



DisplayPort Compliance Test Report

January 31, 2024
Version: 1.0

Customer	Dongguan ULT-unite Electronic Technology Co., Ltd.
GRL Project Number	ULT-DG-05242301
Customer Contact	Ming Jia No. 6 Yinkeng Road, Shangyuan Village, Qingxi Town +86-769-87891528 master@ult-unite.com
Product Model Name	UHBR20(DP80) Enhanced MINI DP CABLE 1.0M
Family Model	UHBR20(DP80) Enhanced MINI DP CABLE 0.8M; UHBR20(DP80) Enhanced MINI DP CABLE 0.5M; UHBR20(DP80) Enhanced MINI DP CABLE 0.3M; UHBR20(DP80) Enhanced MINI DP CABLE 3FT; UHBR20(DP80) Enhanced MINI DP CABLE 2FT; UHBR20(DP80) Enhanced MINI DP CABLE 1FT;
Device Type	DP80 Cable
Ports	Enhanced Mini DP to Enhanced Mini DP
Scope of Testing	UHBR Cable DP80 Compliance Test
DUT Date Received	November 06, 2023

Document ID: C-RT-DisplayPort-V002

LEGAL DISCLAIMER:

1. This test report is subject to Granite River Labs Inc. Standard Terms & Conditions, and does not guarantee the quality or functionality of the device tested, conformance with any specifications, or interoperability with other products. Customer is solely responsible for the quality, functionality, interoperability, and specification conformance of Customer's products.
2. This report is based on the information Customer has supplied to GRL and Customer's representation of the device tested. Test result is valid only to the original tested device model.
3. The test result is judged by the specification defined. Pass means the test data is within limitation line, and vice versa. The test report does not take the test equipment uncertainty factor into account.
4. All test items are not included uncertainty evaluation of test equipment.



Date Completed	January 31, 2024
Overall Results	PASS
GRL Test Engineer	<i>Jack Tan</i>
GRL Reviewer	<i>Robert Yang</i>





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1. Document Information

1.1. Revision History

Version	Date	Author	Comments
1.0	March 3, 2022	Jerry Sung	Initial Release

2. Project Description

Granite River Labs (GRL) was engaged by Dongguan ULT-unite Electronic Technology Co., Ltd. to provide electrical test services on the UHBR20(DP80) Enhanced MINI DP CABLE 1.0M (the “Device Under Test”, or “DUT”). Testing performed on two Enhanced mini DisplayPort (Enh mDP) connectors populated on the DUT.

GRL performed testing in accordance with VESA DisplayPort (DP) Standard spec and industry-accepted methodologies, following the test plan developed in conjunction with Dongguan ULT-unite Electronic Technology Co., Ltd. engineering team.

All test results were referenced to the VESA DisplayPort Specification version 2.1 and the purpose of determining pass or fail criteria.

3. References

- VESA DisplayPort (DP) Standard Version 2.1, 10 October, 2022
- VESA DisplayPort v2.1 PHY Layer Compliance Test Specification (PHY CTS) Revision 1.0, 12 June, 2023
- Method of Implementation (MOI) for DisplayPort (DP) Version 2.1 DP80/DP40/DP8K Cable Compliance Test, June, 2023

4. Certified Product Website Posting Information

If this section is left blank, device(s) will not be posted publicly on the VESA site(s).
At a later date, you may choose to send a copy of your certification and this information to moderator@vesa.org for posting.

If you would like the product listing to hyperlink to an associated product page but do not currently know the URL, you may send the URL at a later date to moderator@vesa.org

Exact product name(s) to be listed:	DP2.1_UHBR20 Enhanced MINI DP CABLE
Date which the certified product listing should appear on the VESA site(s) [DD/MM/YYYY]	11/20/2023
Product URL to be hyperlinked to the certified product listing (if known)	www.ult-unite.com
<i>In order to be listed, the company must be a current member of VESA and have executed a Trademark License Agreement</i>	

5. Product Information



6. Summary of Test Results

Test ID	Test Name	Result	Note
Overall Test Result		Pass	
8.1	Impedance	Pass	
	Intra-Pair Skew	Pass	
	Inter-Pair Skew	Pass	Informative
	ILFitAtNq	Pass	
	Integrated Multi-reflection	Pass	Informative
	Integrated Return Loss	Pass	
	Differential to Common Mode	Pass	
	Integrated Crosstalk	Pass	
	DC Signals	Pass	
	Cable ID	Pass	

7. Test Equipment

- Keysight, E5071C, MY46528831
- mDPF SI Fixture 2009
- mDPF SI Fixture 2009

GRL



VESA® DisplayPort® Cable Compliance Test Report

This form shall be used as an application and test report by parties seeking to associate the VESA DisplayPort Certified Logo with a product. This form shall be used when the product is self-tested or tested by an Authorized Test Center (ATC). The “Applicant Contact Information” and “Device Capability” sections must be filled out in their entirety to ensure accurate test reports. Upon completion, this form and any test log files shall be submitted to VESA for approval.

