

Smart choice for power

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Xantrex XW System
The NEW Standard

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XW System

- Complete system solution
- Indoor installations from 4 kW to 18 kW
- Manageable building blocks for simple, easy, field configuration and installation
- Clean, integrated system design



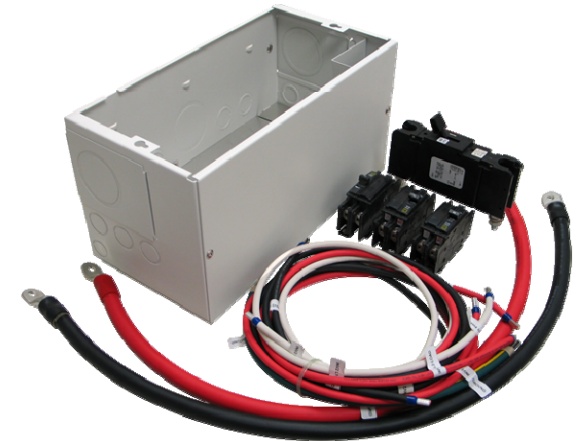
XW System Components



- **XW INVERTER/
CHARGER**
- XW6048-/240-50
- XW4548-/240-50
- XW4024-/240-50



- **XW-POWER
DISTRIBUTION
PANEL**



- **XW-CONNECTION
KIT FOR INV2**

- **XW- SYSTEM CONTROL PANEL**



- **XW- CONDUIT BOX**



Solar Charge Controller



- **XW-AUTO GENERATOR START**



- 250A DC BREAKER, 160VDC, STUD TERMINAL, PANEL MOUNT UL/CSA
- 80A DC BREAKER, 125VDC, PANEL MOUNT UL/CSA
- 60A DC BREAKER, 160VDC, PANEL MOUNT UL/CSA

- **XW-MPPT60-150**

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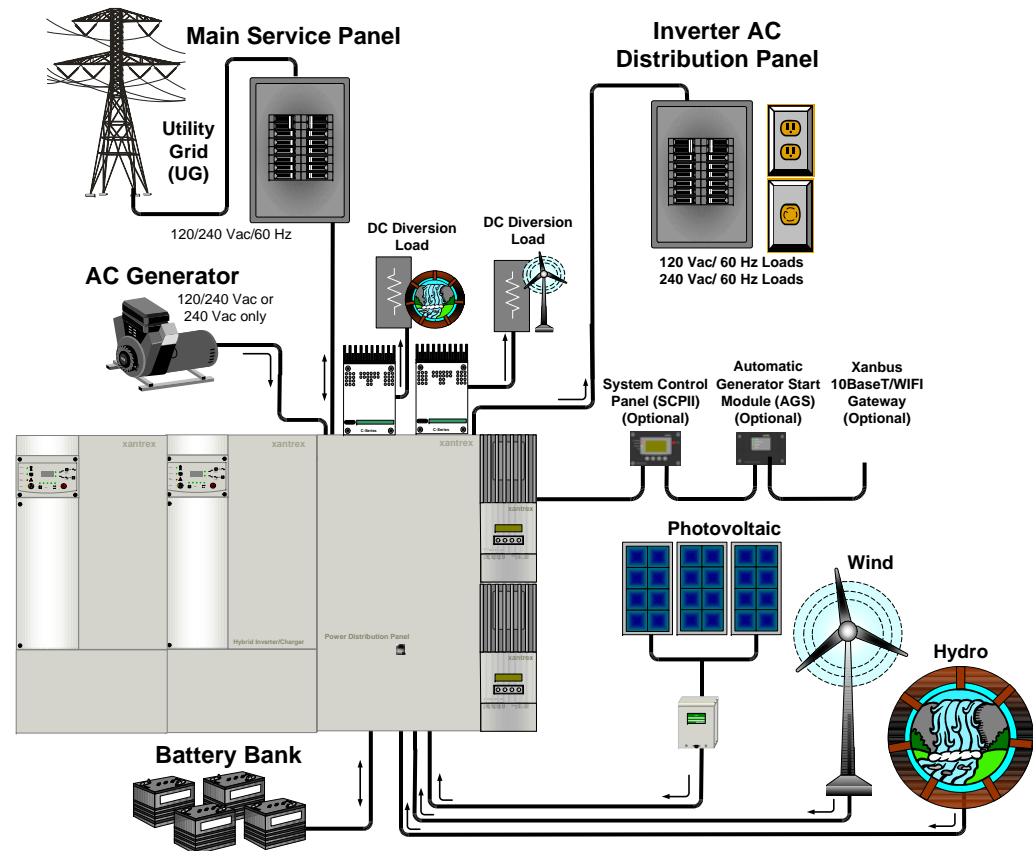


Xantrex XW System
The Hybrid Inverter/Charger

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XW Hybrid Inverter/Charger

- Three XW power levels designed for any application
 - Off-grid
 - Back up
 - Grid-Interactive with Battery Backup
- Dual AC inputs connect to AC Generators &/or Grid

