



Test Report – Consip IT

Copper Data – 4-Connector Channel

Unshielded

U/UTP	Cat.6	✓
U/UTP	Cat.6A	✓

Shielded

S/FTP	Cat.6	✓
S/FTP	Cat.6A	✓

Altdorf, 01.02.2023



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2. Introduction

As part of the Consip Tender Lan 8, the copper components are required to comply with a 2-connector channel model (Interconnect TO).

It is required that the horizontal cable reaches a length of 90m in a 2-connector channel model (Interconnect TO) and the other minimum requirements as shown in the Chapter 3. Minimum requirements for a 2-connector channel model (Interconnect TO).

The DATWYLER IT Infra Test Report shows the high quality of DATWYLER products in which the measurements were realised in the much more demanding 4-connector channel model (Cross-Connect CP-TO) according to ISO 11801-2:2017.

Care has been taken to show that the horizontal link length exceeds the requirements of ISO 11801-2:2017 as calculated in 6.1.3 Length assumptions.

In addition, it is confirmed that the products in the demanding 4-connector channel model (Cross-Connect CP-TO) exceed the minimum requirements of the table for a 2-connector channel model (Interconnect TO) as shown in the Chapter 3. Minimum requirements for a 2-connector channel model (Interconnect TO).

3. Minimum requirements for a 2-connector channel model (Interconnect TO)

<i>Caratteristiche minime dei cavi in rame</i>					
Cavi in rame	Valori minimi richiesti				
channel	Attenuazione (Insertion loss), dB	Return loss, dB	Next, dB	PSANEXT, dB	PSAACRF, dB
Canale in cat. 6 UTP – dati caratteristici a 250MHz	35,19	8,8	36,41		
Canale in cat. 6 S/FTP – dati caratteristici a 250MHz	35,19	8,8	36,41		
Canale in cat. 6a UTP – dati caratteristici a 500MHz	48,31	6,6	28,71	51,97	25,3
Canale in cat. 6a S/FTP – dati caratteristici a 500MHz	48,31	6,6	28,71	54,45	25,3

4. Standards

ISO/IEC 11801-1:2017	Information technology – Generic cabling for customer premises – Part 1: General requirements
ISO/IEC 11801-2:2017	Information technology – Generic cabling for customer premises – Part 2: Office premises
IEC 61156-5	Multicore and symmetrical pair/quad cables for digital communications – Part 5: Symmetrical pair/quad cables with transmission characteristics up to 1 000 MHz – Horizontal floor wiring – Sectional specification
IEC 61156-6	Multicore and symmetrical pair/quad cables for digital communications – Part 6: Symmetrical pair/quad cables with transmission characteristics up to 1 000 MHz – Work area wiring – Sectional specification
EN 50288-4-2	Multi-element metallic cables used in analogue and digital communication and control - Part 4-2: Sectional specification for screened cables characterised up to 600 MHz - Work area and patch cord cables
EN 50288-5-1	Multi-element metallic cables used in analogue and digital communication and control - Part 5-1: Sectional specification for screened cables characterized up to 250 MHz - Horizontal and building backbone cables
EN 50288-5-2	Multi-element metallic cables used in analogue and digital communication and control - Part 5-2: Sectional specification for screened cables characterized up to 250 MHz - Work area and patch cord cables
EN 50288-6-1	Multi-element metallic cables used in analogue and digital communication and control Sectional specification for unscreened cables characterised up to 250 MHz. Horizontal and building backbone cables
EN 50288-6-2	Multi-element metallic cables used in analogue and digital communication and control - Part 6-2: Sectional specification for unscreened cables characterised up to 250 MHz - Work area and patch cord cables
EN 50288-10-1	Multi-element metallic cables used in analogue and digital communication and control - Part 10-1: Sectional specification for screened cables characterized up to 500 MHz - Horizontal floor and building backbone cables

EN 50288-10-2	Multi-element metallic cables used in analogue and digital communication and control - Part 10-2: Sectional specification for screened cables characterized from 1 MHz up to 500 MHz for work area, patch cord and data centre applications
EN 50288-11-1	Multi-element metallic cables used in analogue and digital communication and control - Part 11-1: Sectional specification for un-screened cables characterised up to 500 MHz - Horizontal and building backbone cables
EN 50288-11-2	Multi-element metallic cables used in analogue and digital communication and control - Part 11-2: Sectional specification for un-screened cables, characterized from 1 MHz up to 500 MHz for work area, patch cord and data centre applications
IEC 60603-7	Connectors for electronic equipment - Part 7: Detail specification for 8-way, unshielded, free and fixed connectors
IEC 60603-7-1	Connectors for electronic equipment - Part 7-1: Detail specification for 8-way, shielded, free and fixed connectors
IEC 60603-7-4	Connectors for electronic equipment - Part 7-4: Detail specification for 8-way, unshielded, free and fixed connectors, for data transmissions with frequencies up to 250 MHz
IEC 60603-7-41	Connectors for electronic equipment - Part 7-41: Detail specification for 8-way, unshielded, free and fixed connectors, for data transmissions with frequencies up to 500 MHz
IEC 60603-7-5	Connectors for electronic equipment - Part 7-5: Detail specification for 8-way, shielded, free and fixed connectors, for data transmission with frequencies up to 250 MHz
IEC 60603-7-51	Connectors for electronic equipment - Part 7-51: Detail specification for 8-way, shielded, free and fixed connectors, for data transmissions with frequencies up to 500 MHz

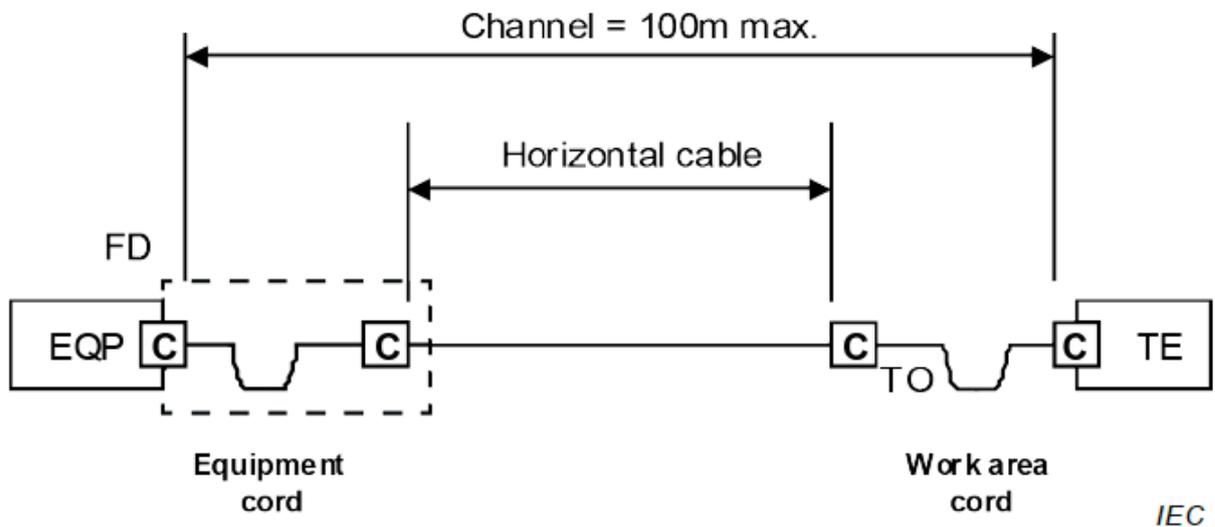
5. Measuring device

	Main device		Remote device	
	Measuring Device Versiv	Measuring Device Modul	Measuring Device Versiv	Measuring Device Modul
	Fluke DSX 5000		Fluke DSX 5000	
Serial	3382528	3408173	3360079	3396300
Software	V6.3 Build 6	V1.48	V6.3 Build 6	V1.48
	DSX-CHA004 Cat. 6A Class EA Channel Adapter		DSX-PC6A Cat. 6A Patch Cord Adapter	
Serial	3344163		3353349	
	DSX-PLA004 Cat. 6A Class EA Permanent Link Adapter		DSX-PLA004 Cat. 6A Class EA Permanent Link Adapter	
Serial	3436091		3436092	
Hardware	V6	V6	V6	V6
Calibration	08.11.2022	08.11.2022	08.11.2022	08.11.2022

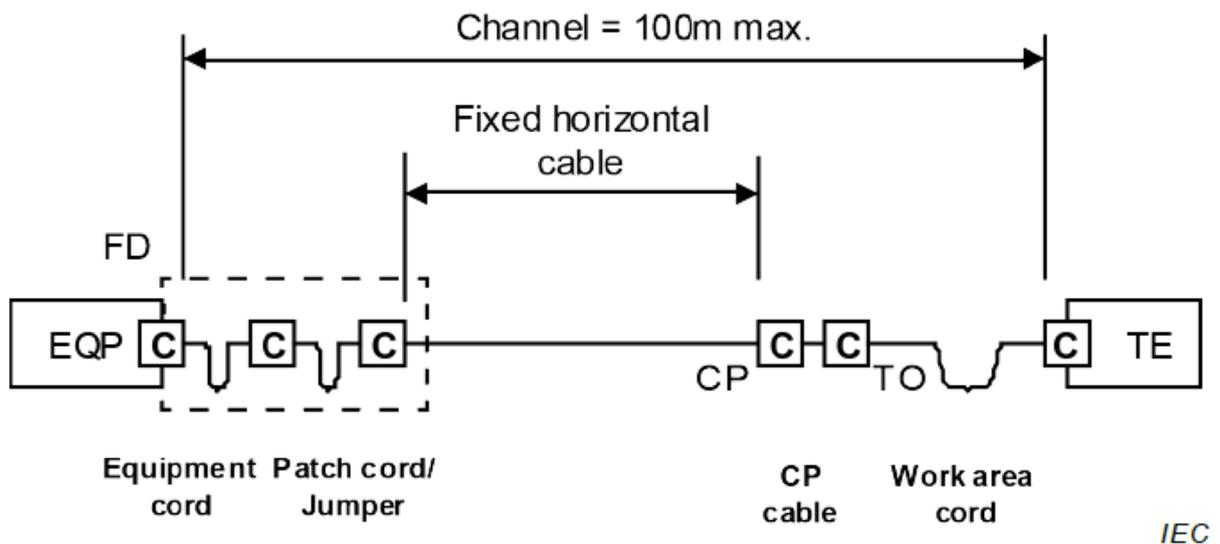
6. Measurement Setup

6.1 Set up according to ISO 11801:2017

6.1.1 Drawing Interconnect - TO – 2-Connector



6.1.2 Drawing Cross-connect - CP – TO 4-Connector



6.1.3 Length assumptions

Segment	Minimum m	Maximum m
FD-CP	15	85
CP-TO	5	-
FD-TO (no CP)	15	90
Work area cord ^a	2	5
Patch cord	2	-
Equipment cord ^b	2	5
All cords	-	10

^a If there is no CP, the minimum length of the work area cord is 1 m.
^b If there is no cross-connect, the minimum length of the equipment cord is 1 m.

