SUNNY BOY STORAGE

Australian Information Release

SUNNY BOY STORAGE

Basic Product Information

- Designed for High Voltage batteries (e.g. Tesla Powerwall).

- AC Coupled solution, suitable for:
    1. Retrofit (SMA or 3rd party PV system), *including the 1.5 million existing Australian residential PV systems*
    2. New installation (SMA or 3rd party PV system)
    3. Storage without PV plant

- Connects easily to the SMA Energy Management System.

- Sunny Boy Storage allows customers to choose their battery:
    - Brand
    - Size/Capacity
    - Technology (e.g. Li-ion, etc)

- Australia identified by SMA as initial market for product.

- First units due off the Production Line March 2016, arriving in Australia in Q2.

SUNNY BOY STORAGE

Cost-effective, flexible and simple

Technical Data

Battery integration	AC-Coupled
Inverter Type	Battery inverter only
Topology	Transformerless
Grid Connection	Single Phase
Power (ch./disch.)	2.5 kW
DC-Voltage (Batt.)	120 V – 500 V_{DC}
DC-Current (Batt.)	10 A
Efficiency (max.)	97 % (Batt. $\rightarrow$ Grid)
Weight (approx)	9kg
Dimensions (W/H/D)	~460 x 360 x 120mm

Advantages:

> **Flexibility due to AC-coupling**

> > New installations, Retrofit, Battery only

> > Flexible PV-design

> > Free choice from several Batteries (e.g. TESLA, etc.)

> **Cost-effective and efficient**

> > Based on SMA's proven String-technology

> > Best-price battery-inverter

> > Efficiency up to 97%

> **Quick and easy to install**

> > Integrated Wireless and Web Server, for commissioning via Smart Phone

> > Direct integration into Sunny Portal/Sunny Places via Webconnect (WiFi or Ethernet)

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SUNNY BOY STORAGE

Basic Generic System

Sunny Portal

Existing Solar PV System
(SMA or other brand)

Sunny Home Manager
(Optional)