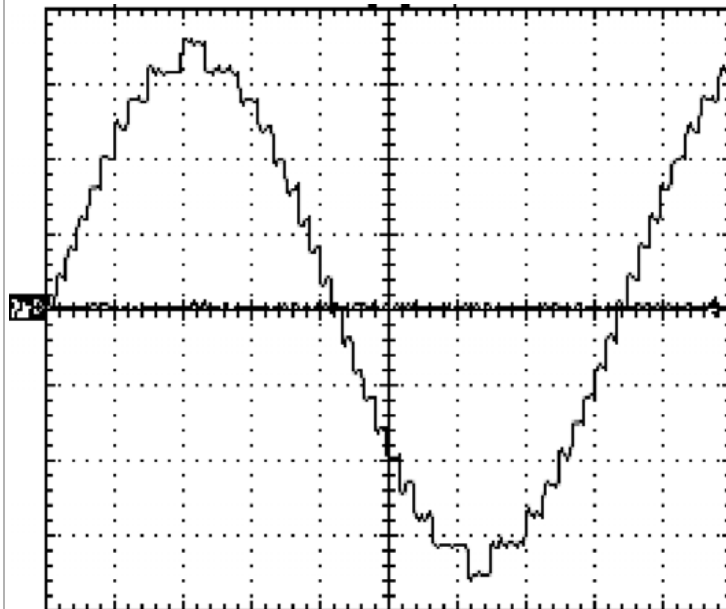


XW Hybrid Inverter/Charger Features

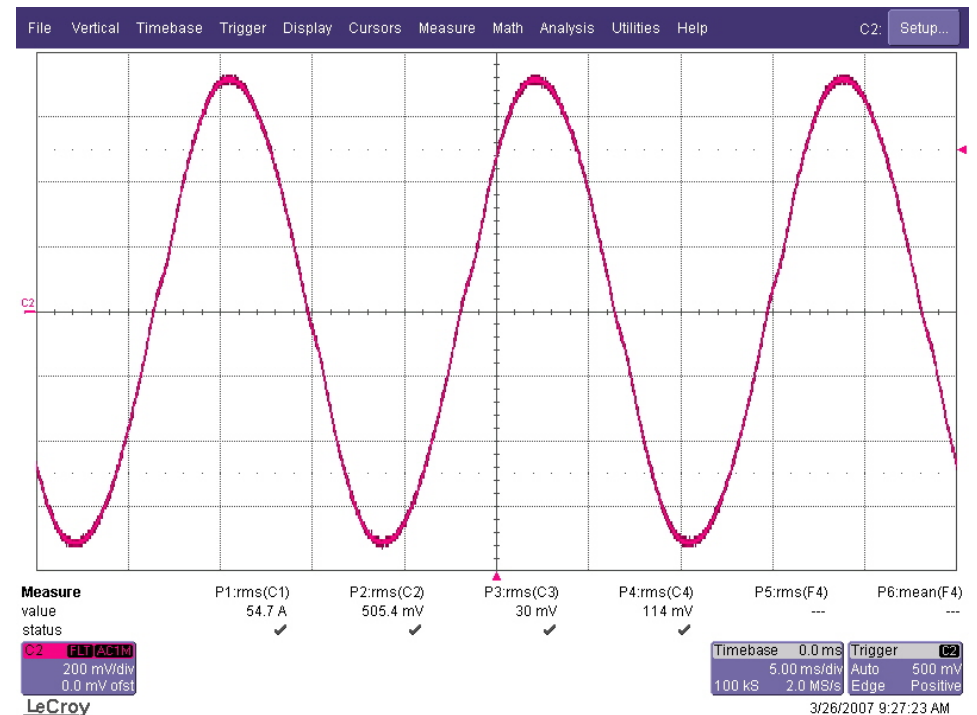
- Easily configurable for multi-unit installations
 - Parallel up to 3 inverters for 18kW systems
- Best-in-class battery charging
 - Highest charge current and efficiency
 - XW6048 (100A, 89%), XW4548 (85A, 90%), XW4024(150A, 86%)
 - Minimizes recharge time (fuel costs) and prolongs battery life
- Grid and Generator Support Features
 - Time-of-use, Peak load shaving
 - Power large loads using both generator and inverter

True Sine Wave Output

- SW Series
 - 34-52 Step sine wave

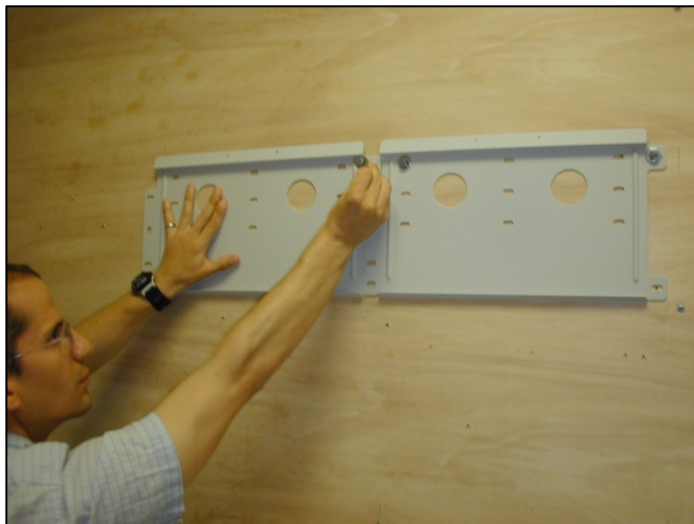


- XW Series
 - Grid quality output



Easy to Install

- Method common to Xantrex GT Series Solar Grid Tie Inverters
- Install mounting back plate, install second nesting back plate for XW-Power Distribution Panel
- Hang Inverter, hang PDP, secure with screws
- Connect with attached, measured and labeled wiring