6.1.4 Horizontal link length equations

Model	Figure	Implementation equation	
		Class E and E _A	Class F and F _A
Interconnect - TO	10a	$l_h = 104 - l_a \times X$	$l_h = 105 - l_a \times X$
Cross-connect - TO	10b	$l_h = 103 - l_a \times X$	$l_h = 103 - l_a \times X$
Interconnect - CP -TO	10c	$l_h = 103 - l_a \times X - l_c \times Y$	$l_h = 103 - l_a \times X - l_c \times Y$
Cross-connect - CP - TO	10d	$l_h = 102 - l_a \times X - l_c \times Y$	$l_h = 102 - l_a \times X - l_c \times Y$

l_h is the maximum length of the horizontal cable (m)
 l_a is the combined length of patch cords/jumpers and equipment cords (m)
 l_c is the length of the CP cable (m)
 X is the ratio of cord cable insertion loss (dB/m) to horizontal cable insertion loss (dB/m)
 Y is the ratio of CP cable insertion loss (dB/m) to horizontal cable insertion loss (dB/m)

For operating temperatures above 20 °C, l_b should be reduced by

- 0,2 % per °C for balanced screened cables up to 60 °C,
- 0,4 % per °C for unscreened balanced cables up to 40 °C,
- 0,6 % per °C for unscreened balanced cables between 40 °C and 60 °C.

These are default values and should be used where the actual characteristic of the cable is not known.
 Manufacturer's or supplier's information shall be consulted where the intended operating temperature exceeds 60 °C.

6.1.5 Laboratory set-up



Number	Description	Length
1	Fluke DSX 5000 Main device	
2	Equipment Cord	3 m
3	Patch Cord / Jumper	5 m
4	Test cable	Max. 85m / 15 m
5	Patchcord CP-TO	5m
6	Work area cord	2m
7	Fluke DSX 5000 Remote device	

7. Test Results

7.1 Cat.6 U/UTP Cca 4-Connector Channel



Material CH Version CU 662 4P Cat.6 Cca U/UTP			
Horizontal Cable		Article No.	Description
H1		19463100CP	CU 662 4P Data cable, U/UTP, Category 6, AWG23, Euro class Cca
Modules		Article No.	Description
M1 – M4		418070	RJ45 module KU-T 1/8 tool-less, Cat. 6, unshielded, white
Cord's		Article No.	Description
P1	Equipment Cord	309325	RJ45 Patch Cord Cat. 6 U/UTP AWG24 grey 3 m
P2	Patch Cord / Jumper	309327	RJ45 Patch Cord Cat. 6 U/UTP AWG24 grey 5 m
P3	CP-TO	309327	RJ45 Patch Cord Cat. 6 U/UTP AWG24 grey 5 m
P4	Work area cord	309323	RJ45 Patch Cord Cat. 6 U/UTP AWG24 grey 2 m

7.1.1 Measurement results

Channel ID	Length [m]	IL [dB]	RL [dB]	Next [dB]	PSANEXT [dB]	PSAACRF [dB]
Long						
2-Connector [5M PC] CU 662 90M [5M PC]	99.6	31.2	27.0	55.9		
4-Connector [3M PC]-[5M PC] CU 662 90M [5M PC]-[2M PC]	104.6	33.7	18.0	42.0		
Short						
2-Connector [2M PC] CU 662 15M [2M PC]	18.7	6.6	18.8	42.5		
4-Connector [3M PC]-[5M PC] CU 662 15M [5M PC]-[2M PC]	29.3	12.0	17.8	39.7		

7.2 Cat.6 U/UTP B2ca 4-Connector Channel

			
Material CH Version CU 662 4P Cat.6 B2ca U/UTP			
Horizontal Cable		Article No.	Description
H1		24014101BP	CU 662 4P Data cable, U/UTP, Category 6, AWG23, Euro class B2ca
Modules		Article No.	Description
M1 – M4		418070	RJ45 module KU-T 1/8 tool-less, Cat. 6, unshielded, white
Cord's		Article No.	Description
P1	Equipment Cord	309325	RJ45 Patch Cord Cat. 6 U/UTP AWG24 grey 3 m
P2	Patch Cord / Jumper	309327	RJ45 Patch Cord Cat. 6 U/UTP AWG24 grey 5 m
P3	CP-TO	309327	RJ45 Patch Cord Cat. 6 U/UTP AWG24 grey 5 m
P4	Work area cord	309323	RJ45 Patch Cord Cat. 6 U/UTP AWG24 grey 2 m

7.2.1 Measurement results

Channel ID	Length [m]	IL [dB]	RL [dB]	Next [dB]	PSANEXT [dB]	PSAACRF [dB]
Long						
2-Connector [5M PC] CU 662 90M [5M PC]	98.8	31.6	25.2	60		
4-Connector [3M PC]-[5M PC] CU 662 90M [5M PC]-[2M PC]	103.6	34.0	17.0	48.7		
Short						
2-Connector [2M PC] CU 662 15M [2M PC]	19.7	7.2	12.5	41.0		
4-Connector [3M PC]-[5M PC] CU 662 15M [5M PC]-[2M PC]	30.3	12.4	13.2	38.0		

7.3 Cat.6A U/UTP B2ca / Cca 4-Connector Channel



Material CH Version CU 692 4P Cat.6A Cca U/UTP			
Horizontal Cable		Article No.	Description
H1		19462600CL	CU 692 4P Data cable, U/UTP, Category 6A, AWG23, Euro class Cca
Modules		Article No.	Description
M1 – M4		418074	RJ45 module KU-TC Plus Cat.6A (IEC) tool-less, unshielded, white
Cord's		Article No.	Description
P1	Equipment Cord	65351200DY	RJ45 Patch Cord Cat. 6A S/FTP AWG26 grey 3 m
P2	Patch Cord / Jumper	65351600DY	RJ45 Patch Cord Cat. 6A S/FTP AWG26 grey 5 m
P3	CP-TO	65351600DY	RJ45 Patch Cord Cat. 6A S/FTP AWG26 grey 5 m
P4	Work area cord	65351000DY	RJ45 Patch Cord Cat. 6A S/FTP AWG26 grey 2 m

7.3.1 Measurement results

Channel ID	Length [m]	IL [dB]	RL [dB]	Next [dB]	PSANEXT [dB]	PSAACRF [dB]		
Long								
2-Connector [5M PC] CU 692 90M [5M PC]	100.6	46.8	24.8	47.6	These values are confirmed by the 3rd Party Certificate from the GHMT. See chapter 8.3.3 3th Party certificate by GHMT			
4-Connector [3M PC]-[5M PC] CU 692 83M [5M PC]-[2M PC]	95.2	47.4	23.6	35.0				
Short								
2-Connector [2M PC] CU 662 15M [2M PC]	18.8	10.0	13.0	35.3				
4-Connector [3M PC]-[5M PC] CU 662 15M [5M PC]-[2M PC]	28.3	16.9	12.9	34.7				

7.4 Cat.6 S/FTP B2ca / Cca 4-Connector Channel



Material CH Version CU 6060 4P Cat.6 Cca S/FTP		
Horizontal Cable	Article No.	Description
H1	18292400CL	CU 6060 Data cable, S/FTP, Category 6, AWG23, Euro class Cca
Modules	Article No.	Description
M1 – M4	418054	RJ45 module KS-TS Plus Cat.6 (IEC) tool-less, shielded
Cord's	Article No.	Description
P1	Equipment Cord 65351200DY	RJ45 Patch Cord Cat. 6A S/FTP AWG26 grey 3 m
P2	Patch Cord / Jumper 65351600DY	RJ45 Patch Cord Cat. 6A S/FTP AWG26 grey 5 m
P3	CP-TO 65351600DY	RJ45 Patch Cord Cat. 6A S/FTP AWG26 grey 5 m
P4	Work area cord 65351000DY	RJ45 Patch Cord Cat. 6A S/FTP AWG26 grey 2 m

7.4.1 Measurement results

Channel ID	Length [m]	IL [dB]	RL [dB]	Next [dB]	PSANEXT [dB]	PSAACRF [dB]
Long						
2-Connector [5M PC] CU 6060 90M [5M PC]	100.7	30.7	24.9	65.7		
4-Connector [3M PC]-[5M PC] CU 6060 90M [5M PC]-[2M PC]	104.3	32.7	23.4	42.1		
Short						
2-Connector [2M PC] CU 6060 15M [2M PC]	19.9	6.6	18.0	43.2		
4-Connector [3M PC]-[5M PC] CU 6060 15M [5M PC]-[2M PC]	30.5	11.2	20.6	41.8		

7.5 Cat.6A S/FTP B2ca / Cca 4-Connector Channel



Material CH Version CU 7060 4P Cat.6A Cca S/FTP			
Horizontal Cable		Article No.	Description
H1		18292400CL	CU 7060 Data cable, S/FTP, Category 6A, AWG23, Euro class Cca
Modules		Article No.	Description
M1 – M4		418069	RJ45 module KS-TC Plus Cat.6A (IEC) tool-less, shielded
Cord's		Article No.	Description
P1	Equipment Cord	65351200DY	RJ45 Patch Cord Cat. 6A S/FTP AWG26 grey 3 m
P2	Patch Cord / Jumper	65351600DY	RJ45 Patch Cord Cat. 6A S/FTP AWG26 grey 5 m
P3	CP-TO	65351600DY	RJ45 Patch Cord Cat. 6A S/FTP AWG26 grey 5 m
P4	Work area cord	65351000DY	RJ45 Patch Cord Cat. 6A S/FTP AWG26 grey 2 m

7.5.1 Measurement results

Channel ID	Length [m]	IL [dB]	RL [dB]	Next [dB]	PSANEXT [dB]	PSAACRF [dB]
Long						
2-Connector [5M PC] CU 7060 90M [5M PC]	99.3	43.6	23.9	44.9	Alien (exogenous) near-end crosstalk, ANEXT, is only a measurement consideration for Type III cables according to IEC 61156-5:2020. For Type I, Type Ib and Type II screened cables as defined in Table 3, ANEXT is proven by design.	
4-Connector [3M PC]-[5M PC] CU 7060 90M [5M PC]-[2M PC]	104.3	46.9	23.4	35.2		
Short						
2-Connector [2M PC] CU 7060 15M [2M PC]	19.2	9.6	15.9	39.7	The DATWYLER CU 7060 meets the requirements for a Type Ib cable.	
4-Connector [3M PC]-[5M PC] CU 7060 15M [5M PC]-[2M PC]	30.5	16.2	16.0	34.3	Table 3 and DATWYLER Measuring see chapter 8.5.3.2 DATWYLER Coupling Attenuation test results.	