Router

SMA Energy Meter

Backup

*

Ethernet

Household Loads

Sunny Boy Storage

CAN Bus
Communication

HV Battery
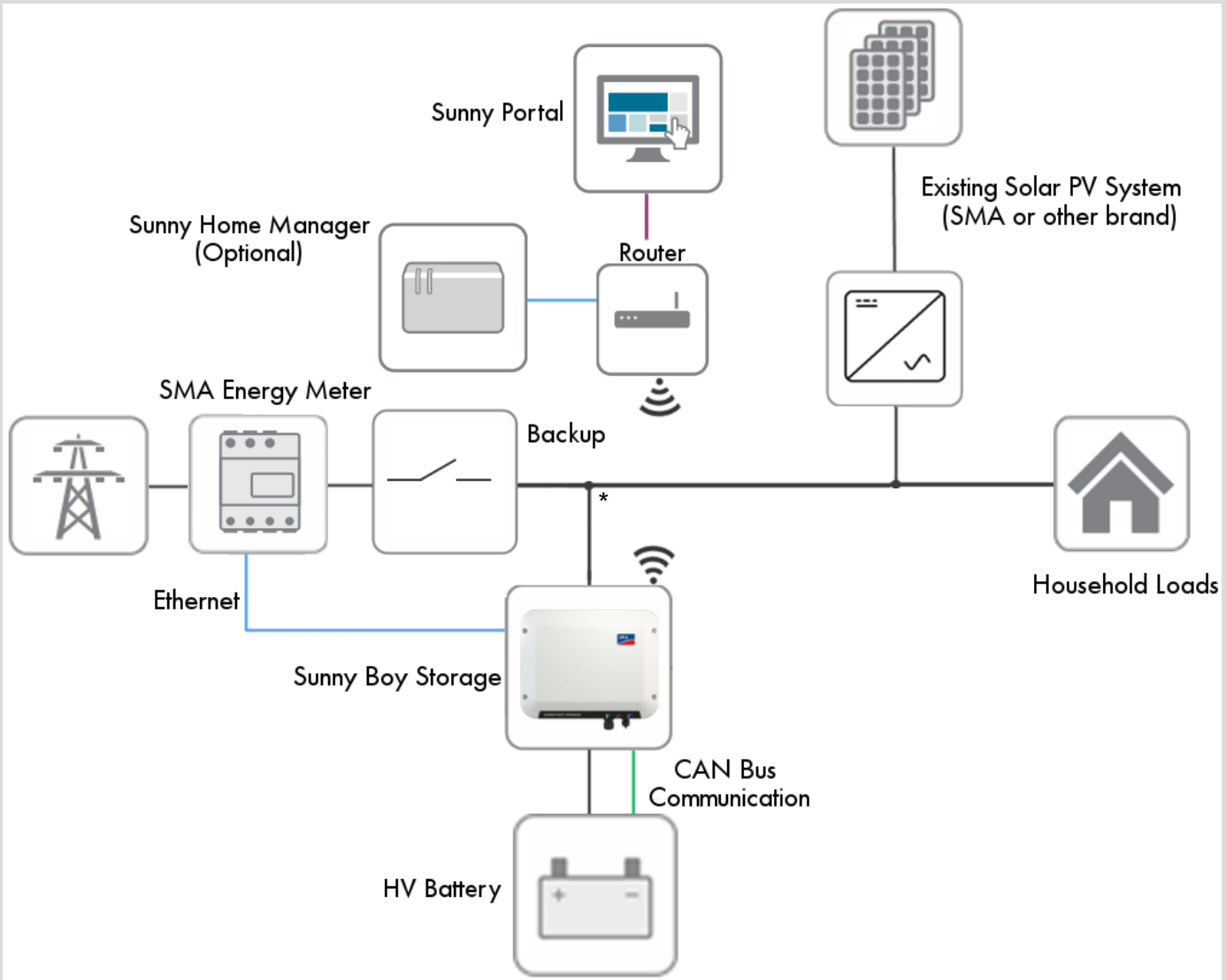
* Backup as retrofit kit (Q4/2016)

SUNNY BOY STORAGE

Basic SMA System

System components

> SMA 1ph or 3ph. PV-Inv. incl. Webconnect
> SMA Energy Meter
> Sunny Boy Storage