Notice

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Applicant Contact Information

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State or Province	Guangdong
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Country	China
Email	master@ult-unite.com
Phone	+86-769-87891528
Product Model #	UHBR20(DP80) Enhanced MINI DP CABLE 1.0M
Product Serial #	4071-2099
SW/FW rev.	
Product Description	DP2.1-UHBR20 (DP80) Enhanced Mini DP Cable 1.0m
Other Products in Family*	UHBR20(DP80) Enhanced MINI DP CABLE 0.8M; UHBR20(DP80) Enhanced MINI DP CABLE 0.5M; UHBR20(DP80) Enhanced MINI DP CABLE 0.3M; UHBR20(DP80) Enhanced MINI DP CABLE 3FT; UHBR20(DP80) Enhanced MINI DP CABLE 2FT; UHBR20(DP80) Enhanced MINI DP CABLE 1FT;

*Family Products use the same DisplayPort interface, hardware and software and can be certified by similarity according to the test results for the device submitted in this report. Additional information about each family model may be required.



Device Configuration

Please “Check” all categories that apply to your product and fill in the required information.

Note: For products that have multiple ports, all data paths will be tested.

Note: To mark a feature as supported, right-click the box, get properties, select “Checked”

Connector 1		
Enh mDP Plug		<input checked="" type="checkbox"/>
Enh mDP Receptacle		<input type="checkbox"/>
Enh FSDP Type1 Plug		<input type="checkbox"/>
Enh FSDP Type1 Receptacle		<input type="checkbox"/>
Enh FSDP Type2 Plug		<input type="checkbox"/>
Enh FSDP Type2 Receptacle		<input type="checkbox"/>
DisplayPort over Type-C Plug		<input type="checkbox"/>
Latch		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Connector 2		
Enh mDP Plug		<input checked="" type="checkbox"/>
Enh mDP Receptacle		<input type="checkbox"/>
Enh FSDP Type1 Plug		<input type="checkbox"/>
Enh FSDP Type1 Receptacle		<input type="checkbox"/>
Enh FSDP Type2 Plug		<input type="checkbox"/>
Enh FSDP Type2 Receptacle		<input type="checkbox"/>
Latch		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Data Rate: RBR		<input type="checkbox"/>
Data Rate: HBR		<input type="checkbox"/>
Data Rate: HBR2		<input type="checkbox"/>
Data Rate: HBR3		<input type="checkbox"/>
Data Rate: UHBR10		<input type="checkbox"/>
Data Rate: UHBR13.5		<input type="checkbox"/>
Data Rate: UHBR20		<input checked="" type="checkbox"/>
Length		1.0m
For Active Cables		
DP Power from:		
Source end		<input type="checkbox"/>
Sink end		<input type="checkbox"/>
None		<input type="checkbox"/>
Media type (copper, fiber, etc.)		



8. Test Results

8.1. Cable Test results

Test Center Information

Test Conducted By	Granite River Labs
Date Testing Completed	January 31, 2024
Approved by	Robert Yang
Signature (if required by company policy)	<i>Robert Yang</i>

Filename Prefix for report and log files	ULT-DG-05242301 Display port
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Cable Test Results

Overall Test Results	PASS
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Cable Test Equipment

Device	Make, Model, Serial #	SW Rev.	Cal Date/Next
Test Equipment	Keysight, E5071C, MY46528831	B.14.14	N/A
Fixture	mDPF SI Fixture 2009 mDPF SI Fixture 2009	N/A	N/A

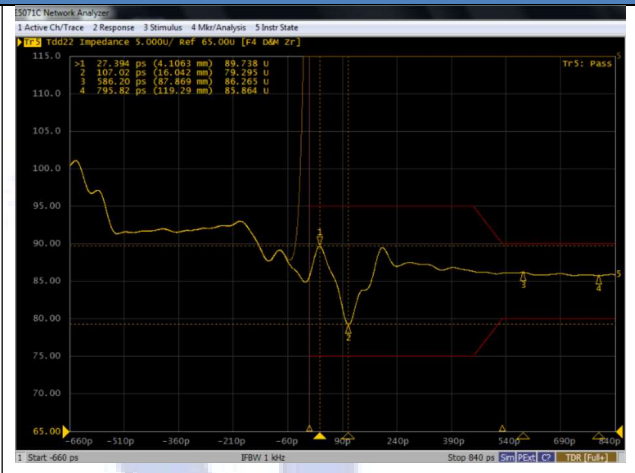
Passive Cable Test Results

Mark Pass, Fail or Skip in Results column, values in Notes column	Cable Sample	Notes:
	#1	
Overall Result	Pass	
8.1.1 Impedance Profile	Pass	
8.1.2 Intra-Pair Skew	Pass	
8.1.3 Inter-Pair Skew	Pass	Informative
8.1.4 Insertion Loss Fit at Nyquist Frequencies	Pass	
8.1.5 Integrated Multi-Reflection	Pass	Informative
8.1.6 Integrated Return Loss	Pass	
8.1.7 Integrated Crosstalk – DP	Pass	
8.1.8 DC Signals	Pass	
8.1.9 Cable ID	Pass	

