



HUGHES[®]

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HT1100 Satellite Modem User Guide

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Understanding safety alert messages

Safety alert messages call attention to potential safety hazards and tell you how to avoid them. These messages are identified by the signal words DANGER, WARNING, CAUTION, or NOTICE, as illustrated below. To avoid possible property damage, personal injury, or in some cases possible death, read and comply with all safety alert messages.

Messages concerning personal injury

The signal words DANGER, WARNING, and CAUTION indicate hazards that could result in personal injury or in some cases death, as explained below. Each of these signal words indicates the severity of the potential hazard.



DANGER indicates a potentially hazardous situation which, if not avoided, *will* result in death or serious injury.



WARNING indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



CAUTION indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury.

Messages concerning property damage

A NOTICE concerns property damage only. Do not add hazard symbols to notices.



NOTICE is used for advisory messages concerning possible property damage, product damage or malfunction, data loss, or other unwanted results – but *not* personal injury.

Safety symbols

The generic safety alert symbol



calls attention to a potential personal injury hazard. It appears next to the DANGER, WARNING, and CAUTION signal words as part of the signal word label. Other symbols may appear next to DANGER, WARNING, or CAUTION to indicate a specific type of hazard (for example, fire or electric shock). If other hazard symbols are used in this document they are identified in this section.

Additional symbols

This document uses the following hazard symbols:



Indicates a safety message that concerns a potential electric shock hazard.

Chapter 1

Overview

This user guide describes the features and operation of the HT1100 satellite modem, which provides Internet access by satellite. This guide also gives pertinent reference information.

This guide applies to users in the United States and Canada. In this user guide satellite modem and modem both refer to the HT1100 satellite modem.

Description

The HT1100 satellite modem connects to a satellite network to provide Internet service. The modem has an Ethernet port so it can be connected to a computer or LAN. Figure 1 shows the front of the HT1100 satellite modem.

After your HT1100 satellite modem has been installed, you can use your computer's web browser to access the Internet or an intranet. The HT1100 supports local area networks (LANs) to extend Internet connectivity to multiple computers. This requires an Ethernet cable or a wireless or a wired connection to the LAN and proper configuration of the computer's operating system network properties.



Figure 1: HT1100 front

Figure 2 shows the back of the HT1100.



Figure 2: HT1100 back

Do not press the reset/rescue unless Customer Care directs you to do so.

The USB port is provided to support a future feature that can be remotely activated with a small software update. Hughes does not recommend plugging anything into this port at this time. Hughes will inform you when this feature is available.

Operating environment

Observe the following requirements for the modem's operating environment.

Ventilation and heat sources

The modem must be adequately ventilated and kept away from sources of heat.

NOTICE

- Do not block any of the modem's ventilation openings.
 - Leave 6 inches of space around the top and sides of the modem to ensure adequate ventilation and prevent overheating.
 - Do not place the modem near a heat source such as direct sunlight, a radiator, heat register or vent, oven, stove, amplifier, or other apparatus that produces heat.
-

Operating position

Operate the HT1100 only in a vertical position, that is, resting on its built-in base as shown in Figure 1.

Computer requirements

The computer that connects to the satellite modem should meet the minimum requirements specified by the computer operating system manufacturer and the following networking and browser requirements.

Networking requirements

- Ethernet port
- Ethernet cable (provided)
- Ethernet NIC, 10/100/1000 Mbps, configured as follows:
 - Auto-negotiate
 - Dynamic host configuration protocol (DHCP) enabled (obtain an IP address automatically)

Internet browser

- Internet Explorer 7 or greater, Mozilla Firefox, Safari (for Windows and Mac)
- Browser settings:
 - HTTP 1.1 or greater enabled
 - Proxy settings disabled

Contact information

If you need operational, warranty, or repair support, who you should contact depends on where you purchased your satellite modem. You may be supported by Hughes Customer Care or another service provider. Please contact your customer service representative in accordance with your service agreement.

For modems purchased from a retail channel or Hughes sales agent in the United States or Canada:

If you purchased this product through a retail channel or Hughes sales agent, you have several support options. Please try these options in the order listed until you find the help you need.