8. Appendix

8.1 Test Report Cat.6 U/UTP Cca

8.1.1 Short – Length



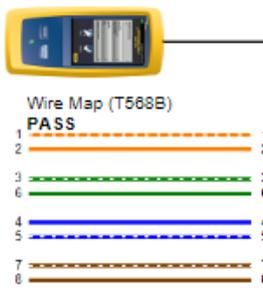
Cable ID: CH [2M PC]-CU662 CCA 15M-[2M PC] 19M **Test Summary: PASS**

Test Limit: ISO11801 Channel Class E (+All) Main: Versiv Remote: Versiv
 Limits Version: V7.7 S/N: 3408173 S/N: 3408084
 Date / Time: 01/24/2023 08:35:34 AM Software Version: V6.8 Build 6 Software Version: V6.8 Build 6
 Operator: Amir Ajvazi Calibration Date: 11/08/2022 Calibration Date: 11/08/2022
 Headroom 9.3 dB (NEXT 3,6-4,5) Adapter: DSX-5000 (DSX-CHA004) Adapter: DSX-5000R (DSX-CHA004)
 Cable Type: DATWYLER CU 662 S/N: 3344163 S/N: 3353349
 NVP: 67.0%

Length (m), Limit 100.0	[Pair 7,8]	18.7
Prop. Delay (ns), Limit 555	[Pair 3,6]	97
Delay Skew (ns), Limit 50	[Pair 3,6]	4
Resistance (ohms), Limit 25.00	[Pair 4,5]	3.07
Resist. Unbal. (ohms), Limit 0.200	[Pair 4,5]	0.035
Resist. P2P Unbal. (ohms), Limit 0.200	[Pair 4,5-7,8]	0.034
Insertion Loss Margin (dB)	[Pair 4,5]	29.1
Frequency (MHz)	[Pair 4,5]	247.5
Limit (dB)	[Pair 4,5]	35.7

Wire Map (T568B)

PASS



18.7 m



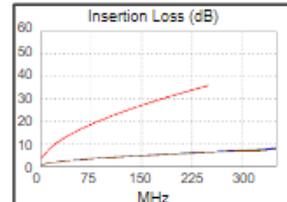
	Worst Case Margin		Worst Case Value	
PASS	MAIN	SR	MAIN	SR
Worst Pair	3,6-4,5	3,6-4,5	1,2-4,5	3,6-4,5
NEXT (dB)	10.6	9.3	11.1	9.3
Freq. (MHz)	210.0	248.5	245.5	248.5
Limit (dB)	34.4	33.2	33.3	33.2
Worst Pair	3,6	4,5	3,6	4,5
PS NEXT (dB)	10.7	11.4	10.7	11.4
Freq. (MHz)	224.5	248.5	224.5	248.5
Limit (dB)	31.0	30.2	31.0	30.2

	MAIN		SR	
PASS	MAIN	SR	MAIN	SR
Worst Pair	3,6-4,5	3,6-4,5	3,6-4,5	4,5-3,6
ACR-F (dB)	12.3	12.3	14.3	14.3
Freq. (MHz)	2.0	2.4	250.0	250.0
Limit (dB)	57.2	55.7	15.3	15.3
Worst Pair	4,5	4,5	4,5	4,5
PS ACR-F (dB)	13.6	13.5	15.6	16.2
Freq. (MHz)	2.9	2.4	250.0	250.0
Limit (dB)	51.1	52.7	12.3	12.3

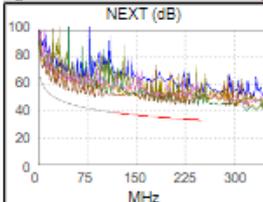
	MAIN		SR	
PASS	MAIN	SR	MAIN	SR
Worst Pair	3,6-4,5	3,6-4,5	1,2-4,5	3,6-4,5
ACR-N (dB)	16.7	17.3	40.4	38.7
Freq. (MHz)	5.9	6.0	245.5	248.5
Limit (dB)	55.3	55.1	-2.3	-2.7
Worst Pair	3,6	3,6	3,6	4,5
PS ACR-N (dB)	17.3	18.2	38.8	40.7
Freq. (MHz)	5.6	6.0	224.5	248.5
Limit (dB)	53.2	52.6	-2.9	-5.6

	MAIN		SR	
PASS	MAIN	SR	MAIN	SR
Worst Pair	7,8	7,8	4,5	4,5
RL (dB)	7.4	7.2	8.0	7.5
Freq. (MHz)	96.3	109.0	247.0	247.0
Limit (dB)	12.2	11.6	8.1	8.1

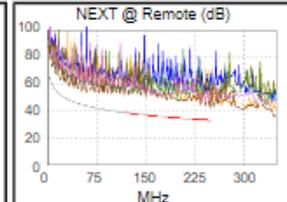
Insertion Loss (dB)



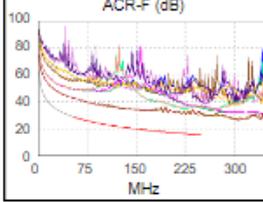
NEXT (dB)



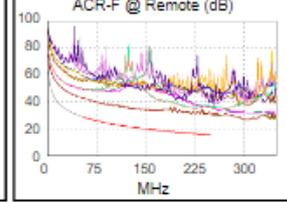
NEXT @ Remote (dB)



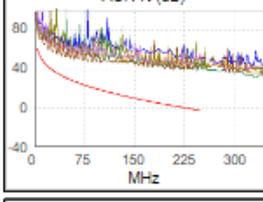
ACR-F (dB)



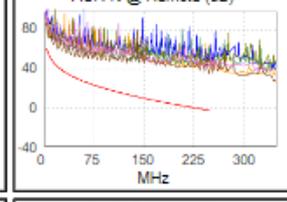
ACR-F @ Remote (dB)



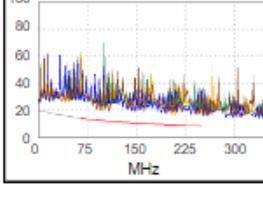
ACR-N (dB)



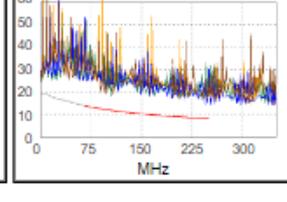
ACR-N @ Remote (dB)



RL (dB)



RL @ Remote (dB)



Compliant Network Standards:
 10BASE-T 100BASE-TX 100BASE-T4
 1000BASE-T 2.5GBASE-T 5GBASE-T
 ATM-25 ATM-51 ATM-155
 100VG-AnyLan TR-4 TR-18 Active
 TR-18 Passive

LinkWare™ PC Version 10.8.1



Cable ID: CH [3M PC]-[5M PC]-CU662 CCA 15M-[5M PC]-[2M PC] 30M

Test Summary: **PASS**

Test Limit: ISO11801 Channel Class E (+All)

Main: Versiv

Remote: Versiv

Limits Version: V7.7

S/N: 3408173

S/N: 3408084

Date / Time: 01/24/2023 08:41:45 AM

Software Version: V6.8 Build 6

Software Version: V6.8 Build 6

Operator: Amir Ajvazi

Calibration Date: 11/08/2022

Calibration Date: 11/08/2022

Headroom 1.2 dB (NEXT 3,6-4,5)

Adapter: DSX-5000 (DSX-CHA004)

Adapter: DSX-5000R (DSX-CHA004)

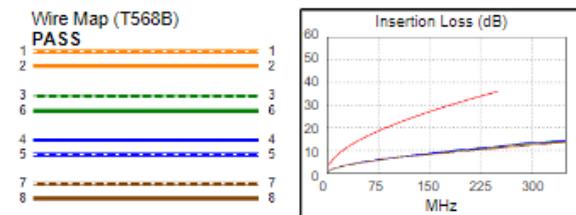
Cable Type: DATWYLER CU 662

S/N: 3344163

S/N: 3353349

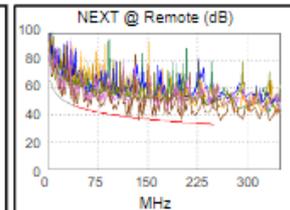
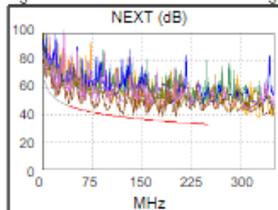
NVP: 67.0%

Length (m), Limit 100.0	[Pair 7,8]	29.3
Prop. Delay (ns), Limit 555	[Pair 3,6]	154
Delay Skew (ns), Limit 50	[Pair 3,6]	8
Resistance (ohms), Limit 25.00	[Pair 3,6]	5.17
Resist. Unbal. (ohms), Limit 0.200	[Pair 4,5]	0.060
Resist. P2P Unbal. (ohms), Limit 0.200	[Pair 3,6-7,8]	0.068
Insertion Loss Margin (dB)	[Pair 3,6]	23.6
Frequency (MHz)	[Pair 3,6]	245.5
Limit (dB)	[Pair 3,6]	35.6

