

Xantrex Technology Inc. is a world leader in advanced power electronics. We enable green energy through our inverter and charge controller technology, utilized worldwide, to control renewable energy and backup power systems. Xantrex has designed and manufactured renewable energy inverters for nearly 25 years. Our knowledge and experience in advanced power electronics enables us to develop inverters that efficiently convert raw electrical energy (DC) from sources such as solar, wind, micro-hydro and batteries, into high-quality household (AC) electricity.

Xantrex inverters allow customers to increase energy efficiency and provide freedom from the utility grid, while making a positive impact on the environment.

XW System Applications

G Grid-Interactive Renewable Energy System with Backup Power

The XW System is the ideal solution for homes that are connected to the utility grid, where owners want to incorporate a renewable energy system with backup power. Most applications use solar arrays, but a wind generator, micro-hydro generator, and/or a fuel generator can also be incorporated into the system. Grid-interactivity allows excess energy that is generated to be exported to the grid, and allows the grid to act as an additional energy source to charge the system's batteries. If the grid should fail, the inverter will automatically go into backup power mode supplying energy from the batteries and energy inputs, to support the home's electrical needs.

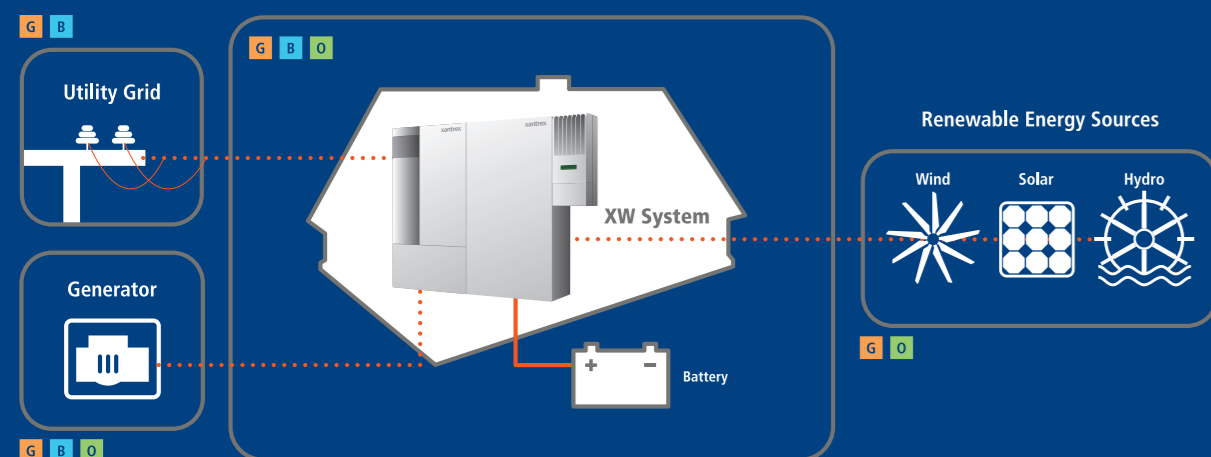
O Off-Grid Power

The Xantrex XW System can process multiple forms of incoming power making it a popular choice for off-grid applications (those not connected to the utility grid), as it provides homes with a completely autonomous supply of electricity. Most applications use solar arrays, but a wind generator, micro-hydro generator, and/or a fuel generator can also be incorporated into the system.

B Backup Power

Grid-connected homes can also benefit from the use of a Xantrex XW System as the inverter will automatically detect a grid failure and instantly switch to backup power stored in the battery bank. When the grid is active, the XW System will monitor and regulate battery charging to ensure the batteries are ready to supply backup power when the grid fails.

The diagram below explains these three system applications:



The XW Hybrid Inverter/Charger is a true sine wave inverter/charger with a modular “building-block” design, that can be used for both residential and commercial stand-alone, grid-backup, and grid-tie applications with battery energy storage. The XW Hybrid Inverter/Charger is an integrated DC to AC inverter, battery charger, and AC transfer switch. Up to three inverters can be installed in parallel to create larger 120/240-volt split-phase systems, allowing for increased capacity.

