EPEVER
XTRA-N G3
Solar Charge Controller

INTRODUCTION

XTRA New Model

Content Outline

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The Need for Evolution

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Why industry needed a new charge controller?

- Battery Longevity Challenges and Lithium compatibility
- Protection
- Adaptability to Advancing Technologies
- Monitoring and Communication Needs
- Self consumption rates

Meeting the Challenges:
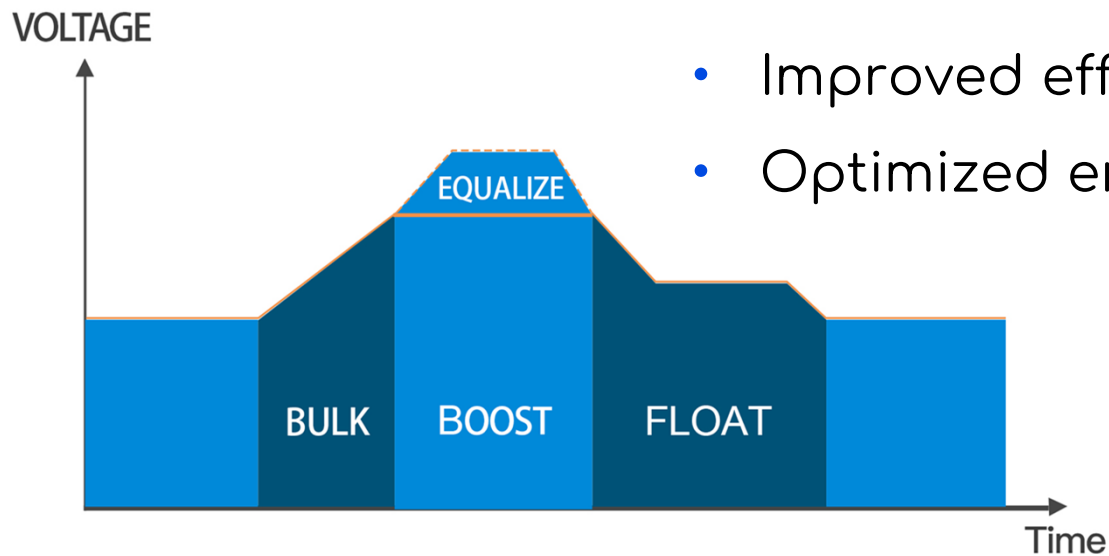
Introducing the XTRA-N G3 Series

- Innovative MPPT Algorithm and Adaptive Charging
- Lithium Battery Compatibility
- Battery Care and Constant Voltage Output
- Seamless Operation
- Integrated Bluetooth & RS485
- Energy Efficient & Quiet
- Durability & Protection

Features and Advancements

1. Revolutionary MPPT Algorithm and adaptive charging

- Enhanced tracking & response speeds.

- Reduced losses & minimized downtime.

- Improved efficiency across power segments.

- Optimized energy extraction in all scenarios.

2. Lithium Battery Compatibility

Features and Advancements

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2 Constant Voltage Output Function

- Enables direct load supply with sufficient PV energy.
- Prevents overshoot voltage with tailored protection values.
- Provides stability and compatibility for various lithium batteries.
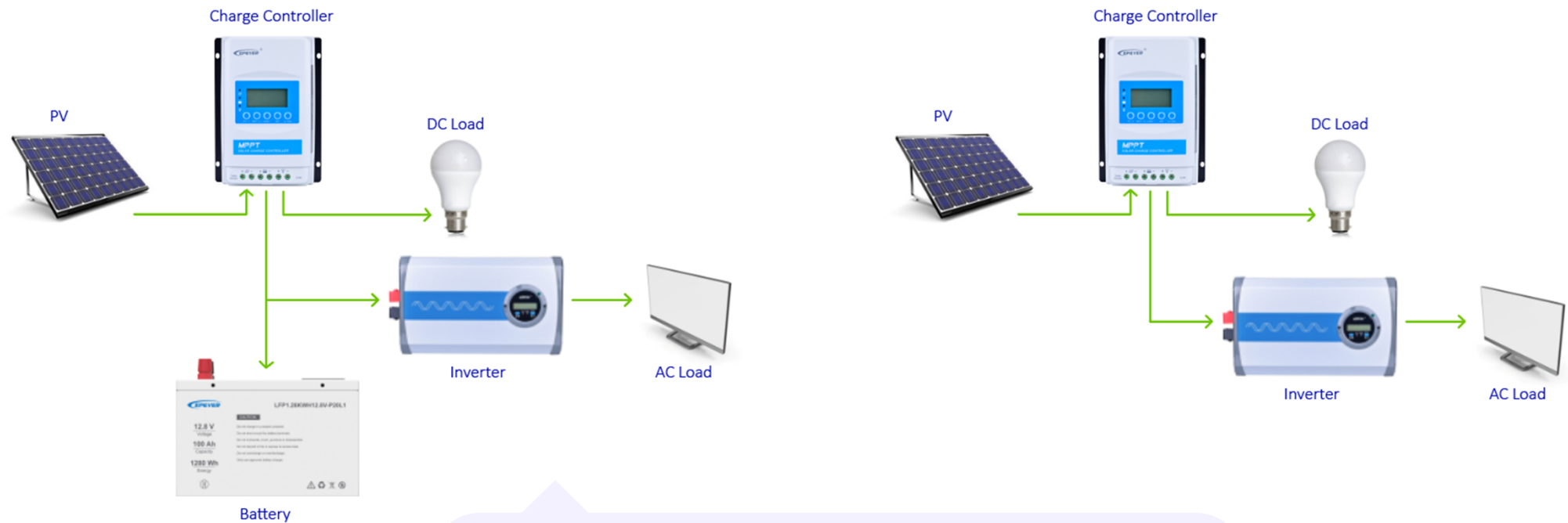
Key Advancements:

- Prevents high voltage spikes during BMS cut-off.
- Protects load, inverter, and system integrity.

Features and Advancements
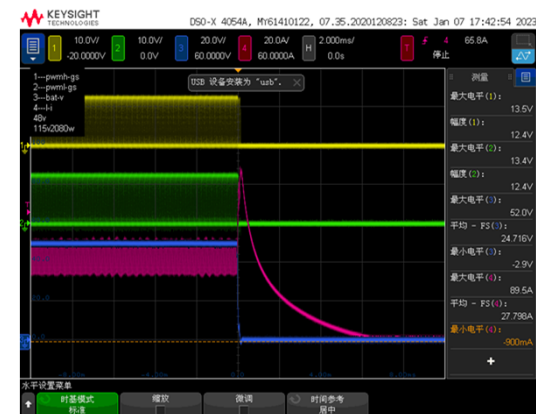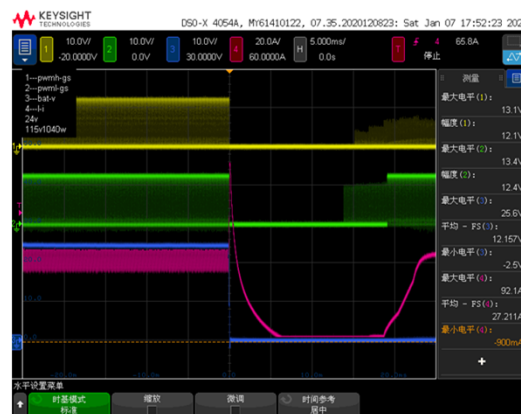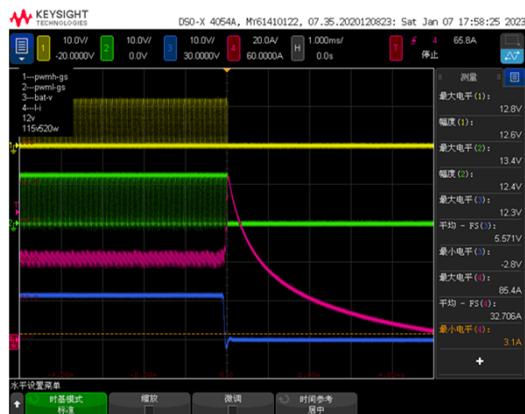
2 Constant Voltage Output Function

