Application Note:
Configuration of Serial Ports on CTI 2500 Series™ and Simatic® 545/555 PLC's

CTI 2500 Series™ Processors are designed to be compatible with Simatic® 545/555 processors for attaching serial cables for programming and HMI devices. However, there are some minor differences which may require modification of cables for existing devices.

CTI 2500 Series™ Processors include <u>one</u> DB9 male port which supports communications using RS232 or RS422. Selection of RS232 or RS422 is made using SW5 on the dipswitch.

Simatic® 545/555 Processors include <u>two</u> DB9 male ports. Port 1 supports only RS232 communications, but includes hardware handshaking signals. Port 2 supports communications using RS232, RS422, or RS485, selected as follows:

1. RS232: set SW1=ON, wire pin 5 to pin 6 at the DB9 connector
2. RS422: set SW1=ON, leave pin 6 open at the DB9 connector
3. RS485: set SW1=OFF, leave pin 6 open at the DB9 connector

The table below shows a comparison of port pinouts for each operation mode in CTI and Siemens® Processors.

Pin	CTI 2500-Cxxx RS232 Port, SW5=open (RS232 mode)	CTI 2500-Cxxx RS232 Port, SW5=closed (RS422 mode)	Siemens® 545/555 Port 1	Siemens® 545/555 Port 2, SW1=ON (RS232 mode)[1]	Siemens® 545/555 Port 2, SW1=ON (RS422 mode)[2]	Siemens® 545/555 Port 2, SW1=OFF (RS485 mode)
1			RSD			
2	RCV	RX-	RCV	RCV	RX-	
3	XMT	TX+	XMT	XMT	TX+	TX/RX+
4			DTR			
5	GND	GND	GND	GND	GND	GND
6			DSR	SEL232	SEL232	SEL232
7			RTS			
8		TX-	CTS		TX-	TX/RX-
9		RX+			RX+	

NOTES:

[1] pin 5 must be shorted to pin 6 at the DB9 connector
[2] pin 5 must not be shorted to pin 6 at the DB9 connector

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