

# **PowerHub**

Home Energy Storage System

#### **FLEXIBLE**

USE WITH NEW OR EXISTING PV SYSTEM

#### **EXPANDABLE**

MODULAR DESIGN AVAILABLE IN 2 SIZES

#### **STACKABLE**

CONNECT UP TO 4 UNITS ACHIEVE UP TO 80kWH

The greenworks° PowerHUB™ is a compact modular Energy Storage System with a powerful Lithium-Ion (LFP) battery and hybrid inverter. PowerHub can be integrated with the utility grid, solar panels, and even a generator to provide reliable energy in all conditions.

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greenworkspower.com

### An intuitive mobile app

Monitor & manage your energy from anywhere.



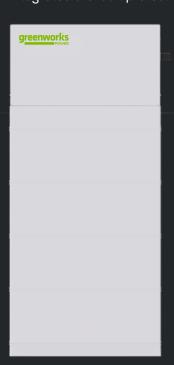




## **Expandable Modular Design**

For growing energy needs and easier installation.

Available in 10kWH or 20kWH, peak inverter efficiency 98%, includes integrated arc fault protection, and rapid shutdown transmitter.



#### **Power Hub**

- Stack up to four 5 kWh batteries for 20kWh per unit
- Modular design for easier & faster installation
- Floor or wall mounted
- · Long life & Safe LFP battery



#### **Smart Switch**

- Supports up to 5 circuits
- · Real-time load monitoring
- Auto control of high amp loads for quicker black-start recovery



#### 7.6 kW Hybrid Inverter

- Up to 200% PV oversizing
- 3 MPPTs
- Maximum 16A PV input current
- Microgrid Supported



Supports DC and AC input Suitable for new and existing PV systems.

Allows up to 15.2 kW of solar input 3 Maximum Power Point Trackers (MPPT) for higher yields of solar power.

Integrated Transmitter
Enables easy installation of rapid
shut down devices for safe PV array
connections

Compact And Sleek Design Can be installed indoors or outdoors, wall mounted or floor mounted

#### Stackable

Connect up to four units together to achieve up to 80kWh of usable storage capacity for whole-home power.

\*During grid outages vs. competing models.



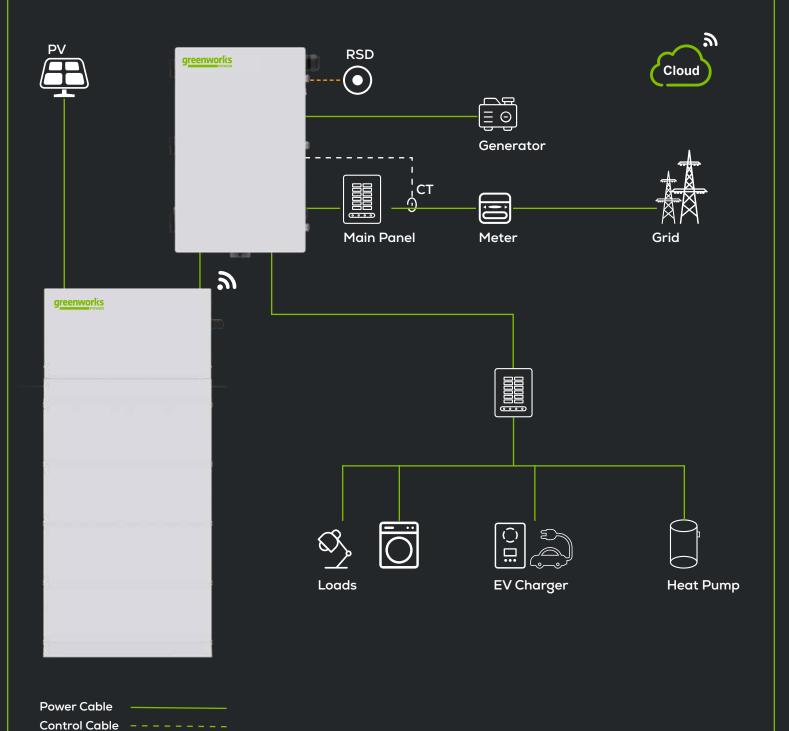
#### **Backup Interface**

- Supports 200A main panel
- 64A generator support
- Built-in energy management meter