Begin at the HughesNet Customer Care page:

1. Open a web browser on a computer connected to the satellite modem. Enter the web address www.my.hughesnet.com.
2. Click the HughesNet Customer Care link.

The HughesNet Customer Care page opens. Options 1, 2, and 3 below are available on this page:

1. Search our Knowledge Base.
 - a. In the Self help section, click Knowledge Base Search.
 - b. Follow the on-screen instructions to find the information you need.
2. Email a Customer Care representative.
 - a. In the Contact Hughes section, click Email.
 - b. Complete the email form.
 - c. Click Email Us!
3. Chat with a Customer Care representative.
 - a. In the Contact Hughes section, click Chat.
 - b. Complete the chat form.
 - c. Click Chat with Us!
4. Call a Customer Care representative.

If these options do not help you, call Hughes Customer Care at 1 (866) 347-3292.

For modems purchased from a value-added reseller (VAR) in the United States or Canada:

If you purchased this product from a Hughes VAR, do not contact Hughes. Contact your VAR for technical support according to the procedure supplied by them. They are trained to help you with any technical problem.

System Control Center

The System Control Center is a set of screens and links you can use to monitor your broadband service and troubleshoot the satellite modem in the event of a problem. The System Control Center provides access to system status, configuration information, and online documentation. You access the System Control Center through a web browser on a computer connected to the satellite modem. Use the System Control Center to find system information for configuring networks or to check system performance if the satellite modem does not seem to be functioning properly.

Accessing the System Control Center

To access the System Control Center, a computer with a web browser installed must be connected to the satellite modem's LAN port. The System Control Center web site is hosted on the modem, consequently the computer does not have to be connected to the Internet.

To open the System Control Center, double-click the System Control Center shortcut on your computer desktop, or follow these steps:

1. Open a web browser such as Internet Explorer.
2. In the browser address bar, type www.systemcontrolcenter.com and press **Enter**.

System Control Center home page

The System Control Center home page contains numerous links to satellite modem features and important information regarding operation of your satellite modem.

Figure 3 shows the System Control Center home page before service activation. Notice that the System Status indicator is red which means that system requires attention. Refer to Indicator links later in this chapter for additional information about indicator links.

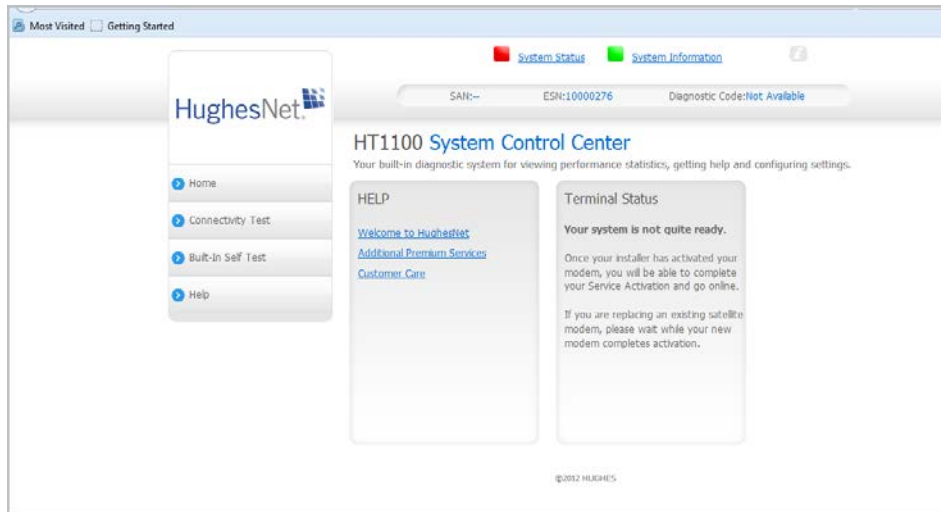


Figure 3: System Control Center home page before activation

Figure 4 shows the System Control Center home page after service activation. The System Status indicator is green which means that all functions are working within normal parameters.

