



# Connecting Cisco HSSI Network Modules to the Network

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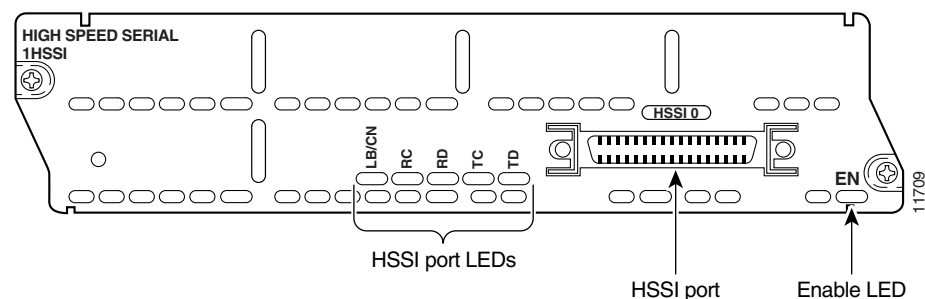
This guide describes how to connect Cisco High-Speed Serial Interface (HSSI) network modules to your network. It contains the following sections:

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## HSSI Network Modules

The 1-port High-Speed Serial Interface (HSSI) network module (see [Figure 1](#)) provides connectivity for fractional DS3 rate links and slower.