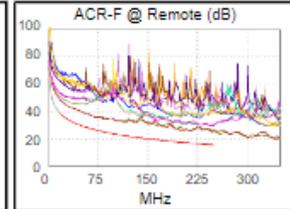
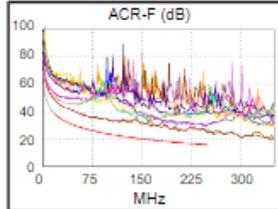


Worst Case Margin Worst Case Value

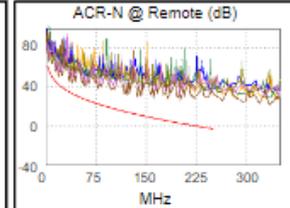
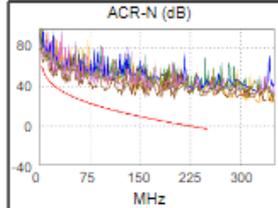
PASS	MAIN	SR	MAIN	SR
Worst Pair	3,6-4,5	3,6-4,5	3,6-4,5	3,6-4,5
NEXT (dB)	1.9	1.2	5.0	2.3
Freq. (MHz)	39.5	122.0	201.5	201.5
Limit (dB)	46.7	38.5	34.7	34.7
Worst Pair	4,5	4,5	3,8	3,8
PS NEXT (dB)	4.0	3.1	6.1	4.9
Freq. (MHz)	39.8	39.5	177.5	201.5
Limit (dB)	43.9	44.0	32.8	31.8



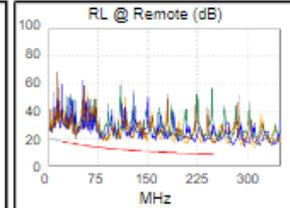
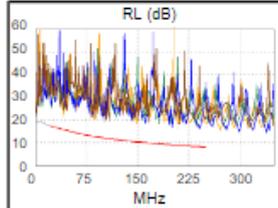
PASS	MAIN	SR	MAIN	SR
Worst Pair	3,6-4,5	3,6-4,5	4,5-3,8	3,6-4,5
ACR-F (dB)	7.8	7.9	9.2	9.4
Freq. (MHz)	200.5	200.5	247.5	247.5
Limit (dB)	17.2	17.2	15.4	15.4
Worst Pair	4,5	4,5	4,5	4,5
PS ACR-F (dB)	9.5	9.7	9.5	11.1
Freq. (MHz)	200.5	200.5	200.5	247.5
Limit (dB)	14.2	14.2	14.2	12.4



PASS	MAIN	SR	MAIN	SR
Worst Pair	3,6-4,5	3,6-4,5	3,6-4,5	3,6-4,5
ACR-N (dB)	7.9	8.0	26.1	23.4
Freq. (MHz)	4.3	4.1	201.5	201.5
Limit (dB)	58.3	58.6	2.9	2.9
Worst Pair	3,8	4,5	3,8	3,8
PS ACR-N (dB)	9.4	9.5	33.4	26.2
Freq. (MHz)	4.1	4.1	244.5	201.5
Limit (dB)	56.1	56.1	-5.2	-0.1



PASS	MAIN	SR	MAIN	SR
Worst Pair	1,2	1,2	4,5	1,2
RL (dB)	6.5	4.9	8.0	6.8
Freq. (MHz)	41.0	82.0	240.5	209.5
Limit (dB)	15.9	12.9	8.2	8.8



Compliant Network Standards:
 10BASE-T 100BASE-TX 100BASE-T4
 100BASE-T 2.5GBASE-T 5GBASE-T
 ATM-25 ATM-51 ATM-155
 100VG-AnyLan TR-4 TR-16 Active
 TR-16 Passive

LinkWare™ PC Version 10.8.1

Project: PROJEKT CONSIP 2023
 Site: CU 662 U/UTP Cat.6 Cca
 Consip - 4-Connector.flw

Building: Results
 Page 11



8.1.2 Long - Length



Cable ID: CH [5M PC]-CU662 CCA 90M-[5M PC] 100M

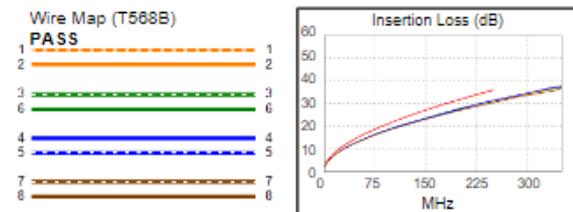
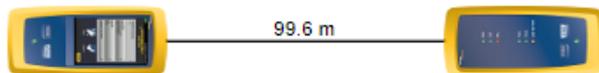
Test Limit: ISO11801 Channel Class E (+All)
 Limits Version: V7.7
 Date / Time: 01/24/2023 08:37:41 AM
 Operator: Amir Ajvazi
 Headroom 9.6 dB (NEXT 3,6-7,8)
 Cable Type: DATWYLER CU 662
 NVP: 67.0%

Main: Versiv
 S/N: 3408173
 Software Version: V6.8 Build 6
 Calibration Date: 11/08/2022
 Adapter: DSX-5000 (DSX-CHA004)
 S/N: 3344163

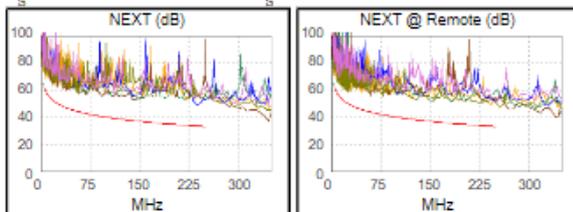
Test Summary: PASS

Remote: Versiv
 S/N: 3408084
 Software Version: V6.8 Build 6
 Calibration Date: 11/08/2022
 Adapter: DSX-5000R (DSX-CHA004)
 S/N: 3353349

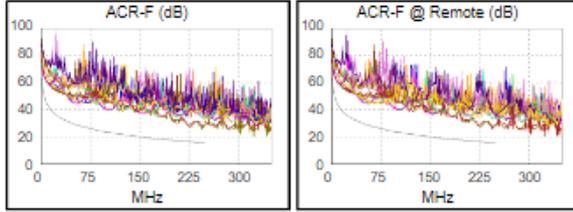
Length (m), Limit 100.0	[Pair 7,8]	99.6
Prop. Delay (ns), Limit 555	[Pair 4,5]	522
Delay Skew (ns), Limit 50	[Pair 4,5]	26
Resistance (ohms), Limit 25.00	[Pair 4,5]	15.46
Resist. Unbal. (ohms), Limit 0.480	[Pair 4,5]	0.061
Resist. P2P Unbal. (ohms), Limit 0.630	[Pair 3,6-7,8]	0.145
Insertion Loss Margin (dB)	[Pair 1,2]	4.6
Frequency (MHz)	[Pair 1,2]	248.5
Limit (dB)	[Pair 1,2]	35.8



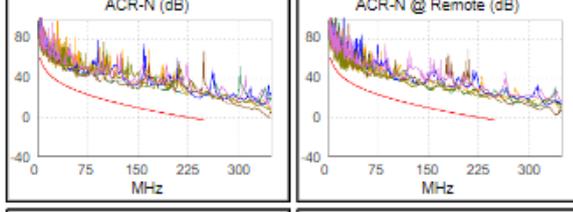
	Worst Case Margin		Worst Case Value	
	MAIN	SR	MAIN	SR
PASS				
Worst Pair	3,6-7,8	3,6-7,8	1,2-7,8	1,2-3,6
NEXT (dB)	11.9	9.6	16.0	15.6
Freq. (MHz)	57.3	17.5	238.5	244.0
Limit (dB)	44.0	52.6	33.5	33.3
Worst Pair	3,6	3,6	1,2	3,6
PS NEXT (dB)	12.5	11.3	17.5	16.2
Freq. (MHz)	6.9	17.5	243.0	244.5
Limit (dB)	56.7	49.9	30.4	30.3



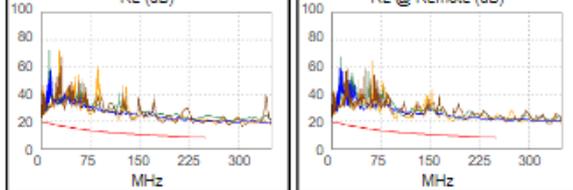
	Worst Case Margin		Worst Case Value	
	MAIN	SR	MAIN	SR
PASS				
Worst Pair	3,6-4,5	4,5-3,6	3,6-4,5	4,5-3,6
ACR-F (dB)	10.3	10.5	10.3	10.5
Freq. (MHz)	244.5	244.5	244.5	244.5
Limit (dB)	15.5	15.5	15.5	15.5
Worst Pair	4,5	3,6	4,5	3,6
PS ACR-F (dB)	12.4	13.1	12.4	13.3
Freq. (MHz)	244.5	244.5	244.5	249.0
Limit (dB)	12.5	12.5	12.5	12.3



	Worst Case Margin		Worst Case Value	
	MAIN	SR	MAIN	SR
PASS				
Worst Pair	1,2-3,6	3,6-7,8	1,2-7,8	1,2-3,6
ACR-N (dB)	12.4	10.7	21.5	20.4
Freq. (MHz)	3.0	4.1	238.5	244.0
Limit (dB)	61.0	58.6	-1.5	-2.2
Worst Pair	3,6	3,6	1,2	3,6
PS ACR-N (dB)	11.3	9.8	22.3	21.2
Freq. (MHz)	4.0	4.1	243.0	250.0
Limit (dB)	56.4	56.1	-5.0	-5.8



	Worst Case Margin		Worst Case Value	
	MAIN	SR	MAIN	SR
PASS				
Worst Pair	7,8	7,8	7,8	1,2
RL (dB)	8.0	8.2	10.1	9.6
Freq. (MHz)	3.3	3.3	248.0	183.5
Limit (dB)	19.0	19.0	8.1	9.4



Compliant Network Standards:
 10BASE-T 100BASE-TX 100BASE-T4
 1000BASE-T 2.5GBASE-T 5GBASE-T
 ATM-25 ATM-51 ATM-155
 100VG-AnyLan TR-4 TR-16 Active
 TR-16 Passive

