GigTest™

Ethernet Speed Tester

GT1000 / GT1005 User Manual

T3 Innovation

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www.t3innovation.com

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User Manual

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ABOUT THIS MANUAL

Testing and measuring key data link operations is necessary to determine the speed capability of individual CAT 5/6 links within installed LAN network systems. With the push of a button the GT1000 GigTest automatically measures key metrics like Signal to Noise Ratio and Skew as well as generating a Bit Error Rate Test (BERT) that generates data packets for transmission and receiving along a link to see both error generation and/or noise interference effects that may impede data flow at the highest possible level.

FEATURES

- Usable with premise equipment or with a second GigTest to test data reliability of a link.
- Use a second GigTest to run BERT test.
- Tests can be saved to GigTest when not linked and uploaded to app when linked.
- WiFi connectivity to Smart Phone.
- Android App for controlling, uploading in real time, naming and saving results.
- iOS (Apple) App for controlling, uploading in real time, naming and saving results.
- Save up to 40 test results on GigTest

SAFETY INFORMATION

To ensure safe operation of the GigTest™, follow these instructions.

WARNING! Do not attach to AC power.
The GigTest is designed for use on
unenergized cabling systems.

Connecting the GigTest to live AC power
may damage it and pose a safety hazard for the user.

Failure to observe these warnings
can result in severe injury or death.

Always Check Connectors First

Poorly terminated RJ45 connectors have the potential to damage the jacks on the GigTest™. Always visually inspect an RJ45 connector before inserting it into the tester. All the contacts should always be recessed into the plastic housing of the connector.

Only insert RJ45 connectors into the RJ45 jack in the tester. Plugging 6-position connectors (RJ12/RJ11) into the 8-position jack on the tester may damage the outer-most contacts of the jack unless the connector is specifically designed for that purpose.

CABLE TEST

Bicolor LED indicating pass or fail of a cable test. If 10Mb link, cable test only will be run. If 100Mb is selected, only active two pairs are tested. Cable test primarily tests for cable faults that would prevent the possibility of linking, not a complete wire map.

SIGNAL TO NOISE RATIO

LED indicating pass or fail of the SNR test. Cable must pass Cable Test in order to be run. Will test the 1-2 and 3-6 pairs if 100Mb is selected. All four pairs are tested in 1000Mb mode. SNR is reported if connected to a switch or NIC.

BIT ERROR RATE TEST (BERT)

LED indicating pass or fail of BERT test. Will run only if Cable and SNR tests are passed and a second GigTest is at the other end of the cable. This test will show fail if more than 3 errors are detected in the normal length test, or 10 errors in the long length test.

Test Speed

Test Speed - Pressing the button below 10000Mb/100Mb LEDs will toggle between the two settings. Test is run only for the data rate selected.

Blink Light

Pressing the button directly below the Link Blink LED will turn on the LED and enter Link blink test mode. Linked LED will turn on and off if link is established and the speed of the link is show by lighting one of the speed results LEDs. Auto-off in 30 minutes. Exit with Back button or second press of Blink Light.

Wifi

Pressing the WiFi button toggles the WiFi on and off. The LED above indicates current setting.

Long BERT

Button press toggles between normal BERT test of about $1x10^{10}$ bits (10Gbits) transferred and the long BERT test of $1x10^{11}$ bits (100Gbits) transferred at 1000Mb speed. Number of bits transferred is 1/10 of those values if run at 100Mb.

BUTTONS

Back

A test in progress can be canceled by pressing the back button, returning the tester to idle. Only the master can terminate a test in progress utilizing two GigTests testers.

Save

Press the Save button to save the currently displayed test result. Saving will be indicated by a quick flash of all three green results LEDs . Only 40 results can be saved.

If the Save button is pressed when memory is full, all three red results LEDs will flash. The saved results must be cleared; press and hold the Save button to clear all the results.

To view all results, refer to Wifi reporting (page 12). Tests are numbered from 1 to 40.

Pressing the Save button for more than 3 seconds clears all saved test results.
All three green results LEDs will flash three times.