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Xantrex XW System
Balance of System Components

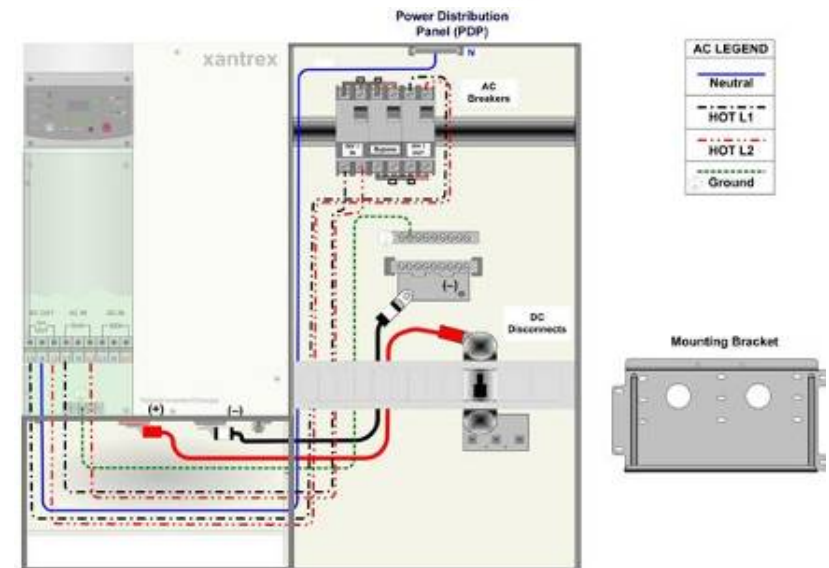
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XW-Power Distribution Panel

- All parts and wiring for one XW inverter/charger
 - AC & DC breakers
 - Arctic UltraFlex Blue™ wiring connected, measured and labeled
 - Conduit Box & Mounting Bracket

- Room for Additional Equipment
 - Up to three Inverters
 - Up to four Charge Controllers

- Field Flexibility
 - Can be on left or right side of inverter



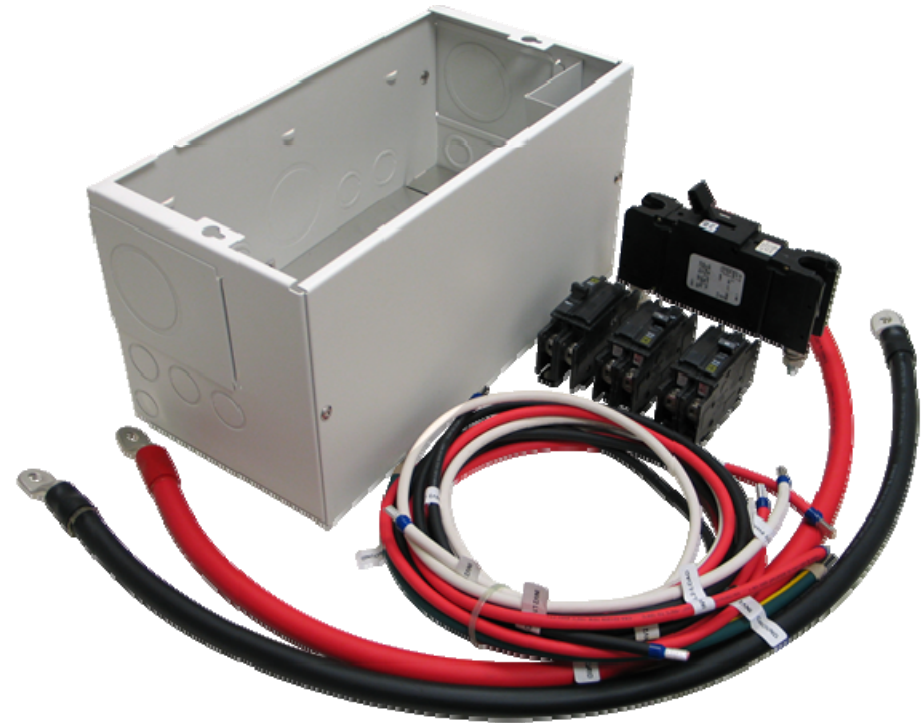
XW-Extension Kit

DC connections and wiring

- 250 A DC Breaker
- 4/0 DC Arctic UltraFlex Blue™ wiring (+ & -) to inverter

AC connections and wiring

- AC Input/Bypass Switch assembly
- 60 A AC breaker for inverter output
- 6AWG AC Arctic UltraFlex Blue™ wiring from inverter to breakers
- Conduit Box
- Sync & Xanbus cables



XW-Conduit Box

- Bare conduit box
- For systems larger than 2 inverters
- To retrofit inverters into existing systems which may have AC/DC disconnects



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Xantrex XW System
Solar Charge Controller

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XW-MPPT60-150



- 60 Amps
- Array voltage: V_{batt} to 150Voc
- Battery voltage: 12 to 60VDC
- Dynamic maximum power point tracking
- Convection cooled
- Built-in PV Ground Fault Protection

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- Home
- Products
- Support
- Buy
- Company
- Investors
- Contacts



Module	
BP Solar BP 4175	
Pmax @ STC	175 W
Pmax @ PTC	155 W
Vmp at Pmax	35.7 V
Imp at Pmax	4.9 A
Voc @ STC	44 V
Voltage change	-160 mV/C