Impedance L0 #1

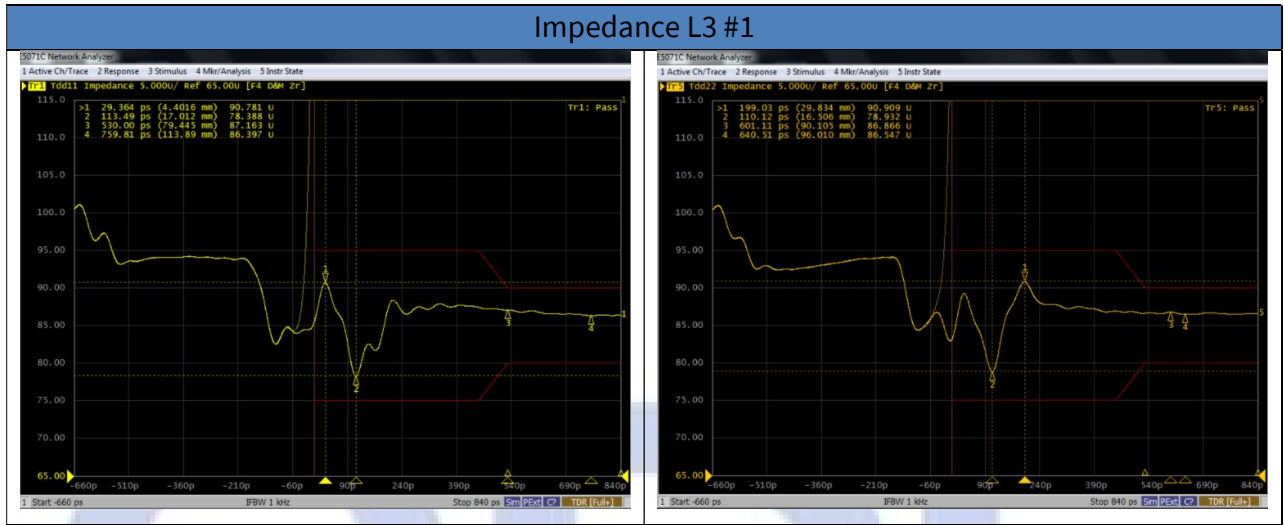


Impedance L1 #1



Impedance L2 #1





Intra-Pair Skew Result (Normative)			
CH	#1 Measured(ps)	Criteria	Pass/Fail
L0	1.0560	x <= 10ps for DP80	Pass
L1	4.7486	x <= 10ps for DP80	Pass
L2	2.8554	x <= 10ps for DP80	Pass
L3	0.97889	x <= 10ps for DP80	Pass

Inter-Pair Skew Result (Informative)			
CH	#1 Worst Measured (UI)	Criteria	Pass/Fail
L0/L3	0.079	< 2UI	Pass

Test Item	Frequency Domain Test Result on Sample #1								Limit	Result
	TX1(L)	TX1(R)	RX1(L)	RX1(R)	TX2(L)	TX2(R)	RX2(L)	RX2(R)		
ILfit@0.1GHz (dB)	-0.6	-0.6	-0.61	-0.61	-0.61	-0.61	-0.61	-0.61	-1	Pass
ILfit@2.7GHz (dB)	-3.89	-3.89	-3.99	-3.99	-3.96	-3.96	-3.9	-3.9	-4	Pass
ILfit@5GHz (dB)	-5.27	-5.27	-5.4	-5.4	-5.35	-5.35	-5.3	-5.3	-5.5	Pass
ILfit@6.75GHz (dB)	-6.12	-6.12	-6.24	-6.24	-6.18	-6.18	-6.16	-6.16	-6.5	Pass
ILfit@10GHz (dB)	-7.7	-7.7	-7.89	-7.89	-7.77	-7.77	-7.85	-7.85	-8.5	Pass
ILfit@15GHz (dB)	-11.06	-11.06	-11.8	-11.8	-11.44	-11.44	-11.71	-11.71	-13	Pass
IMR (dB)	-36.82	-36.82	-35.55	-35.55	-34.75	-34.75	-35.96	-35.96	-32.75	Informative
IRL (dB)	-21.55	-21.55	-20.27	-20.27	-20.16	-20.16	-20.28	-20.28	-17.89	Pass
C2D (dB)	-36.73	-33.01	-20.85	-21.45	-30.14	-28.43	-32.12	-34.93	-17	Pass
D2C (dB)	-36.68	-32.74	-20.74	-21.7	-29.65	-28.98	-32.19	-34.88	-17	Pass
IXT_DP (dB)	-45.63	-44.86	-40.5	-40.9	-41.14	-41.04	-46.26	-46.12	-35.65	Pass



Cable ID Result				
Test Item		#1 Measured	Criteria	Pass/Fail
Resistor(s) between CONFIG1 and CONFIG2 (kΩ) On Enh DP	Left	220.4	209~231kohm (DP80)	Pass
	Right	216.4		Pass