Functions

> Control to the grid connection Point via SMA Energy Meter
> Export limitation between 0-100% of rated power
> Visualization Sunny Portal
> Modbus third-party interface
> CAN-BUS battery interface
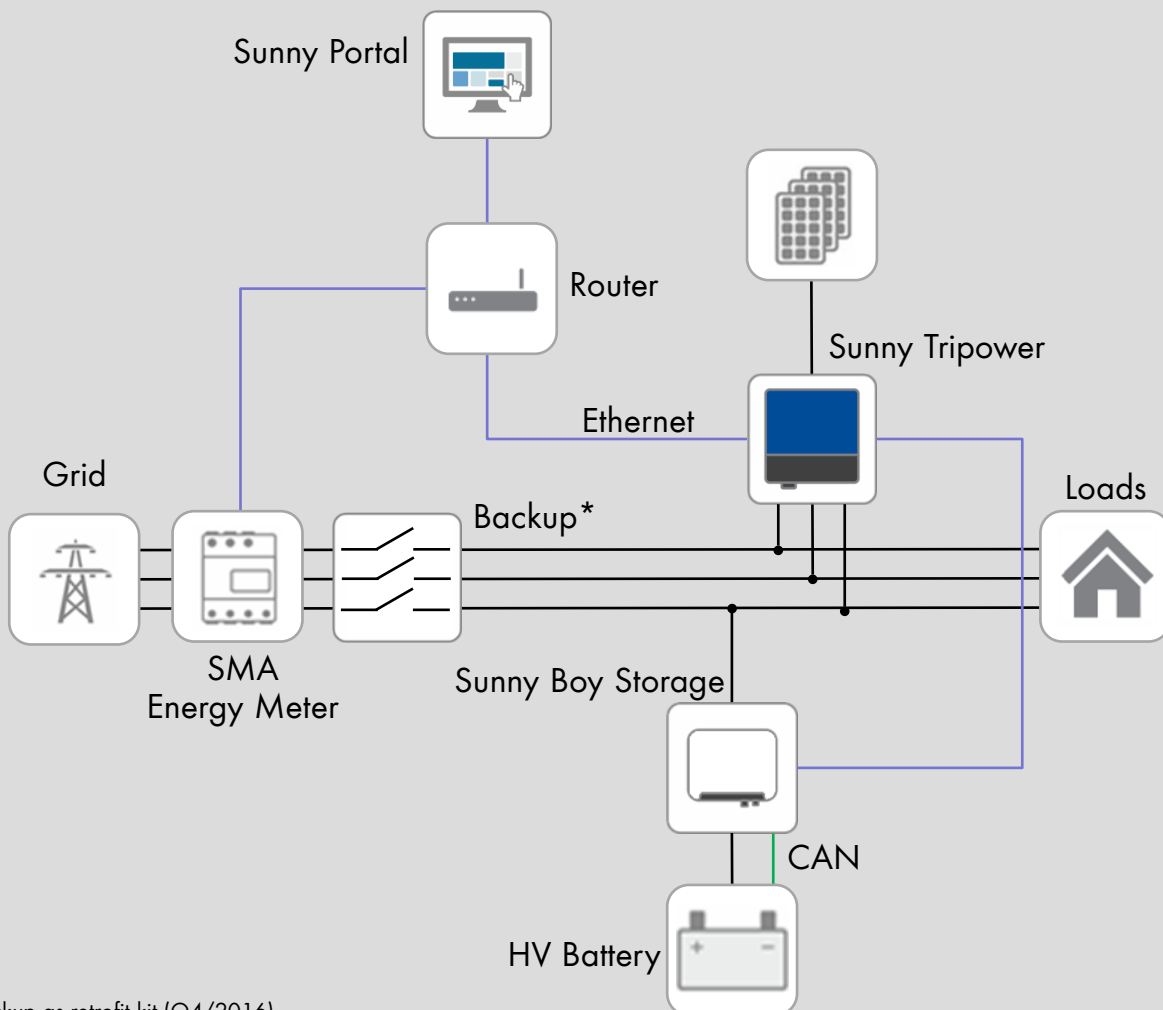
* Backup as retrofit kit (Q4/2016)

SUNNY BOY STORAGE

Full Function SMA System

SMA

System components

> SMA 1ph or 3ph. PV-Inv. incl. Webconnect
> SMA Energy Meter
> Sunny Boy Storage
> Sunny Home Manager (FM 1.30)

Functions

> Control to the grid connection Point via SMA Energy Meter
> Export limitation between 0-100% of rated power
> Visualization Sunny Portal
> Modbus third-party interface
> CAN-BUS battery interface
> With Sunny Home Manager
> > Charge battery from grid time-window
> > Weather forecast based charging

