

MODEL PAXUSB - USB PROGRAMMING OPTION CARD

DESCRIPTION

This bulletin serves as a guide for the installation, configuration and operation of the PAX USB Programming plug-in card. The plug-in card is a separately purchased option card that plugs into the main circuit board of the meter. The PAX USB card in conjunction with the Crimson® programming software enables the user to configure a PAX from a PC. The PAXUSB requires the installation of drivers that are included with the Crimson Programming software.

Following installation of the drivers, the card appears as a Virtual communications port.

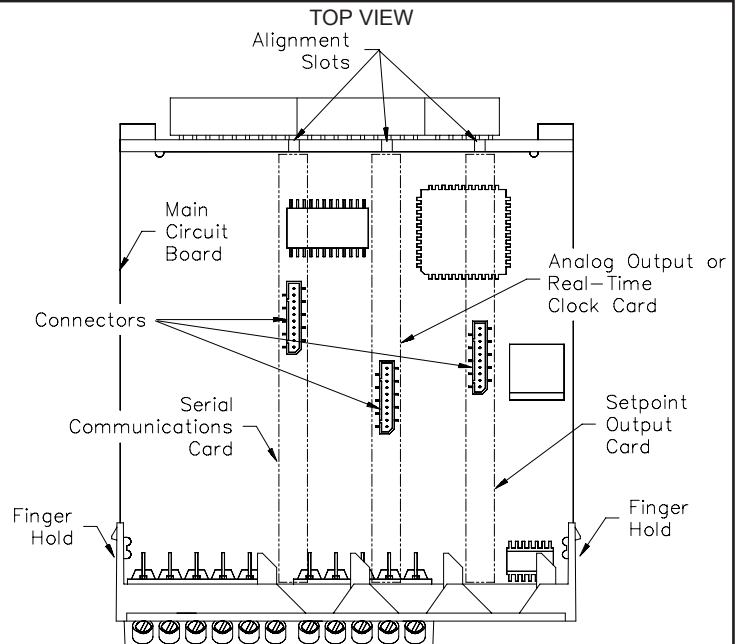
Crimson is a Windows® based program that allows configuration of the PAX® meters from a PC. Crimson offers standard drop-down menu commands, that make it easy to program the PAX meters. The PAX program can then be saved in a PC file for future use. A PAX serial plug-in card is required to program the meter using the software.

INSTALLING AN OPTION CARD

CAUTION: The option and main circuit cards contain static sensitive components. Before handling the cards, discharge static charges from your body by touching a grounded bare metal object. Ideally, handle the cards at a static controlled clean workstation. Also, handle the cards by the edges only. Dirt, oil or other contaminants that may contact the cards can adversely affect circuit operation.

WARNING: Exposed line voltage exists on the circuit boards. Remove all power to the meter AND load circuits before accessing the unit.

1. Remove the main assembly from the rear of the case. Squeeze the finger holds on the rear cover, or use a small screwdriver to depress the side latches to release it from the case. It is not necessary to separate the rear cover from the main circuit card.
2. Locate the option card connector for the type of option card to be installed. Hold the unit by the rear connector, not the display board, when installing an option card.
3. Install the option card by aligning the option card connector with the slot bay in the rear cover. The cards are keyed by position with different main board connector locations. Be sure the connector is fully engaged and the tab on the option card rests in the alignment slot on the display board.
4. Slide the assembly back into the case. Be sure the rear cover latches fully into the case.
5. Perform USB driver installation below prior to powering the PAX and connecting PAXUSB to PC USB port.



USB DRIVER INSTALLATION

1. Download and install the latest Crimson 2 build on your Windows® compatible PC. Earlier builds may not have the RLC Virtual Comm port drivers. Crimson software is available as a free download at <http://www.redlion.net>.
2. Install PAXUSB card into the meter and apply power to the PAX.
3. Connect Type A to mini B USB cable to computer and PAX option card. Windows will prompt you for the location of the drivers for the device. The default location for these drivers is "C:\Program Files\Red Lion controls\Crimson 2.0\Device." When the hardware setup appears, choose "Install from a list or Specific location," click Next, and then check "Include this location..." and click the Browse button. Point the Wizard at the location specified above or whatever other location you specified during installation of the software. It is important that you perform this step correctly, or you may have to manually remove the drivers using the Device Manager, and repeat the installation once more.

Note: Crimson's USB drivers have not been digitally signed by Microsoft®, and you will therefore see a dialog offering you the chance to stop the installation. You should be sure to select the Continue option to indicate that you do indeed wish to install the drivers.

4. Windows will automatically assign a comms port to the PAXUSB. To determine the port assigned, open "System Properties" from within Windows® Control Panel. Select the Hardware tab, and click the "Device Manager" button. Expand the "Ports" line. Take note of which Comms port is assigned to "RLC Virtual Comm port". It must be Com4 or lower to operate with Crimson 2. If higher, right-click on the entry and select "Properties," "Port Settings" tab, and then "Advanced" button. Select a Coms port that is COM4 or lower and is not physically being used.