Key Features:

- ▶ 120/240-volt split-phase, true sine wave output (no need for autotransformer or stacking inverters)
- ▶ Unsurpassed surge capacity - innovative Full Digital Control regulates voltage to prevent a drop during a power surge. Full 200% rated output power is delivered to the load
- ▶ Efficient, power factor corrected, high-current, multistage battery charging (minimizes recharge time, and electricity/fuel costs, and prolongs battery life)
- ▶ Certified to UL1741 and CSA for utility-interactive applications (no need to purchase an application-specific model)
- ▶ Easier and less expensive to install – mounting bracket is included and Power Distribution Panel includes all AC/DC disconnects and wiring (no need to purchase separate components)
- ▶ Local display on inverter shows output power, charge current and battery level, to provide system status at-a-glance
- ▶ Xanbus™ Network provides plug-and-play networkability (no need for separate hub or router)

The XW Power Distribution Panel (XW PDP) with conduit box is factory-wired and labeled to support a code-compliant single-inverter installation. It is factory configured to mount on the right side of the inverter/charger and may also be mounted on the left side. Internal wiring and breakers can be added to expand the XW System with up to three inverters, four charge controllers, or other equipment to support larger systems.

Key Features:

- ▶ Accommodates both AC and DC breakers and wiring for three XW Hybrid Inverter/Chargers and four XW Solar Charge Controllers
- ▶ Includes breakers and wiring to connect to XW Hybrid Inverter/Charger
- ▶ Wiring is labeled and cut-to-length, ready to connect to inverter
- ▶ Uses flexible Arctic Ultraflex Blue™ wires
- ▶ Multiple knockouts on sides, top, bottom and back of panel
- ▶ Includes mounting back plate and XW conduit box

The Xantrex Solar Charge Controller (XW SCC) is a photovoltaic (PV) charge controller that tracks the electrical maximum power point of a PV array to deliver the maximum available current for charging batteries. The XW SCC can be used with 12, 24, 36, 48, and 60-volt DC battery systems. The XW SCC is designed to regulate PV input only. It is not designed to work with wind or hydro generators.

Key Features:

- ▶ Two or three-stage charging process, with manual equalization to maximize system performance and maintain expected battery life
- ▶ Maximum Power Point Tracking (MPPT) to deliver the maximum available power from a PV array to the battery bank
- ▶ Configurable auxiliary power output
- ▶ Two-line, 16-character liquid crystal display (LCD) and four buttons for configuration and system monitoring in stand-alone applications
- ▶ Battery Temperature Sensor (BTS) to provide temperature-compensated battery charging
- ▶ Communicates settings and activity to other Xanbus™-enabled devices, such as the Xantrex XW Hybrid Inverter/Charger(s), XW System Control Panel (XW SCP), XW Automatic Generator Start (XW AGS), and other XW Solar Charge Controllers (XW SCC)
- ▶ Can also be used with other battery-based solar energy systems

XW System Control Panel (XW SCP)

The XW SCP is a Xanbus™-enabled device featuring a graphical, backlit LCD screen that displays system configuration and diagnostic information. Large keypad buttons, an intuitive onscreen menu system, and plain text status messages make it easy to configure and operate all devices connected to the Xanbus™ Network. The XW SCP gives a single point of control to setup and monitor an entire system, which may consist of multiple XW Inverter/Chargers, XW Solar Charge Controllers, etc.

Interfaces with:

XW Hybrid Inverter/Charger(s), XW Solar Charge Controller(s), XW Auto Generator Start



XW Automatic Generator Start (XW AGS)

The XW AGS is a Xanbus™-enabled device that can automatically activate a generator to provide an XW Series Inverter/Charger with power to recharge depleted batteries or assist with heavy loads. Compatible with popular generators, the XW AGS adds intelligence to power management and eliminates time spent monitoring batteries and inverter loads.

The XW AGS can be customized to suit each user's preferences. A user can define whether the generator should be activated by low-battery voltage, thermostat operation, or load size on the inverter(s). A quiet-time setting prevents the generator from starting at inconvenient times. LED lights display the status of the XW AGS, while all user-defined settings are programmed through the system control panel (XW SCP).

