

CommScope, Inc. of North Carolina **LETTER REPORT**

SCOPE OF WORK

Testing of a cabling configuration performance to the requirements of IEEE Std 802.3™ for Type 4 remote powering applications

REPORT NUMBER

105853508CRT-001i

ISSUE DATE

24-June-2024

REVISED DATE

None

TESTS START DATE

24-June-2024

TESTS END DATE

24-June-2024

PAGES

5

DOCUMENT CONTROL NUMBER

GFT-OP-10a (6-March-2017)

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LETTER REPORT

24-June -2024

Intertek Report No. 105853508CRT-001i

Intertek Project No. G105853508

Mr. Wayne Hopkinson
CommScope, Inc. of North Carolina
3642 US Hwy 70 East
Claremont NC 28610
USA

Subject: Performance testing of category 6 unshielded channel per IEEE 802.3™ for support of Type 4 remote powering applications commonly referred as PoE++

Dear Mr. Hopkinson:

This letter report represents the results of our evaluation of the above referenced product(s) to the requirements contained in the following document(s):

IEEE Std 802.3™-2022 Standard for Ethernet, Approved 13-May-2022

SECTION 1 SUMMARY

Intertek wishes to inform you that the power delivery tests have been performed on your channel configuration. This testing was performed under project G105853508 and quotation Qu-01450453 issued 06-May-2024. Compliant results were obtained for the relevant tests contained in section 145 of IEEE 802.3™ for channel transmission performance.

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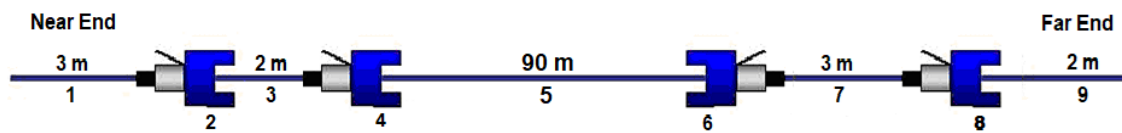
SECTION 2
NON-CONFORMANCES

None

SECTION 3
TEST CONFIGURATION

The client supplied a 4-connector unshielded channel as illustrated below.

The samples were received on 24-June-2024 and were production samples in undamaged condition.



Component Id	Manufacturer	Description	Part number
1, 7	CommScope	Modular cord	CPC3312-03M003
3, 9	CommScope	Modular cord	CPC3312-03M002
2, 4, 6, 8	CommScope	Modular jack	MGS400
5	CommScope	U/UTP CMP horizontal cable	XL5 2081B

SECTION 4
TEST EQUIPMENT USED

The following test equipment was used to conduct the testing.

Test equipment used	Model number	Control number	Calibration due date
AEM multifunction cable tester	TestPro CV100	J388	20-December-2024
Keysight LCR Meter	4263B	E355	19-October-2024
Temperature/humidity meter	OM-EL-USB-2-LCD	H243	23-May-2025

SECTION 5
TESTING

The tables below represent a summary of the tests and results. The DC resistance test data is enclosed to this letter report.

Test description	IEEE 802.3 section	Result
DC loop resistance	145.1.3	Compliant
DC resistance unbalance within a pair	145A.1	Compliant
DC resistance unbalance between pairs	145A.3	Compliant
Functional power delivery	Various	Compliant

The cabling configuration was confirmed to meet the minimum 71 W power delivery for Type 4 remote powering applications at ambient temperature. This was done using the external load function of the AEM TestPro CV100 multifunction cable tester as shown in the following screenshot.



The ambient conditions during the testing were 20°C and 62% relative humidity.

SECTION 6
PROJECT STATUS & ACTION

Issuance of this letter report completes the power delivery testing of this channel cabling configuration per IEEE 802.3™ covered by Intertek Project No. G105853508 and quotation Qu-01450453. The test results are compliant with the requirements of the standard and sections referred to on pages 2 and 4. The testing was performed at the client's facility located in Claremont, NC.

If there are any questions regarding the results contained in this report, or any of the other services offered by Intertek, please do not hesitate to contact your dedicated Intertek Project Manager.

Completed by:	David Ayers	Reviewed by:	Antoine Pelletier
Title:	Technician	Title:	Project Engineer
Signature:		Signature:	
Date:	24-June-2024	Date:	24-June-2024

Please note: this Letter Report does not represent authorization for the use of any Intertek certification marks.



Low Frequency Report

Client	CommScope	Report No	105853508CRT-001i@20C
Specification	IEEE 802-3bt Type 4		
Part No	2081B	Length (m)	100.
Test Started	6/24/2024	Temperature	20 °C
Description	4 Connector Channel		
Operator Name	Antoine Pelletier	Test Status	Complies

DC Resistance (Ohms)

45	12	36	78	Limit (Ohms)
7.4160	7.4390	7.6280	7.1200	
7.2910	7.2650	7.6360	7.3630	

Resistance Unbalanced (%)

45	12	36	78	Limit (%)
0.85	1.18	0.05	1.68	3.00

Resistance Unbalanced Pair-Pair (%)

45 - 12	45 - 36	45 - 78	12 - 36	12 - 78	36 - 78	Limit (%)
0.01	1.86	0.78	1.88	0.76	2.64	7.00

DC Loop Resistance (Ohms)

45	12	36	78	Limit (Ohms)
14.7070	14.7040	15.2640	14.4830	25.0000