SPECIFICATIONS

PAXUSB PROGRAMMING CARD

Type: USB Virtual Comms Port

Isolation To Sensor & User Input Commons: 500 Vrms for 1 min.

Working Voltage: 50 V. Not Isolated from all other commons.

PAXH Isolation:

Isolation To Sensor Common: 1400 Vrms for 1 min.

Working Voltage: 125 V

Isolation To User Input Common: 500 Vrms for 1 min.

Working Voltage: 50 V

Baud Rate: 300 to 19.2k

Unit Address: 0 to 99; only 1 meter can be configured at a time

CRIMSON 2 SYSTEM REQUIREMENTS

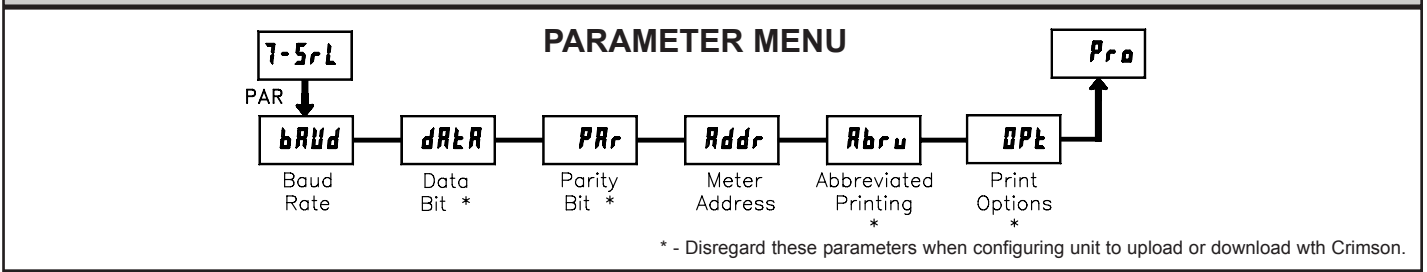
- Windows 2000, XP, or Vista
- RAM and free disk space as required by the chosen operating system.
- An additional 50 MB of disk space for software installation.
- A display of at least 800 by 600 pixels
- A USB port for downloading to the PAX

ORDERING INFORMATION

MODEL NO.	DESCRIPTION	PART NUMBER
PAXUSB	PAX USB Programming Card	PAXUSB00
CBLUSB	Type A to mini B USB Cable	CBLUSB01
SFCRUSB*	USB Programming Kit containing USB Card, USB Cable, and Crimson Software	SFCRUSB1

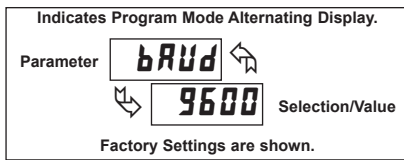
* Crimson software is available for download from <http://www.redlion.net/>

MODULE 7 - SERIAL COMMUNICATIONS PARAMETERS (7-5rL)



It is necessary to match the PAX meter's serial communications parameters to the host's parameters before communications can be established. This is accomplished by using the PAX front panel keys to enter 7-5rL.

The only parameters of concern when utilizing the PAXUSB programming option card to communicate with Crimson 2 programming software is the Baud Rate and Meter Address. The Parameters are only accessible when an optional PAXUSB, RS232 or RS485 serial communications card is installed.



BAUD RATE



Set the baud rate to match that of other serial communications equipment. Normally, the baud rate is set to the highest value that all of the serial communications equipment is capable of transmitting.

DATA BIT *



Select either 7 or 8 bit data word lengths. Set the word length to match that of other serial communication equipment. Since the meter receives and transmits 7-bit ASCII encoded data, 7 bit word length is sufficient to request and receive data from the meter.

PARITY BIT *



Set the parity bit to match that of the other serial communications equipment used. The meter ignores the parity when receiving data, and sets the parity bit for outgoing data. If no parity is selected with 7-bit word length the meter transmits and receives data with 2 stop bits. (For example: 10 bit frame with mark parity)

METER ADDRESS



Enter the serial node address. With a single unit on a bus, an address is not needed and a value of zero can be used (RS232 applications). Otherwise, with multiple bussed units, a unique address number must be assigned to each meter. The node address applies specifically to RS485 applications.

ABBREVIATED PRINTING *



Select abbreviated transmissions (numeric only) or full field transmission. When the data from the meter is sent directly to a terminal for display, the extra characters that are sent identify the nature of the meter parameter displayed. In this case, select **NO**. When the data from the meter goes to a computer, it may be desirable to suppress the node address and mnemonic when transmitting. In this case, set this parameter to **YES**.

PRINT OPTIONS *



YES - Enters the sub-menu to select those meter parameters to appear in the block print. For each parameter in the sub-menu select **YES** for the parameter to appear with the block print, and **NO** to disable the parameter.

* - Disregard these parameters when configuring unit to upload or download with Crimson software.