LinkWare™ PC Version 10.8.1

Project: PROJEKT CONSIP 2023
 Site: CU 662 U/UTP Cat.6 Cca
 Consip - 4-Connector.flw

Building: Results
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Cable ID: CH [3M PC]-[5M PC]-CU662 CCA 90M-[5M PC]-[2M PC] 104M

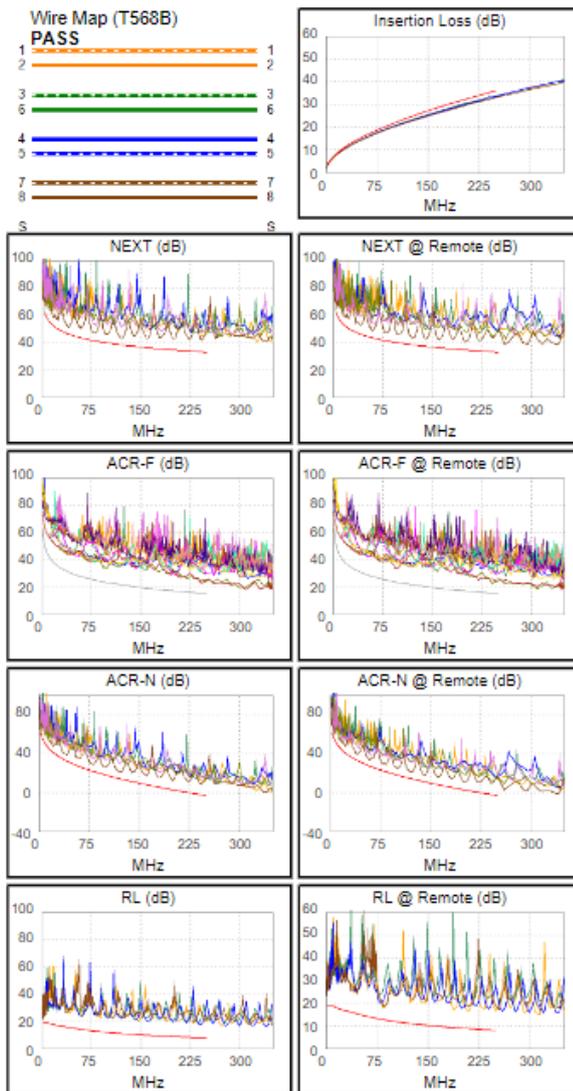
Test Summary: **PASS**

Test Limit: ISO11801 Channel Class E (+All)
 Limits Version: V7.7
 Date / Time: 01/24/2023 08:43:37 AM
 Operator: Amir Ajvazi
Headroom 4.5 dB (NEXT 3,6-4,5)
 Cable Type: DATWYLER CU 662
 NVP: 67.0%

Main: Versiv
 S/N: 3408173
 Software Version: V6.8 Build 6
 Calibration Date: 11/08/2022
 Adapter: DSX-5000 (DSX-CHA004)
 S/N: 3344163

Remote: Versiv
 S/N: 3408084
 Software Version: V6.8 Build 6
 Calibration Date: 11/08/2022
 Adapter: DSX-5000R (DSX-CHA004)
 S/N: 3353349

Length (m), Limit 100.0	[Pair 7,8]	104.6
Prop. Delay (ns), Limit 555	[Pair 4,5]	547
Delay Skew (ns), Limit 50	[Pair 4,5]	26
Resistance (ohms), Limit 25.00	[Pair 3,6]	16.45
Resist. Unbal. (ohms), Limit 0.490	[Pair 4,5]	0.072
Resist. P2P Unbal. (ohms), Limit 0.560	[Pair 3,6-7,8]	0.165
Insertion Loss Margin (dB)	[Pair 1,2]	2.2
Frequency (MHz)	[Pair 1,2]	250.0
Limit (dB)	[Pair 1,2]	35.9



Worst Case Margin Worst Case Value

PASS	MAIN	SR	MAIN	SR
Worst Pair	3,6-4,5	3,6-4,5	3,6-4,5	3,6-4,5
NEXT (dB)	4.7	4.5	8.3	5.9
Freq. (MHz)	121.5	139.0	242.0	200.0
Limit (dB)	38.5	37.5	33.4	34.8
Worst Pair	4,5	4,5	3,6	3,6
PS NEXT (dB)	7.0	6.5	9.5	8.0
Freq. (MHz)	121.5	57.8	243.0	200.0
Limit (dB)	35.6	41.2	30.4	31.9

PASS	MAIN	SR	MAIN	SR
Worst Pair	4,5-3,6	3,6-4,5	4,5-3,6	3,6-4,5
ACR-F (dB)	6.3	6.3	6.3	6.3
Freq. (MHz)	243.0	243.0	243.0	243.0
Limit (dB)	15.5	15.5	15.5	15.5
Worst Pair	3,6	4,5	3,6	4,5
PS ACR-F (dB)	9.3	8.8	9.3	8.8
Freq. (MHz)	243.0	243.0	243.0	243.0
Limit (dB)	12.5	12.5	12.5	12.5

PASS	MAIN	SR	MAIN	SR
Worst Pair	3,6-4,5	3,6-4,5	3,6-4,5	3,6-4,5
ACR-N (dB)	5.0	5.6	10.3	11.4
Freq. (MHz)	3.9	3.9	242.0	241.0
Limit (dB)	59.1	59.1	-1.9	-1.8
Worst Pair	3,6	3,6	3,6	3,6
PS ACR-N (dB)	6.4	7.0	11.6	12.7
Freq. (MHz)	3.9	3.9	243.0	241.0
Limit (dB)	56.6	56.6	-5.0	-4.8

PASS	MAIN	SR	MAIN	SR
Worst Pair	7,8	1,2	4,5	1,2
RL (dB)	7.3	5.3	9.3	7.6
Freq. (MHz)	3.1	85.3	239.0	207.5
Limit (dB)	19.0	12.7	8.2	8.8

Compliant Network Standards:
 10BASE-T 100BASE-TX 100BASE-T4
 1000BASE-T 2.5GBASE-T 5GBASE-T
 ATM-25 ATM-51 ATM-155
 100VG-AnyLan TR-4 TR-16 Active
 TR-16 Passive

LinkWare™ PC Version 10.8.1

Project: PROJEKT CONSIP 2023
 Site: CU 662 U/UTP Cat.6 Cca
 Consip - 4-Connector.flw

Building: Results
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8.2 Test Report Cat.6 U/UTP B2ca

8.2.1 Short - Length



Cable ID: CH [2M PC]-CU662 B2CA 15M-[2M PC] 19M

Test Limit: ISO11801 Channel Class E (+All)

Limits Version: V7.7

Date / Time: 01/10/2023 01:53:27 PM

Operator: Amir Ajvazi

Headroom 6.2 dB (NEXT 3,6-7,8)

Cable Type: DATWYLER CU 662

NVP: 67.0%

Main: Versiv

S/N: 3408173

Software Version: V6.8 Build 6

Calibration Date: 11/08/2022

Adapter: DSX-5000 (DSX-CHA004)

S/N: 3344163

Test Summary: PASS

Remote: Versiv

S/N: 3408084

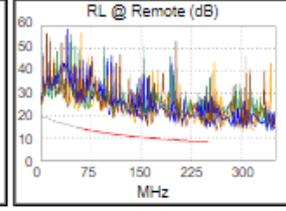
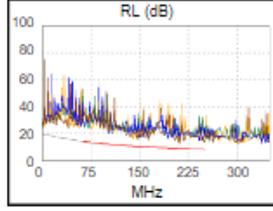
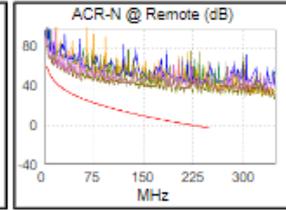
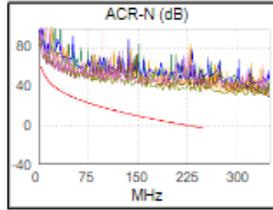
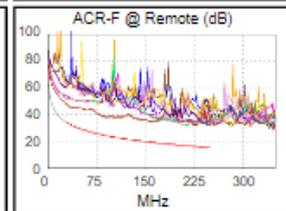
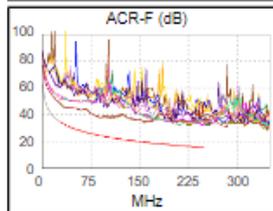
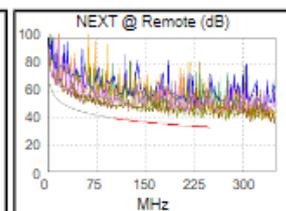
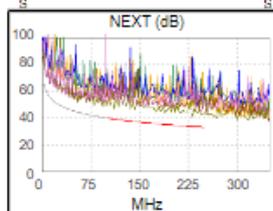
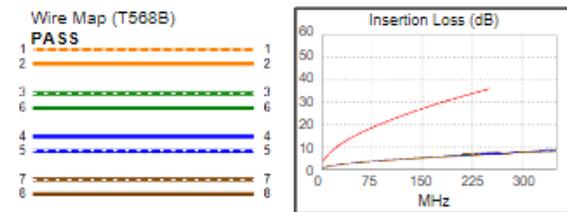
Software Version: V6.8 Build 6

Calibration Date: 11/08/2022

Adapter: DSX-5000R (DSX-CHA004)

S/N: 3353349

Length (m), Limit 100.0	[Pair 7,8]	19.7
Prop. Delay (ns), Limit 555	[Pair 4,5]	103
Delay Skew (ns), Limit 50	[Pair 3,6]	5
Resistance (ohms), Limit 25.00	[Pair 4,5]	3.21
Resist. Unbal. (ohms), Limit 0.200	[Pair 4,5]	0.024
Resist. P2P Unbal. (ohms), Limit 0.200	[Pair 4,5-7,8]	0.039
Insertion Loss Margin (dB)	[Pair 4,5]	28.6
Frequency (MHz)	[Pair 4,5]	248.0
Limit (dB)	[Pair 4,5]	35.8