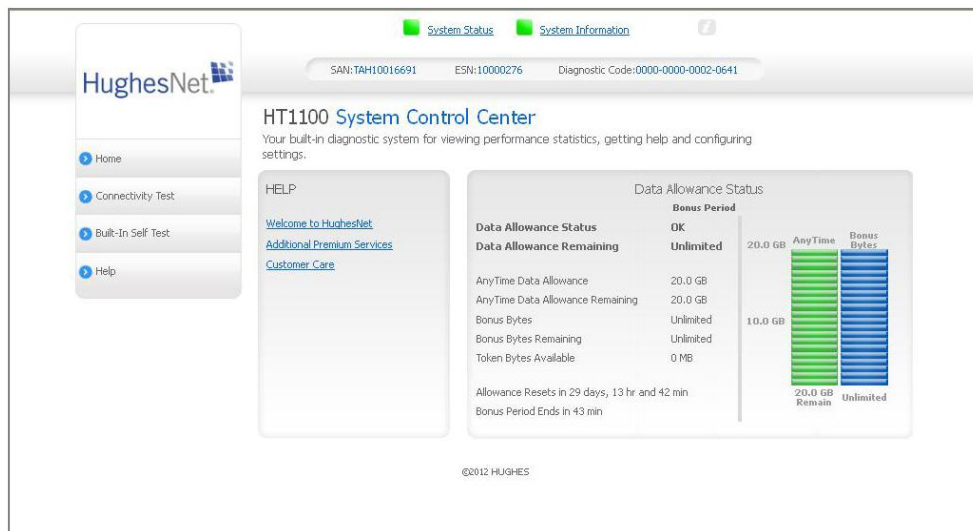


Figure 4: System Control Center after activation

Indicator links

At the top of each System Control Center page are two indicators (Figure 5) followed by a link:

[The System Status link](#)

[The System Information link](#)



Figure 5: Indicators and links

Each link navigates to a page in the System Control Center. See Table 1: Destination pages. The System Status link navigates to the System Status page. The System Status indicator also changes color to indicate the operational status of the satellite modem. Figure 6 explains the colors and their meanings for the System Status indicator.

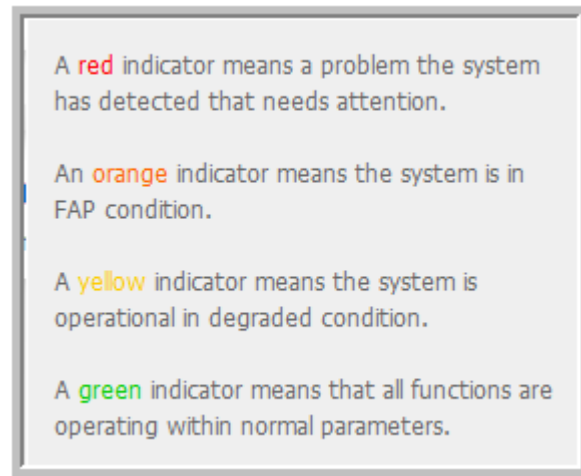


Figure 6: Indicator colors and meaning

Note: Hughes maintains a Fair Access Policy. This policy establishes an equitable balance in Internet access for all HughesNet subscribers. Hughes assigns a Data Allowance to each service plan that limits the amount of data that may be downloaded or uploaded within a one-month period. Subscribers who exceed this limit will experience a temporary reduction of speed.

The table below identifies the destination page for each link.

Table 1: Destination pages

Indicator	Destination	Description
System Status	System Status page	Gives important information about the satellite modem's operational status.
System Information	System Information page	General information screen that identifies software and hardware versions and other important satellite connection information.

Parameters bar

The parameters bar appears at the top of all System Control Center screens as shown in Figure 7. This bar displays three important fields of information:

- SAN - Site account number (SAN)
- ESN - Electronic Serial Number
- Diagnostic Code - Used to troubleshoot problems when calling customer care.

