

## MODEL XCENET - 10/100 ETHERNET OPTION CARD FOR DATA STATION PLUS AND MODULAR CONTROLLER



- CONFIGURED USING CRIMSON® SOFTWARE (VERSION 2.0 OR LATER)
- 10 BASE-T/100 BASE-TX ETHERNET PORT
- EASY INSTALLATION

### GENERAL DESCRIPTION

Both the Modular Controller Master (enhanced models) and Data Station Plus contain a proprietary expansion port which provides a high speed, parallel architecture that extends the functionality and flexibility of the platform. This approach allows these products to evolve concurrently with the latest advances in communications and standards, without sacrificing performance. This high bandwidth channel has significantly greater throughput when compared to the traditional (external) serial gateway approach.

The auxiliary Ethernet port provides a means to isolate machine-network traffic from the plant-wide network, thereby negating the need for an industrial router. Further, by isolating the machine and plant-wide networks, the system only requires that a single IP address be provided by the company's IT group.

The XCENET option card is easily installed by removing the blank expansion port cover of your Modular Controller or Data Station Plus, and plugging the XCENET card into the expansion port. Installing this card adds an auxiliary 10/100 Ethernet port to any Modular Controller or Data Station Plus. Configuration is simple using Red Lion's free Crimson 2.0 or Crimson 3.0 software.

### SAFETY SUMMARY

All safety related regulations, local codes and instructions that appear in the literature or on equipment must be observed to ensure personal safety and to prevent damage to either the instrument or equipment connected to it. If equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

Do not use the controller to directly command motors, valves, or other actuators not equipped with safeguards. To do so can be potentially harmful to persons or equipment in the event of a fault to the controller.



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### SPECIFICATIONS

- POWER REQUIREMENTS:** 24 V @ 30 mA max. Power is supplied to the option card by the Modular Controller Master or Data Station Plus.
- COMMUNICATIONS:**  
**Ethernet Port:** 10 BASE-T / 100 BASE-TX  
 RJ45 jack is wired as a NIC (Network Interface Card).
- CERTIFICATIONS AND COMPLIANCES:**  
 Consult factory for details.  
**ELECTROMAGNETIC COMPATIBILITY**  
 Emissions and Immunity to EN 61326: Electrical Equipment for Measurement, Control and Laboratory use.  
 Reference Modular Controller Master or Data Station Plus unit for EMC specifications
- ENVIRONMENTAL CONDITIONS:**  
 Refer to the specifications of the Modular Controller Master or Data Station Plus you are installing this card in.
- CONSTRUCTION:** For indoor use only. Installation Category II, Pollution Degree 2.
- INSTALLATION REQUIREMENTS:** See "Installing the XCENET Option card" for more details.
- WEIGHT:** 2.0 oz (56.7 g)

### ORDERING INFORMATION

MODEL NO.	DESCRIPTION	PART NUMBER
XCENET	Ethernet option card for Modular Controller or Data Station Plus	XCENET00
SFCRM2	Crimson 2.0 with G3/Data Station Manual <sup>1</sup>	SFCRM200
	Crimson 2.0 with Modular Controller Manual <sup>1</sup>	SFCRM2MC

<sup>1</sup> Use these part numbers to purchase Crimson 2.0 on CD with a printed manual, USB cable and RS-232 cable. Otherwise, download free of charge from [www.redlion.net](http://www.redlion.net).

## INSTALLING THE XCENET OPTION CARD



**Caution:** The expansion and main circuit boards 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: Risk of Danger:** Be sure to remove all power before removing the expansion port cover

1. Remove power from the unit
2. Insert a flat-bladed screwdriver into the slot at the top of the expansion port cover. Gently apply pressure on the screwdriver in an upward direction until the expansion port cover disengages from the unit as shown in Figure 1.
3. Verify that the option card knobs are in the “unlocked” position as shown in Figure 2.
4. Carefully insert the option card into the expansion port opening while aligning the card-edge connector on the option card with the main board's header, as shown in Figure 3. Once aligned, gently press on the front of the card until it is flush with the front of the case.
5. Turn the option card knobs to the locked position as shown in Figure 4.

