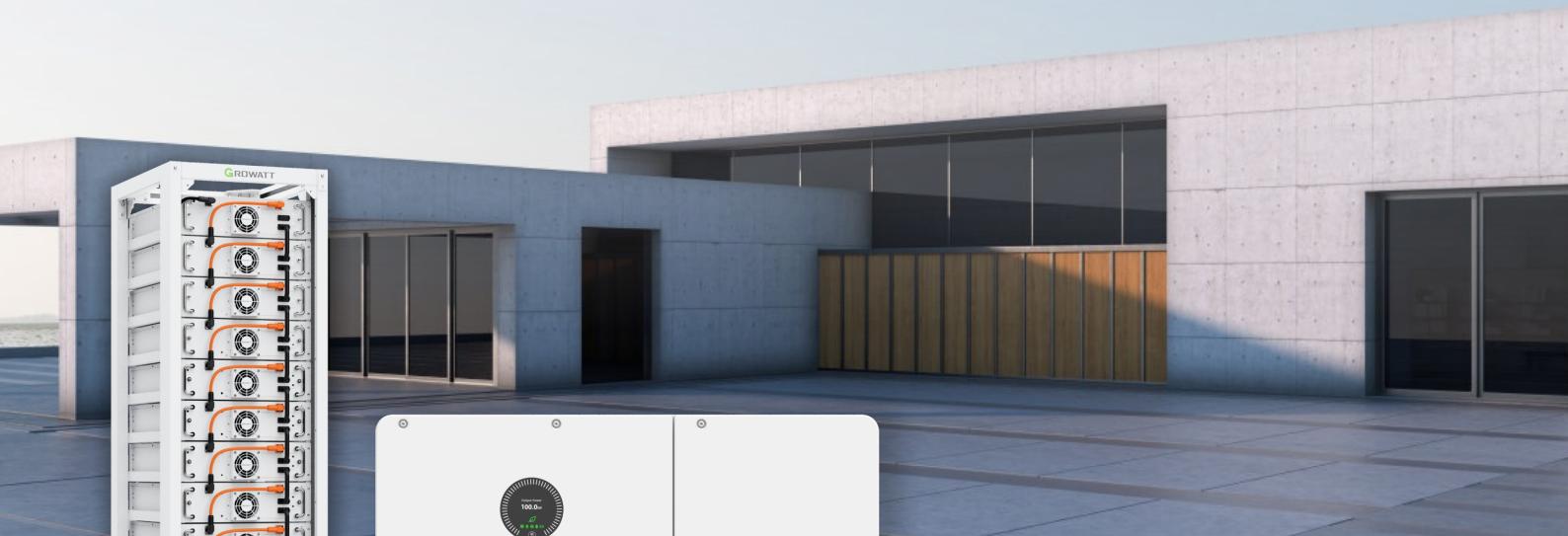


# Hybrid Energy Storage System

(29.9~50kW/30~180kWh)

- Flexible capacity options, 29.9~50kW/30~180kWh
- Support multiple sets of sub-systems operation in parallel in off-grid mode
- Multiple MPPTs and battery input for single system
- Easy installation and maintenance
- Suitable for multiple C&I application scenarios
- Support UPS function
- Strong power grid adaptability