Charge Controller

PV

DC Load

Inverter

AC Load

Battery

12.8 V Voltage

100 Ah Capacity

1280 Wh Energy

Charge Controller

PV

DC Load

Inverter

AC Load

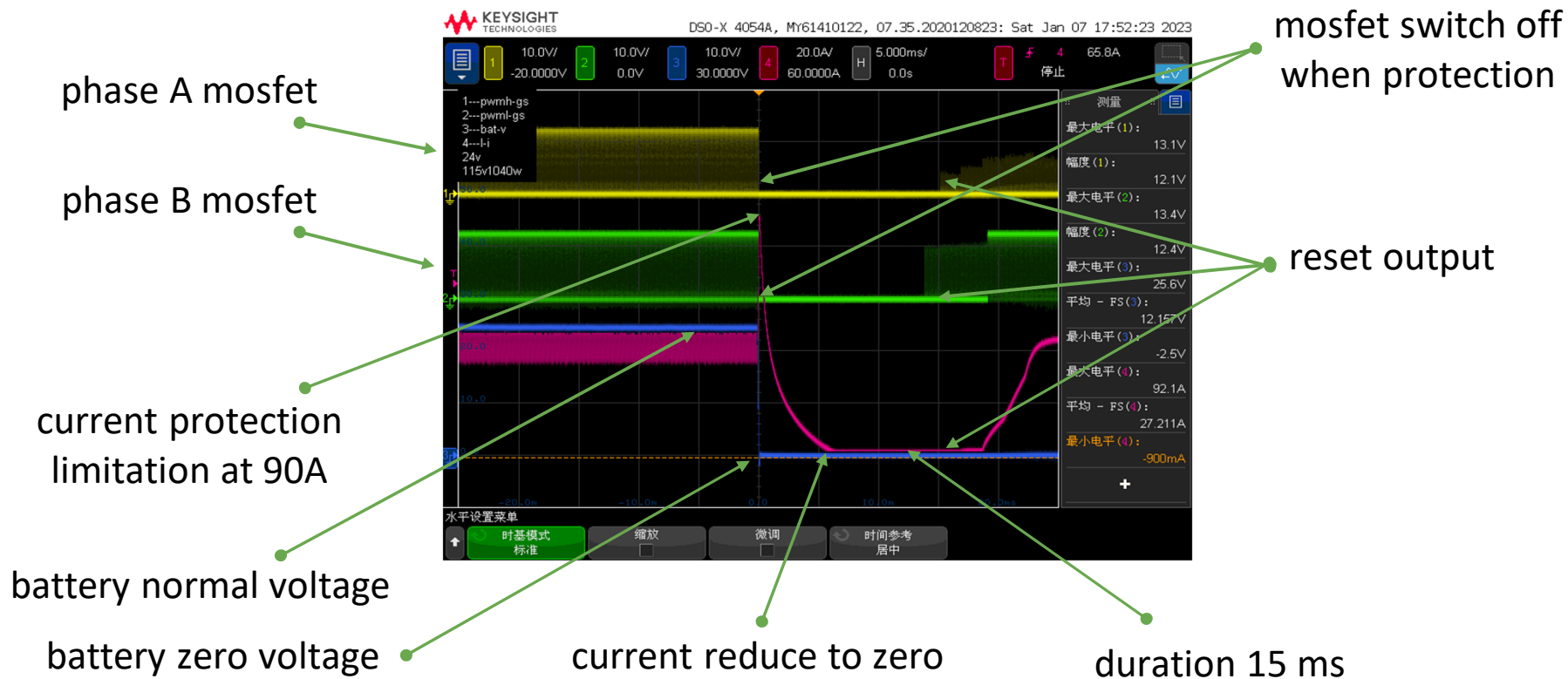Supports load via the Battery terminal

3. Output Overcurrent Protection

- Intelligent Overcurrent Detection: Immediate response to overcurrent scenarios.

- Dynamic Load Management: Adjusts output to prevent system overload.

- Enhanced System Safety: Protects equipment from current-induced damage.

- Continuous Operation Assurance: Ensures uninterrupted power delivery during overcurrent

Features and Advancements

The controller is equipped with overcurrent protection to safeguard against potential damage from large load surge currents or short circuits at the battery terminal.
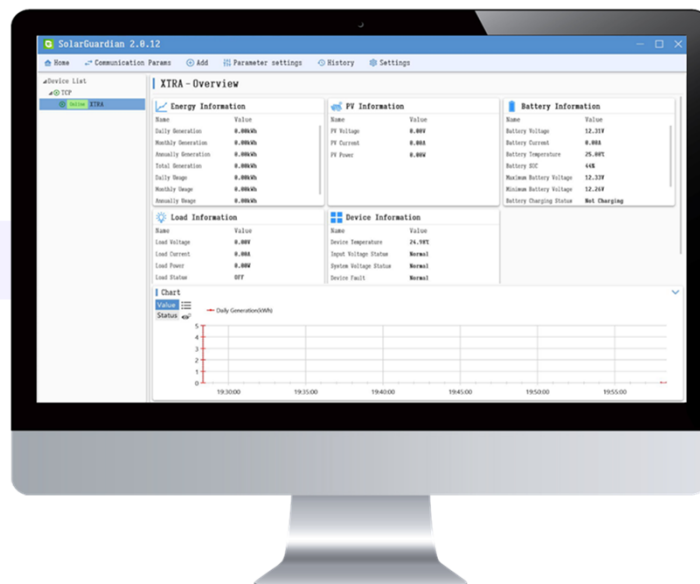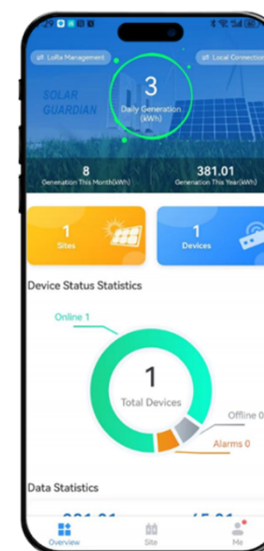
4. Integrated Bluetooth & RS485

