



3933 US Route 11
Cortland, NY 13045

Telephone: (607) 753-6711
Facsimile: (607) 758-3648
www.intertek.com

January 17, 2017

Test report number 102821857CRT-001
Project number 102821857-311

Fluke Networks
6920 Seaway Boul.
Everett, WA 98203

TEST:

Performance testing of telecommunication cabling field tester measurement accuracy to Level 2G, as defined in ANSI/TIA-1152-A, suitable for Category 8 cabling testing also including optional resistance parameters.

STANDARD USED:

ANSI/TIA-1152-A, Requirements for Field Test Instruments and Measurements for Balanced Twisted-Pair Cabling, published November 2016

SECTIONS USED:

The testing was performed in accordance with the following sections of ANSI/TIA-568-C.2:

- Section 4.4: Field tester measurement accuracy requirements
- Section 4.8: Comparison measurement procedures

AUTHORIZATION:

The project was authorized by Mr. Terry Redinger, representing Fluke Networks, with signed quotation number Qu-00740112, dated November 11, 2016.

DATES OF TEST:

December 19 through 20, 2016

TEST REPORT REVISION HISTORY:

First Issue: January 17, 2017 Original Document

SAMPLE DESCRIPTION (PRODUCT TESTED):

The following samples were used to conduct the testing:

- A Versiv™ measurement mainframe
- Two sets of DSX-8000 measurement modules, firmware version Build 2016 1212-1405 dev
 - First set: serial numbers 1612035 and 1612043
 - Second set: serial numbers 1612040 and 1612027
- Two sets of Category 8 channel adapters, model DSX-CHA804
 - First set: serial numbers 1646265, 1646277
 - Second set: serial numbers 1646307 and 1646296.
- Category 8 permanent links adapters, model DSX-PLA804
 - First set: serial numbers 3465018, 3509033
 - Second set: 3509030 and 3509051



This report is for the exclusive use of Intertek's Client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this report. Only the Client is authorized to permit copying or distribution of this report and then only in its entirety. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. The observations and test results in this report are relevant only to the sample tested. This report by itself does not imply that the material, product or service is or has ever been under an Intertek certification program.



The samples were selected on December 19, 2016 and were pre-production samples in undamaged condition.

TESTS PERFORMED:

The following field tester parameters were tested on both sets of units at the baseline, permanent link and channel level in accordance with section 4.4 of ANSI/TIA-1152-A:

- Dynamic range
- Amplitude resolution
- Frequency range resolution
- Dynamic accuracy IL
- Dynamic accuracy NEXT
- Dynamic accuracy ELFEXT/ACR-F
- Source/load return loss
- Random noise floor
- Residual NEXT
- Residual FEXT
- Output signal balance
- Common mode rejection ratio
- Tracking
- Directivity
- Source match
- Return loss of termination

The measurement accuracy between the field tester and the network analyser was determined using the full frequency response method described in section 4.8.3.2.2 of ANSI/TIA-1152-A. Two (2) compliant Category 8 reference links and channels were used and the results were compared in the 1 – 2,000 MHz frequency range.

TEST EQUIPMENT USED:

<u>Equipment used</u>	<u>Model number</u>	<u>Asset number</u>	<u>Calibration date</u>	<u>Calibration due date</u>
Keysight Network Analyzer	E5071B	17673	11/7/2016	11/7/2017
Keysight Network Analyzer	E5071C	14359	4/12/2016	4/12/2017
Keysight E-Cal Module	N4431B	17386	4/26/2016	4/26/2017
Keysight E-Cal Module	N4433A	15760	9/22/2016	9/22/2017

CONCLUSION:

The field tester, as previously described, was tested in accordance with the standard and sections referred to on page 1. The field testers met the requirements for level 2G field tester parameters and measurement accuracy also including optional DC resistance parameters. The testing was witnessed by an Intertek representative at the client's facility. The procedures and requirements were taken from the standards referred to on page 1.

Reviewed and Approved By:

Completed by: Title:	Antoine Pelletier Project Engineer	Reviewed by: Title:	Ken Riedl Senior Project Engineer
Signature:		Signature	