

*Quick Reference Guide*  
**RFID Reader**

# XR400 / XR480

## Introduction

This QRG (*Quick Reference Guide*) provides information for the XR Series RFID Readers. The QRG includes LED definitions, port descriptions, and mounting information. For details, refer to the *XR Series RFID Reader Integrator Guide P/N 72E-71773-XX*, available at: <http://www.symbol.com/manuals>

## Product Description

The Symbol XR Series RFID Readers are intelligent, multi-protocol UHF RFID readers with RFID read performance that provides real-time, seamless EPC-compliant tags processing.

Features:

- UHF Generation 2 support (EPC Class 0 and Class 1 supported only in XR400)
- Intel XScale® processor with Windows® CE
- Support for custom or third-party applications
- Feature set for event and tag management.

## Firmware Updates

The XR SeriesXR Series RFID Readers are shipped with the current firmware version. To install the latest upgrade refer to the *XR Series Integrator Guide P/N 72E-71773-XX*, available from:

<http://www.symbol.com/manuals>

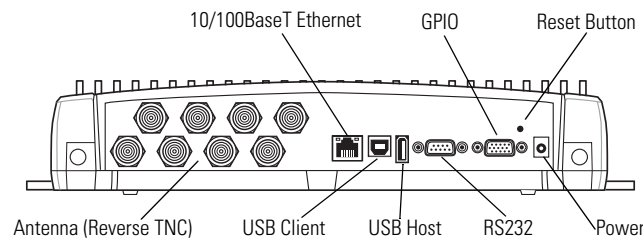
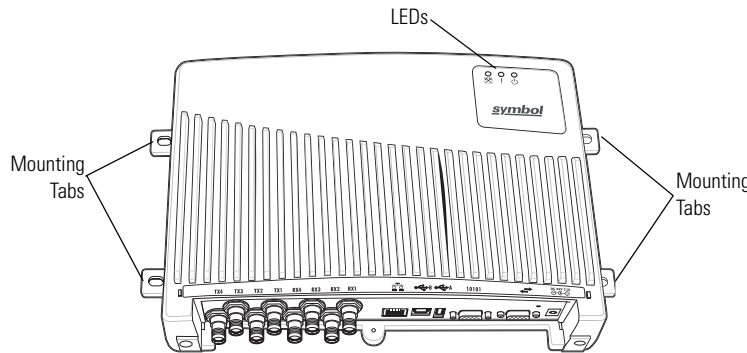
Note: Ensure that power is not interrupted during a firmware upgrade.

## LED Definitions

LEDs indicate reader status as described in the following table.

LED	Indication
Green	Reader is powered on.
Red	Error condition or non-operational mode, e.g., boot-up.
Yellow	Successful tag read.

## Physical Connections



Revision A — XXX 2006



<http://www.symbol.com/manuals>

For the latest version of this guide and other supporting documentation, go to:

United States	1-800-653-5350	Canada	905-629-7226
United Kingdom	0800 328 2424	Asia/Pacific	+65-6796-9600
Australia	1-800-672-906	Austria/Osterreich	01-5055794-0
Denmark/Danmark	7020-1718	Finland/Suomi	9 5407 580
France	01-40-96-52-21	Germany/Deutschland	6074-49020
Italy/Italia	2-48441	Mexico/México	5-520-1835
Netherlands/Nederland	315-271700	Norway/Norge	+47 2232 4375
South Africa	11-809 5311	Spain/España	91 324 40 00
Sweden/Sverige	08 445 29 00	Outside Spain	+34 91 324 40 00
Latin America	1-800-347-0178 Inside US		
Sales Support	+1-954-255-2610 Outside US		
Europe/Mid-East	Contact local distributor or call		
Distributor Operations	+44 118 945 7360		

## Service Information

Before using the unit, it must be configured to operate in the facility network and run the required applications. If a problem occurs using the equipment, contact the facility Technical or Systems Support representative. If there is a problem with the equipment, they will contact the Symbol Support Center.