- **Dual Interface:** Simultaneous hardware (RS485) and wireless (Bluetooth) communication.

- **Enhanced Protection:** Includes short-circuit protection with isolated RS485.

- **Comprehensive Monitoring:** Monitor system via PC software and mobile app concurrently.

PC Software

App

5. Enhanced Control

- **Communication Customization:** Enable/disable COM port via LCD to conserve energy.

6. Ultra-quiet & Low power design

- **Low Power Consumption:** ≤30mA/12V, ≤16mA/24V, ≤13mA/48V

- **Enhanced Energy Savings:** <8mA/12V, <6mA/24V, <5mA/48V when communication is off

- **Extended Standby Time:** Over 1.7 times longer with communication disabled

- **Consistent Efficiency:** Bluetooth feature maintains low static losses

- **Ultra-Quiet Operation:** Designed for noise-sensitive environments

7. Remote Meter & EMC

- **Remote Meter:** Enhanced MT52 version for lithium battery protection.

- **EMC Compliance:** Working on getting FCC Class B standards

Features and Advancements

8. Display Unit

XTRA-N

There are three options available for the local display
unit: DB1, DS1, and DS2

XTRA-N G3

Not selectable, DS2 is the only
available local display unit

9. Load Working Mode

XTRA-N

Four modes: Manual Mode, Light (ON/OFF) Mode, Light ON + Timer Mode, and Real-time Control Mode.

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Six modes: Manual Mode, Light ON/OFF Mode, Light ON/OFF + Timer Mode 1 (night on and day off), Light ON/OFF + Timer Mode 2 (day on and night off), Real-time Control Mode, Always ON Mode

Comparison

Function / Series	Display Unit	Built-in Bluetooth★	Constant Voltage Output Function	Output Overcurrent Protection	Communication Enable	Ultra-quiet & Low power design	Charging voltage & Max. current limiting settings	Load Working Mode	Remote Meter	EMC★
XTRA-N	3 options	×	×	×	×	×	9~17V	4	MT50 & MT52	CLASS B★
XTRA-N G3 BLE	Only one option	√	√	√	√	√	9~15.5V	6	MT52	150V：CLASS A 60V/100V：CLASS B

Accessories

No.	Name	Model	Image	Application	Software Download https://www.epever.com/support/softwares/
1	Remote Meter	MT52		Remote monitoring and real-time parameter configuration for the controller via wired remote connection. Plug and play without the need for any communication parameters setup. Easy and convenient operation	MT52 is a firmware upgrade version of MT50
2	USB to RS485 cable	CC-USB-RS485-150U		The controller can be real-time monitored and configured through PC monitoring software	https://www.epever.com/download/solar-guardian-pc-software-v2-0-windows/
3	WiFi 2.4G Adapter	EPEVER WiFi 2.4G RJ45 D		Compatible with mobile app or cloud platform (offline mode & online mode) for wireless monitoring and parameter configuration of the controller via WiFi signal	Apple App Store Google Play
4	Bluetooth Adapter	EPEVER BLE RJ45 D		Compatible with mobile app (offline mode only) for wireless monitoring and parameter configuration of the controller via Bluetooth signal	

Accessories

No.	Name	Model	Image	Application	Software Download https://www.epever.com/support/softwares/
5	Serial Device Server	EPEVER TCP 306		Compatible with mobile app or cloud platform for remote wireless monitoring and parameter configuration of the controller via TCP network communication. LAN (local area network) monitoring can be achieved using PC configuration tools and PC software	Apple App Store Google Play
6	4G Wireless Data Transmission Terminal	EPEVER RTU 4G HE01		Compatible with mobile app or cloud platform for remote wireless monitoring and parameter configuration of the controller via a GSM/GPRS SIM card	
7	Remote Temp. Sensor	RTS300R47K3.81A		Collecting the real temperature of the battery, the controller performs accurate control and protection of charging and discharging.	/

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Thank you

For your attention

Questions