

TSAN 030 T96SR CM SCADA PACK

Dataradio Technical Support

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Products:

Dataradio T-96SR wireless modem

Control Microsystems SCADA Pack PLC using TelePACE Modbus Protocol

Application: This application note documents the configuration needed to set up a master to remote link using Control Microsystems' SCADA Pack PLC and Dataradio's T-96SR wireless modems. Figure 1 illustrates a typical configuration. The test described in this note utilized TelePACE MODBUS ASCII and MODBUS RTU at data rates of 19.2 kbps and 9600 bps. The T-96SR will operate at speeds of up to 19.2 kbps (dependant on channel bandwidth).

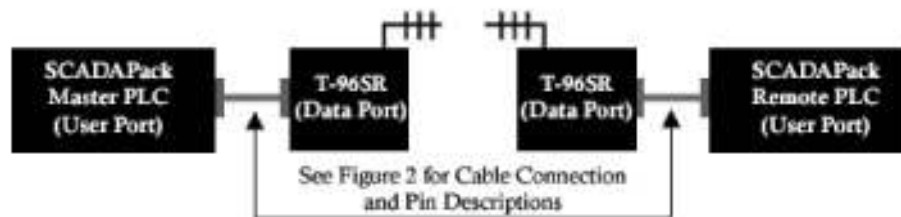


Figure 1: Typical configuration between master and remote

Overview: T-96SR wireless modems can be configured to work as a serial link between a master SCADA Pack PLC and a remote SCADA Pack PLC. Users must have the ability to use Control Microsystems TelePACE setup program. This program allows users to configure the serial ports in each controller to the proper operating parameters. The operating parameters for the SCADA Pack controller serial port must match those of the T-96SR COM port (shown in Figure 3).

Setup:

SCADA Pack

The SCADA Pack controller (model 5203) has three RS-232 ports. Communication parameters for each serial can be programmed using the TelePACE software. These parameters must first be set in the TelePACE software program and then downloaded as part of the PLC user ladder program. Refer to the TelePACE manuals for programming instructions.

The serial port used for the connection to the T-96SR must be programmed to Half-duplex mode as illustrated in Figure 3a. Half-duplex mode utilizes RTS/CTS to control the data flow between the T-96SR and the SCADA Pack.

A data cable (Dataradio p/n 697-0000-001) must be used for the user application configuration. A straight through 9-pin COM cable should be used to connect to the DB 9-pin female data cable connector and the DB 9-pin male connector on the SCADA Pack. Cable connections and pin descriptions are shown in Figure 2.

SCADA Pack		T-96SR	
<i>Pin</i>	<i>Description</i>	<i>Pin</i>	<i>Description</i>
1	DCD	1	DCD
2	RXD	2	RXD
3	TXD	3	TXD
4	DTR	4	NC
5	GND	5	GND
6	NC	6	NC
7	RTS	7	RTS
8	CTS	8	CTS
9	5+	9	NC

Figure 2: Cable Connections for RTS/CTS Half-duplex mode

T-96SR

Refer to the T-96SR Technical Manual (p/n 001-4006-001) for programming instructions. The setup cable required for T-96SR programming is available in the Field Programming Kit (p/n 250-4006-001).

Figure 3: Operating parameters for the SCADA Pack controller serial port must match those of the T-96SR COM port

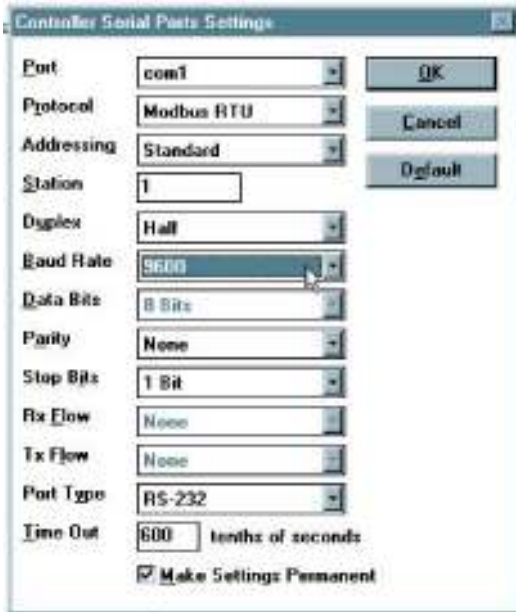


Figure 3a: Serial port parameters selected in the TelePACE programming software



Figure 3b: Serial port parameters selected in the T-96SR Field Programming Software