Charger	
XW-MPPT60-150	
Max OC Voltage	150 Vdc
Max Current	60 Adc

Battery Bank Specifications	
Battery voltage (nominal)	48 V
Bulk/Absorb battery voltage	57.6 Vdc
Float battery voltage	54 Vdc

Temperature Specifications	
Celsius or Fahrenheit	F
Record low ambient temperature	14
Average high ambient temperature	95

	Max VOC at Min Temp	Min VMP at Max Temp
2 Modules	99 Vdc	68 Vdc
3 Modules	149 Vdc*	102 Vdc

* Indicates nearing min or max Vdc

		2 Modules		3 Modules	
		Array Watts	Charger Amps	Array Watts	Charger Amps
1 Strings	STC	350 Wdc	6 Adc	525 Wdc	9 Adc
	PTC	310 Wdc	6 Adc	465 Wdc	8 Adc
2 Strings	STC	700 Wdc	13 Adc	1050 Wdc	19 Adc
	PTC	620 Wdc	11 Adc	931 Wdc	17 Adc
3 Strings	STC	1050 Wdc	19 Adc	1575 Wdc	28 Adc
	PTC	931 Wdc	17 Adc	1396 Wdc	25 Adc
4 Strings	STC	1400 Wdc	25 Adc	2100 Wdc	38 Adc
	PTC	1241 Wdc	22 Adc	1862 Wdc	34 Adc
5 Strings	STC	1750 Wdc	32 Adc	2625 Wdc	47 Adc
	PTC	1552 Wdc	28 Adc	2328 Wdc	42 Adc
6 Strings	STC	2100 Wdc	38 Adc	3150 Wdc	57 Adc
	PTC	1862 Wdc	34 Adc	2793 Wdc	50 Adc
7 Strings	STC	2450 Wdc	44 Adc	3675 Wdc	60 Adc*
	PTC	2172 Wdc	39 Adc	3259 Wdc	59 Adc
8 Strings	STC	2800 Wdc	51 Adc	4200 Wdc	60 Adc*
	PTC	2483 Wdc	45 Adc	3724 Wdc	60 Adc*
9 Strings	STC	3150 Wdc	57 Adc	4725 Wdc	60 Adc*
	PTC	2793 Wdc	50 Adc	4190 Wdc	60 Adc*
10 Strings	STC	3500 Wdc	60 Adc*	5250 Wdc	60 Adc*
	PTC	3104 Wdc	56 Adc	4656 Wdc	60 Adc*

* Indicates charge controller will regulate current on oversized arrays

STC - Standard Test Conditions
PTC - PV USA Test Conditions

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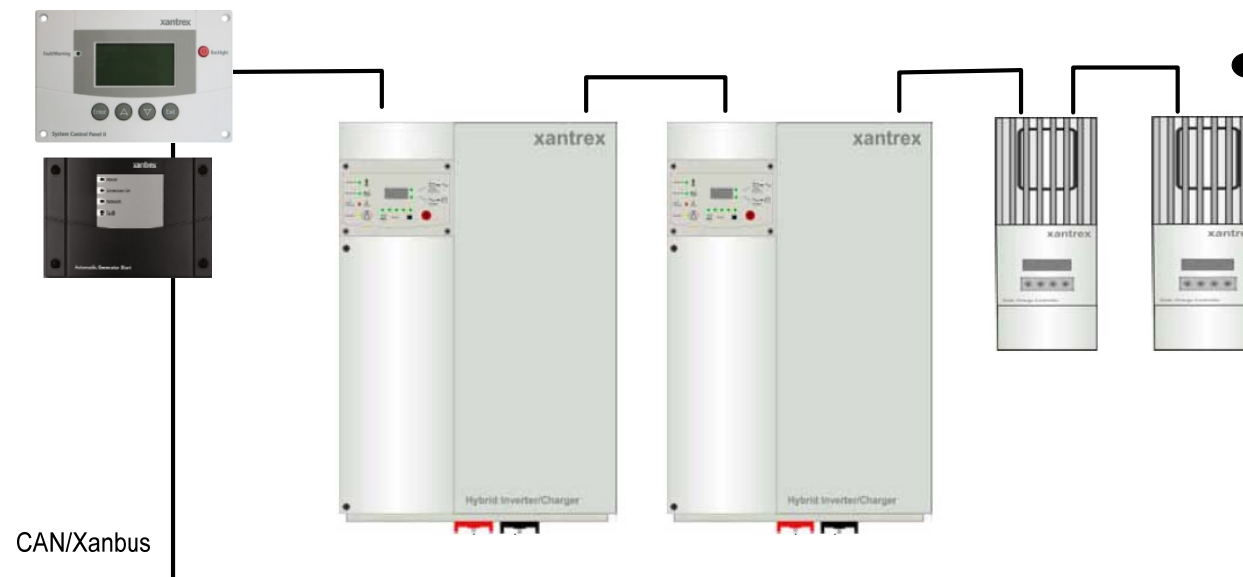


Xantrex XW System
Communications & Networking

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XW System Network

- Integrated network communications (Xanbus)
 - All networked components auto-detect and collaborate in real-time
 - No hub required, just standard Cat5 Ethernet cables
 - Peripheral devices are powered off network (i.e. no wall-warts)