Interfaces with:

XW Hybrid Inverter/Charger(s), XW Solar Charge Controller(s), and XW System Control Panel



XW Connection Kit (for second XW Hybrid Inverter/Charger)

The XW Connection Kit is a wiring kit and conduit box used to connect a second inverter to an XW Power Distribution Panel. All wires are measured, pre-cut and labeled to facilitate quick and easy installation.

Interfaces with:

XW Hybrid Inverter/Charger(s), XW Power Distribution Panel



XW Conduit Box

The XW Conduit Box, is a bare conduit box (no wires) that can be used to create systems larger than two inverters, or to retrofit XW Inverters into existing systems which may already have AC/DC disconnects.

Interfaces with:

XW Hybrid Inverter/Chargers, XW Power Distribution Panel



The XW System consists of several devices, components, and optional accessories that, when installed together, create a renewable energy power system that can be customized to suit nearly any application – off-grid, grid-tie, or backup.

Field-serviceable, with out-of-the-box network capability, the complete Xantrex XW System consists of a high-efficiency XW Inverter/Charger, XW Power Distribution Panel, including both AC & DC breakers, and the XW Solar Charge Controller.

XW SYSTEM

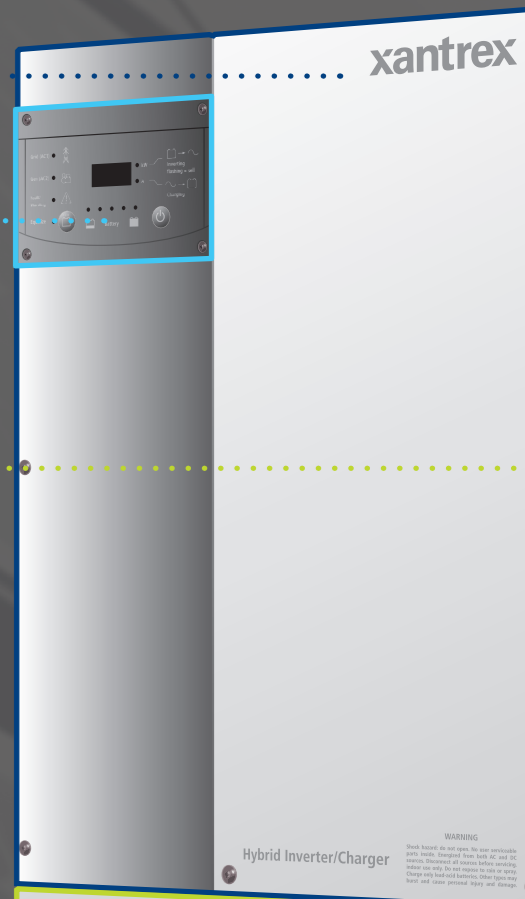
The Next Generation

A Battery-Based System for Renewable Energy and Backup Power Applications



XW Hybrid Inverter/Charger

- ▶ True sine wave
- ▶ Split-phase (120/240 Vac) technology
- ▶ Local display panel
- ▶ High current, multistage battery charger
- ▶ Field-serviceable Xanbus™ Network ready
- ▶ Multiple units can be paralleled



XW Power Distribution Panel

- ▶ Accommodates both AC & DC breakers & wiring
- ▶ Uses innovative Arctic Ultraflex Blue™ wiring
- ▶ Wiring is labeled and ready to connect to inverter
- ▶ Room to add additional breakers and wiring to build onto your system



XW Automatic Generator Start

- ▶ Compatible with popular generators
- ▶ Configurable start settings
- ▶ Quiet-time setting
- ▶ LED display status



XW Solar Charge Controller

- ▶ Dynamic Maximum Power Point Tracking algorithm (MPPT)
- ▶ Xanbus™ Network ready
- ▶ Convection cooled
- ▶ User-friendly interface
- ▶ Integrated ground-fault protection



XW System Control Panel

- ▶ Interface for system configuration and monitoring
- ▶ Xanbus™ Network ready
- ▶ Powered through network connection – "hub" not required