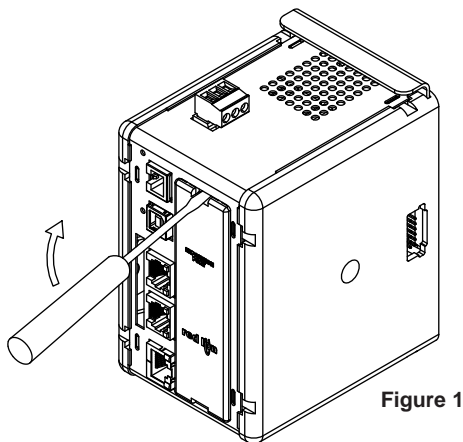


Figure 1

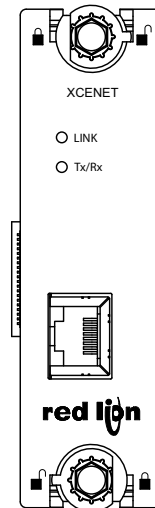


Figure 2

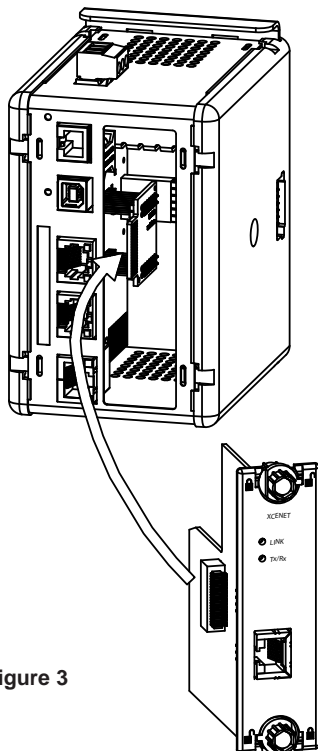


Figure 3

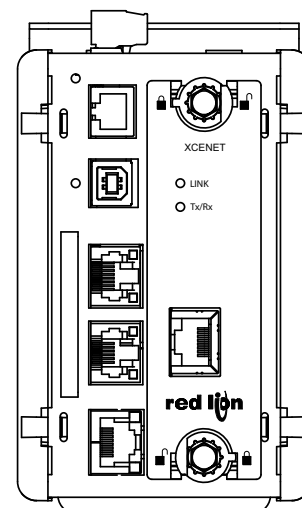


Figure 4

## THE OPTION CARD LABEL

Place the option card label on the outer plastic cover of the Modular Controller Master or Data Station Plus. The label contains the MAC ID of the particular XCENET option card being used.

## POWER SUPPLY REQUIREMENTS

### NEW AND EXISTING INSTALLATIONS

The XCENET option card draws all of its power from the main board of the Modular Controller master or Data Station Plus. The specifications of the Modular Controller master or Data Station Plus account for the power needs of an option card.

## COMMUNICATING WITH THE XCENET OPTION CARD

### CONFIGURING THE XCENET OPTION CARD

The XCENET is configured using Crimson® software. Crimson is available as a free download from [www.redlion.net](http://www.redlion.net), or it can be ordered on CD. Updates to Crimson for new features and drivers are posted on the website as they become available. By configuring the XCENET using the latest version of Crimson, you are assured that your unit has the most up-to-date feature set. Additional information can be found in your hardware bulletin and also in the Crimson 2.0 user manual.

## ETHERNET COMMUNICATIONS

Ethernet communications can be established at either 10 BASE-T or 100 BASE-TX. The XCENET option card's RJ45 jack is wired as a NIC (Network Interface Card). XCENET option card auto-detects remote transmit and receive pairs and correctly assigns the transmit and receive pairs for the XCENET option card. This extremely useful feature enables the user to use whichever type of cable (cross-over or straight) is available.

## SOFTWARE/UNIT OPERATION

### LEDS

The Link and Tx/Rx LEDs, shown in Figure 2, indicate the status of the Ethernet port. Refer to the following chart.

LED	COLOR	DESCRIPTION
LINK	GREEN	10 BASE-T Communications
	AMBER	100 BASE-TX Communications
Rx/Tx	YELLOW solid	Link established
	YELLOW flashing	Data being transferred

### TROUBLESHOOTING YOUR XCENET OPTION CARD

If for any reason you have trouble operating, connecting, or simply have questions concerning your new XCENET option card, contact Red Lion's technical support. For contact information, refer to the back page of this bulletin for phone and fax numbers.

### **LIMITED WARRANTY**

The Company warrants the products it manufactures against defects in materials and workmanship for a period limited to two years from the date of shipment, provided the products have been stored, handled, installed, and used under proper conditions. The Company's liability under this limited warranty shall extend only to the repair or replacement of a defective product, at The Company's option. The Company disclaims all liability for any affirmation, promise or representation with respect to the products.

The customer agrees to hold Red Lion Controls harmless from, defend, and indemnify RLC against damages, claims, and expenses arising out of subsequent sales of RLC products or products containing components manufactured by RLC and based upon personal injuries, deaths, property damage, lost profits, and other matters which Buyer, its employees, or sub-contractors are or may be to any extent liable, including without limitation penalties imposed by the Consumer Product Safety Act (P.L. 92-573) and liability imposed upon any person pursuant to the Magnuson-Moss Warranty Act (P.L. 93-637), as now in effect or as amended hereafter.

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