Sunny Portal

Sunny Home Manager

Router

Sunny Tripower

Ethernet

Grid

Loads

Backup*

SMA Energy Meter

Sunny Boy Storage

CAN

HV Battery
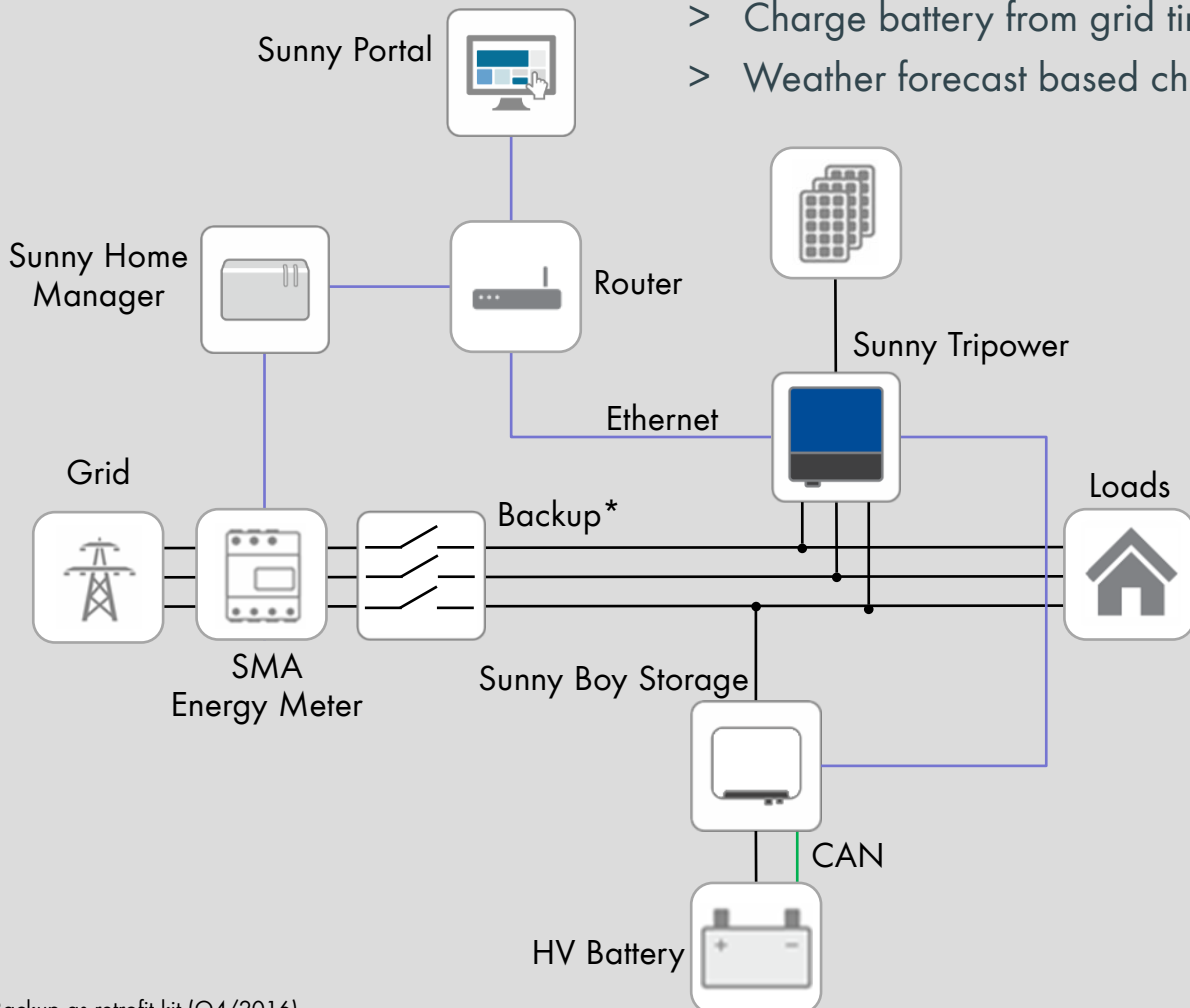
* Backup as retrofit kit (Q4/2016)

SUNNY BOY STORAGE

Monitoring Visualisation in Sunny Portal Information
(with Sunny Boy Storage & SMA Energy Meter)

	Retrofit		New Installation		Storage without PV
PV System	SMA	3rd Party	SMA	3rd Party	N/A
Battery Charge / Grid Export	✅	✅	✅	✅	✅
Battery Discharge / Grid Import	✅	✅	✅	✅	✅
Battery State of Charge	✅	✅	✅	✅	✅
PV System Generation	✅ *	❌	✅	❌	N/A
Total PV + Battery Self-Consumption	✅ *	❌	✅	❌	Battery Only
PV System Errors & Events	✅ *	❌	✅	❌	N/A
Battery System Errors & Events	✅	✅	✅	✅	✅

* For SMA inverters with Webconnect capability