Serial DCD Signal with Automation Control

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Introduction

Ctek's Z4500 and Z4550 Series platforms offer 1 RS-232 serial interface without the DCD signal; however, is now accessible through the Automation Control Application. This document will describe how to externalize the DCD signal on the device's digital output pin using the Automation Control Application.

Applicability

This document is applicable to the following hardware models:

- Z4500XXX
- Z4550XXX
- Z44009XX
- Z42009XX

This feature is enabled from firmware release 6.00.12.01 (selective update 0001) and greater.

Methodology

The following procedure must to be completed to use the DCD signal of the serial interface:

1. Create a Vitural Digital Input with Serial DCD as the source
2. Create a Virutal Digital Output on Pin 1
3. Create a program to toggle the virtual output
4. Tie the program to the state of the virtual input

Implementation

Create DCD State Program

From the Automation Control configuration area:

1. Select Programs and New Program
2. Enter the following program:

Name: DCD Signal State
1. Digital I/O – Set o 1 i 1

This program will set output on pin 1 to the value of input at pin 1. The input and output will be defined next. Output 1 is directly tied to Pin 3 (DO) of the Ctek device.

Serial DCD as a Virtual Input

Assuming the first module in the system is Virtual I/O module, from the Automation Control configuration area:

1. Select **Inputs** and click on the button to configure Virtual **Input 1**
2. Select the **Digital** type tab
3. Select **Serial DCD** for **Primary Source**
4. Under **Alarms/Programs**, select the DCD Signal State program for the **Off State** and **On state**
5. Fill-in all the other options as necessary

Serial DCD via Physical Digital Out

Assuming the first module in the system is Virtual I/O module, from the Automation Control configuration area:

1. Select **Outputs** and click on the button to configure Virtual **Output 1**
2. Select the **Digital** type tab
3. Give the output a **Name** and fill-in all the other options as necessary

> *The default configuration for the Automation Control Application has a Virtual IO Module at location 1. When Automation Control is given access to the on-board (Pin 3) Digital Out, it is configurable from Pin 1 on Virtual IO Module at location 1*

Grant Automation Control Access to Digital Out

From the **Admin Main** screen:

1. Select **Relay Out**
2. Select **Yes** for **Managed by Automation Control**

Run Configuration

The configuration is now complete and ready to be executed. From the configuration screen of Automation Control click on **Run Configuration**.

The DCD signal will now be transmiting over Pin 3 of the controller.