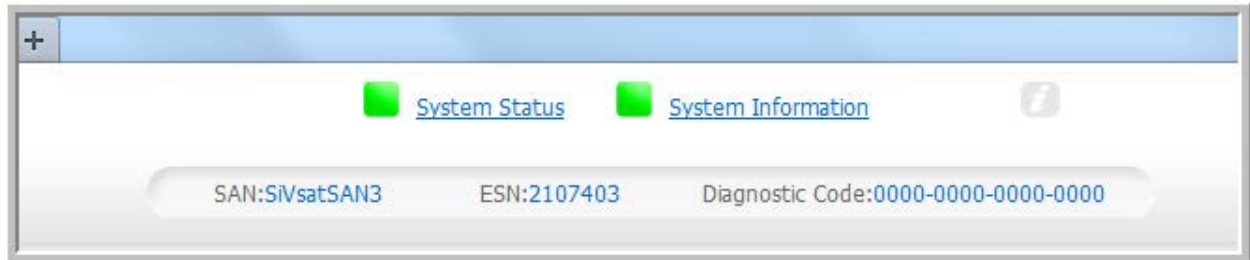


Figure 7: Parameters bar

Center panel text links and information

The System Control Center home page center panel includes the following text links and informational panels once service is activated.

HELP area

[Welcome to HughesNet](#) - Gives you access to the HughesNet Web Portal, which contains a variety of useful tools, resources, and information. Access to the HughesNet portal is determined by your service plan.

[Additional Premium Services](#) - Gives you access to additional services and self-help information.

[Customer Care](#) - Navigates to the Customer Care web page where you manage the various facets of your account.

Download Allowance Status

The Status Meter monitors your Download Allowance and Download Bank. The Download Allowance is the amount of data which can be downloaded without restriction.

Side panel

The following links appear on the left side panel of each System Control Center screen as shown in Figure 8.



Figure 8: Side panel links

[Home](#) - Opens the System Control Center home page.

[Connectivity Test](#) - Opens the Connectivity Test page, which you can use to test the connection between the satellite modem and the NOC.

[Built in Self Test](#) - Checks the internal operation of the modem.

[Help](#) - Opens the Help page. This page includes a variety of topics such as getting started and recommended browser settings.

Note: Some of these links may not appear because they are not enabled by the NOC.

System Status page

The System Status page lists parameter information vital to the proper operation of the HT1100. Available system status values (as shown in Figure 9) may vary, depending on how your satellite modem is configured.

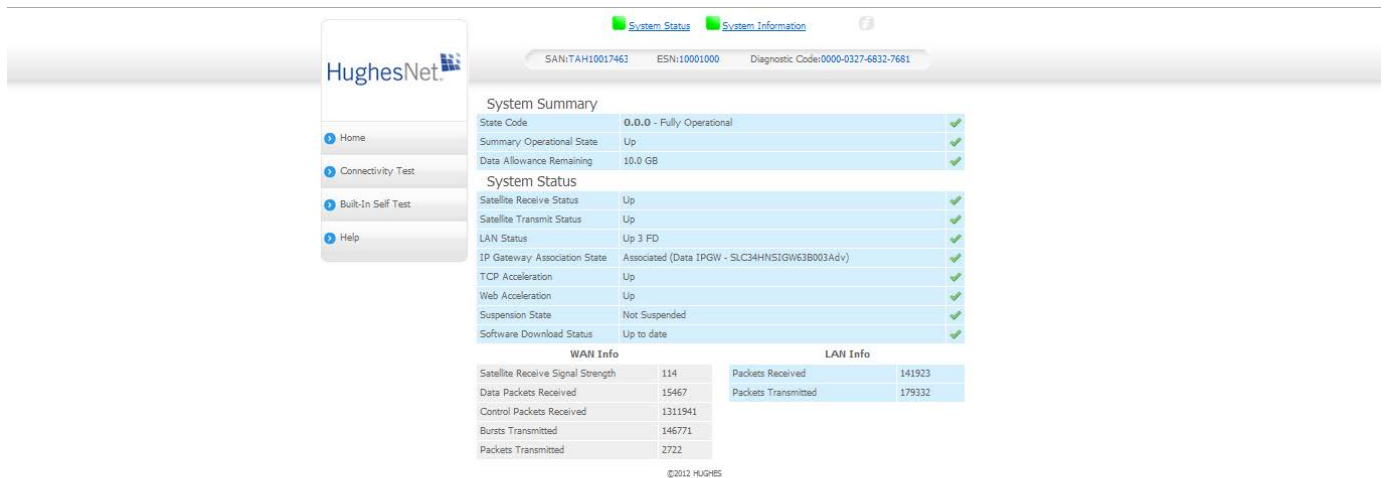


Figure 9: System Status page

System Information page

The System Information page, shown in Figure 10, provides system information for the satellite modem such as identification information, software versions, and satellite information.

