TITAN SOLAR UPS

ESPi
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Your Next Generation UPS

The TITAN Solar Outdoor uninterruptible power supply for FTTh is an industry first to utilize solar power, utility power, and battery power to extend the runtime of your ONT. We used our industry proven TITAN Outdoor UPS as a foundation and added additional input for a solar panel. Our advanced on board firmware constantly checks the status of utility, solar, and battery to extend the runtime of your ONT. During normal operation or during a power outage, the TITAN Solar utilizes the solar power first. If the solar panel is producing more power than the ONT needs, the additional power is used to charge the battery. If the solar panel isn't producing enough power for the ONT, the TITAN Solar will use additional power from the battery. The TITAN Solar calibrates voltage to the battery according to ambient temperature fluctuations, charging the battery precisely and accurately and thus extending its life. The TITAN Solar UPS also has numerous design features for flexible installation, ease of service, and fewer service calls. Add up the TITAN Solar benefits; higher performance, longer life, and service optimization, and the result is the industry's longest ONT runtime.

- Extend your runtime with solar power - Great for rural markets
- Solar power will charge the battery and power up the ONT after 2 to 3 hours of sunlight
- Power priority - 1. Solar 2. Utility 3. Battery - Seamlessly switches between all three power sources
- 6-8 year battery design life
- Advanced Thermo-Amp technology for precise temperature-compensated charging to extend battery life
- Advanced diagnostics algorithm for accurate determination of battery status
- Modular components for easier service, including swappable fuse and electronics
- Telecommunications grade UPS for FTTh, wireless, other broadband applications
- Field-ready design: AC-DC conversion at the outlet, up to 115' power cable for flexible installation
- Industry-first alarm wire connector for ease of installation and guaranteed visual wire connections
- Warranties: 6 years battery (4 full, 2 prorated) – industry-best. 3 years electronics

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Utility Input
DC Input	120Vac
DC Input Frequency	50/60 Hz
Plug Type	2 prong ungrounded

Solar Input
DC Input	10V to 42V
Solar Panel	50 Watt 12V

Output
Output Power, Operational	24W max. continuous (ONT load)
Output Voltage	**12-14.5Vdc Nominal**
Output Connector	2 Position Screw Terminal
Alarm Output	• On Battery • Battery Low • Battery Fail • Battery Missing

Solar Panel
Type	Monocrystaline
Voltage	12V Nominal
Wattage	35 watt
Dimensions	18" X 22"
Warranty	10 Year

Battery
Type	**8Ah lead acid, maintenance-free, leak-proof**
Design Lifespan	**8 years**
Runtime	**Up to 24 hours (day 1)**
	(After day 1) up to 12 additional hours per day

Battery charging circuit
Type	**Advanced Firmware with Temperature Compensated Charging Including Solar mode**

Thermo-Amp Technology
Precise charging	**Based on ambient temperature providing maximum battery lifespan**
Load Testing	**Advanced auto-test algorithm**
Diagnostic Frequency	45 days

Diagnostics: System LED
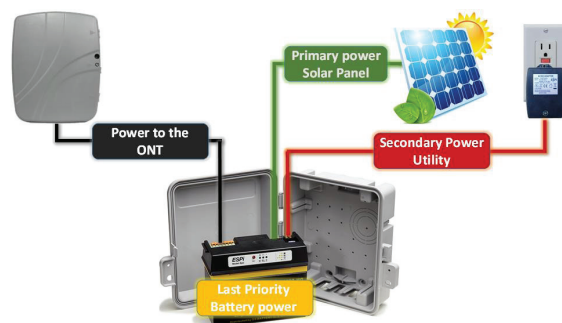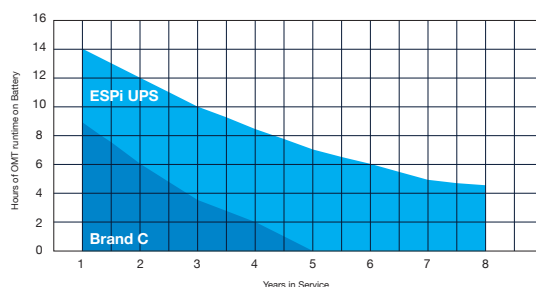|	
Green	Normal status: commercial power available
Green Flashing w/ no utility power	Solar panel is precharging battery for ONT startup
Green and yellow Flashing	Solar panel is charging battery
Yellow Flashing	Utility power not present
Red	Replace battery: failed self-test
Red Flashing	Battery missing
All three flashing	Short-circuit between UPS and ONT

Physical
Unit Weight	8 lb.
AC/DC Converter	At AC outlet
Power Cable	16 gauge up to 115 ft long for mounting flexibility
Alarms	Connector allows for visual verification of connected wires
Modular Design	Swappable circuit board, fuse, battery
Mounting Options	Wall or Pole Mountable

Environment
Operating Temperature Electronics	**-40°C to +65°C (-40°F to + 149°F)**
Operating Temperature Battery	**-40°C to +65°C (-40°F to + 149°F)**
Operating Humidity	0% to 95%

Warranties
Electronics	3 Years
Battery	**6 Years - 4 years full + 2 prorated**

Graph: Hours of ONT runtime on Battery vs Years in Service, comparing ESPi UPS and Brand C

Diagram: Primary power Solar Panel, Secondary Power Utility, Power to the ONT, Last Priority Battery power

**Bold indicates industry-best*

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