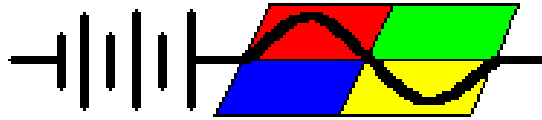# RightHand

Engineering, LLC   *WinVerter™ OPC Monitor FX-MX*

WinVerter OPC Monitor FX-MX is a software interface that provides data from the OutBack Power Systems FX-series inverters and MX-60 solar charge controllers to a process control system using the Open Process Control (OPC) protocol.

Designed for the OutBack MX60 Charge Controller

OutBack Power Systems

WinVerter OPC Monitor FX-MX runs under Microsoft Windows as an OPC Server and supplies OPC Clients on the same or networked PCs with the electrical meter data supplied by the OutBack equipment.

WinVerter OPC Monitor FX-MX [1] - RightHand Engineering, LLC

File   View   Options   Help

FX Inverter Tags   **MX Charge Controller Tags**

	0	1	2	3	4	5	6	7	8	9	10	
HUB Port	0	1	2	3	4	5	6	7	8	9	10	HUB Port
Data Age	106	0	0	106	106	106	106	106	106	0	0	Data Age
Device Type		FX	FX							MX	MX	Device Type
Inv Amps		00	00							00	00	unused
Chg Amps		00	00							10	10	Chg Amps
Buy Amps		00	00							06	06	PV Amps
In Volts		117	117							072	072	PV Volts
Out Volts		117	117							05.0	05.0	Daily KWHr
Sell Amps		00	00							00	00	unused
Op Mode		04	04							00	00	Aux Mode
Err Mode		000	000							000	000	Err Mode
AC Mode		02	02							02	02	Chrg Mode
Bat Volts		50.0	50.0							50.0	50.0	Bat Volts
Misc		000	000							000	000	unused
WarnMode		000	000							000	000	unused

Port 0 is direct connection to device (no Hub used)

Tag Key: Active / Not Used / In Use

Inverter Control Tags: Inverter On/Off [ ]   AC Input [ ]   Aux Output [ ]

Simulated Data from Mate ok | No Client connections.

Features

- Provides access to a single OutBack device or to all devices attached to a single OutBack hub – up to 10 devices total.
- Supports OPC Client polling rate up to one sample per second.
- Notifies OPC Clients upon change in data value.
- Accepts remote control commands from OPC Clients for limited control of a master inverter.
- Provides local, on-screen limited control of a master inverter.
- Provides OPC Clients with data quality information for detection of loss of connection.
- Displays the raw data received from each device.
- Displays the OPC tag state via colors; active, in-use, not used.
- Command Line interface allows Windows registration or un-registration to ease OPC Client discovery of the Server.
- Simulation mode assists with Client development without need to connect to actual equipment.
- Password protected lock feature prevents unauthorized use of the Server.

Local Display

The software, even though acting as a server, provides a local display allowing you to verify proper operation with or without active clients. The local display shows connectivity status to both the monitored equipment, as well as clients. It also shows the tag status including the most recent values received from the monitored equipment. It also allows a local means of sending control messages to the equipment.

Data Quality

The software supports data quality information for each tag, so that you can tell the difference between valid, real-time information, vs. stale, last-known readings.

Simulation Mode

The software allows you to simulate operation just as if it were connected to live systems. You are able to simulate equipment data changes. This allows development of client software without having actual equipment to monitor.

Host PC Requirements
- Intel Pentium Celeron (or equivalent) or better processor
- 600 MHz or better for up to 4 devices. 1 GHz or better for up to 10 devices. Devices may be either FX series inverters or MX charge controllers.
- Microsoft Windows® 98 SE or later operating system
- 256 MB RAM for up to 4 devices, 512 MB RAM or more for up to 10 devices. Or as required by the operating system, whichever is higher.
- 20 MB of free hard disk space
- Multi-read CDROM drive for installing software
- 1024 x 768 video or better. Color recommended
- Pointing device, such as mouse or track-ball
- One or more 9 or 25 pin RS-232 serial ports with full RS-232 voltage on the flow control signals (Note: USB converters do not generally meet this requirement).
- For continuous, unattended operation the following is recommended:
  o Microsoft Windows 2000 or Windows XP Professional operating system.
  o Simultaneous operation of other software should be kept to a minimum.
  o Meet the minimum PC requirement for the other software installed on the PC.
  o Latest drivers compatible with the OS for the installed hardware.
  o The particular model of PC should be listed on the Microsoft Hardware Compatibility List (HCL) for the installed OS.

OutBack Inverter Requirements:
- OutBack Power Systems FX or VFX series inverters with firmware revision 41 or later, or GTFX or GVFX series inverters with firmware revision 75 or later.
- OutBack Power Systems Mate with firmware revision 1.6 or later for FX or VFX, 3.3 or later for GTFX or GVFX.
- If monitoring multiple units or devices the OutBack HUB4 or HUB10 is required.
- Host PC must be within 50 feet wire distance of the Mate unless special extending devices are used.

OutBack Charge Controller Requirements:
- OutBack Power Systems MX-60 series with firmware revision 7.2.3, serial number 1000 or later (the MX revision numbering is based on Month.Day.Year).
- OutBack Power Systems Mate with firmware revision 2.3 or later.
- If monitoring multiple units or devices the OutBack HUB4 or HUB10 is required.
- Host PC must be within 50 feet wire distance of the Mate unless special extending devices are used.

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