## Ports

Port	Description
Antenna (Reverse TNC)	XR400/XR480 - Supports up to eight antennas (four transmit, four receive). XR480 - Supports up to eight transceiver antennas.
10/100BaseT Ethernet	Insert a standard RJ45 Ethernet cable for connection to an Ethernet network. Insert a cross-connect Ethernet cable for connection to a local PC.
USB Client	For future expansion.
USB Host	Support for USB Flash drives, USB screen.
RS232	For serial console only.
GPIO	Insert a DB15 serial cable for connection to an external device.
Power	Connect the Symbol approved power supply (see <i>Power Supply</i> for the Symbol approved power supply). The power supply uses an AC adapter that varies depending on the country. Maximum power consumption: 24 VDC, 1.2 A.

## Mounting

For installation instructions refer to the *XR Series Integrator Guide P/N 72E-71773-XX*, available from: <http://www.symbol.com/manuals>.

1. Position the XR reader on the wall or shelf, ensuring a minimum clearance of five inches on all sides. Orient the XR reader vertically with the ports at the bottom and ensure that all connected cables hang straight down.
2. Mark the hole locations using the mounting tabs as a guide. Remove the XR400 and drill four mounting holes at the marked locations.
3. Reposition the XR reader over the mounting holes and secure using fasteners appropriate for the surface material.

## Warranty

For the complete Symbol hardware product warranty statement, go to:

<http://www.symbol.com/warranty>

## Patents

This product is covered by one or more of the patents listed on the web site:

<http://www.symbol.com/patents>

<http://devzone.symbol.com>

Device web site:

Software updates, SDKs, development support and related documents are available from the Symbol

<http://www.symbol.com/manuals>

Supporting documents are available for viewing/download from the Symbol documentation web site:

## Reference Documents

<http://www.symbol.com>

One Symbol Plaza

Holtsville, N.Y. 11742-1300

Symbol Technologies, Inc.

are hereby acknowledged.

mentioned in this manual may be trademarks or registered trademarks of their respective companies and Symbol and the Symbol logo are registered trademarks of Symbol Technologies, Inc. Other product names and subsystems contained in Symbol products.

process in which Symbol products might be used. An implied license exists only for equipment, circuits, patent, covering or relating to any combination, system, apparatus, machine, material, method, or

No license is granted, either expressly or by implication, estoppel, or otherwise under any patent right or of any product, circuit, or application described herein.

Symbol does not assume any product liability arising out of, or in connection with, the application or use of any product to make changes to any product to improve reliability, function, or design.

© 2006 SYMBOL TECHNOLOGIES, INC. All rights reserved.

## Regulatory Information

All Symbol devices are designed to be compliant with rules and regulations in locations they are sold and will be labeled as required. Regulatory information is available from: <http://www.symbol.com/manuals>

Any changes or modifications to Symbol Technologies equipment, not expressly approved by Symbol Technologies, could void the authority to operate the equipment.

Antennas: Use only the supplied or an approved replacement antenna. Unauthorized antennas, modifications, or attachments could cause damage and may violate regulations.

### **Country Approvals**

Regulatory markings are applied to the device signifying the radio(s) are approved for use in the following countries: United States.

Please refer to the Symbol Declaration of Conformity (DoC) for details of other country markings. This is available at: <http://www2.symbol.com/doc>.



Operation of the device without regulatory approval is illegal.

## Health and Safety Recommendations



### **Warnings for Use of Wireless Devices**

Please observe all warning notices with regard to the usage of wireless devices.

### **Potentially Hazardous Atmospheres-Fixed Installations**

You are reminded of the need to observe restrictions on the use of radio devices in fuel depots, chemical plants etc. and areas where the air contains chemicals or particles (such as grain, dust, or metal powders).



### **RF Exposure Guidelines**

## Safety Information

### **Reducing RF Exposure - Use Properly**

It is advisable to use the device only in the normal operating position.

### **Remote and Standalone Antenna Configurations**

To comply with FCC RF exposure requirements, antennas that are mounted externally at remote locations or operating near users at stand-alone desktop of similar configurations must operate with a minimum separation distance of 79 cm from all persons.

### **Power Supply**

Use only a Symbol approved power supply, output rated 24 Vdc and minimum 3 Amps. The power supply is certified to UL60950-1 with SELV outputs. Use of alternative power supply will invalidate any approval given to this device and may be dangerous.

### **Radio Frequency Interference Requirements - FCC**

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.