



## Communicating with the Console Port of a Cisco router through the Control/Chain In/Out ports of an ADTRAN TSU XX0 Series T1 Multiplexer

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### Introduction

This document outlines how to connect a terminal/modem to the console port of a Cisco router via the Control/Chain in/out ports of a TSU 100, 120, or 600 (TSU XX0). This document also shows the process of communicating with that router via T-Watch.

### Before you begin

**NOTE:** The application described in this document is supported only in units with the following or later revisions:

TSU 100      Rev T

TSU 120      Rev J

TSU 600 (L1) Rev M

TSU 600 (L2) Rev F

Any reference to T-Watch within this note refers to either T-Watch or T-Watch PRO. This document assumes that T-Watch has already been setup on the reader's PC and that the reader has some familiarity with the T-Watch package.

**NOTE:** Once the console port of the Cisco router has been connected to the Control/Chain out port of the TSU XX0, the router may be subject to receive T-Watch commands. The router should be oblivious to these commands, however, as long as a router terminal session is not in progress.

### Configuring the TSU XX0 to accept a T-Watch connection

#### Configuration of the Control/Chain port

1. Using the front panel keypad, select **2) CONFIG** from the main menu.
2. Select **2) UNIT**.
3. Select **1) CTL PORT RATE**.

4. Use the arrow keys to select the correct port rate that will be used and press the **ENTER** key.

### Configuration of the unit access parameters

1. Using the front panel keypad, select **3) UTIL** from the main menu.
2. Select **3) SET PASSCODE**.
3. Enter the desired passcode at the **NEW PASSCODE:** prompt and press the **ENTER** key.
4. Enter the desired passcode again at the **VERIFY PASSCODE:** prompt and press the **ENTER** key.
5. Select **4) UNIT ID**.
6. Enter the desired unique unit identification number at the **4) UNIT ID:** prompt and press the **ENTER** key.

Ctl/Chain in	Name	Description
1	GND	Ground - Connected to Unit Chassis
2	RTS	Request to Send
3	RxD	Data Received by the TSU XX0
5	TxD	Data Transmitted by the TSU XX0
8	CTS	Clear to Send

Figure 1: Pinouts of the Control/Chain in port of a TSU XX0

### Connecting a PC or terminal to the Control/Chain in port of a TSU XX0

RJ45	DB-25
1	7
2	4
3	2
5	3
8	5

Figure 2: RJ45 female/DB-25 female adapter pinouts

1. Connect the RJ45 female/DB-25 female adapter that was included with T-Watch to the DB-25 male com port on the terminal or PC.  
**NOTE:** On computers that have a DB-9 COM port, a DB-9/DB-25 adapter or cable must be used to connect with the furnished RJ45 female/DB-25 female adapter.
2. Connect a straight-through RJ45/RJ45 cable between the furnished RJ45 female/DB-25 female adapter to the Control/Chain in port on the TSU XX0.

### Connecting a modem to the Control/Chain in port of a TSU XX0

RJ45	DB-25
1	7
2	5
3	3
5	2
8	4

Figure 3: RJ45 female/DB-25 male adapter pinouts

1. Connect the RJ45 female/DB-25 male adapter that was included with T-Watch to the DB-25 female port on the modem.
2. Connect a straight-through RJ45/RJ45 cable between the furnished RJ45 female/DB-25 male adapter to the Control/Chain in port on the TSU XX0.

### Connecting the console port of a Cisco router to the Control/Chain out port of a TSU XX0

**NOTE:** Because of the different Cisco adapters that a customer may have, this document does not describe the connections of every Cisco adapter to a TSU XX0 Control/Chain out port. Instead, this document will give the pinouts of the ADTRAN and Cisco equipment in order to supply the reader with the correct information from which to build a cable/adapter.

**NOTE:** The Cisco router console port pinouts that are included in this document are done so as a guide to help the reader and may not represent the console port pinouts of all Cisco routers. The reader should consult the proper Cisco documentation to confirm the console pinouts, should any doubt or problems arise.

Cisco console port	TSU XX0 Ctl/Chain out	Desc.of TSU pins
1*	8	CTS
3	5	TXD
5	1	GND
6	3	RXD
8*	2	RTS

\*Pin 1 is internally connected to pin 8

Figure 4: Cisco console port pins that correspond to pins on a TSU XX0 Control/Chain out port

1. Using the pinouts in Figure 4, construct an adapter or cable that connects the proper pins on two RJ45 modular connectors. To prevent future confusion, mark each of the RJ45 connectors with the proper device name ("Cisco" and "ADTRAN" are used in this document).
2. Plug the RJ45 marked "Cisco" into the console port of the Cisco router.
3. Plug the RJ45 marked "ADTRAN" into the Control/Chain out port of the TSU XX0.

## Establishing a connection to the Cisco router in T-Watch

1. After wiring a TSU XX0 Control/Chain out port to the Cisco router console port, run T-Watch and connect to this TSU XX0 (see Figure 5). It is necessary to first connect to the TSU XX0 in order to establish a connection with the site at which the TSU XX0 and Cisco router are located.



Figure 5: Select the unit with which to communicate in the Unit Access window

2. Once T-Watch has established a connection with the TSU XX0, select the Terminal Mode option in the Utility menu (see Figure 6).



Figure 6: Selecting Terminal Mode in T-Watch

3. A blank (terminal) screen now appears with a white cursor in the upper left corner.
4. In order to establish a connection with the Cisco router, the **Enter** key must be pressed on the computer keyboard.
5. After the **Enter** key is pressed, the Cisco router prompt should appear on the screen of the PC indicating that communication has been established.

## Terminating the router terminal session and returning to Normal T-Watch Mode

1. Before switching back to T-Watch normal mode, it is recommended that the terminal session with the router first be terminated.
2. After exiting out of the router, the screen of the PC should report that the console port "is now available" and that the user can "Press RETURN to get started" (see Figure 7). At this point it is safe to return to T-Watch normal mode.
3. Select the **Normal Mode** option from the **Utility** menu (see Figure 7).
4. The user is now reconnected to the same TSU XX0 (as in Establishing a connection... step 1) and can further communicate with the unit or disconnect from the unit in the **Unit Access** window.

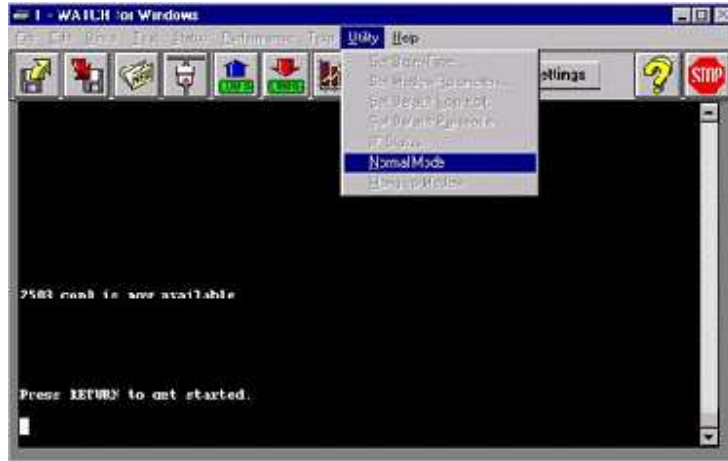


Figure 7: Selecting Normal T-Watch mode after disconnecting from a Cisco 2503 router

If you experience any problems using your ADTRAN product, please contact ADTRAN Technical Support.