XW System Control Panel

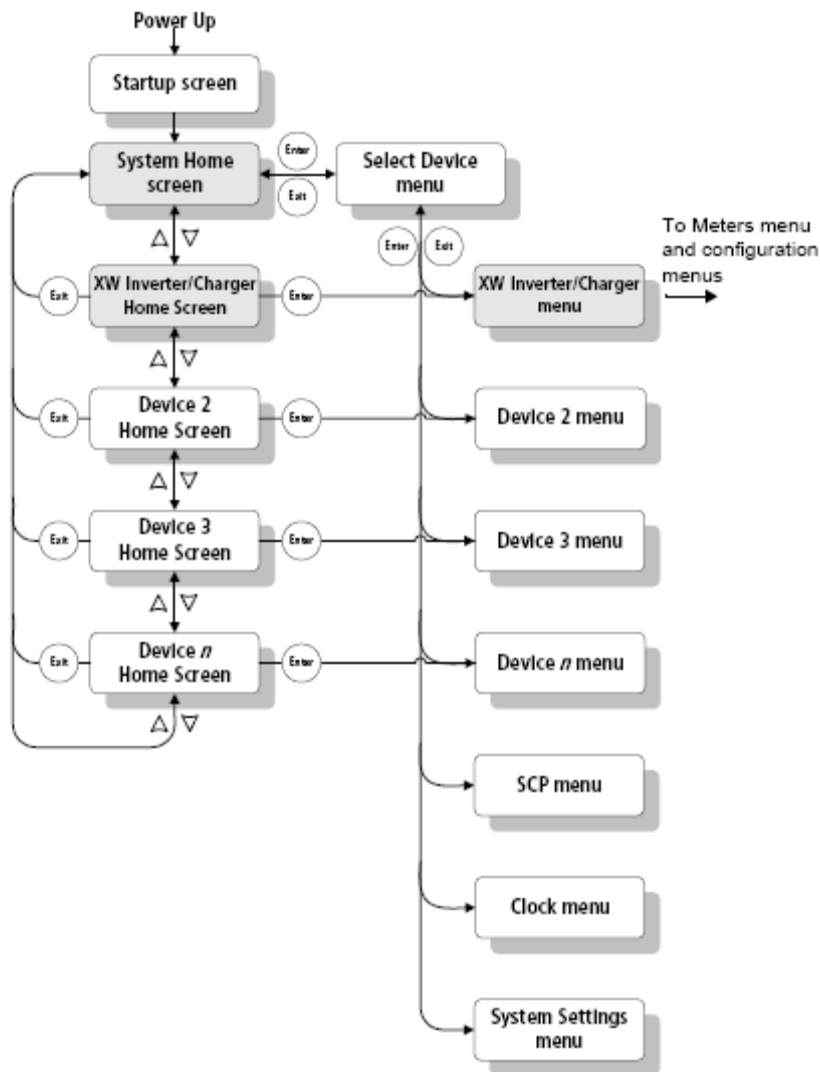
- Central user interface
- System Configuration
- System Monitoring
- Can be removed from system to prevent end-user tampering



Features:

- Graphical 128x64 pixel, backlit LCD screen
- Large, tactile keypad buttons
- Intuitive onscreen menu system (basic & advanced)
- Built-in flash memory
- Xanbus™ enabled
- No “hub” required

Menu Structure



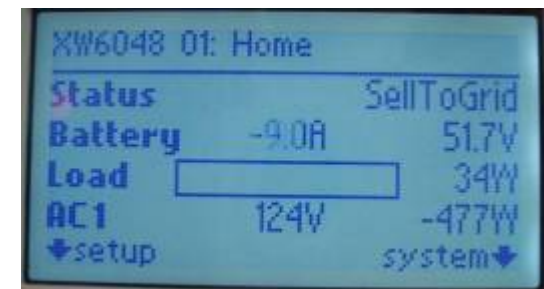
SYSTEM HOME SCREEN

- Aggregate of all devices in system



XW INVERTER HOME SCREEN

- Basic inverter information



XW INVERTER "METERS"