Worst Case Margin Worst Case Value

PASS	MAIN	SR	MAIN	SR
Worst Pair	3,6-7,8	3,6-7,8	3,6-7,8	3,6-7,8
NEXT (dB)	7.7	6.2	8.5	6.7
Freq. (MHz)	188.0	199.0	250.0	237.0
Limit (dB)	35.2	34.8	33.1	33.5
Worst Pair	3,6	3,6	3,6	3,6
PS NEXT (dB)	9.0	7.0	10.1	7.6
Freq. (MHz)	187.5	193.0	250.0	250.0
Limit (dB)	32.3	32.1	30.2	30.2

PASS	MAIN	SR	MAIN	SR
Worst Pair	3,6-4,5	4,5-3,6	3,6-4,5	4,5-3,6
ACR-F (dB)	12.6	12.7	15.2	15.1
Freq. (MHz)	33.5	34.3	228.5	228.5
Limit (dB)	32.8	32.6	16.1	16.1
Worst Pair	4,5	4,5	4,5	4,5
PS ACR-F (dB)	14.0	14.1	14.8	15.0
Freq. (MHz)	33.5	33.5	228.5	207.0
Limit (dB)	29.8	29.8	13.1	13.9

PASS	MAIN	SR	MAIN	SR
Worst Pair	3,6-7,8	3,6-7,8	3,6-7,8	3,6-7,8
ACR-N (dB)	14.3	14.6	37.4	35.4
Freq. (MHz)	5.6	5.3	250.0	237.0
Limit (dB)	55.7	56.4	-2.8	-1.4
Worst Pair	3,6	3,6	3,6	3,6
PS ACR-N (dB)	14.3	14.1	39.2	36.7
Freq. (MHz)	5.6	5.1	250.0	250.0
Limit (dB)	53.2	54.1	-5.8	-5.8

PASS	MAIN	SR	MAIN	SR
Worst Pair	7,8	7,8	7,8	7,8
RL (dB)	3.8	5.5	3.8	5.7
Freq. (MHz)	211.5	159.0	211.5	212.0
Limit (dB)	8.7	10.0	8.7	8.7

Compliant Network Standards:
 10BASE-T 100BASE-TX 100BASE-T4
 100BASE-T 2.5GBASE-T 5GBASE-T
 ATM-25 ATM-51 ATM-155
 100VG-AnyLan TR-4 TR-16 Active
 TR-16 Passive

LinkWare™ PC Version 10.8.1

Project: PROJEKT CONSIP 2023
 Site: CU 662 U/UTP Cat.6 B2ca
 Consip - 4-Connector.flw

Building: Results
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Cable ID: CH [3M PC]-[5M PC]-CU662 B2CA 15M-[5M PC]-[2M PC] 30M

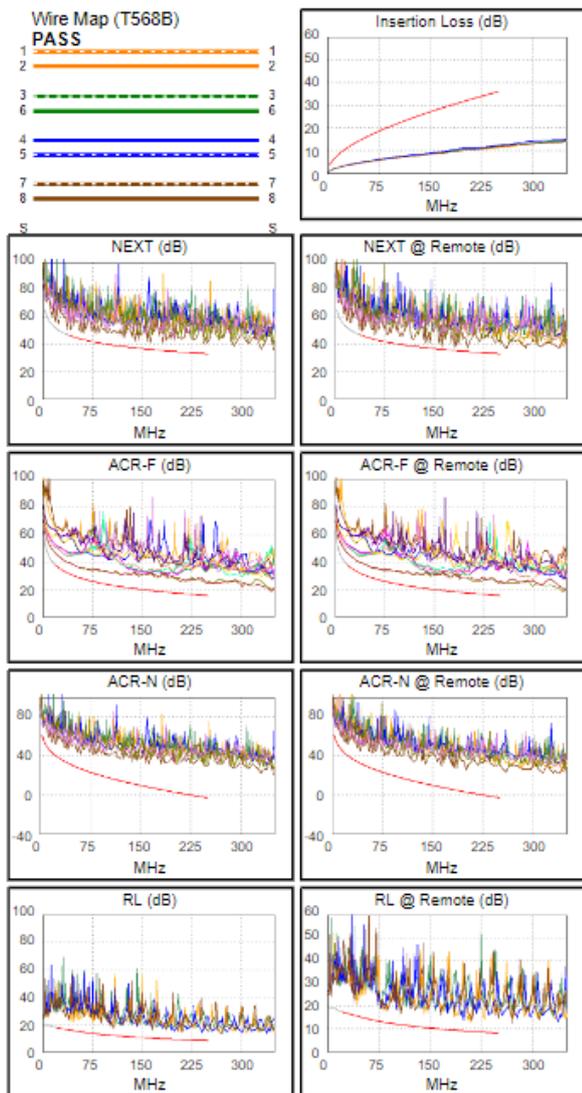
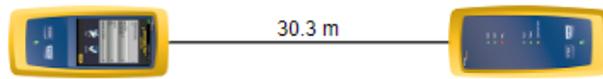
Test Summary: **PASS**

Test Limit: ISO11801 Channel Class E (+All)
 Limits Version: V7.7
 Date / Time: 01/10/2023 02:53:07 PM
 Operator: Amir Ajvazi
 Headroom 2.5 dB (NEXT 3,6-4,5)
 Cable Type: DATWYLER CU 662
 NVP: 67.0%

Main: Versiv
 S/N: 3408173
 Software Version: V6.8 Build 6
 Calibration Date: 11/08/2022
 Adapter: DSX-5000 (DSX-CHA004)
 S/N: 3353349

Remote: Versiv
 S/N: 3408084
 Software Version: V6.8 Build 6
 Calibration Date: 11/08/2022
 Adapter: DSX-5000R (DSX-CHA004)
 S/N: 3344163

Length (m), Limit 100.0	[Pair 7,8]	30.3
Prop. Delay (ns), Limit 555	[Pair 3,6]	160
Delay Skew (ns), Limit 50	[Pair 3,6]	9
Resistance (ohms), Limit 25.00	[Pair 4,5]	5.25
Resist. Unbal. (ohms), Limit 0.200	[Pair 4,5]	0.053
Resist. P2P Unbal. (ohms), Limit 0.200	[Pair 4,5-7,8]	0.071
Insertion Loss Margin (dB)	[Pair 4,5]	22.8
Frequency (MHz)	[Pair 4,5]	241.0
Limit (dB)	[Pair 4,5]	35.2



Worst Case Margin Worst Case Value

PASS	MAIN	SR	MAIN	SR
Worst Pair	3,6-4,5	3,6-4,5	3,6-4,5	3,6-4,5
NEXT (dB)	4.5	2.5	7.9	2.7
Freq. (MHz)	60.8	181.0	247.5	200.0
Limit (dB)	43.6	35.5	33.2	34.8
Worst Pair	4,5	3,6	3,6	3,6
PS NEXT (dB)	6.1	4.5	8.8	5.4
Freq. (MHz)	61.0	120.5	247.5	200.5
Limit (dB)	40.8	35.7	30.2	31.8

PASS	MAIN	SR	MAIN	SR
Worst Pair	4,5-3,6	3,6-4,5	4,5-3,6	4,5-3,6
ACR-F (dB)	7.1	7.0	9.1	9.1
Freq. (MHz)	56.3	56.3	246.5	247.0
Limit (dB)	28.3	28.3	15.4	15.4
Worst Pair	4,5	4,5	3,6	3,6
PS ACR-F (dB)	8.9	8.6	11.3	11.5
Freq. (MHz)	35.5	37.0	246.5	247.0
Limit (dB)	29.3	28.9	12.4	12.4

PASS	MAIN	SR	MAIN	SR
Worst Pair	3,6-4,5	3,6-4,5	3,6-4,5	3,6-4,5
ACR-N (dB)	11.1	11.1	31.6	23.2
Freq. (MHz)	18.3	18.1	247.5	200.0
Limit (dB)	43.4	43.5	-2.5	3.1
Worst Pair	4,5	4,5	3,6	4,5
PS ACR-N (dB)	12.5	12.1	32.5	26.2
Freq. (MHz)	3.9	4.8	247.5	200.0
Limit (dB)	56.6	54.8	-5.5	0.1

PASS	MAIN	SR	MAIN	SR
Worst Pair	1,2	1,2	4,5	1,2
RL (dB)	5.7	4.4	5.9	4.4
Freq. (MHz)	204.5	209.5	241.0	209.5
Limit (dB)	8.9	8.8	8.2	8.8

Compliant Network Standards:
 10BASE-T 100BASE-TX 100BASE-T4
 1000BASE-T 2.5GBASE-T 5GBASE-T
 ATM-25 ATM-51 ATM-155
 100VG-AnyLan TR-4 TR-18 Active
 TR-18 Passive

LinkWare™ PC Version 10.8.1

Project: PROJEKT CONSIP 2023
 Site: CU 662 U/UTP Cat.6 B2ca
 Consip - 4-Connector.flw

Building: Results
 Page 11



8.2.2 Long - Length



Cable ID: CH [5M PC]-CU662 B2CA 90M-[5M PC] 100M

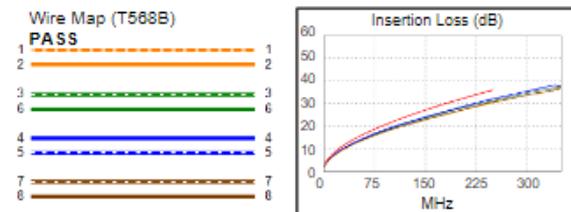
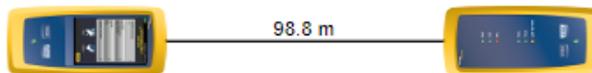
Test Limit: ISO11801 Channel Class E (+All)
 Limits Version: V7.7
 Date / Time: 01/10/2023 01:55:11 PM
 Operator: Amir Ajvazi
 Headroom 9.2 dB (NEXT 3,6-7,8)
 Cable Type: DATWYLER CU 662
 NVP: 67.0%

Main: Versiv
 S/N: 3408173
 Software Version: V6.8 Build 6
 Calibration Date: 11/08/2022
 Adapter: DSX-5000 (DSX-CHA004)
 S/N: 3344163

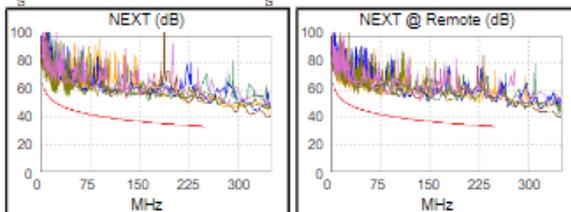
Test Summary: PASS

Remote: Versiv
 S/N: 3408084
 Software Version: V6.8 Build 6
 Calibration Date: 11/08/2022
 Adapter: DSX-5000R (DSX-CHA004)
 S/N: 3353349

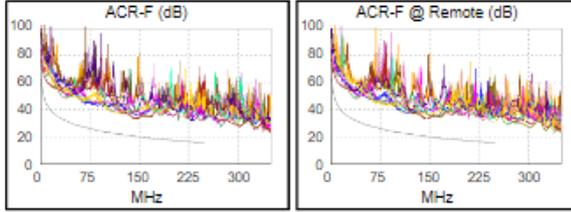
Length (m), Limit 100.0	[Pair 7,8]	98.8
Prop. Delay (ns), Limit 555	[Pair 4,5]	522
Delay Skew (ns), Limit 50	[Pair 4,5]	30
Resistance (ohms), Limit 25.00	[Pair 4,5]	15.32
Resist. Unbal. (ohms), Limit 0.440	[Pair 7,8]	0.074
Resist. P2P Unbal. (ohms), Limit 0.630	[Pair 4,5-7,8]	0.172
Insertion Loss Margin (dB)	[Pair 4,5]	4.3
Frequency (MHz)	[Pair 4,5]	250.0
Limit (dB)	[Pair 4,5]	35.9



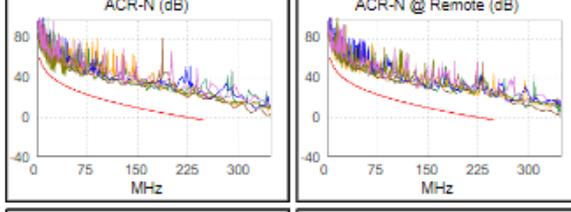
	Worst Case Margin		Worst Case Value	
	MAIN	SR	MAIN	SR
PASS				
Worst Pair	3,6-7,8	3,6-7,8	3,6-4,5	1,2-3,6
NEXT (dB)	9.2	10.9	16.2	16.5
Freq. (MHz)	22.4	9.3	225.0	220.0
Limit (dB)	50.8	57.1	33.9	34.1
Worst Pair	3,6	3,6	3,6	3,6
PS NEXT (dB)	10.4	11.4	16.4	16.8
Freq. (MHz)	22.4	9.3	223.5	219.5
Limit (dB)	48.2	54.6	31.0	31.1



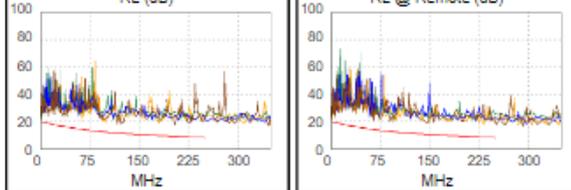
	Worst Case Margin		Worst Case Value	
	MAIN	SR	MAIN	SR
PASS				
Worst Pair	4,5-3,6	3,6-4,5	7,8-3,6	7,8-4,5
ACR-F (dB)	12.7	12.5	15.7	15.8
Freq. (MHz)	143.5	143.5	230.0	250.0
Limit (dB)	20.1	20.1	16.0	15.3
Worst Pair	4,5	4,5	7,8	4,5
PS ACR-F (dB)	13.9	13.7	16.7	16.9
Freq. (MHz)	148.0	143.5	250.0	243.5
Limit (dB)	16.9	17.1	12.3	12.5



	Worst Case Margin		Worst Case Value	
	MAIN	SR	MAIN	SR
PASS				
Worst Pair	3,6-7,8	3,6-7,8	3,6-4,5	1,2-4,5
ACR-N (dB)	10.5	11.8	21.7	23.2
Freq. (MHz)	22.4	9.3	248.5	248.0
Limit (dB)	41.0	50.8	-2.7	-2.6
Worst Pair	3,6	3,6	3,6	4,5
PS ACR-N (dB)	11.6	12.0	21.9	22.5
Freq. (MHz)	22.4	6.1	247.0	248.0
Limit (dB)	38.3	52.4	-5.4	-5.6



	Worst Case Margin		Worst Case Value	
	MAIN	SR	MAIN	SR
PASS				
Worst Pair	7,8	7,8	7,8	1,2
RL (dB)	6.7	6.2	9.0	9.7
Freq. (MHz)	8.4	5.4	204.5	232.5
Limit (dB)	19.0	19.0	8.9	8.3



Compliant Network Standards:
 10BASE-T 100BASE-TX 100BASE-T4
 1000BASE-T 2.5GBASE-T 5GBASE-T
 ATM-25 ATM-51 ATM-155
 100VG-AnyLan TR-4 TR-16 Active
 TR-16 Passive

LinkWare™ PC Version 10.8.1

Project: PROJEKT CONSIP 2023
 Site: CU 662 U/UTP Cat.6 B2ca
 Consip - 4-Connector.flw

Building: Results
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Cable ID: CH [3M PC]-[5M PC]-CU662 B2CA 90M-[5M PC]-[2M PC] 104M

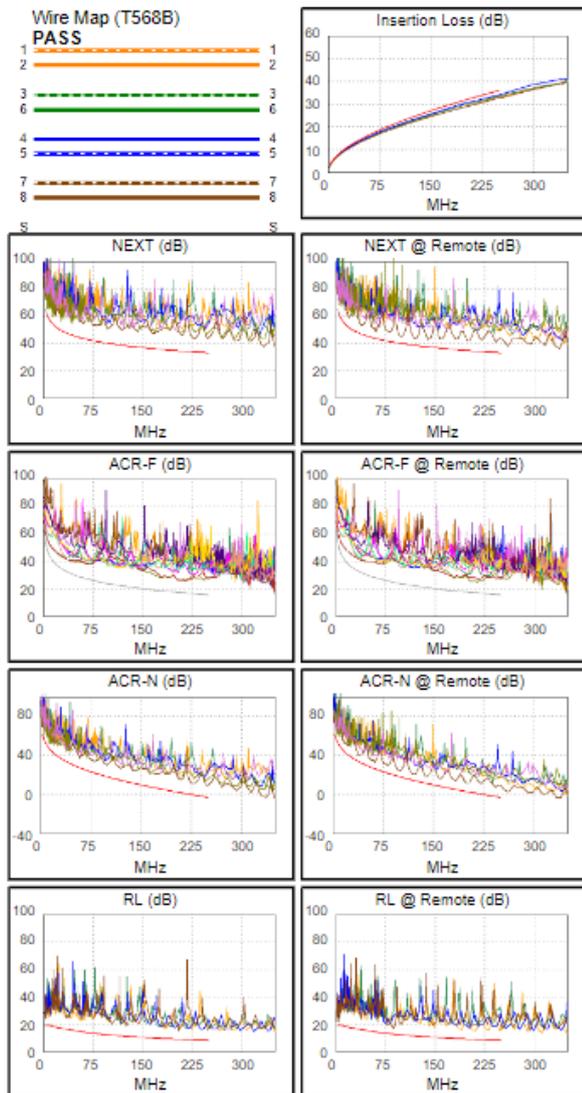
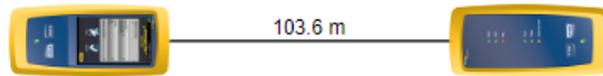
Test Summary: **PASS**

Test Limit: ISO11801 Channel Class E (+All)
 Limits Version: V7.7
 Date / Time: 01/10/2023 02:56:16 PM
 Operator: Amir Ajvazi
 Headroom 5.0 dB (NEXT 3,6-4,5)
 Cable Type: DATWYLER CU 662
 NVP: 67.0%

Main: Versiv
 S/N: 3408173
 Software Version: V6.8 Build 6
 Calibration Date: 11/08/2022
 Adapter: DSX-5000 (DSX-CHA004)
 S/N: 3353349

Remote: Versiv
 S/N: 3408084
 Software Version: V6.8 Build 6
 Calibration Date: 11/08/2022
 Adapter: DSX-5000R (DSX-CHA004)
 S/N: 3344163

Length (m), Limit 100.0	[Pair 7,8]	103.6
Prop. Delay (ns), Limit 555	[Pair 4,5]	547
Delay Skew (ns), Limit 50	[Pair 4,5]	31
Resistance (ohms), Limit 25.00	[Pair 4,5]	16.22
Resist. Unbal. (ohms), Limit 0.470	[Pair 7,8]	0.071
Resist. P2P Unbal. (ohms), Limit 0.560	[Pair 4,5-7,8]	0.186
Insertion Loss Margin (dB)	[Pair 4,5]	1.9
Frequency (MHz)	[Pair 4,5]	250.0
Limit (dB)	[Pair 4,5]	35.9



Worst Case Margin Worst Case Value

PASS	MAIN	SR	MAIN	SR
Worst Pair	3,6-7,8	3,6-4,5	3,6-4,5	3,6-4,5
NEXT (dB)	8.0	5.0	10.2	7.9
Freq. (MHz)	12.6	60.0	250.0	242.5
Limit (dB)	54.9	43.7	33.1	33.3
Worst Pair	3,8	4,5	3,8	3,8
PS NEXT (dB)	9.9	6.8	11.0	9.9
Freq. (MHz)	12.8	60.0	229.5	242.5
Limit (dB)	52.2	40.9	30.8	30.4

PASS	MAIN	SR	MAIN	SR
Worst Pair	3,6-4,5	3,6-4,5	4,5-3,8	3,6-4,5
ACR-F (dB)	7.0	7.0	8.2	7.6
Freq. (MHz)	1.8	1.6	214.0	214.0
Limit (dB)	58.4	59.0	16.6	16.6
Worst Pair	4,5	4,5	4,5	4,5
PS ACR-F (dB)	8.6	8.5	11.8	8.9
Freq. (MHz)	1.8	1.6	239.5	203.5
Limit (dB)	55.4	56.0	12.7	14.1