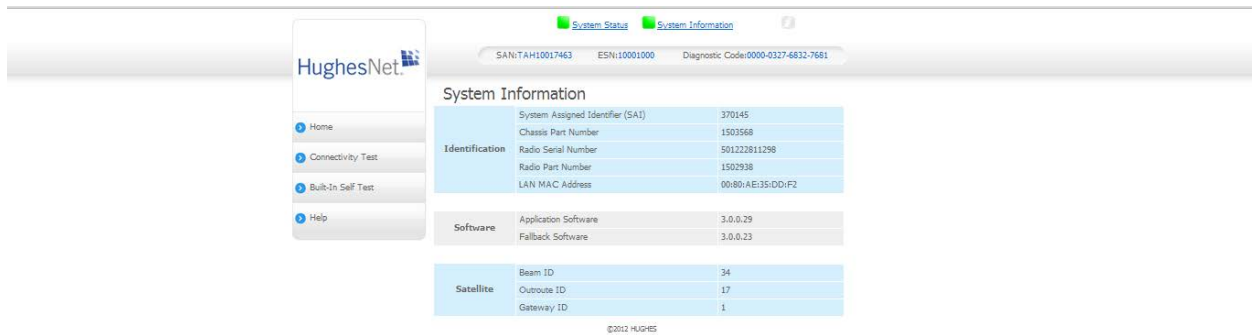


Figure 10: System Information page

Connectivity Test

Use the [Connectivity Test](#) link on the side panel to check the connectivity to the Hughes Network Operations Center (NOC). To test your connectivity:

1. Click the [Connectivity Test](#) link on the side panel. The Terminal - Gateway Connectivity Test appears in the center of the screen.
2. Click the [Start the test](#) link as shown in Figure 11.

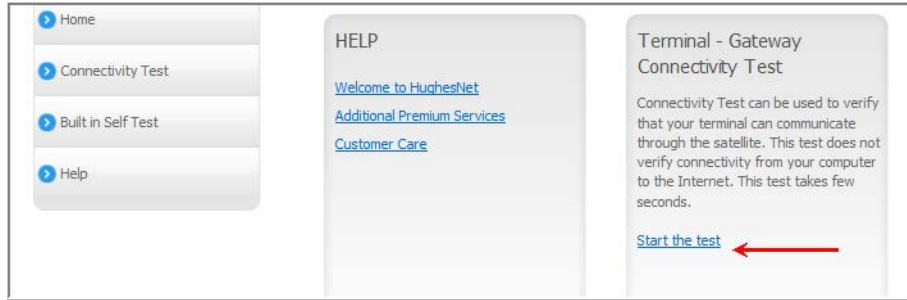


Figure 11: Connectivity Test start screen

The Terminal - Gateway Connectivity Test panel appears indicating the test has started, as shown in Figure 12.

