

# Solar-Powered Single-Axle Trailer



## Key Features

- One-Person, Tool-Free Assembly
- Three (3) 460-Watt Monocrystalline Silicon Solar Panels
- Four (4) 12.8V Lithium Iron Phosphate Batteries
- Retractable 8 m (26 ft) Mast
- GPS Tracking
- C5 Corrosion Protection
- Level 12 Beaufort Wind Scale
- IP67 Ingress Rating

## Qualifications

- NDAA Compliant
- UL
- FCC

## Overview

The Solar Trailer combines simplicity and functionality. This single-axle trailer can be assembled by a single person and does not require any tools, reducing the time and labor spent on setup. Its durability allows for deployment anywhere including in windy or corrosive environments.

## About the Product

### Integrated Plug-and-Play Platform

The trailer computer provides full access and control to the trailer's network, speaker, and strobe lights. The computer also provides users remote access for on-the-go controls

### Monocrystalline PERC Technology

The trailer's panels use monocrystalline silicon cells and have PERC technology. This technology improves electron collection and light absorption for increased performance and efficiency, particularly in low light.

### C5-I Corrosion Protection

The trailer is rated C5-I, the highest level of corrosion protection possible based on the ISO 12944-2 standard. C5-I products must be able to operate properly even in intensely corrosive environments with constant high humidity, pollution, and condensation.

### Level 12 Beaufort Wind Scale

The trailer is able to withstand "hurricane force" as it is rated the highest level possible on the Beaufort Wind Scale. This means it can withstand winds 73 MPH (118 KPH) or higher and widespread damage in the surrounding environment.

### IP67 Ingress Rating

The trailer is waterproof, protected against dust over an extended period of time, and can withstand contact with objects greater than 1 mm in diameter.

## Specifications

### General

System Voltage	48 VDC	Corrosion Class	C5
PV Controller	MPPT 30A, 96.9%	Roof Rack Components	3 x Strobe Lights 2 x Speakers 1 x 4G Router 1 x Fill Light 1 x Power Supply Board (12/48 VDC) 1 x Edge Controller 1 x Hard Drive (1 TB)
IP Rating	IP67		
Control	Remote Control		
Battery Supply	Solar Power, Mains Electricity		
Charge Time	20 Hours (AC)		

### Trailer Computer

System Frame	Embedded Linux System Watchdog Hard Disk Storage HDMI UHD Display IP Network Video Access	Audio Functions	Audio and Video Recording HDMI Audio Output APP Audio and Video Preview/ Playback
Video Input	Supported Resolutions 16MP, 12MP, 8MP, 6MP, 5MP, 4MP, 3MP, 1080P, 960P, 720P, D1, CIF Max. Input Eight (8) Cameras Access Bandwidth 256 Mbps	Audio Compression	G.711a, G.711u, PCM, G726
Video Playback	1/4/8 Simultaneous, APP	Storage	Built-in 1 TB HDD Cloud Backup Recording Type: Motion Detection, Alarm, Schedule, Intelligent, General
		Power Consumption	Total Output for NVR: ≤ 10W (No HDD) Total Output for PoE: 100 W Max. Output for One Port: 25.5 W

### PV Controller

Nominal System Voltage	48 VDC	Relative Humidity	≤ 95%
Working Voltage Range	8 to 68 VDC	Self-Consumption	≤ 0.624%
Communication	RS-485 (RJ45 5 VDC/200 mA)	Certifications	FCC, UL

### 4G CPE

4G	LTE FDD: B1/B2/B3/B4/B5/B7/B8/B9/ B12/B13/B17/B18/B19/B20/B25/B26/ B28/B66 LTE TDD: B34/B38/B39/B40/B41	Power	12V DC 1A
SIM	1.8V/3V SIM/UIM Cards Built-In 15kV ESD protection	Operating Temperature	-30 °C to 70 °C (-22 °F to 158 °F)
Port	LAN: Two (2) RS-485/RS-232: One (1)	Power Consumption	2.88 W (Max.)
		LAN Protocol	ARP, Ethernet
		WAN Protocol	IP, DHCP, PPPoE

## Solar Panel

Number of Panels	Three (3)	Operating Temperature	-40 °C to 80 °C (-40 °F to 185 °F)
Solar Cell Type	Monocrystalline Silicon	Dimensions	1757.0 mm x 1134.0 mm x 30.0 mm (69.2 in. x 44.6 in. x 1.2 in.)
Wattage	460 W per Panel	Weight per Panel	21.5 kg (47.4 lb)
Voltage Range	10 to 40.9 VDC	Certifications	TUV, CQC, CE
Energy Efficiency	23.80%		

## Battery

Number of Batteries	Four (4)	Operating Temperature	Charge: 0 °C to 60 °C (32 °F to 140 °F) Discharge: -20 °C to 60 °C (-4 °F to 140 °F)
Cathode Material	Lithium Iron Phosphate	Weight (per Battery)	12 kg
Voltage per Battery	12.8 V	Life Cycle	≥ 5000 Cycle at 25 °C, 0.5 C, and 80% DOD
Capacity	150 Ah (51.2 VDC 7680 Wh)		

## Mast

Height	8.0 m (26.0 ft), Retractable	Coating	Electrophoretic Preservative
Control	Hand-Operated	Material	Aluminum Alloy
Beaufort Wind Scale	Level 12		

## AC Charging

Voltage Range	90 to 264 VAC, 127 to 370 VDC	Operating Temperature	-30 °C to 70 °C (-22 °F to 158 °F)
Frequency Range	47 to 63 Hz	Charging Protection	Low Voltage, Over Current, Over Voltage, Short Circuit, Over Temperature
Power	450 W	Certification	UL, TUV, EAC, CE, CB
Output Voltage	42 to 80 VDC (Adaptable)		
Output Current	6.8 A		

## Trailer

Trailer Coupler	Suitable for 2 in. (50 mm) Trailer Ball	Packaging Dimensions	2200.0 mm x 1600.0 mm x 2389.0 mm (86.6 in. x 63.0 in. x 94.1 in.)
Speed Limit	Standard: 80 km/h (50 MPH) Maximum: 100 km/h (62 MPH)	Product Weight	< 835.0 kg (< 1840.9 lb)
Hand Brake	One (1)	Protection Measures	<ul style="list-style-type: none"> <li>Tamper-proof, removable hand crank for mast and PV bracket</li> <li>Theft-proof control box and trailer support foot</li> <li>GPS positioning</li> </ul>
Tire Type	Aluminum Rim, 175R13		
Support Legs	Four (4)		
Product Dimensions	3087.0 mm x 3464.0 mm x 7941.0 mm (121.5 in. x 136.4 in. x 312.6 in.)		