## Flexible Home

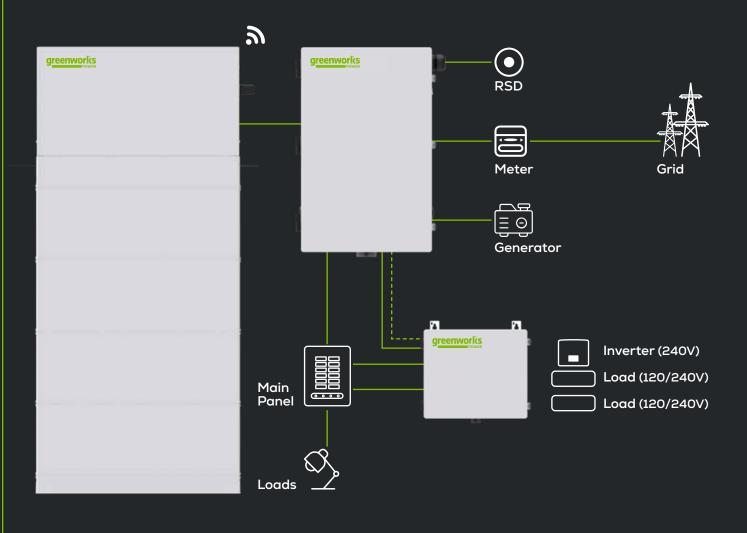
## Backup Solution





## **Smart Home Circuit Control**

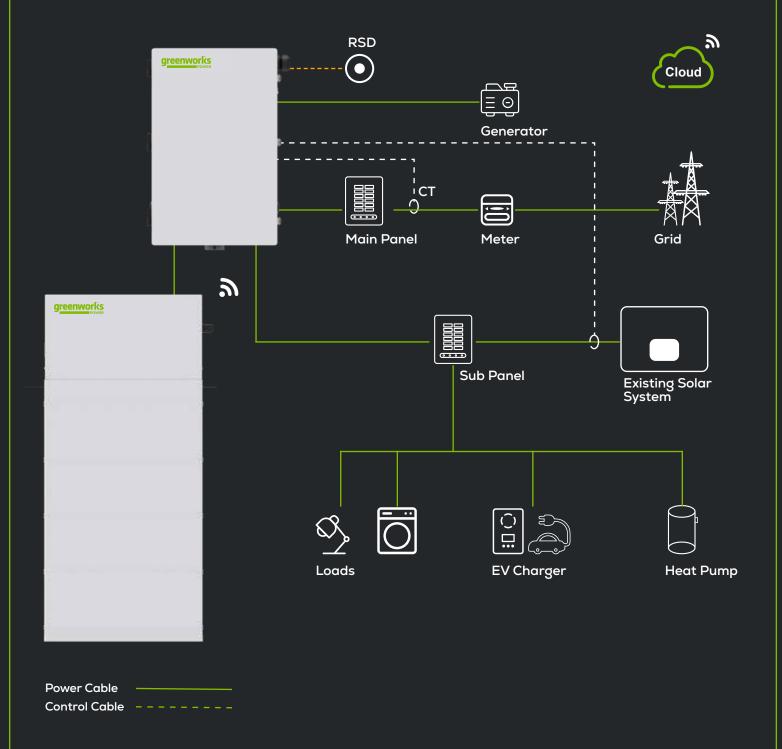
3x 240V / 1x 240V, 4x 120V





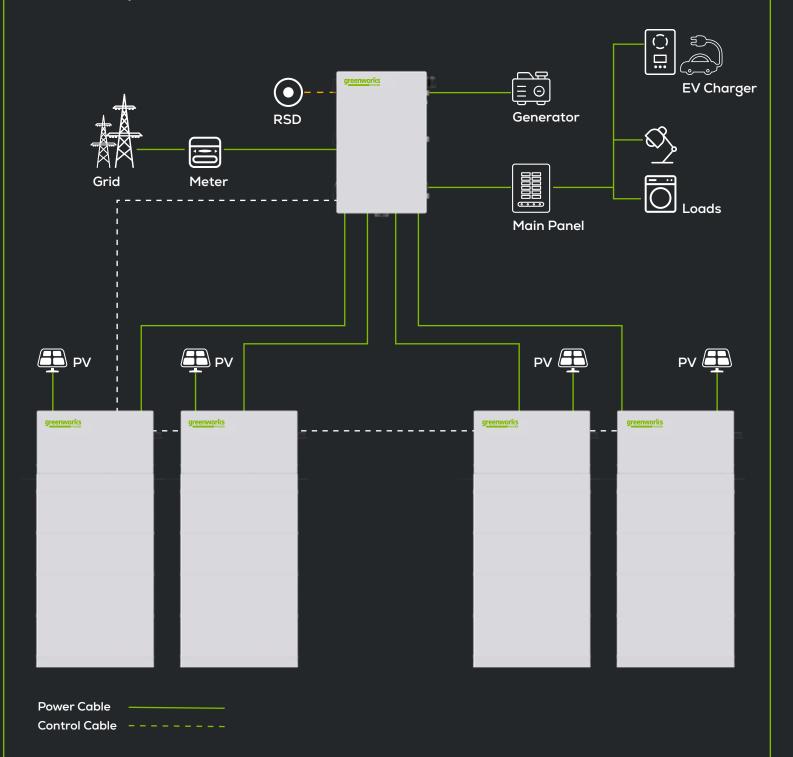
## Flexible Home

## **Backup Solution AC Coupled**





# Energy Storage System Parallel Operation





# PowerHub Hybrid Inverter GWU-HYB-7.6TH

#### **INPUT PV**

Maximum recommended PV power [W] 15200 Maximum DC voltage [V] 550 550 Nominal DC operating voltage [V] 360 Maximum input current [A] A: 16 / B: 16 / C: 16 Maximum short circuit current [A] A: 20 / B: 20 / C: 20 MPPT voltage range [V] 90-500 Start input voltage [V] 120 No. of MPP trackers, Strings per MPP tracker 3,1/1/1 YES DC disconnection switch

#### **INPUT/OUTPUT AC**

Nominal / Maximum apparent AC power [VA] 7608 / 7608

Peak apparent AC power [VA] (10s, o -grid/backup) 13680 / 13680

Nominal AC voltage [V] / Nominal AC frequency [Hz] 240 / 50 , 60

Nominal AC current [A] 31.7

Displacement power factor 0.8 leading to 0.8 lagging

Total harmonic distortion (THD, rated power) < 3%

#### **INPUT/OUTPUT BAT**

Maximum output power [W]7600Maximum charge / discharge current [A]54Reverse-polarity protectionYES

#### **ADDITIONAL FEATURES**

AFCI

Revenue Grade Metering, ANSI C12.20

Rapid shutdown transmitter

YES

Optional

Integrated PLC controller to RSD

#### **EFFICIENCY**

CEC weighted efficiency 97.50%

Maximum inverter efficiency 98.00%

#### **POWER CONSUMPTION**

Nighttime power consumption [W]

#### **STANDARD**

Safety

Emissions
Grid connection standards

#### **INSTALLATION SPECIFICATIONS**

Protection class
Operating temperature range [°F / °C]
De-rating start temperature [°F / °C]
Storage temperature range [°F / °C]
Relative humidity [%]
Typical noise emission [dBA]
Over voltage category

#### **GENERAL**

Dimensions (W x H x D) [in / mm] Weight [lb / Kg] Communication interfaces UL1741 SA, UL1741 SB, UL1699B, CSA - C22.2 No. 107.1-01, Canadian AFCI according to T.I.L. M-07 FCC Part 15 Class B IEEE1547, Rule 21, Rule 14, SRD V2.0 (HI)

**<** 3

NEMA 4X -13 to +140 / -25 to +60 113 / 45 or above -13 to +167 / -25 to +75 0 to 95 < 30 IV (electric supply side), II (PV side)

 $33.5 \times 17.9 \times 5.8 / 850 \times 455 \times 148$ 75 / 34RS485, CAN, WIFI (optional) / 4G (optional), Dry Contact



# PowerHub LFP Battery GWU-BAT-5.0H

T-BAT H 10.0 T-BAT H 20.0

**MODEL** 

Battery type 100Ah Lithium (LFP)

Component TBMS-MCS60060 + 2\*TP-HS50 TBMS-MCS60060 + 4\*TP-HS50

**NOMINAL CHARACTER (10/20kWh)** 

 Voltage [V]
 102.4
 204.8

 Operating voltage range [V]
 90 - 116
 180 - 232

 Total energy [kWh]
 10
 20

 Usable energy [kWh]
 9
 18

 Maximum power [kWh]
 5.5
 11.1

Battery round-trip efficiency % 95%

Maximum charge / discharge current [A] 54

Cycle life (90% DOD) 6000 cycles

Warranty (Details refer to greenworks Power warranty statement.)

