

Tigo is dedicated to your success

More customers

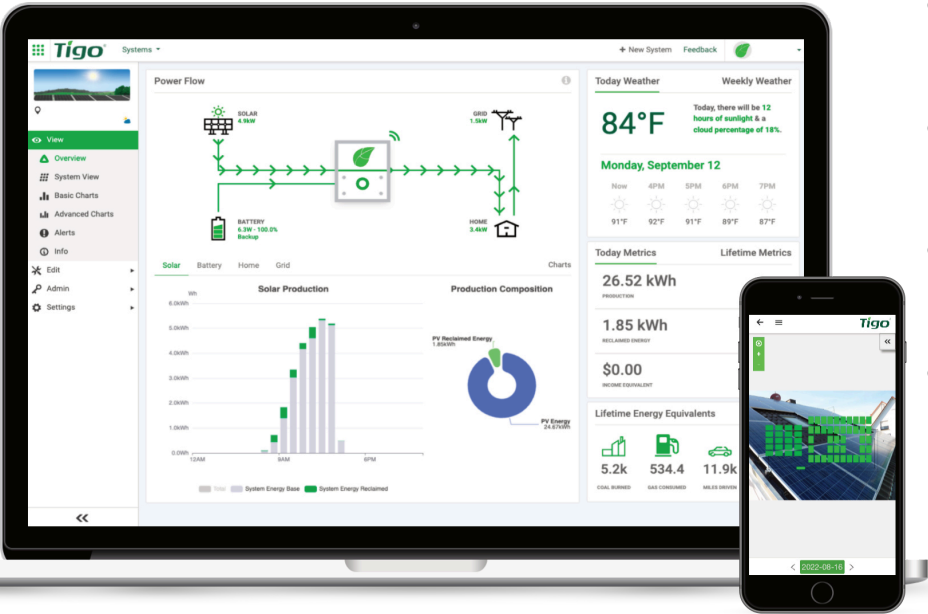
- Install more sites in less time
- Serve more sites with the same equipment (shaded, mixed orientations, large & small, etc.)
- Provide the features your solar customers want and get more referrals

Lower operational expenses

- Single solution from commissioning through monitoring
- Simplify inventory management with a modular battery system
- Reduce truck rolls by remotely diagnosing issues

Unified by the Tigo Energy Intelligence (EI) platform

The most powerful solar commissioning and monitoring solution available



Reduce truck rolls and get peace of mind that your systems are performing the way you designed and installed it. Benefits of the Tigo Energy Intelligence platform include:

- **Maximize site uptime** - Get real-time performance and safety alerts so you can quickly return the site to normal operation. More uptime = more energy
- **Minimize O&M costs** - Detect system, string, and module level issues to remotely pinpoint and diagnose issues before rolling a truck. Fewer truck rolls = more savings.
- **Enhance the customer experience** - Gain fleet level visibility using a single monitoring platform. Happier customers = more referrals.
- **Commission the complete system in <10 minutes** with the Tigo EI App.



Download the Tigo EI App

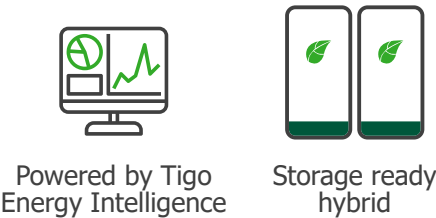


EI Energy Storage Three Phase

Tigo EI (Energy Intelligence) is a complete energy storage system that easily expands to accommodate customer's ever changing needs. The Tigo EI Battery stacks 3kWh blocks, easily allowing up to 12kWh of total energy. The Tigo EI Link is the keystone of the EI System. It is the communications hub and points for all grid, inverter, PV and battery connections. When paired with Tigo TS4 Flex MLPE, module level monitoring, optimization, and fire safety features can all be achieved with Tigo communications already built in.

Features

- Powered by Tigo TS4 optimizers for maximizing flexibility with module design
- Supporting 150% oversized PV power
- Providing back-up, time of use, and energy management
- Fast Charging and high discharge current from battery
- Responding time less than 2 s
- Remote Monitoring and over the air upgrade
- Working in full load under extreme cold condition
- Fast installation and commissioning
- Industry leading warranty



EI Inverter

DC Input	TSI-6K3D	TSI-10K3D	TSI-15K3D
Number of MPPT Trackers	2		
Number of strings (MPPT 1/MPPT 2)	1	2/1	
Max PV input power per MPPT (W)	5000	10500/6000	11000/7000
Max PV input voltage (V)	1000		
Startup voltage (V)	200		
MPPT operating voltage (V)	180 - 950		
Max input current per MPPT (A)	16	28/16	
Max short circuit input current per MPPT (A)	20	35/20	

