

# CP-R20U

## Desktop Card Programmer

Hardware and Software User Manual



**ROSSLARE**  
SECURITY PRODUCTS

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# Notice and Disclaimer

This manual's sole purpose is to assist installers and/or users in the safe and efficient installation and usage of the system and/or product described herein.

**BEFORE ATTEMPTING TO INSTALL AND/OR USE THE SYSTEM, THE INSTALLER AND THE USER MUST READ THIS MANUAL AND BECOME FAMILIAR WITH ALL SAFETY REQUIREMENTS AND OPERATING PROCEDURES.**

- The system must not be used for purposes other than those for which it was designed.
- The use of the software associated with the system and/or product, if applicable, is subject to the terms of the license provided as part of the purchase documents.
- ROSSLARE exclusive warranty and liability is limited to the warranty and liability statement provided in an appendix at the end of this document.
- This manual describes the maximum configuration of the system with the maximum number of functions, including future options. Therefore, not all functions described in this manual may be available in the specific system and/or product configuration you purchased.
- Incorrect operation or installation, or failure of the user to effectively maintain the system, relieves the manufacturer (and seller) from all or any responsibility for consequent noncompliance, damage, or injury.
- The text, images and graphics contained in the manual are for the purpose of illustration and reference only.
- All data contained herein is subject to change without prior notice.
- In no event shall manufacturer be liable for any special, direct, indirect, incidental, consequential, exemplary or punitive damages (including, without limitation, any and all damages from business interruption, loss of profits or revenue, cost of capital or loss of use of any property or capital or injury).
- All graphics in this manual are for reference only, some deviation between the image(s) and the actual product may occur.
- All wiring diagrams are intended for reference only, the photograph or graphic of the PCB(s) are intended for clearer illustration and understanding of the product and may differ from the actual PCB(s).

# 1. Introduction

Rosslare's CP-R20U is a desktop card programmer for 125 KHz ISO and Clamshell RFID proximity cards.

The CP-R20U makes managing re-programmable cards easier and can help facilitate the effective deployment and control of any Facility code application, including access control, intrusion, and Time and Attendance applications.

## 1.1 The CP-R20U System

The CP-R20U is built for high-security, portability and ease of use, enabling high quality RFID proximity card reading and writing at a low cost.

The CP-R20U programmer is controlled by computer using Rosslare's CP-R20U Proximity Cards Programmer software package.

### 1.1.1 Desktop Convenience

The CP-R20U is small and lightweight, with a slim and attractive design. It is built for convenience and portability, with a USB 1.1 computer interface that makes it quick to install and allows it to run without any additional power source.

Designed to sit safely on any desktop, the CP-R20U is sturdily built, with a large ergonomic tray for Clamshell or ISO cards and surface-gripping rubber feet.

### 1.1.2 Intuitive Software System

The CP-R20U Proximity Cards Programmer software package operates on almost all standard PCs.

The system allows you to maintain your customer database quickly and easily. Because every card is tracked separately within the database, the system will not program duplicate cards, and the user can monitor the status of all assigned cards.

Every card batch requires a unique Job Order code. This ensures that any card that the CP-R20U has programmed can be tracked, making unauthorized use of the programmer easy to detect. The system also includes a security authentication system and a real-time operations log.

### 1.1.3 Compatibility

CP-R20U is compatible with the AC-215 Access Controller and AS-215 Access Control software.

For best performance we recommend always using Rosslare accessories.

## 1.2 Main Features

The CP-R20U is a feature-rich RFID proximity card programmer, ideal for all Facility code applications in access control, intrusion, and Time and Attendance applications.



