



TSAN 058_T96_dcb Dataradio Technical Support

For additional assistance: www.dataradio.com

Within the U.S.A.	1-800-992-7774	International	1-507-833-8819
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Product: T-96SR

Application: Provide the interface for connecting a T-96SR to a DataComm for Business (DCB) SE 6600 serial encryption device.

T-96SR Configuration Setup

Configuration is set using the T-96SR Field Programming Software

Modem Tab

- **Long ID, Short ID:** Factory Set user programmable if desired.
- **Comment:** Add comments as needed.
- **Online Diagnostics:** Active
- **T-Base Option:** Disabled
- **Extended Turnoff (T2):** Disabled
- **Output Raw Diagnostics Data Only:** Disabled
- **Figure 3 Setup Modem Parameters Baud Rate:** 9600 bps
- **Data Type:** Enhanced
- **Network Type:** T-96SR Native (Unless fit into an older T-96S system)

Radio Tab

- **Radio:** Designates radio Model
- **Range:** Designates Frequency range
- **Redirect Channel 8 to channel:** Disabled
- **Channel :** Specifies whether unit is half-or full-channel
- **PTT Watchdog:** Enabled
- **PTT Watchdog Timer:** Sets max transmit time: set to 60 sec.
- **Tune Range:** Low Rx
- **Dynamic Carrier Detect Off Threshold:** Enabled
- **Carrier Detect Thresholds:** On: -110 dBm, Off: -115 dBm (Beginning values)

Setup Frequencies Parameters

- **Chan:** Channel
- **Rx Frequency:** Receive Frequency
- **TX Frequency:** Transmit Frequency (Displays user frequencies)
- **TX Power:** 255 is max 255=5 watts (not linear, i.e., 128 is not exactly 2.5 W)

Setup of DCB SE 6600

Using a cross over Ethernet cable connect your PC to the RJ-45 Ethernet connection on the SE 6600 device. Ensure that the SE 6600's valid LAN LED is on. If the LAN LED is not on, check cables and connections. Set the LAN IP address to 192.168.1.2 under the PC's IP properties in the network configuration. Set your web browser to 192.168.1.1 and click go. The SE 6600 home page will be displayed as shown in Figure 1.

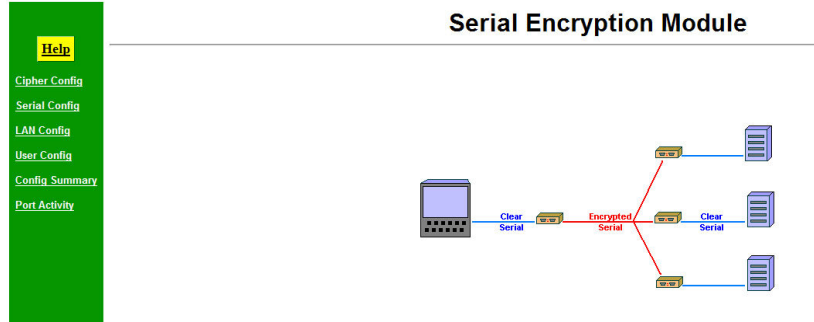


Figure 1. Home page

Setup with Encryption Enabled

Note: If the system is to be installed with encryption mode enabled, all devices must be enabled at the time of installation.

Click on the Cipher Config menu item on the right left side of the Home page screen.

The Cipher Configuration page will be displayed as shown in Figure 2.

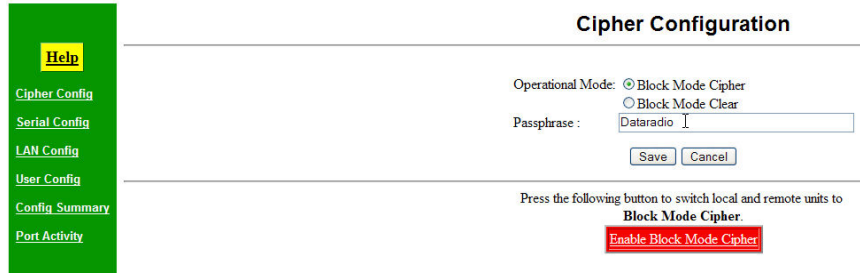


Figure 2. Cipher Configuration screen

Click on the “Block Mode Cipher” radio button to enable the Block Mode Cipher. Enter the desired Passphrase in the textbox provided. Dataradio was used as an example. The Passphrase must be the same in all devices used in the system network. Click on the “Save” button in order to save the Pass phrase.

Click on the “Serial Config” menu item on the left hand side of the Cipher configuration screen. The Serial Configuration page will be displayed as shown in Figure 3.



Figure 3. Serial Configuration

Note: The serial configuration must be the same as the PLC and the T-96SR used the system network.

The default settings of Baud Rate: 9600, Parity: Bit None, Data bits: 8 bits, Stop bits: 1 bit, Rx Idle Time: 12 char time, and TX Idle Time: 2 char time was used in this example system network. Click on the “Save” button to save the configuration selected.

Connecting the T-96SR to the SE 6600

Note: The SE 6600 does not have the ability to generate the RTS/CTS control signals which are required for the T-96SR. A DCI Technologies* Micro-Capp RTS buffer is used to generate the RTS signal for the SE 6600.

Technical Support Application Note



Use a straight through 9 pin cable to connect the 9 pin male connector of the Micro-Capp to the 9 pin female connector of the Dataradio cable, part number 697-000-001. Use a straight through 9 pin cable from the 9 pin male connector on the SE 6600 Encrypted Link (2) port to connect the 9 pin female connector on the Micro-Capp RTS Buffer. The PLC or the PC/HMI device will connect to the SE 6600 Clear (1) port. A special cable or a null modem cable is typically used for this connection because the port on the SE 6600 is a male DCE port. Below Table 1 shows the pin out of the special connecting cable.

Table 1. Special cable configuration

DE 9 Female	DE 9 Male
2-----	3
3-----	2
5-----	5

Figure 2 shows the SE 6600 connected to the Micro-Capp RTS Buffer and a PLC. It also shows the T-96SR connected to the Micro-Capp RTS Buffer.

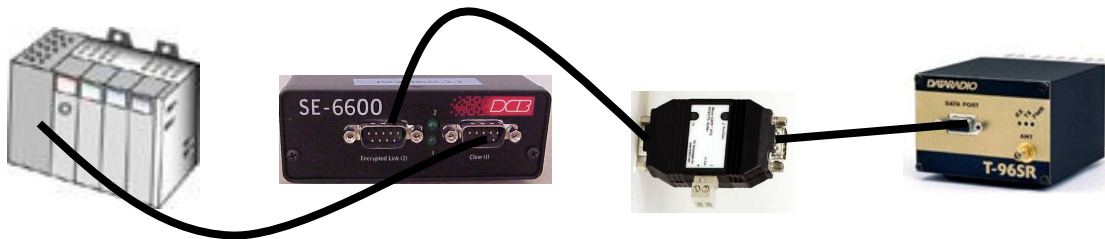


Figure 2. A PLC, the SE 6600, Micro-Capp RTS Buffer and the T-96SR connected.

* DCI Technologies can be found at www.dcitech.com