P O W E R  
- I N G O  
T O M O -  
R R O W O

**GROWATT**

Hybrid Inverter Data					
Model	WIT 29.9K-XHU	WIT 30K-XHU	WIT 36K-XHU	WIT 40K-XHU	WIT 50K-XHU
Input Data (PV)					
Max. recommended PV power (for module STC)	59.8kW	60kW	72kW	80kW	100kW
Start voltage			195V		
Max. DC voltage			1100V		
Nominal voltage			620V		
Max. open circuit voltage of PV			1000V		
Operating voltage range			180V-1000V		
Full load DC voltage range	375V-850V	375V-850V	450V-850V	500V-850V	620V-850V
Max. input current per MPP tracker			40A		
Max. short-circuit current per MPP tracker			50A		
No. of PV strings per MPP tracker			2		
No. of MPP trackers			4		
Battery Data (DC)					
Battery voltage range			200-900V		
Full load battery voltage range	200-800V	200-800V	225-800V	250-800V	310-800V
Recommended battery voltage			512V		
No. of battery input			3		
Max. charging/discharging current			55A*3		
BMS communication			RS485/CAN		
Input/Output AC					
AC input/output nominal power(Grid)	59.8kW/29.9kW	60kW/30kW	72kW/36kW	80kW/40kW	100kW/50kW
Max. AC input/output apparent power(Grid)	59.8kVA/29.9kVA	66kVA/33kVA	79.2kVA/39.6kVA	88kVA/44kVA	110kVA/55kVA
Max. input/output current(Grid)	90.6A/45.3A	100A/50A	120A/60A	133.3A/66.7A	166.7A/83.3A
Max. input current(GEN/AC couple)	90.6A/45.3A	100A/45.5A	120A/54.5A	133.3A/60.7A	166.7A/75.7A
Max. continuous AC passthrough current			200A		
Nominal AC voltage/range <sup>a</sup>			380/400V -15%~10%		
Nominal AC grid frequency/range			50Hz/60Hz, 45-55Hz/55-65Hz		
Power factor(@nominal power)			>0.99		
Adjustable power factor			-1...+1		
THDi			<3%		
AC grid connection type			3P3W+PE/3P4W+PE		
Backup Power					
AC nominal output power	29.9kW	30kW	36kW	40kW	50kW
Max. AC apparent power	29.9kVA	45kVA	54kVA	60kVA	75kVA
Nominal AC voltage			220V/230V(L-N), 380V/400V(L-L)		
Nominal AC frequency			50/60Hz		
Max. output current	68.0A	68.2A	81.8A	91A	113.6A
Overload capability			1.5 times of rated power, 10s		
THDv			<3% (@Linear full load)		
Switch time			≤10ms		
Efficiency					
Max. efficiency			98.1%		
Protection Devices					
DC reverse polarity protection			Yes		
Battery reverse protection			Yes		
Insulation resistance monitoring			Yes		
AC/DC surge protection			Type II		
AC short-circuit protection			Yes		
Ground fault monitoring			Yes		
Grid monitoring			Yes		
String monitoring			Yes		
Anti-islanding protection			Yes		
Residual-current monitoring unit			Yes		
General Data					
Dimensions (W/H/D)			920/585/320mm		
Weight			90kg		
Operating temperature range			-30°C - 60°C (>50°C derating)		
Noise emission			≤55dB		
Altitude			4000m		
Topology			Transformerless		
Cooling			Smart air cooling		
Protection degree			IP66		
Relative humidity			0~95%		
Interfaces					
Display			OLED+LED/APP		
Interfaces			RS485/USB/CAN, WIFI/LAN(Opt)		
Warranty: 5 / 10 years			Yes/Opt		

NRS 097-2-1:2017, EN 50549-1, NC RFG, PSE-2018, PTPIREE-2021, IEC 62116, IEC 61727, G99-2020, VDE 4105, IEC/EN 61000-6-1, IEC/EN 61000-6-3, IEC/EN 62109-1, IEC/EN 62109-2

\* 1 The AC voltage range may vary depending on specific country grid standard. All specifications are subject to change without notice.  
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Battery System Data							
Model	AXE 30.0H-1HR-E1 EU	AXE 35.0H-1HR-E1 EU	AXE 40.0H-1HR-E1 EU	AXE 50.0H-1HR-E1 EU	AXE 60.0H-1HR-E1 EU		
Control module				AXE 1000100-C1			
Number of control module	1						
Battery module	AXE 5.0H-E1 EU						
Number of modules in series	6	7	8	10	12		
Energy capacity	30kWh	35kWh	40kWh	50kWh	60kWh		
Usable capacity	27kWh	31.5kWh	36kWh	45kWh	54kWh		
Max. output power* <sup>1</sup>	30kW	35kW	40kW	50kW	60kW		
Max. charge/discharge current	100A						
Dimension (W/H/D)	570/1560/660mm			570/1964/660mm			
Weight	≤0.38t	≤0.43t	≤0.48t	≤0.59t	≤0.69t		
Nominal voltage	307.2V	358.4V	409.6V	512V	614.4V		
Operating voltage range	278.4~340.8V	324.8~397.6V	371.2~454.4V	464~568V	556.8~681.6V		
Ingress protection	IP20						
Installation style	Floor-Mounted						
Operating temperature range	-10~50°C						
Relative humidity	5% ~ 95%						
Cooling	Air-Cooling						
Warranty* <sup>2</sup>	5 years (opt. 10 years)						
Noise emission	<60dB						
Maximum altitude	≤2000m						
Control Module		AXE 1000100-C1					
Dimension (W/H/D)	482/131/580mm						
Weight	≤15kg						
Communication port	CAN/RS485/USB						
Operating voltage range	120V~1000Vdc						
Maximum current	100A						
Monitoring parameters	SOC, System voltage, current, cell voltage,cell temperature, PCBA temperature						
Battery Module		AXE 5.0H-E1 EU					
Battery type	Lithium-ion						
Nominal energy	5kWh						
Nominal voltage	51.2V						
Pack operating voltage range	46.4~56.8V						
Dimension (W/H/D)	482/131/580mm						
Battery module weight	≤47kg						
UN 38.3, IEC 62619, IEC 60730, IEC 62477, CE, RoHS, UKCA							

