: Schuko, French, British
- Power consumption: 230V +/-10%; 0.4 W
- Operation temperature 0 to +40°C
- IP class: IP40

#### Radio features

- Radio Sensitivity: -101 dBm @ 1% PER
- Radio output power: +8 dBm

#### Power metering

- Voltage range: 207 to 253 VAC
- Accuracy: Typ +/- 2 %
- Reported resolution: 1W

#### Remote control

- Max. switch voltage: 250 VAC
- Max. load: 16 A
- Max. continuous load: 10A (UK version 13A)
- Overload and over temperature protection

#### Communication

- Wireless protocol: ZigBee Home Automate

#### Certifications

- Conforming to CE, RoHS and REACH directives
- ZigBee Home Automation 1.2 certified



## Inline Smart Cable

Our Inline Smart Cable measures the consumption of appliances that are wired into the wall, and switches them on/off to save energy. This cable can be used as an alternative to smart plugs.

### Specifications and Features

#### General

- Dimensions (W x D x H): 108 X 36 X 24 mm
- Colour: White
- Acceptable cable size: Maximum: outside diameter 11.8 mm
- Power supply: 230 V
- Power consumption: 0.4 W

#### Environment

- Operation temperature: 0 to +40°C
- IP class: IP30

#### Radio features

- Sensitivity: -100 dBm at 1% PER
- Output power: +8 dBm

#### Power meter

- Voltage range: 207 to 253 VAC
- Current range: 16A continuous
- Accuracy: Typ +/- 2.0%
- Optimum: 1%
- Reported resolution: 1 W

#### Remote control

- Max. switch voltage: 250 VAC
- Max. switch current: 16 A

#### Certifications

- Conforming to CE, RoHS and REACH directives
- ZigBee Home Automation certification



## 16A DIN Rail Relay

This relay is for the distribution board. It measures consumption and can be used to switch a whole circuit on/off.

### Specifications and Features

#### General

- Dimensions: 90 x 58 x 17.5 mm
- Power supply
- Supply voltage: 230 V
- Power consumption: 0.4 W

#### Environment

- IP class: IP30
- Operation temperature 0 to +50°C
- Relative humidity 5% - 85%, non-condensing
- Storage temperature -40°C to +85°C

#### Power meter

- Voltage range: 207 to 253
- Current range: 16 A
- Accuracy: Typ +/- 3.0%
- Optimum: 1%

#### Radio features

- Sensitivity: -101 dBm @ 1% P
- Output power: +8 dBm

#### Remote control

- Max. switch voltage: 250 VAC
- Max switch current: 13 A

#### Phase dropout alarm

- Via Zigbee
- Conforming to CE, RoHS and REACH directives
- Zigbee Home Automation 1.2 certified



## 32A Smart Relay

This relay is for the distribution board. It measures consumption & switches circuits on/off.

### Specifications and Features

#### General

- Dimensions: 90.2mm x 53mm x 57.5mm
- Operating temperature -10°C - +45C
- Operating Humidity: up to 85% non-condensing

#### Communication

- ZigBee Pro HA 1.2
- Receiver Sensitivity -101dBm

#### Power Metering & Control

- Power Supply 110V and 230V
- Maximum Load 6900W 30A/230V
- Accuracy +/-5%

#### Certifications

- ZigBee Pro HA 1.2
- Conforming to CE and RoHS directives



## Smart Relay 30A, Outdoors

This relay is for outdoor appliances. It measures consumption & switches circuits on/off.

### Specifications and Features

#### General

- Dimensions (W x H x D): 115 x 90 x 55 mm
- Power supply: 230 V +/- 10%
- Power consumption: Idle transceiver: 0.4 W, active transceiver: 0.4 W
- Operation temperature 0 to +50°C
- Storage temperature: -20°C to +50°C
- IP class: IP 55

#### Power metering

- Voltage range: 210-250 VAC
- Current range: 30 A
- Frequency range: 47-53 Hz

#### Remote control

- Max. switch voltage: 250 VAC
- Max. switch current: 30 AAC
- Phase dropout alarm via ZigBee

#### Communication

- Available in ZigBee HA and SE 1.1

#### Certifications

- Conforming to CE, RoHS and REACH directives
- ZigBee Smart Energy 1.1 certified



## Wireless Humidity/Temperature Sensor

GridDuck's sensors are battery-powered and can be used indoors and outdoors. Sensors connect to the Wireless Hub and act as a trigger for automations e.g. on/off.

### Specifications and Features

#### General

- Dimensions: 70 x 70 x 21 mm
- Color: White
- Power supply
- Battery: 2 x AA, exchangeable
- Battery life: 5 years, reporting every 5 minutes
- Resolution: 0.1 Volt
- Battery Warning:  $V < 2.2V$

#### Radio features

- Sensitivity: -92 dBm
- Output power: +3 dBm

#### Environment

- IP class: IP20
- Operation temperature: 0 to -

#### Temperature sensor

- Range: 0 to +50°C
- Resolution: 0.1°C (accuracy  $\pm 0.5^\circ\text{C}$ )
- Reported every second

#### Humidity sensor

- Range: 0 to 100% RH
- Resolution: 1% RH (accuracy 3%, 20-80% RH)
- Reported every second

#### Certifications

- RoHS compliant according to the EU Directive 2002/95/EC
- ZigBee Home Automation 1.2 certified

#### More sensors available

- Movement/Light, Air Quality, Smoke Alarm, Water Leak Detector



## External Meter Reader

GridDuck's meter reader counts the LED or infrared pulses from your main meter.

### Specifications and Features

#### General

- Dimensions: 115 x 35 x 70 mm

#### Power supply

- Battery: 3 x AA alkaline batteries, exchangeable
- Battery life: 2 years, updating every 5 seconds, at room temperature
- Battery level and low battery warning are reported

#### Radio features

- Sensitivity: -98 dBm
- Output power: +8 dBm

#### Environment

- Operation temperature: -20 to +60°C
- IP class: IP22
- Relative humidity 5% - 85%, non-condensing

#### Certifications

- Conforming to CE, RoHS and REACH directives





## Wireless CT Clamp 3-Phase

GridDuck's 3-Phase CT clamp measures the current of a single or 3-phase device. We offer a choice of 80A up to 500A and above..

### Specifications and Features

#### General

- Dimensions: 86(L) x 86(W) x 37(H) mm
- Weight: 415g
- ZigBee HA 1.2 compliant
- Single/3 phase electricity compatible
- Three current transformers for single phase application
- Measures real-time and total energy consumption
- Suitable for both residential and commercial application
- Optional antenna to enhance the signal strength
- Lightweight and easy to install

#### Power Supply

- Output Power: Up to +20dBm
- Operating Voltage: 100-240 Vac 50/60 Hz

#### Radio Features

- Internal Antenna (default)
- External Antenna (optional)

#### Interfaces

- CT 75A, accuracy <2% (default)
- CT 100A, accuracy <2% (optional)
- CT 200A, accuracy <2% (optional)