AC input & output

Nominal AC output power (W)	6000	10000	15000
Max AC output apparent power (VA)	6600	11000	15000
Max AC output current (A)	9.7	16.1	24.1
Max AC input power (W)	12000	20000	
Max AC input current (A)	19.3	32	
Nominal AC voltage (V)	415/240; 400/230; 380/220		
Grid frequency (Hz)	50/60		
Power factor	0.8 leading - 0.8 lagging		
THDi (%)	<3		

Battery data

Battery Type	LiFePO ₄ (LFP)		
Battery voltage range (V)	180 - 800		
Max continuous charge/discharge (A)	30/30		

Off-grid output (with battery)

Nominal output power (VA)	6000	10000	15000
Peak apparent power (VA)	9000, 60 sec	15000, 60 sec	16500, 60 sec
Max continuous current (A)	8.7	14.5	21.8
THDv (%)	<3		
Switch over time (s)	2		

System Data

MPPT efficiency (%)	>99	
Max/Euro efficiency (%)	98.2 / 97.7	
Battery charge/discharge efficiency (%)	98.5 / 97.5	
Standby consumption (W)	<5	
Protection rating	IP65	
Operating temperature (°C)	-35 to 60 (derating >45)	
Storage Temperature (°C)	-40 to 70	
Max operating altitude (m)	<3000 m	
Humidity (%)	0 - 100% non-condensing	
Noise emission (dB)	<40	<45
Cooling	Natural convection	Forced airflow
Dimensions (WxHxD) (mm)	503 x 503 x 199	
Weight (kg)	34	
Communications	RS485, Ethernet, WiFi, LCD interface, Tigo EI App	

Standard

Safety	IEC62109-1/-2		
EMC	EN61000-6-1/2/3/4; EN61000-3-2/3/11/12		
Certification	VDE 0126-1-1 A1:2012/VDE-AR-N 4105/G98/G99/ AS4777/ EN50549-1:2019/CEI 0-21		

EI Link

PV	TSS-3PS
Max PV input power (Vdc)	1000
Number of MPPT trackers	2
Number of strings (MPPT 1/MPPT 2)	2 / 1
Max. Short circuit current (MPPT1/MPPT2) (A)	30/20

Battery

Battery voltage range (V)	180 - 480
Max. Charge/discharge current (A)	30

On Grid (Inverter)

Rated voltage (Vac), Frequency (Hz)	380/400/415, 50/60
Max. Grid (Inv) input/output current (A)	24.1 / 24.1

Off-grid (Inverter)

Rated voltage (Vac), Frequency (Hz)	380/400/415, 50/60
Max. current (A)	24.1

Grid (Utility)

Rated voltage (Vac), Frequency (Hz)	380/400/415, 50/60
Max. input/output current (A)	63 / 24.1

Load

Rated voltage (Vac), Frequency (Hz)	380/400/415, 50/60
Max. input/output current (A)	63

Environmental limit

Degree of protection	IP54
Protection class	Class I
Operating temperature (°C)	-35 to 60 (derating above 45)
Storage temperature (°C)	-40 to 70
Relative Humidity (%)	100
Max Altitude (m)	3000
Overvoltage category	III(AC), II(DC)

Other

Cooling concept	Nature convection
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Dimensions and Weight

Dimensions (WxHxD) (mm)	500 x 512 x 204.5
Net Weight (kg)	10

EI Battery

	TSB-6	TSB-9	TSB-12
Nominal Voltage (V)	204.8	307.2	409.6
Operating voltage range (V)	180-232	270-348	360-464
Total Energy (kwh)	6.1	9.2	12.2
Usable energy ¹ (kwh)	5.5	8.3	10.9
Normal power (kW)	5.1	7.6	10.2
Max. Power (kW)	6.1	9.2	12.2
Max. charge/discharge current (A)	30/30		
Battery roundtrip efficiency (%)	95		
Cycle life (90% DoD)	6000 cycles		
Available charge/discharge temperature range (°C)	-30 to 50		
Storage temperature (°C)	-20 to 50		
Relative humidity (%)	0 - 100		
Max. Altitude (m)	3000		
Degree of protection	IP65		
Battery to inverter	RS485/CAN2.0		
Battery to battery/BMS	CAN 2.0		
Certificate	CE/IEC62619/UN38.3/IEC62040/UKCA		
Hazardous materials classification	Class 9		
Dimensions (WxHxD) (mm)	EI BMS: 482 x 173.5 x 153		
	TSB : 482.5 x 471.5 x 153		
Net Weight (kg)	EI BMS: 7.5		
	2x TSB-3 69	3x TSB-3 103.5	4x TSB-3 138

- 1) test condition 90% DoD, 0.2C charge and discharge @ 25°C
2) EI BMS: one EI BMS can connect up to 4 TSB-3

Three Phase energy storage configurations:

