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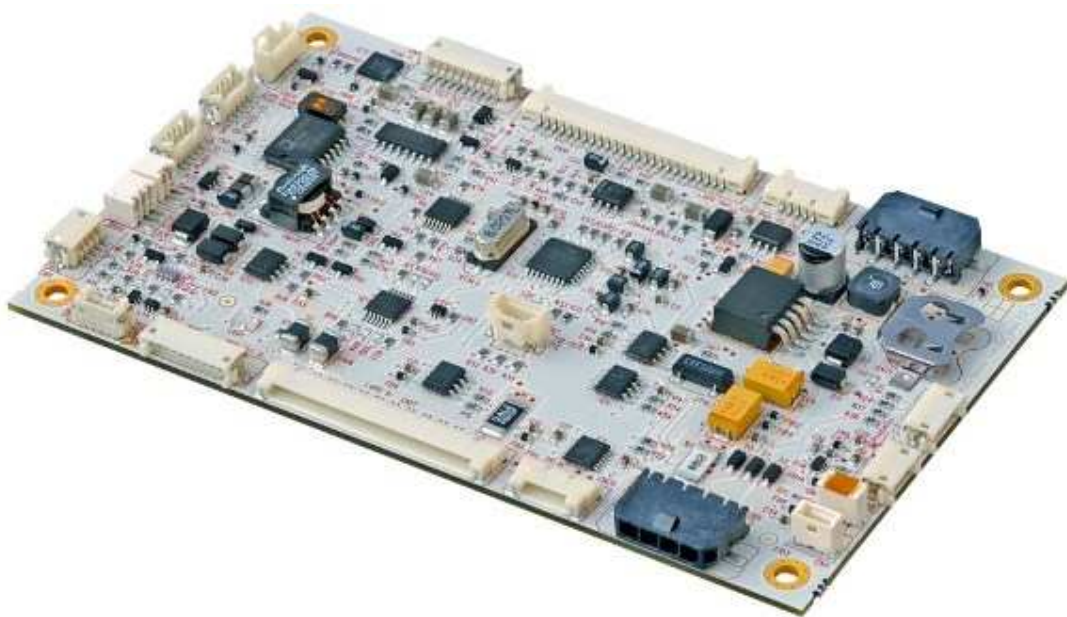
# Installation Guide

## Distec

### ARCB-II

#### USB and RS485 Installation Guide

PA-18-000, PA-18-001



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## Table of Contents

1	Revision History .....	3
2	RS485 Network Installation .....	4
2.1	Network Topology .....	4
2.2	Start Up Protocol.....	4
2.3	Cabling.....	5
2.3.1	Cabling for system without External RS485 Converter .....	5
2.3.2	Cabling for system with External RS485 Converter .....	5
3	RS232 and USB Setups.....	6
3.1	RS232 Setup .....	6
3.2	USB Setup.....	6

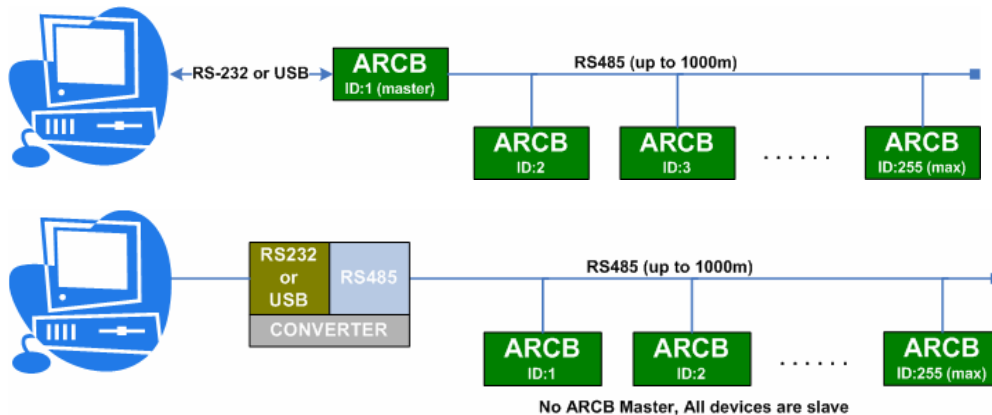
## 1 Revision History

Date	Description	Exp.
10/11/09	First Release	-

## 2 RS485 Network Installation

### 2.1 Network Topology

First device on the RS485 bus is named as “Master ARCB”. Master device has its specific settings which is different than other ARCBs on the bus. All other ARCBs are named “Slave” on the bus. Master device can be connected to PC either RS232, USB or RS485 connections. The main role of the master device is to convert communication type RS232 (or USB) to RS485 networks. If there is an external RS485 converter, no need for master board.