**INSTALLATION SPECIFICATIONS** 

Charge temperature range IF / °C Charge: 32 to 127.4 / 0 to 53, Discharge temperature range IF / °C Discharge: 14 to 127.4 / -10 to 53 Storage temperature range IF / °C (3 months) 4 to 122 / -20 to 50 Storage temperature range IF / °C (1 year) 32 to 104 / 0 to 40 Relative humidity [%] 0 to 100

**STANDARD** 

Certification UN38.3, UL1973, UL9540, UL9540A

Hazardous materials classification Class 9

**GENERAL** 

Dimensions (W x H x D) [in / mm]
TBMS-MC60060 (BMS)
33.5 x 5.2 x 5.8 / 850 x 133 x 148

TP-HS50 (BAT)  $33.5 \times 23.6 \times 5.8 / 850 \times 600 \times 148$   $33.5 \times 47.2 \times 5.8 / 850 \times 1200 \times 148$ 

Base 33.5 x 2.2 x 5.8 / 850 x 55 x 148

Weight [lb / kg] 238 lb / 108 kg 476 lb / 216 kg



# PowerHub Backup Interface GWU-BI-1.0

#### **GRID INPUT**

Nominal AC input voltage [V] 120 / 240
Nominal AC frequency [Hz] 50 / 60
Maximum continuous AC input current [A] 160

#### **OUTPUT TO MAIN PANEL IN GRID TIED OPERATION**

Nominal AC output voltage [VI 120 / 240 Maximum AC input current [A] 160

#### **OUTPUT TO MAIN PANEL IN BACKUP OPERATION**

Nominal AC output voltage [V] 120 / 240 Imbalance compensation in backup operation [VA] 5000 Split phase imbalance output current [A] 41.7

#### **INPUT FROM INVERTER**

Maximum AC power [W]7600Maximum continuous input current @240V [A]31.7Maximum inverter input AC circuit breaker [A]40 (optional)

#### **GENERATOR**

Maximum AC power [W]15000Maximum continuous input current [A]63Auto generator startYes

#### **GENERAL**

Dimensions (H × W × D) [in / mm] 27.8 × 17.7 × 5.9 / 706 × 450 × 151

Weight [lb / kg] 69.4 / 31.5

Energy meter accuracy 1%

Communication interfaces RS485, CAN, Dry Contact

Cooling Fan

Warranty 12 years

#### **STANDARD**

Safety UL1741, CSA 22.2 NO.107 Emissions FCC part 15 Class B

#### **INSTALLATION SPECIFICATIONS**

Altitude [ft / m] 9843 / 3000 MAX Operating temperature range [°F / °C] -13 to +140 / -25 to +60 Protection class NEMA 3R Typical noise emission [dB] < 50



## Smart Switch GWU-SW-1.0

#### INPUT AC (Grid)

Nominal voltage [V]	120 / 240
Frequency [Hz]	60
Maximum number of input [240V + 120V / 240V]	5/3
Maximum overcurrent protection device [A]	80
Maximum continous output current rating [A]	64

#### OUTPUT AC (Load)

Nominal voltage [V]	120 / 240
Frequency [Hz]	60
Maximum number of output [240V + 120V / 240V]	5/3
Maximum continous output current rating [A]	64 / 32

#### **STANDARD**

Safety	UL1741, CSA - C22.2 No. 107.1-01
EMC	FCC part15 class B ICES003

#### **ENVIRONMENT LIMIT**

NEMA 3R
-13 to +113 (-25 to +45)
-13 to +167 (-25 to +75)
0% – 95%
9843 (3000) MAX
∢30
Wall mount (Indoors / Outdoors)

#### **GENERAL**

Dimensions with safety switch (W × H × D) [in / mm]	15.2 × 13.1 × 5.5 / 38 / × 334 × 140
Weight with safety switch [lb / Kg]	15.2 / 6.9
Warranty [Years]	5