- Provides detailed inverter info for troubleshooting



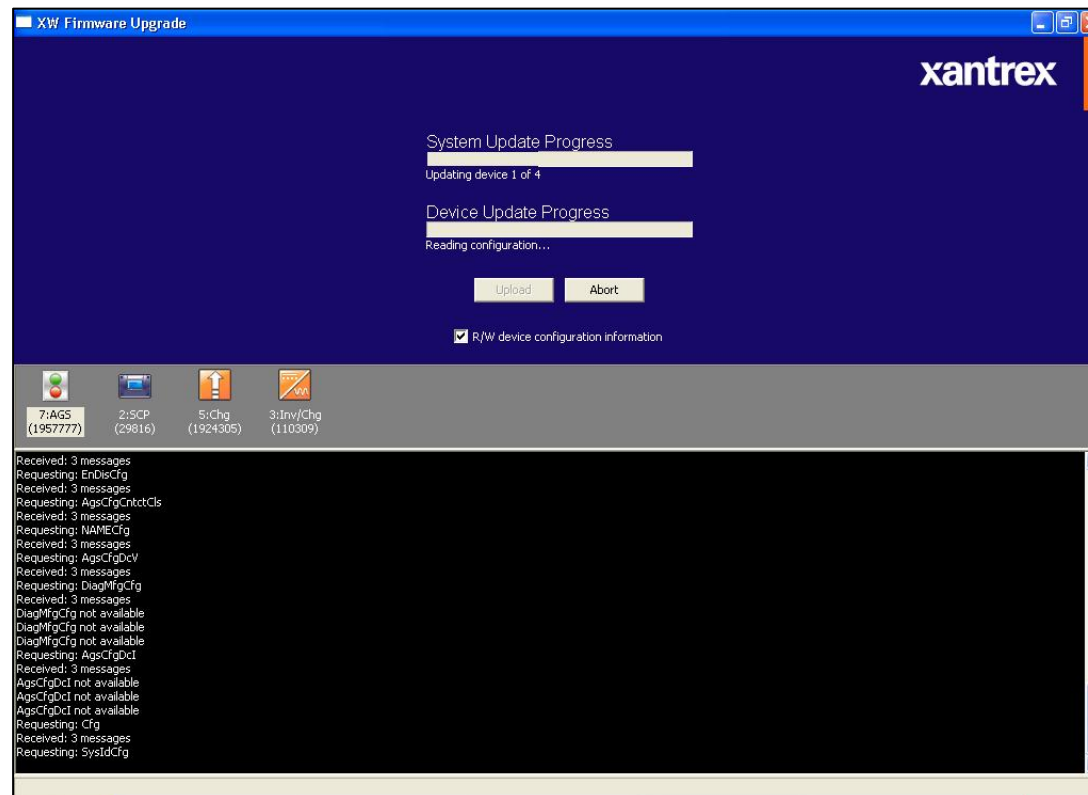
XW Automatic Generator Start

- Intelligent power management
 - Automatically activates generator to provide power to recharge depleted battery bank or assist with heavy loads
- Comprehensive customizable triggers
 - Low battery voltage
 - High inverter load
 - Thermostat signal
 - Exercise period
 - Max run-time, quiet time
- Compatible with popular generators
 - 2 or 3 wire start control
 - No extra relays or adapters required
 - Onan, Kohler, Westerbeke, Northern Lights, Generac, Honda, and Powertech

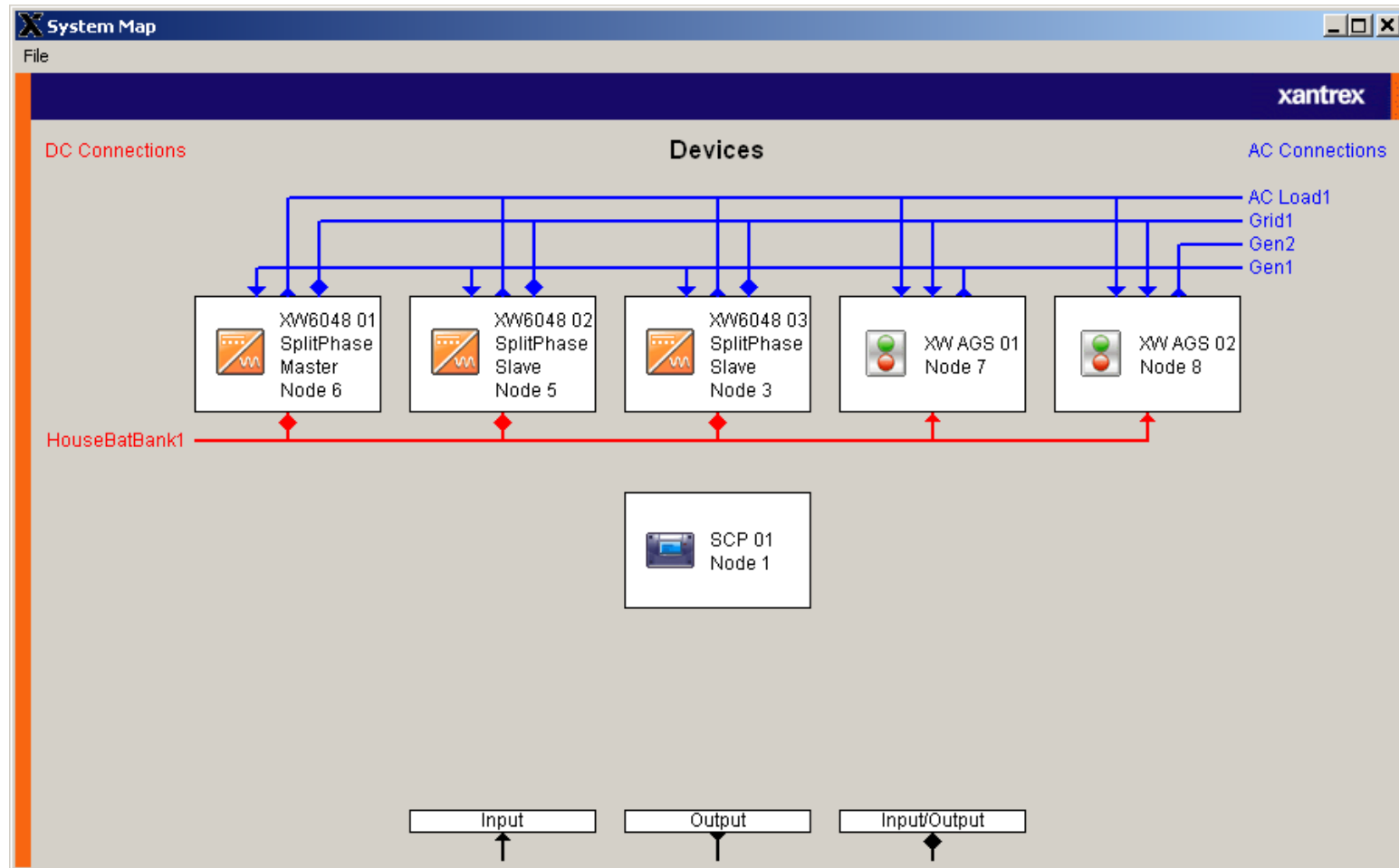


Communications Options

- Xanbus – USB Adapter
 - Configure system and/or update firmware in all components in XW System using local PC