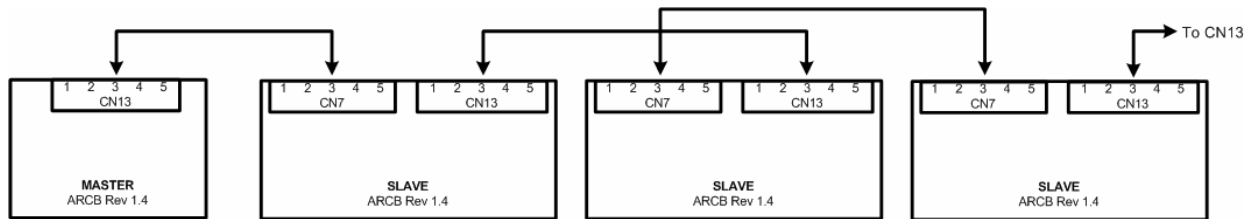
### 2.2 Start Up Protocol

1. All ARCB boards shipped with 0 (zero) terminal ID. Change the terminal ID of the all ARCB boards by giving a number between 1 and 255. Do this operation for each board before connecting them to the RS485 bus.  
**(Important:** Terminal ID should be different than zero “0”)
2. Check the main data cable connecting the devices:
  - Verify the SW1 switches are correctly installed at the first and last device on the RS485 bus.  
SW1 jumper setting for **first** device:  
First Node: ON (OFF if external RS485 converter is used)  
Last Node: OFF (ON if external RS485 converter is used)  
SW1 jumper setting for **last** device:  
First Node: OFF  
Last Node: ON (OFF if external RS485 converter is used)
  - Verify the continuity of the main data cable
3. When the main data cable has been verified, power the first (master) device and connect it to the ARCS (Artista Remote Control Service) web service running at PC (at this time, do not connect the master to the RS-485 network)
4. Verify that the ARCS web service finds the master device by using any web browser.
5. Connect the RS-485 network to the master (at this time, do not connect any slave device) and verify that ARCS still communicates with the master device
6. Connect the first slave device to the RS-485 network and verify that ARCS still communicates with the master device and that ARCS finds the slave device.
7. Connect the second slave device to the RS-485 network and verify that ARCS still communicates with both the master device and the first slave device. Verify that ARCS finds the second slave device
8. Repeat the above step, adding one slave device at a time to the RS-485 network

## 2.3 Cabling

Two main configurations are possible:

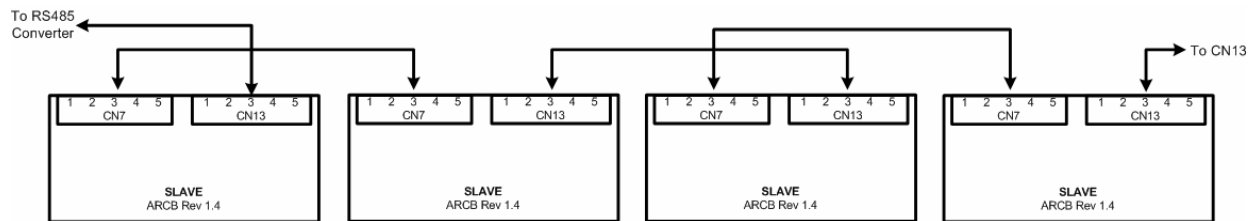
### 2.3.1 Cabling for system without External RS485 Converter



Only Master board connection is CN13 to CN7, all others CN13 to CN13 and CN7 to CN7 connected.

- All cables are same and “1-to-1”.
- Pin 1 and 2 should be twisted pair cable for all connectors
- Pin 3 and 4 should be twisted pair cable for all connectors

### 2.3.2 Cabling for system with External RS485 Converter



CN13 to CN13 and CN7 to CN7 connected.

- All cables between ARCBs are same and “1-to-1”.
- Pin 1 and 2 should be twisted pair cable for all connectors
- Pin 3 and 4 should be twisted pair cable for all connectors

## 3 RS232 and USB Setups

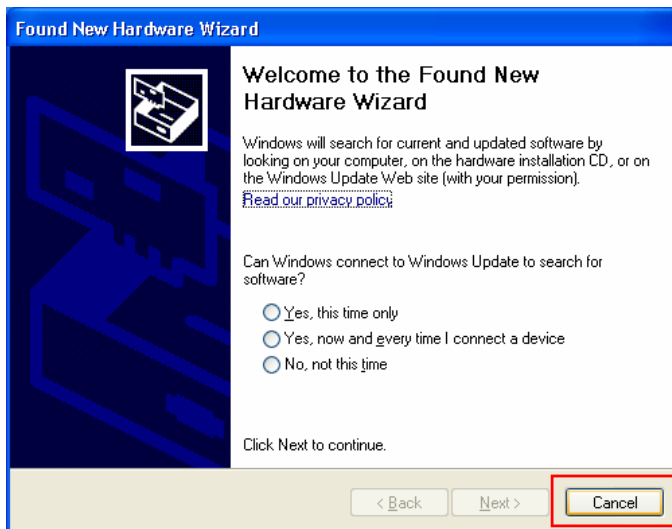
### 3.1 RS232 Setup

No setup or driver installation is required for RS232.