### 1.2.1 CP-R20U Programmer

- Allows the user to read, verify, and program RFID proximity cards
- Supports serial and USB 1.1 computer connections
- LEDs and buzzer system indicate programming status, card status, and power supply
- CP-R20U runs a thorough internal diagnostic self-test every time it turns on

### 1.2.2 Proximity Cards Programmer Software

- All card details are automatically saved within the system database, ensuring complete card security
- Monitor card use and replace damaged or lost cards instantly
- Print detailed customer log files
- Create many job orders for each customer listed in the database
- Prevents the accidental re-use any unique card number

# 2. CP-R20U Hardware Specifications

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<b>Physical Data</b>	
<b>Dimensions (L x W x H)</b>	150 x 120 x 30 mm (5.9 x 4.7 x 1.2 in.)
<b>Weight</b>	150 g (5.29 oz)
<b>Electrical Specifications</b>	
<b>Power Consumption</b>	Typical: 35 – 70 mA (maximum: 100 mA)
<b>Operating Voltage</b>	12 VDC Via USB
<b>Input Current</b>	Standby: 20 mA Maximum: 45 mA
<b>Environmental Data</b>	
<b>Operating Temperature Range</b>	10° to 50° C (50° to 122° F)
<b>Operating Humidity</b>	0 to 95% (non-condensing)
<b>Data Specifications</b>	
<b>Data format</b>	EM4002, Rosslare data format
<b>Cards</b>	Atmel 555x series, Sokymat
<b>RF Frequency</b>	125 KHz @ ASK modulation
<b>RF Transmission Time</b>	50ms
<b>Software Requirements</b>	
<b>Operating System</b>	Windows /98/NT/ME/2000/XP/7
<b>Processor</b>	At least Pentium 133 MHz
<b>Memory</b>	At least 16MB
<b>Connection Port</b>	USB

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**Standards Approvals**

**US Standards Compliance**

<b>Radio Frequency Compliance</b>	FCC Part 15b (U.S. Standard)
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**EU Standards Compliance**

<b>EMC Emission</b>	EN 50081-1 1992
<b>EMC Immunity</b>	EN50082-1 1997
<b>EMC Immunity to Conducted RF</b>	EN6100-4-6 1996
<b>R&amp;TTE requirements</b> (Directive 1999/5/EC of the European Parliament and of the Council of March 1999)	EN55022 1998
<b>RFI</b>	EN55022 1998
<b>Safety</b>	EN60950+Am1(93), Am2(93), Am3(95), Am4(97)

# 3. Installation

## 3.1 Unpacking the Equipment

The CP-R20U programmer is ready to use immediately "out of the box" and includes sample OTP and MTP Cards, USB cable and documentation.

Please confirm you have received all the items listed below before you begin. If you find any items missing, contact your dealer immediately.

- One CP-R20U RFID card programmer
- One Male A to Male B USB cable
- One software CD
- One multi-programmable MTP Card Temic 5557
- One one-time programmable OTP card
- Two inlay keyboard templates
- Instruction manual

The standard CP-R20U pack contents are listed. Additional components can be ordered separately. Contact your dealer for more information.

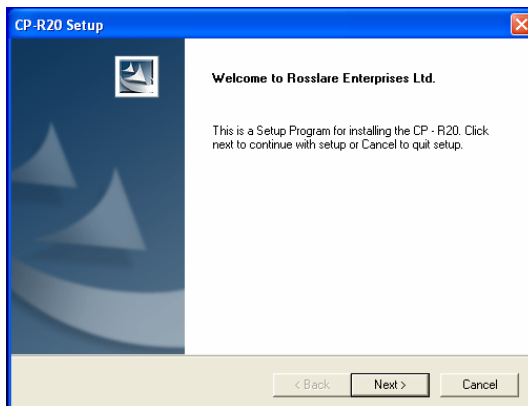
## 3.2 Installing the CP-R20U Software

The CP-R20U Proximity Cards Programmer software is included on a CD-ROM with the CP-R20U.

*To install the CP-R20U software for the first time:*

1. Insert the CD into your computer's CD drive.
2. Open My Computer, double-click on the CD drive icon, and then double-click the **CP-R20.exe** file.

The *Welcome to CP-R20U Setup* window appears.



## Installation

3. Click **Next**.
4. Follow the InstallShield's on-screen instructions. For a standard installation, click **Next** at every stage.
5. On reaching the InstallShield Wizard Complete window, click **Finish** to end the installation process. Restart the computer if requested.

### 3.3 Connecting the CP-R20U to a Computer

Once the software has been installed, the CP-R20U unit can be connected to the computer.



Do not connect the CP-R20U to the computer until you have installed the CP-R20U software (see Section 3.2).

Note

#### 3.3.1 Attaching the USB Cable

Insert the USB cable into the CP-R20U communication socket at the back of the machine (Figure 1).

**Figure 1: CP-R20U Communication Port**



#### 3.3.2 Installing the CP-R20U USB Driver

Before the CP-R20U can be used with a USB connection for the first time, the USB driver must be installed on the computer.

*To install the CP-R20U USB driver:*

1. Connect the USB cable to the CP-R20U and to the computer.  
Microsoft Windows® automatically opens the Found New Hardware Wizard.

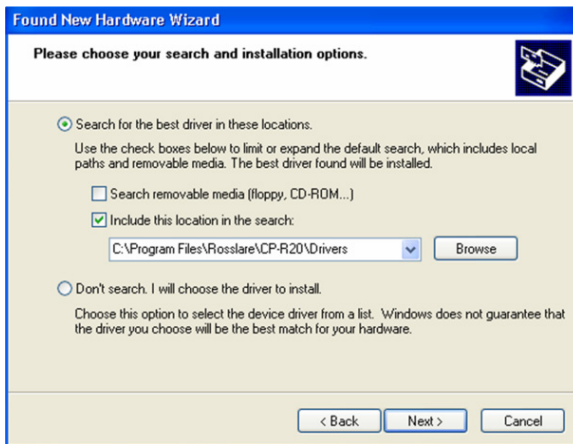


## Installation

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2. Select **Install from a list or specific location (Advanced)**, and click **Next**.

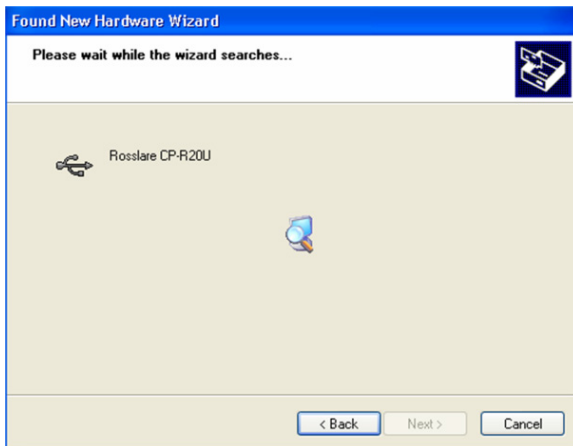
The Search and Installation Options window opens.



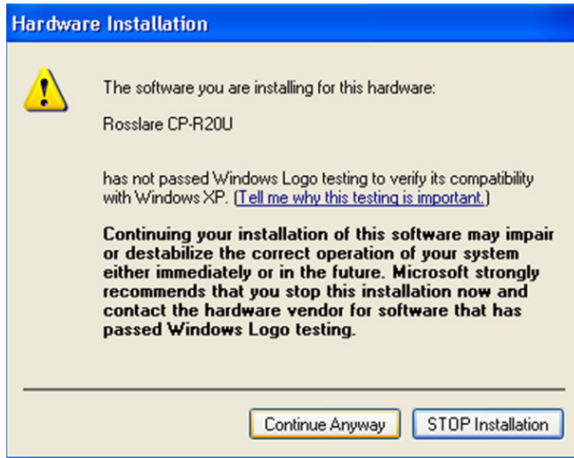
3. Select **Search for the best drivers in these locations** and check the **Include this location in the search** box.

4. Click **Next**.

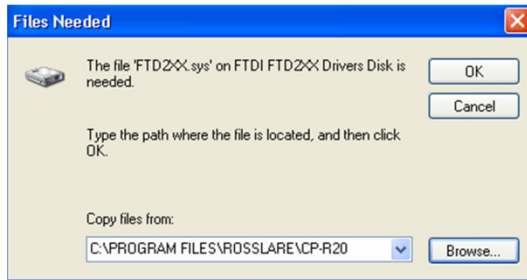
The installation process begins.



5. During the installation process, Windows may display a Windows Logo testing message. Click **Continue Anyway**.



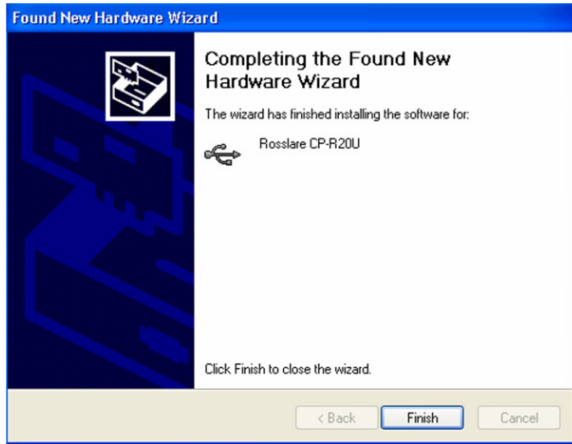
6. Follow the on-screen instructions until the Files Needed window opens.



7. Click **Browse** to select the folder where you installed the CP-R20 software.  
By default, the software is installed in "C:\Program Files\Rosslare\CP-R20".  
Click **OK**.  
The Completing the Found New Hardware Wizard window opens.

## Installation

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8. Click **Finish**.  
The CP-R20U driver is now fully installed on the computer.



## 4. The CP-R20U Software

### 4.1 Starting the Software

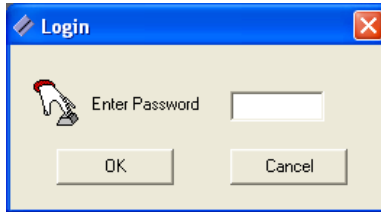
This section explains how to start the software and log in to the main window.

**To start the software:**

1. Click on the CP-R20 icon on the desktop, or select the program from the Rosslare folder in the "Start" menu.



The Login dialog appears.



2. Enter a password. The default password is "admin".  
The main window of the CP-R20U software opens.

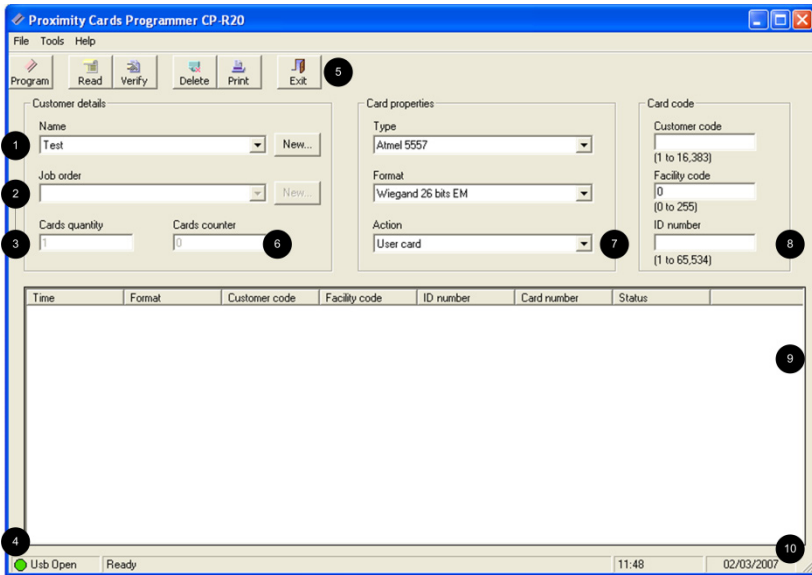
### 4.2 Software Overview

The main window of the CP-R20U software allows users to:

- Update and maintain the card database
- Specify the type of cards to be programmed
- Read information from cards placed on the CP-R20U
- Program cards on the CP-R20U

# The CP-R20U Software

**Figure 2: CP-R20U Proximity Cards Programmer Main Window**



The central features of the CP-R20U software window are:

**Table 1: Central Features**

1	<b>Name</b>	Lists all the Customers currently in the system's database.
2	<b>Job Order</b>	Lists all Job Orders currently in the system's database. A Job Order is a set of Cards assigned to a Customer. All the cards in a Job Order share the same card format.
3	<b>Cards Quantity</b>	The total number of cards within the selected Job Order.
4	<b>Port Status</b>	A green circle indicates the CP-R20U is connected to the computer. If the circle is red, check the connection between the CP-R20U and the computer.
5	<b>Toolbar</b>	Use the toolbar icons to perform all the software's basic tasks (see Section 4.2.1).
6	<b>Cards Counter</b>	The number of cards within the selected Job Order that have been programmed and verified.
7	<b>Card Properties</b>	Shows the card type, Wiegand format and the available card action types. Card action types can only be set for cards in a Wiegand RFR format. When you select a Job Order, the card type and Wiegand format are set as part of that Job Order and cannot be modified from these boxes.







8	<b>Card Code</b>	<p>Shows the card's Customer code, Facility Code and ID Number.</p> <p>The Customer Code can only be set for cards in a Wiegand RFR format.</p> <p>When a Job Order has been selected, the Facility Code and ID Number are set as part of that Job Order and cannot be modified from these boxes.</p> <p>Each ID Numbers is unique and cannot be used twice within a single Customer's card set.</p>
9	<b>Display Area</b>	<p>Lists details of all programmed and verified card currently selected.</p>
10	<b>Time and Date</b>	<p>The current time and date set on the computer. The database records a timestamp for all card operations performed.</p>

### 4.2.1 Using the Toolbar

The toolbar controls all the basic tasks required to program and manage your cards.

The toolbar icons are dynamic and change according to the actions performed.

**Table 2: Toolbar Icons**

<b>Icon</b>	<b>Name</b>	<b>Description</b>
	<b>Program icon</b>	Program the card currently in the CP-R20U, according to the selected Job Order or card settings.
	<b>Read icon</b>	Read data from the card currently in the CP-R20U. The information is shown in the software's display area.
	<b>Verify icon</b>	Read data from the card currently in the CP-R20U and compare it with the selected Job Order or card settings.
	<b>Delete icon</b>	Delete the current customer and Job Order details from the system database.
	<b>Print icon</b>	Print the current data shown in the display area.
	<b>Exit icon</b>	Exit the Proximity Cards Programmer.

## The CP-R20U Software

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### 4.2.2 Using the Menu Bar

The menu bar controls the general operations and setup of the software.

**Table 3: Menu Bar**

<b>Menu</b>	<b>Description</b>
<b>File &gt; Exit</b>	Closes the application.
<b>Tools &gt; Settings</b>	Opens the Settings window, allowing the user to change the password and set connection preferences.
<b>Help &gt; About</b>	Software version information.
<b>Help &gt; User Guide</b>	Opens this user guide in PDF format

## 5. How to Program a Card

This section explains the step-by-step process required to program a card using the CP-R20U.

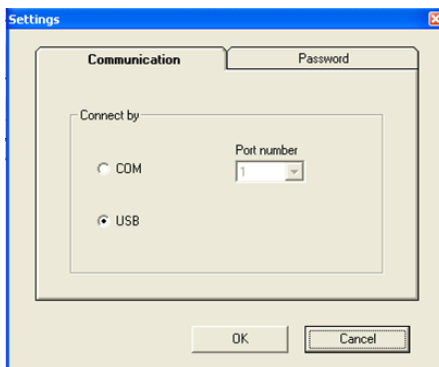
Step	Action	Section
1	Connect the computer to the CP-R20U	5.1
2	Check the connection	5.2
3	Create a Customer	5.3
4	Set-up a Job Order	5.4
5	Program the cards	5.5

### 5.1 Connecting the CP-R20U

The CP-R20U connects to any standard computer using the supplied Male A to Male B cable. For more information, see Section 3.3.

*To connect the CP-R20U to the computer:*

1. Connect the USB cable to the computer and then to the CP-R20U.
2. Open the software and select Settings from the Tools menu.  
The *Settings* window appears.



## How to Program a Card

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3. Select to connect by USB and click **OK**.

In the main window, the Port Status icon should be green and read "USB Open."

### 5.2 Checking the Connection to the Computer

Before beginning to program cards, check that there is a working connection between the CP-R20U and the computer.

#### *To check the CP-R20U connection to the computer:*

1. Put a programmed card or a card with a pre-set serial number on the CP-R20U tray.
2. Open the software and select "Test" from the **Name** box.

Click on the toolbar **Read** icon.

The system displays a "Read – succeed" message if the CP-R20U is properly connected.

If the system displays the message "Failed to read card!" check your connections, restart your computer and try again.



For assistance, contact Rosslare technical support.

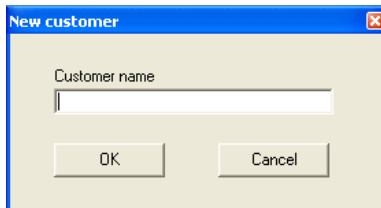
### 5.3 Creating a New Customer

The software database tracks which cards were created for which customer. One or more customers must exist before it is possible to program a card.

#### *To enter a new customer into the database:*

1. Click **New** opposite the **Name** box.

The *New Customer* window opens.



2. Enter a customer name and click **OK**.

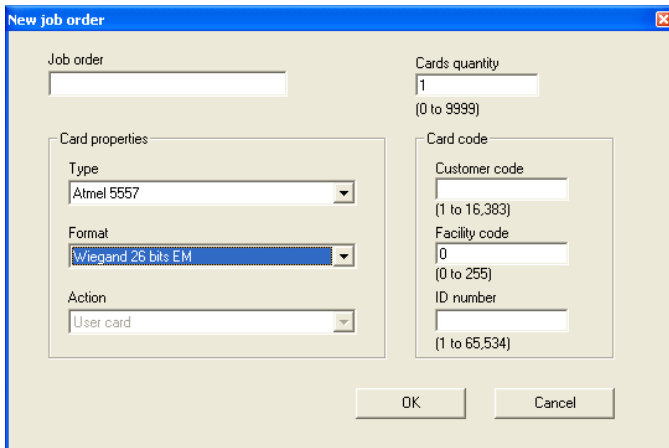
### 5.4 Setting Up a Job Order

Using a Job Order, it is possible to program many cards for one customer in a single session.

#### *To set up a new Job Order:*

1. Select a Customer from the **Name** box. The new Job Order is assigned to this Customer.

2. Click **New** opposite **Job order**.  
The *New Job Order* window opens.



The screenshot shows a 'New job order' dialog box with the following fields and values:

- Job order: [Empty text box]
- Cards quantity: 1 (range: 0 to 9999)
- Card properties:
  - Type: Atmel 5557
  - Format: Wiegand 26 bits EM
  - Action: User card
- Card code:
  - Customer code: [Empty text box]
  - Facility code: 0 (range: 0 to 255)
  - ID number: [Empty text box] (range: 1 to 65,534)

Buttons: OK, Cancel

3. Enter a Job Order name and select a card type and card format.
4. Fill other fields as required and click **OK**.

### 5.5 Programming the Cards

Once the CP-R20U is properly connected to the computer and the customer's Job Order has been set up within the system, it is possible to program the cards.

#### *To program cards on the CP-R20U:*

1. Select a Customer Name and Job Order from the **Name** and the **Job Order** boxes.
2. Place a card on the CP-R20U tray.

**Figure 3: Programming a Card**



## How to Program a Card

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3. In the software, click the toolbar **Program** icon.
4. If the Job Order is for more than one card, repeat Steps 2 and 3 until every card has been programmed.

The number in the **Cards Counter** box increases, showing how many cards in the Job Order have been programmed and verified.



The CP-R20U may corrupt cards that are left too close.  
Keep all blank and programmed cards at least 20 centimeters away from the CP-R20U at all times.



# A. System Maintenance

To maximize the lifetime of your product, we recommend that you follow these guidelines as closely as possible:

- Do not expose the unit to water, rain, or to humidity over the specified level.
- Do not expose the unit to direct sunlight for extended periods. This can cause overheating and system failure.
- Avoid dropping the unit onto the ground. This may cause electromechanical failure.

### B. Limited Warranty

The full ROSSLARE Limited Warranty Statement is available in the Quick Links section on the ROSSLARE website at [www.rosslaresecurity.com](http://www.rosslaresecurity.com).

Rosslare considers any use of this product as agreement to the Warranty Terms even if you do not review them.



CP-R20U

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