Power

Press power button to turn on unit. Turn on second BERT tester at other end of cable if qualifying a cable. Unit will remain on for 30 minutes after the last button press or can be turned off manually by a second button press.

Test

Pressing the Test button initiates testing of the cable connected. If a GigTest's are at either end of the cable, a test can be initiated on either tester, which becomes the master for that test run and displays the results. Remote end shows last test run by that tester.

VIEW GIGTEST RESULTS

1 Turn on **GigTest**

2 Turn on WiFi

WiFi will retain on/off status from previous usage.

3 Connect Phone/Tablet via Wifi to SSID "GigTest-xxxxxx"

WiFi will retain on/off status from previous usage.

4 Open **GigTest** App on Phone/Tablet.

Available on the App Store

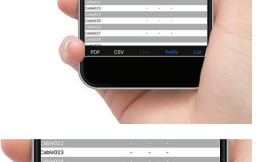
Available on the Android App Store

GigTest 1 Gbps

5 **View GigTest Reports**

6 **View, Print or Share GigTest Reports**

CSV or PDF Export Options



Swipe left and right to switch between two separate tables.

Left Table GigTest Results | **Right Table** Mobile Testing

MOBILE TESTING

1 Turn on **GigTest**

2 Turn on WiFi

WiFi will retain on/off status from previous usage.

3 Connect Phone/Tablet via Wifi to SSID "GigTest-xxxxxx"

WiFi will retain on/off status from previous usage.

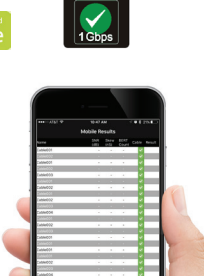
4 Open **GigTest** App on Phone/Tablet.

Available on the App Store

Available on the Android App Store

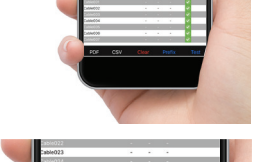
GigTest 1 Gbps

5 **Mobile Test**



6 **View, Print or Share GigTest Reports**

CSV or PDF Export Options



Swipe left and right to switch between two separate tables.

Left Table | **Right Table**

GigTest Results | Mobile Testing

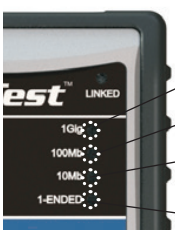
INDICATOR LEDS

Battery Low/Power On LED

LED will be green when power is on and will switch to red when the battery voltage reaches 6.0V. LED will remain on for as long as the unit is powered on. GigTest will power off when battery reaches 5.7 volts.

Link Light LED

While a Link is established, the Link Light LED will be on. In Blink Light Mode, the LED will turn on and off at the Link Blink Cadence.

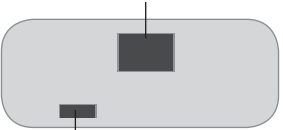


Data Rate & 1-Ended Test

1000Mb: Green LED lights if test performed at 1Gb data rate.
100Mb: Green LED lights if test performed at 100Mb data rate.
10Mb: Green LED lights only during Link Blink mode if the remote device links at 10Mb
1-Ended: Green LED lights if cable test was run with nothing connected at other end of cable.

CONNECTORS

RJ45 Test Connector
Connect to cable to be tested.



Micro USB
Connect to Windows PC running GigTest Application to update firmware.

Manufacturing Connector
In battery hole, supports PIC programmer, factory use only.

Specifications

Battery Life	6X AA alkaline batteries, 9VDC nominal, 2,200 mA-hr (typical) Linked – 7 hrs typical, Not linked – 30 hrs typical
Altitude	10,000 ft. (3048 m) operating
Temperature	Operating: 32 to 122 degrees F (0 to 50 C)
Humidity	10 to 90% non-condensing
Enclosure	High Strength ABS V0 plastic with boot
Size	1.85" H x 3.6"W x 6.8" L (4.7 x 9.15 x 17.3 cm)
Weight	18 oz (510 grams) - With Batteries
Safety Compliance	CE low voltage directive

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For technical information and customer support, please visit www.t3innovation.com or send an email to support@t3innovation.com.

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