**Figure 1** HSSI Network Module

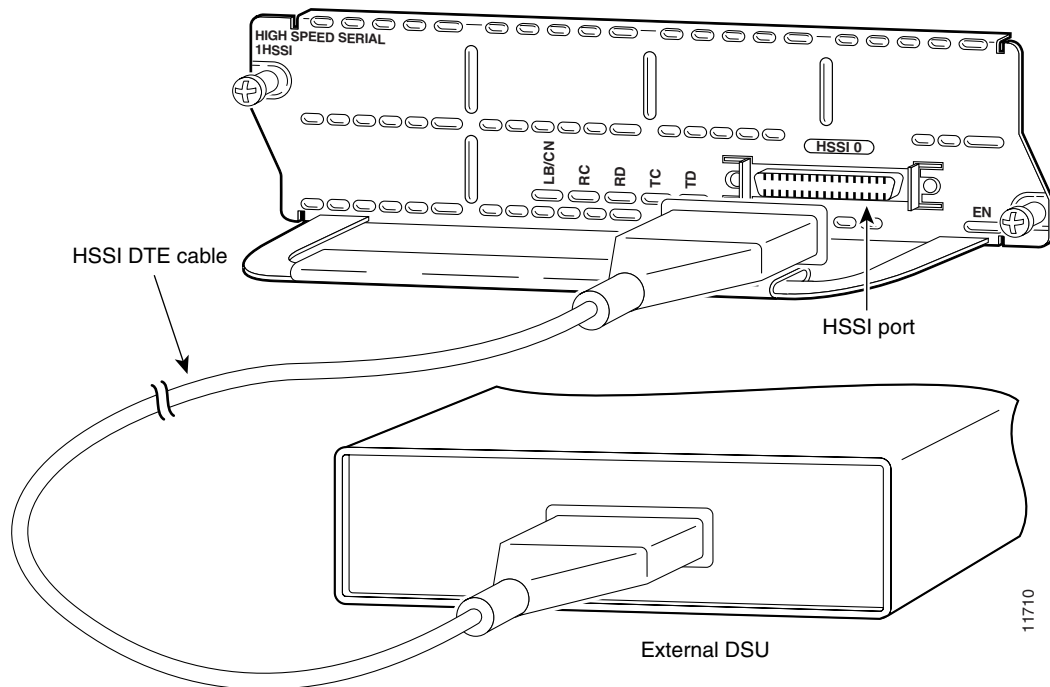


# Connecting HSSI Modules to the Network

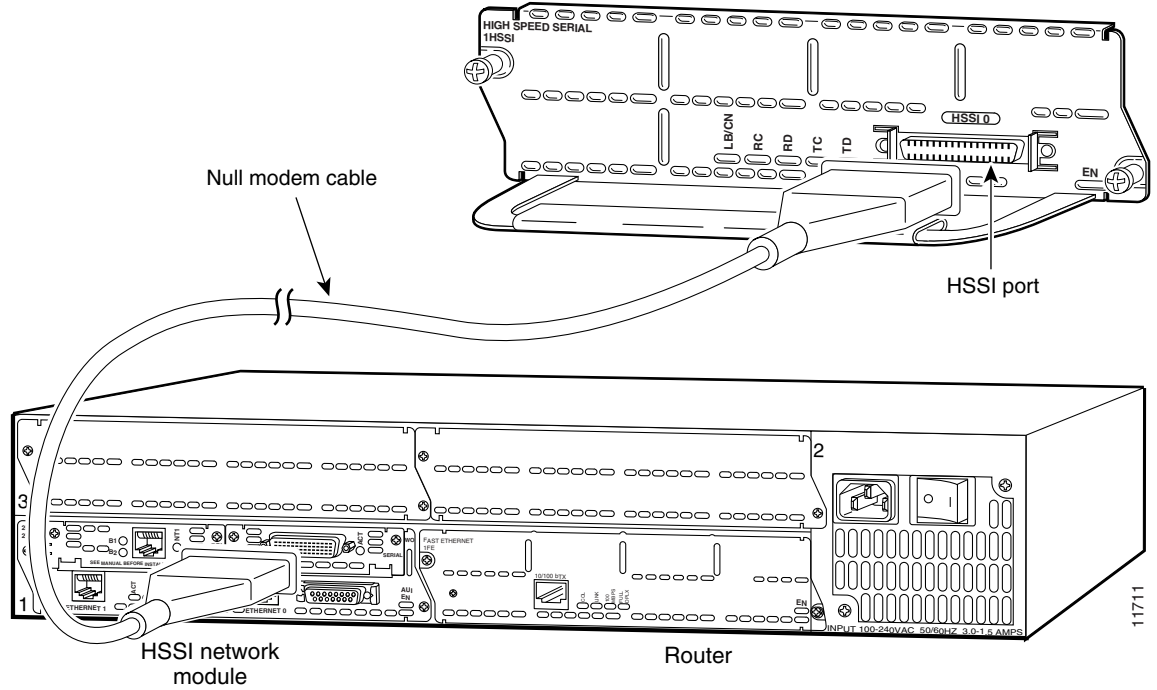
The HSSI module contains a 50-pin receptacle, color-coded blue. You can connect this port to a network in either of two ways:

- To an external data service unit (DSU), using a HSSI data terminal equipment (DTE) cable for operation in DTE mode (see [Figure 2](#)). The HSSI port is configured to operate in this mode by default.
- To another router for back-to-back operation, using a HSSI null modem cable. (See [Figure 3](#).) Both routers must be at the same site. Back-to-back operation allows you to verify operation of the HSSI port or link routers directly to build a larger node. Both routers must be configured to use a 51.84-MHz internal clock.

**Figure 2** Connecting the 1-Port HSSI Module to an External DSU



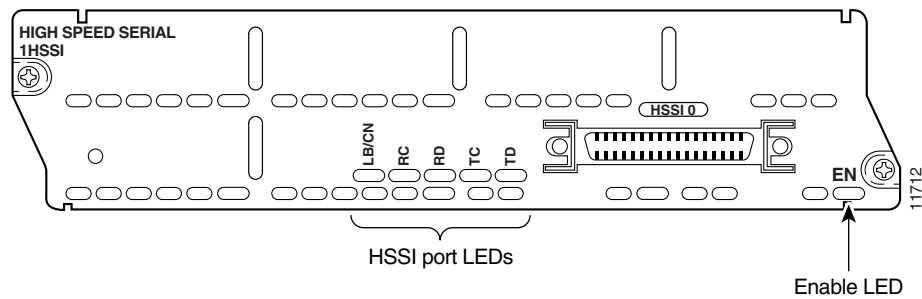
**Figure 3** Connecting Two Routers Back to Back



## HSSI Network Module LEDs

All network modules have an enable (EN) LED. The enable LED indicates that the module has passed its self-tests and is available to the router. The HSSI network module has the additional LEDs shown in [Figure 4](#) and described in [Table 1](#).

**Figure 4** HSSI Network Module LEDs



**Table 1** HSSI Network Module LEDs

LED	Meaning
LB/C (Loopback/Connect)	Green indicates normal operation. The module is connected to the external DSU, and the signals TA (DTE available) and CA (DCE available) are active. Yellow indicates that the module is in loopback mode. If this LED is off, the port is neither connected to the DSU nor in loopback mode.
RC (Receive Clock)	Module has detected a receive clock signal. During normal operation, this signal is received from the external DSU. During loopback, it is generated internally.
RD (Receive Data)	Module has detected a receive clock signal. During normal operation, this signal is received from the external DSU. During loopback, it is generated internally.
TC (Transmit Clock)	Module is transmitting a clock signal to the external DSU. During normal operation, this signal is derived from the DSU's RT signal. During loopback, it is generated internally.
TD (Transmit Data)	Module has been detected by and can send packets to the external DSU.

## Related Documents

For additional information, see the following documents and resources.

Related Topic	Document Title
Regulatory compliance and safety information	<i>Cisco Network Modules and Interface Cards Regulatory Compliance and Safety Information</i> <a href="http://www.cisco.com/en/US/docs/routers/access/interfaces/rcsi/IOHrcsi.html">http://www.cisco.com/en/US/docs/routers/access/interfaces/rcsi/IOHrcsi.html</a>
Cisco IOS software website and reference documentation	<i>Cisco IOS Software</i> <a href="http://www.cisco.com/web/psa/products/index.html?c=268438303">http://www.cisco.com/web/psa/products/index.html?c=268438303</a>

## Obtaining Documentation, Obtaining Support, and Security Guidelines

For information on obtaining documentation, obtaining support, providing documentation feedback, security guidelines, and also recommended aliases and general Cisco documents, see the monthly *What's New in Cisco Product Documentation*, which also lists all new and revised Cisco technical documentation, at:

<http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html>

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