### 3.2 USB Setup

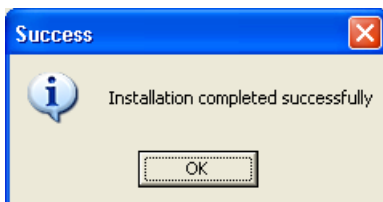
USB communication with ARCB needs driver installation to operating system. Follow these steps:

- 1- Download the driver packet which proper for the operating system in your PC.  
<https://www.silabs.com/products/mcu/Pages/USBtoUARTBridgeVCPDrivers.aspx> , for Windows 2000/XP/Server 2003/Vista (v5.40) operating systems download “VCP Driver Kit” in this web-page.
- 2- Connect ARCB to PC with standard USB cable
- 3- Following message should be appear:



Click to “Cancel”.

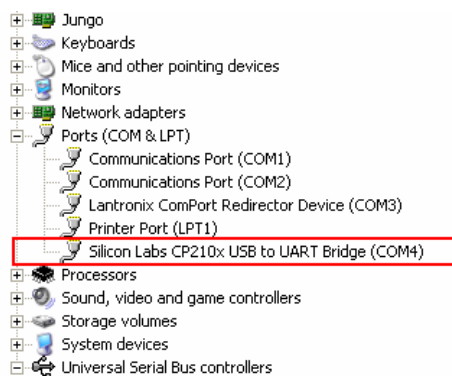
- 4- Unpack and execute “CP210x\_VCP\_Win2K\_XP\_S2K3.exe” the application downloaded in first step. Following message should be seen:



- 5- Click “OK”. Then following message will appear, click to “Continue Anyway”:

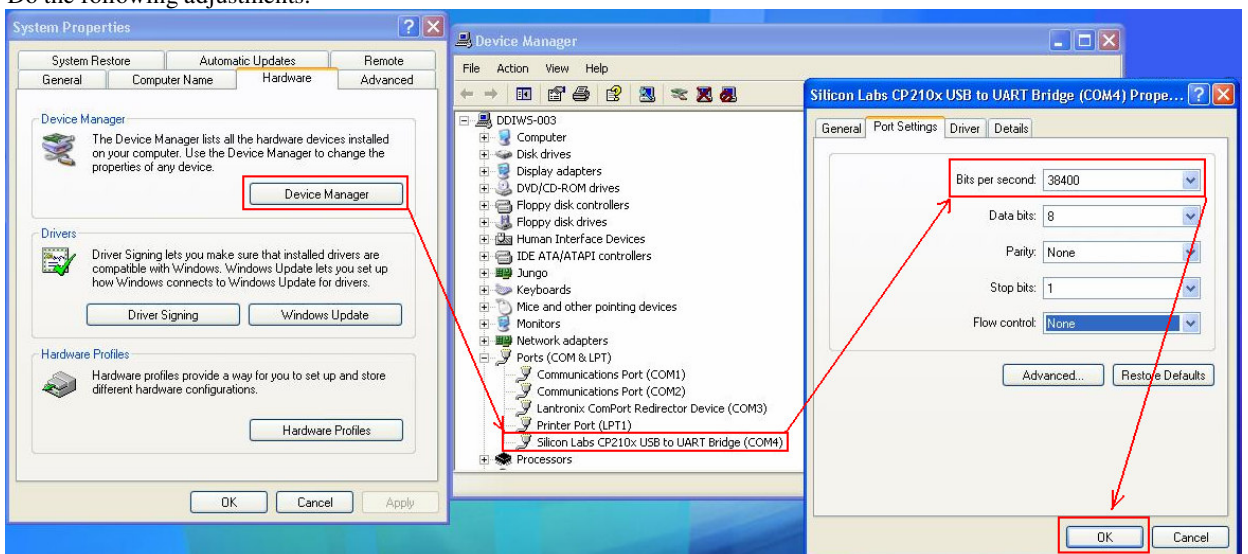


- 6- Installation completed. Check the “Device Manager” to be sure of successful installation:



- 7- Restart the PC.

- 8- Do the following adjustments:



- 9- Finished.

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