XW Configuration Tool



XW Configuration Tool

XW6048 01 Command Config Test Request Reset

XW6048 01 xantrex

Charger Configuration

Max Chg Rate: 98 %

Charge Cycle: 2StageNoFloat

ReCharge Volts: 50.000 V

Batt Type: Flooded

Absorb Time: 10800 seconds

Batt Capacity: 60 A H

Default Batt Temp: Warm

Chg Block Start: 12 : 00 AM

Chg Block Stop: 12 : 00 AM

Update Reset Back

No faults or warnings

XW6048 01 Command Config Test Request Reset

XW6048 01 xantrex

Basic Status

Line1	Line2	
0.0	0.0	V
0.0	0.0	A
0	0	W

Line1	Line2	
109.3	109.3	V
0.0	0.0	A
7	6	W

AC1 SplitPhaseMaster Invert Load

AC2 Qualifying AC Primary 2StageNoFloat

71 W
1.450 Amps
49.600 V
No Data

- Inverter Enable
- Sell Enable
- Load Shave Enable
- Anti Islanding
- Grid Enable
- Charger Enable

No faults or warnings

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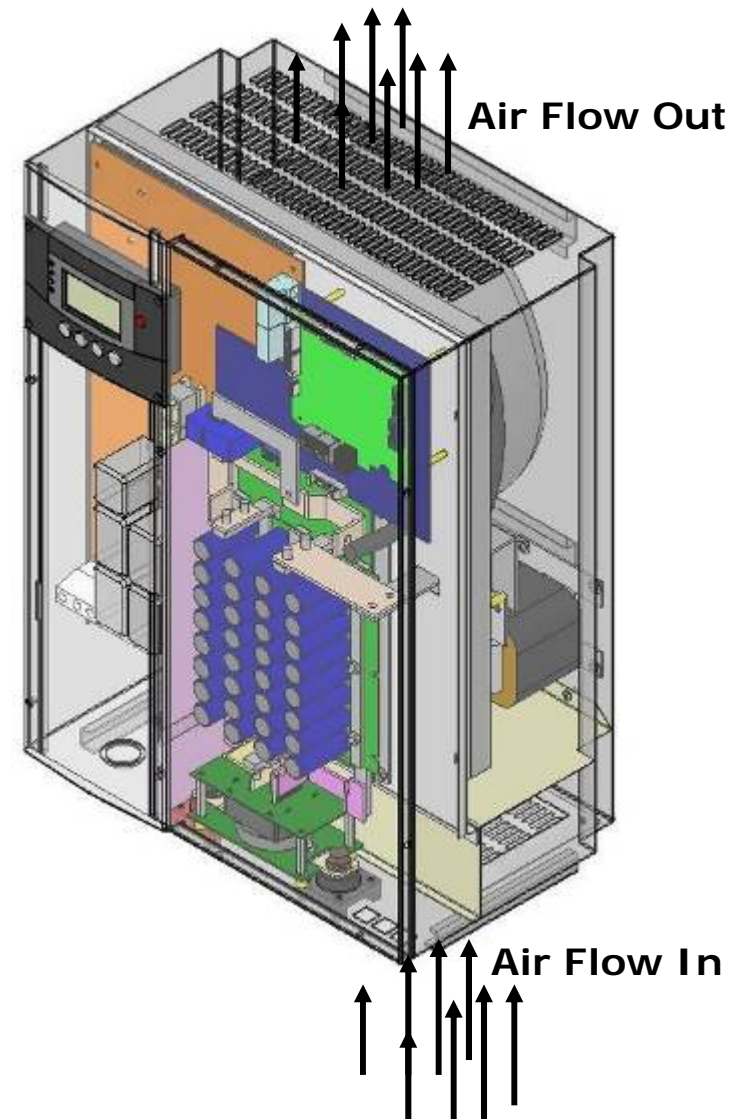