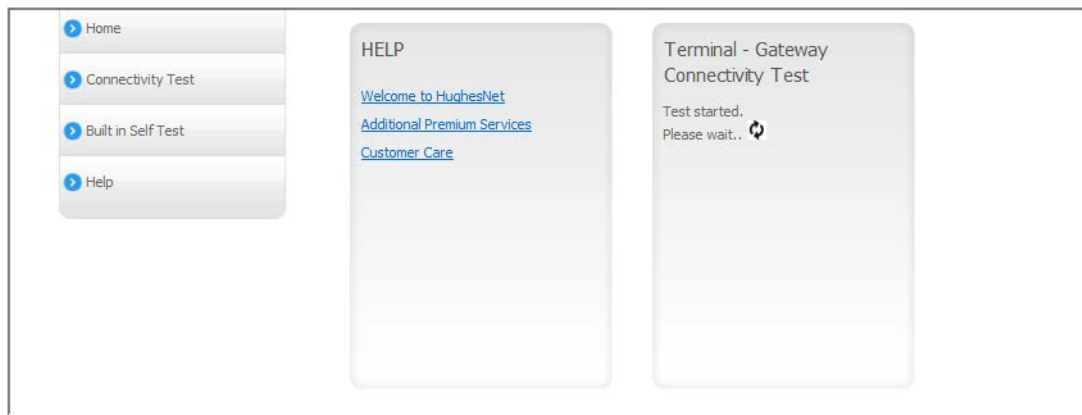


Figure 12: Connectivity Test started

When the test completes, the results appear in the center panel. Figure 13 shows the results of the test.

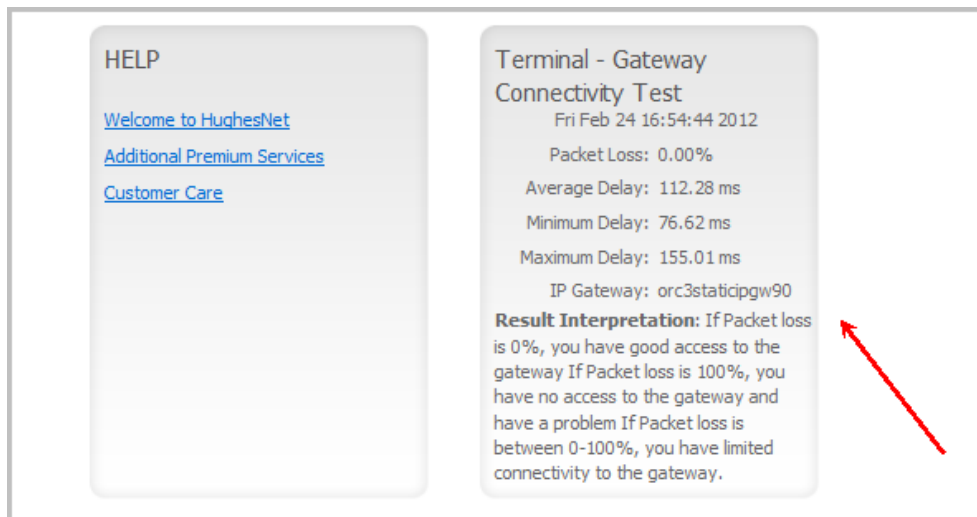


Figure 13: Connectivity Test results

Built-In Self Test

Use the [Built-In Self Test](#) link on the side panel to check the connectivity of the satellite modem. To initiate the test:

1. Click the [Built in Self Test](#) link on the side panel.

The test results appear below the link as shown in Figure 14 .

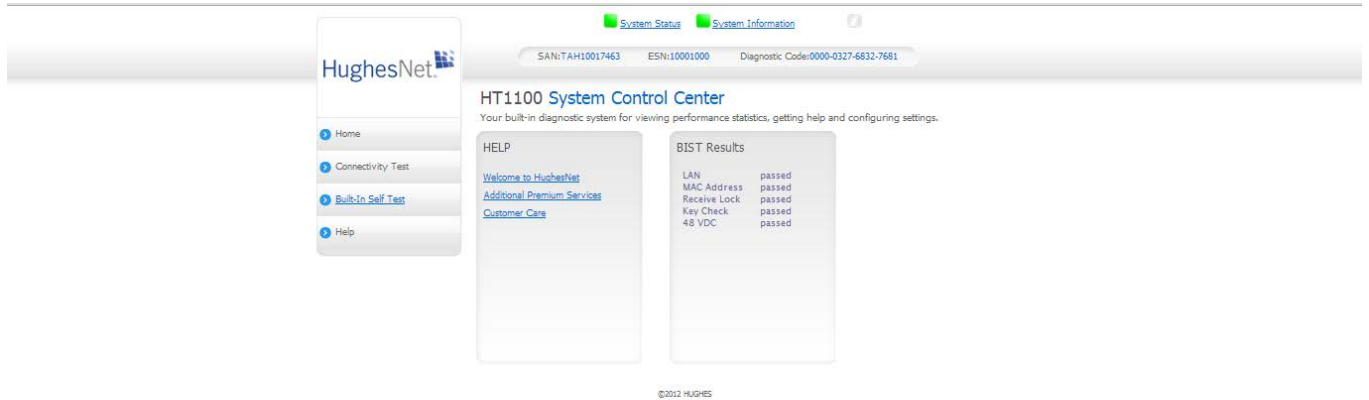


Figure 14: Built-In Self Test screen

HELP

[Welcome to HughesNet](#) - The HughesNet web portal contains a variety of useful tools, resources, and information. Access to the HughesNet portal is determined by your service plan. Figure 15 shows the Welcome screen.



Figure 15: HughesNet Welcome screen

Front panel LEDs

The satellite modem has five LEDs on the front panel, as shown in Figure 16. By their appearance (on, off, blinking, or flashing) the LEDs indicate the modem's operating status. The front panel LEDs are blue when lit.

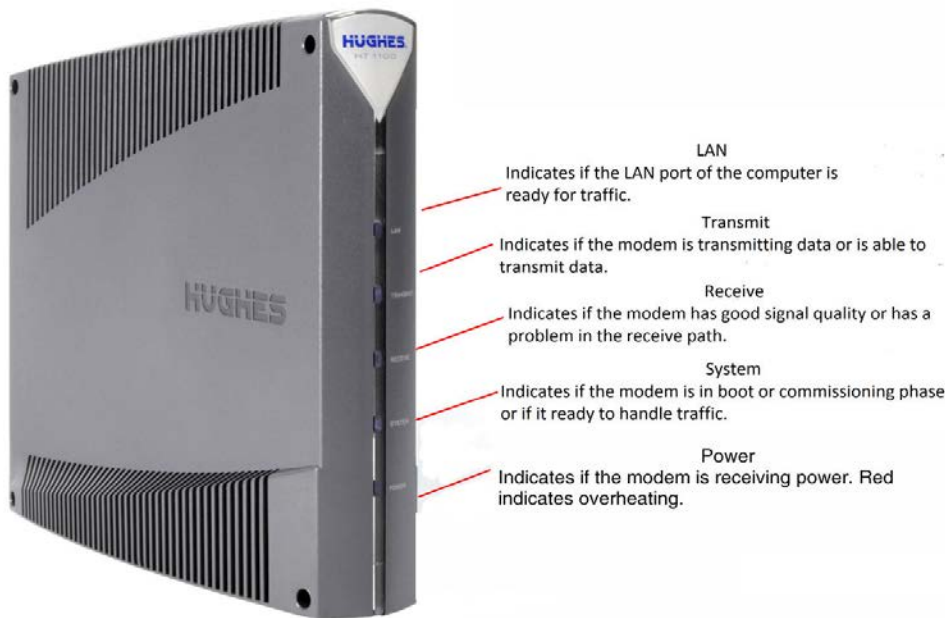


Figure 16: Front panel LEDs

Table 2 explains what the modem status is when the LEDs are on, off, or blinking. On means the LED is continuously lit. Blinking means the LED is usually on, but intermittently turns off briefly. Flashing means the LED alternates between on and off for periods of ½ sec to 1 sec.