System Options* <sup>3</sup>						
AXE 30.0~60.0H-1HR-E1*3(92.16~184.32kWh)	√	√	√	√	√	√
AXE 30.0~60.0H-1HR-E1*2(61.44~122.88kWh)	√	√	√	√	√	√
AXE 60.0H-1HR-E1*1(61.44kWh)	√	√	√	√	√	√
AXE 50.0H-1HR-E1*1(51.2kWh)	√	√	√	√	√	√
AXE 40.0H-1HR-E1*1(40.96kWh)	√	√	√	√	√	Limited(Max 40kW)
AXE 35.0H-1HR-E1*1(35.84kWh)	√	√	√	Limited(Max 35kW)	Limited(Max 35kW)	Limited(Max 35kW)
AXE 30.0H-1HR-E1*1(30.72kWh)	√	√	Limited(Max 30kW)	Limited(Max 30kW)	Limited(Max 30kW)	Limited(Max 30kW)
Battery System	Inverter	WIT 29.9K-XHU	WIT 30K-XHU	WIT 36K-XHU	WIT 40K-XHU	WIT 50K-XHU

\* 1 Depend on the max. battery charge/discharge power of the inverter.

\* 2 Detailed warranty terms should be negotiated with Growatt in the warranty agreement.

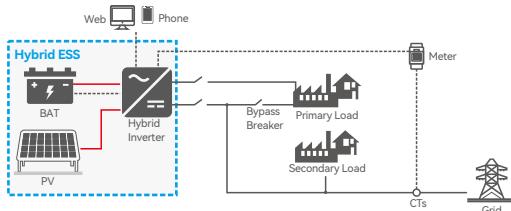
\* 3 Labeled with '√' means the system can reach its rated power. Or else, the system output is limited to the charging/discharging power of the battery system(s) connected.

\* Nominal charge/discharge current and power derating will occur related to temperature and SOC.

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## Solutions

### On/Off-Grid System

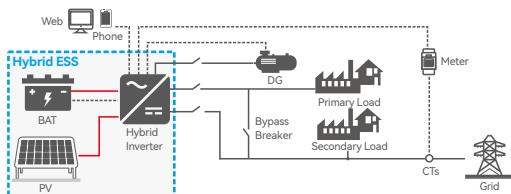


### Single System or Multiple Systems

#### Hybrid ESS:

- WIT 29.9-50K-XHU
- AXE 30.0-60.0H-1HR-E1
- SEM-XA-RM+CTs (for multiple system)
- ShineWiLAN-X2 (for single system)
- TPM-CT-E/C-EU (for single system)
- Battery Terminal Junction Box (optional)

### On/Off-Grid System with DG

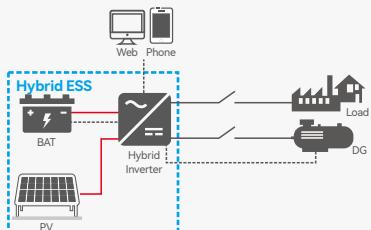


### Single System or Multiple Systems

#### Hybrid ESS:

- WIT 29.9-50K-XHU
- AXE 30.0-60.0H-1HR-E1
- SEM-XA-RM+CTs (for multiple system)
- ShineWiLAN-X2 (for single system)
- TPM-CT-E/C-EU (for single system)

### Off-Grid System

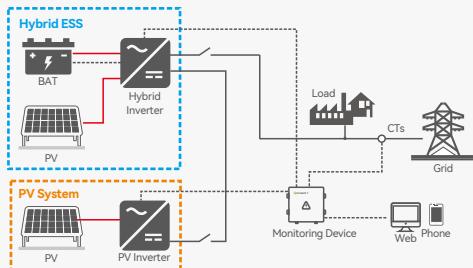


### Single System or Multiple Systems

#### Hybrid ESS:

- WIT 29.9-50K-XHU
- AXE 30.0-60.0H-1HR-E1
- SEM-XA-RM+CTs (for multiple system)
- ShineWiLAN-X2 (for single system)
- Battery Terminal Junction Box (optional)

### On-Grid AC-Coupled System



### Multiple Systems

#### Hybrid ESS:

- WIT 29.9-50K-XHU
- AXE 30.0-60.0H-1HR-E1
- SEM-XA-RM+CTs (for multiple system)
- Battery Terminal Junction Box (optional)

#### PV System:

- MAX series PV Inverters
- MID series PV Inverters

**AC**

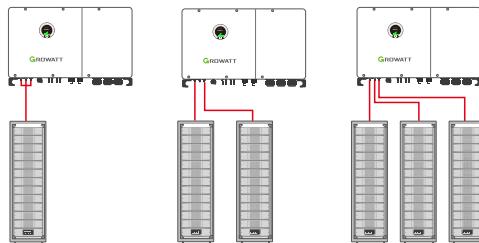
Multi-System Parallel Operation



parallel operation of up to 10 inverters<sup>\*2</sup>

**DC<sup>\*1</sup>**

Flexible Battery Capacity



30~60kWh<sup>\*3</sup>

60~120kWh

90~180kWh

\*1 DC means battery input capability here.

\*2 For parallel demand over 6 units, please consult with Growatt technical team for more information.

\*3 Each battery input provides up to 55A current. For higher charging/discharging current demand, battery terminal junction box can be purchased.