XW System
Quality & Reliability

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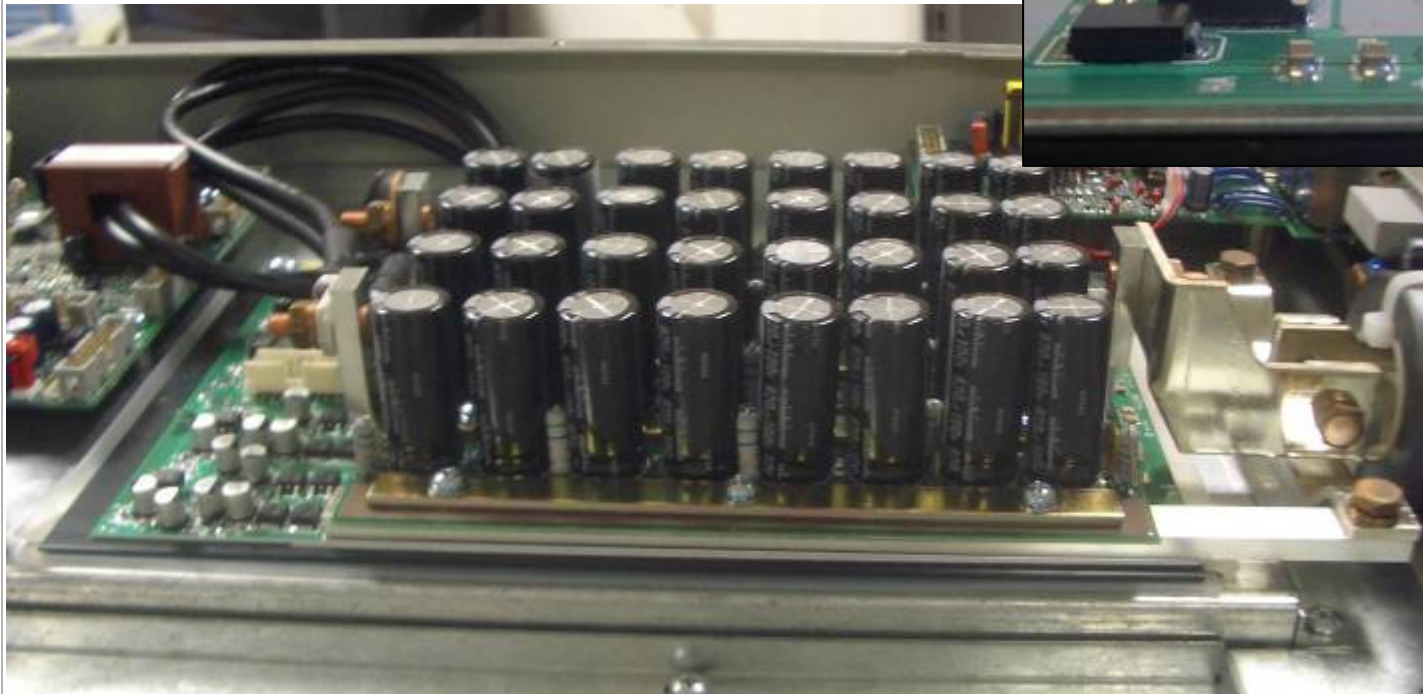
Design for Reliability

- Two compartments
 - Sensitive electronics are sealed from the environment
 - Heat generating components are in the cooling airflow
 - Vertical form factor creates natural chimney effect
 - fan remains off at lower power levels
- All sheetmetal is plated and powder coated



Designed for Reliability

- Using Insulated Metal Substrate in Power Bridge Assembly
 - IMS is proven technology commonly found in motor drives
- Capacitors are widely distributed and load share to minimize stress
- Reliability Benefits
 - Superior heat dissipation
 - Low electrical impedance
 - Efficient mechanical design



Designed and Tested For Reliability

- HALT “Highly Accelerated Life Testing”
 - XW6048-120/240-60 Limits
 - Cold Step Stress -45C
 - Hot Step Stress >+100C
 - Rapid Thermal -35C to 105C @ 60C/min
 - XW-MPPT60-150 Limits
 - Cold Step Stress -60C
 - Hot Step Stress >+100C
 - Rapid Thermal -50C to 85C @ 60C/min
- Salt Fog Testing
- MTBF calculations “Mean Time Between Failure” 22.7 years @ 25°C/77, 30% duty-cycle



Production Testing

- Burn-in & full functional test prior to shipment
- Done on every XW Inverter and Charge Controller before shipment to customer



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XW System
Service & Warranty

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Design for Serviceability

- All 6 boards in inverter accessible from the front
- Fan accessible on bottom via removable grill



Service & Warranty Support

- Standard Warranty - 5 years
 - Optional extension to 10 years (Under Review for Australia)
- Xantrex Quick-Swap program
 - Minimize dealer time spent managing warranty repair exchanges
 - Return XW Charge Controller directly to Xantrex for exchange
 - Board level replacements for XW Inverter to be positioned for quick response time
 - Possible installer removal/re-installation/board swap fee payable to **Qualified Installers** for warrantable failures

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Xantrex XW System
Why Choose an XW System?

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Product Differentiators

XW Inverter/Charger

1. Outstanding Inverter Performance
 - Low load and peak efficiency improvements over competition
 - Continuous output power and surge improvements
2. Utility interactive, same unit (coming)

XW Solar Charge Controller

1. True maximum power point tracking with no mini or full sweeps
2. Integrated PV Ground Fault Protection
3. Convection cooled - No fan to fail

XW System

1. Superior integrated system execution
 - Supports high power configurations
 - Fewer pieces, less complexity, lower installed dealer cost
 - Reliable 2 & 3 wire generator support with AGS module
2. Communications
 - All components truly networked, no "hub" required
 - Common settings shared between devices to facilitate system setup
3. 5 year standard warranty on all XW components

Distributor / Dealer / Installer Benefits

- Less complexity - Systems will be easier to spec out and install
 - Nesting wall brackets, pre-wired distribution panel, plug-n-play network...
 - No need to order heavy power panels to reduce complexity
 - Lower parts count per system
 - 12kW XW System = 5 components (Quad Stack = 15 skus, >20 components)
 - More configurable and scalable for higher power levels without special accessories or custom engineering support
- Systems will be easier to forecast and inventory
 - 12 XW SKUs vs. 51 SKUs associated with SW, SWPlus
 - >100 OutBack SKUs
- Complete system is easily Shippable; lower cost, easier handling and field configuration
- 5 year standard warranty and improved ease of field service

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Thank You!

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