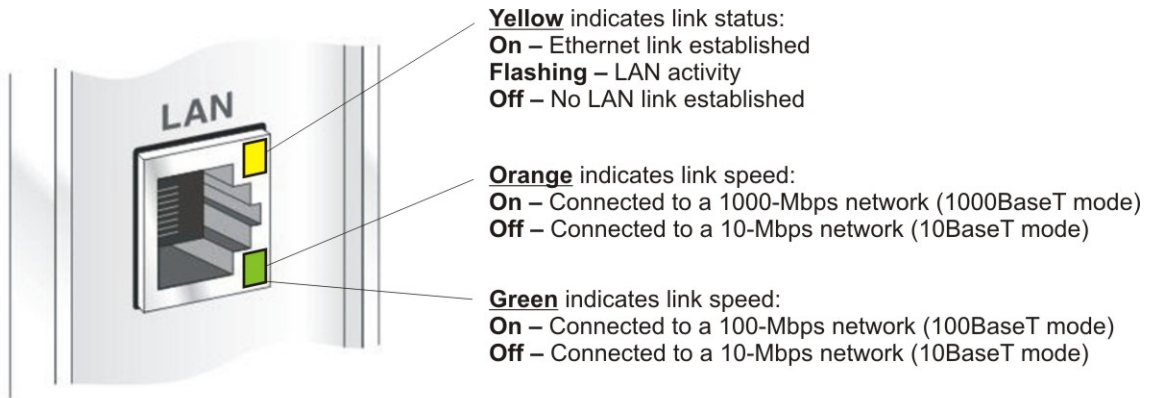
Table 2: Front panel LED indicators

LEDS	Appearance	Status
LAN	On	Satellite modem is connected to a computer network card or Ethernet device
	Blinking	Transmitting and/or receiving data
	Off*	No device is connected to the LAN port or the device connected to the LAN port is not working properly.
Transmit	On	OK - Transmit path is operational
	Blinking, mostly on	Transmitting data
	Blinking, mostly off	Ranging (The modem is measuring the distance to the satellite to calibrate transmit timing and transmit power.)
	Off*	Condition preventing transmission
Receive	ON	OK - Receive path is operational
	Blinking	Receiving data
	Off*	Condition preventing receipt of data
System	ON	Connection established with the NOC
	Off	Condition preventing full operation
Power	ON Red color**	Power is on and the modem is functioning normally **Indicates an alarm condition
	Flashing	Operating with fallback.bin (backup) version of software
	Off*	No power

Bold type indicates LED appearance during normal operation when the satellite modem is transmitting or receiving data. *Indicates an operational problem.

LAN port LEDs

Green and orange LEDs on the LAN (Ethernet) port on the modem's rear panel indicate link status and speed, as explained in Figure 17.



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Figure 17: LAN port LEDs

Standards compliance

The HT1100 satellite modem has been certified to comply with the standards listed in Table 3. Additional information follows the table.

Table 3: HT100 standards compliance

Category	Standard
Safety	UL60950-1 for the USA CAN/CSA-C22.2 No. 60950-1 for Canada
Electromagnetic Interference (EMI)	FCC Part 15 for the USA ICES-003 for Canada
Telecommunications	TIA IPoS

Repairs in Canada

Repairs to certified equipment should be made by an authorized Canadian maintenance facility designated by the supplier. Any repairs or alterations made by the user to this equipment, or equipment malfunctions, may give the telecommunications company cause to request the user to disconnect the equipment.

Users should not attempt to make electrical ground connections themselves, but should contact the appropriate electrical inspection authority, or electrician, as appropriate.

Electromagnetic interference (EMI)

This product conforms to EMI standards of the U.S. FCC, and Canadian CSA, as detailed in the following sections. The installation and maintenance procedures in the installation guide must be followed to ensure compliance with these regulations.

NOTICE

This is a class B product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.

FCC Part 15

This section applies to the HT1100 satellite modem. Standards to which conformity is declared: FCC Part 15

The modem complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Responsible party's name: Hughes Network System, LLC Address: 11717 Exploration Lane, Germantown, MD 20876

Telephone: 1 (866) 347-3292

Trade name: HUGHES

Type of equipment: Two-way Hughes system

Model number: HT1100 (1502573)

Canada Class B warning

The two-way Hughes system (HT1100) complies with the Canadian ICES-003, Class B standard. Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada. Class II Radio Equipment (per R&TTE Directive 1999/5/EC)

Acronyms and abbreviations

D

DHCP – Dynamic host configuration protocol

E

ESN – Electronic serial number

EMI – Electromagnetic interference

F

FAP – Fair Access Policy

L

LAN – Local area network

LED – Light Emitting Diode

N

NetBEUI – Extended User Interface (network transfer protocol) Networking requirements

NOC – Network Operations Center

S

SAN – Site account number

V

VAR – Valued-added reseller

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