PASS	MAIN	SR	MAIN	SR
Worst Pair	3,6-7,8	3,6-4,5	3,6-4,5	3,6-4,5
ACR-N (dB)	8.5	5.7	12.1	9.5
Freq. (MHz)	5.5	60.0	250.0	242.5
Limit (dB)	55.9	27.2	-2.8	-2.0
Worst Pair	3,8	4,5	3,8	4,5
PS ACR-N (dB)	10.4	7.5	14.4	12.2
Freq. (MHz)	12.8	60.0	250.0	242.5
Limit (dB)	44.8	24.4	-5.8	-4.9

PASS	MAIN	SR	MAIN	SR
Worst Pair	7,8	1,2	7,8	1,2
RL (dB)	6.1	4.4	6.4	6.1
Freq. (MHz)	3.1	86.8	205.0	210.5
Limit (dB)	19.0	12.6	8.9	8.8

Compliant Network Standards:
 10BASE-T 100BASE-TX 100BASE-T4
 1000BASE-T 2.5GBASE-T 5GBASE-T
 ATM-25 ATM-51 ATM-155
 100VG-AnyLan TR-4 TR-18 Active
 TR-18 Passive

LinkWare™ PC Version 10.8.1

Project: PROJEKT CONSIP 2023
 Site: CU 662 U/UTP Cat.6 B2ca
 Consip - 4-Connector.flw

Building: Results
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8.3 Test Report Cat.6A U/UTP B2ca / Cca

8.3.1 Short – Length



Kabelkennung: CH [2M PC]-CU692 CAT.6A 15M-[2M PC] 18.8M

Testzusammenfassung: PASS

Grenzwert: ISO11801 Channel Class Ea (+All)

Hauptgerät: Versiv

Remote: Versiv

Grenzwerte Version: V7.7

Serien-Nr.: 3408173

Serien-Nr.: 3408084

Datum/Uhrzeit: 01/02/2023 10:01:59

Software-Version: V6.8 Build 6

Software-Version: V6.8 Build 6

Bediener: Amir Ajvazi

Kalibrierungsdatum: 08/11/2022

Kalibrierungsdatum: 08/11/2022

Reserve 8.2 dB (NEXT 3,6-4,5)

Adapter: DSX-5000 (DSX-CHA004)

Adapter: DSX-5000R (DSX-CHA004)

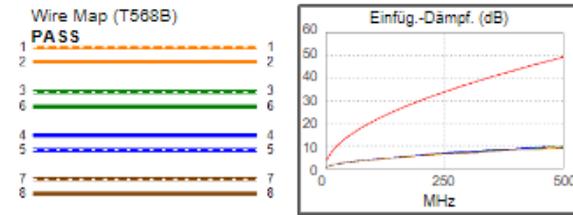
Kabeltyp: DATWYLER CU 692

Serien-Nr.: 3344163

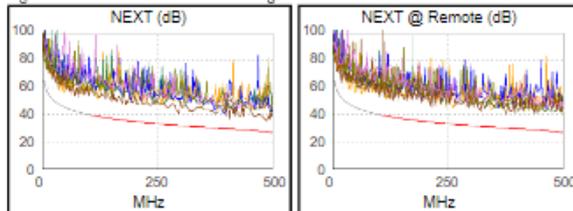
Serien-Nr.: 3353349

NVP: 66.0%

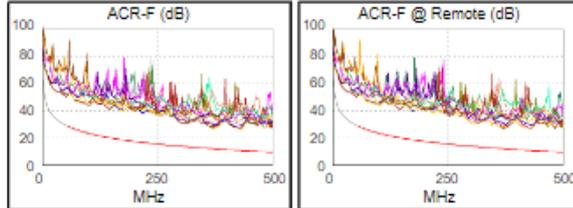
Länge (m), Grnz. 100.0	[Paar 7,8]	18.8
Laufzeit (ns), Grnz. 555	[Paar 4,5]	99
Abweichung (ns), Grnz. 50	[Paar 3,6]	4
Widerstand (Ohm), Grnz. 25.00	[Paar 4,5]	3.60
Widerst.- Abw. (Ohm), Grnz. 0.200	[Paar 3,6]	0.033
P2P-Widerstandsabw. (Ohm), Grnz. 0.200	[Paar 4,5-7,8]	0.029
Einfüg.-Dämpf. Reserve (dB)	[Paar 4,5]	37.7
Frequenz (MHz)	[Paar 4,5]	470.0
Grenzwert (dB)	[Paar 4,5]	47.7



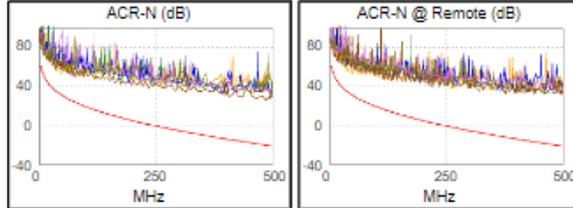
	Min. Abstand		Min. Wert	
PASS	MAIN	SR	MAIN	SR
Schlechtest Paar	3,8-4,5	3,8-4,5	3,8-4,5	3,8-4,5
NEXT (dB)	8.2	10.4	8.2	10.4
Freq. (MHz)	486.0	383.0	486.0	383.0
Grenzwert (dB)	27.1	29.9	27.1	29.9
Schlechtest Paar	4,5	3,8	4,5	3,8
PS NEXT (dB)	10.5	12.4	10.5	12.4
Freq. (MHz)	487.0	439.0	487.0	439.0
Grenzwert (dB)	24.0	25.8	24.0	25.8



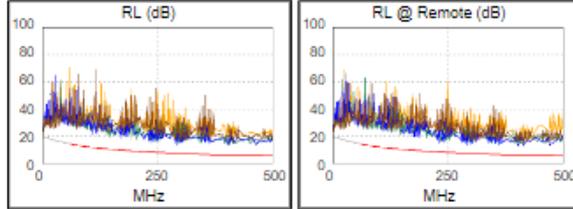
	Min. Abstand		Min. Wert	
PASS	MAIN	SR	MAIN	SR
Schlechtest Paar	1,2-3,8	1,2-3,8	1,2-3,8	1,2-3,8
ACR-F (dB)	14.5	14.5	15.8	14.5
Freq. (MHz)	369.0	363.0	432.0	363.0
Grenzwert (dB)	11.9	12.1	10.5	12.1
Schlechtest Paar	3,8	3,8	3,8	3,8
PS ACR-F (dB)	15.3	16.1	15.3	18.1
Freq. (MHz)	374.0	363.0	374.0	500.0
Grenzwert (dB)	8.8	9.1	8.8	6.3



	Min. Abstand		Min. Wert	
PASS	MAIN	SR	MAIN	SR
Schlechtest Paar	3,8-4,5	3,8-4,5	3,8-4,5	1,2-4,5
ACR-N (dB)	20.1	19.4	46.2	51.4
Freq. (MHz)	3.0	9.1	486.0	477.0
Grenzwert (dB)	61.0	51.0	-20.4	-19.8
Schlechtest Paar	3,8	3,8	4,5	3,8
PS ACR-N (dB)	21.1	18.8	48.6	49.3
Freq. (MHz)	3.9	3.9	487.0	439.0
Grenzwert (dB)	56.7	56.7	-23.6	-20.1



	Min. Abstand		Min. Wert	
PASS	MAIN	SR	MAIN	SR
Schlechtest Paar	4,5	4,5	4,5	4,5
RL (dB)	7.5	7.0	7.5	7.0
Freq. (MHz)	470.0	403.0	470.0	403.0
Grenzwert (dB)	6.0	6.0	6.0	6.0



Erfüllte Network Standards:
 10BASE-T 100BASE-TX 100BASE-T4
 1000BASE-T 2.5GBASE-T 5GBASE-T
 10GBASE-T ATM-25 ATM-51
 ATM-155 100VG-AnyLan TR-4
 TR-16 Active TR-16 Passive

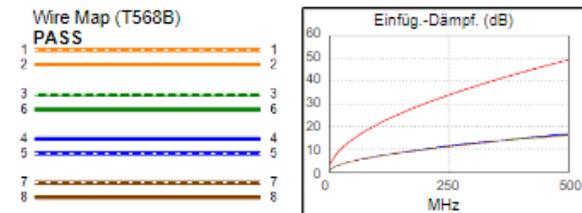
LinkWare™ PC Version 10.7



Kabelkennung: CH [3M PC]-[5M PC]-CU692 CAT.6A 15M-[5M PC]-[2M PC] 28.3M
Grenzwert: ISO11801 Channel Class Ea (+All) Hauptgerät: Versiv
 Grenzwerte Version: V7.7 Serien-Nr.: 3408173
 Datum/Uhrzeit: 01/02/2023 10:32:57 Software-Version: V6.8 Build 6
 Bediener: Amir Ajvazi Kalibrierungsdatum: 08/11/2022
Reserve 6.5 dB (NEXT 3,6-4,5) Adapter: DSX-5000 (DSX-CHA004)
 Kabeltyp: DATWYLER CU 692 Serien-Nr.: 3344163
 NVP: 66.0%

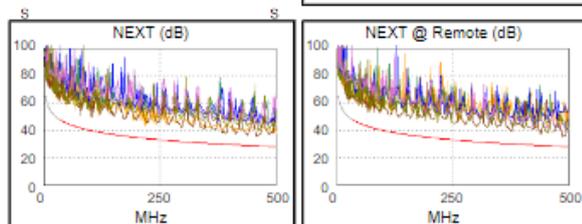
Testzusammenfassung: PASS
 Remote: Versiv
 Serien-Nr.: 3408084
 Software-Version: V6.8 Build 6
 Kalibrierungsdatum: 08/11/2022
 Adapter: DSX-5000R (DSX-CHA004)
 Serien-Nr.: 3353349

Länge (m), Grnz. 100.0	[Paar 7,8]	28.3
Laufzeit (ns), Grnz. 555	[Paar 4,5]	147
Abweichung (ns), Grnz. 50	[Paar 4,5]	4
Widerstand (Ohm), Grnz. 25.00	[Paar 4,5]	7.08
Widerst.-Abw. (Ohm), Grnz. 0.210	[Paar 4,5]	0.132
P2P-Widerstandsabw. (Ohm), Grnz. 0.250	[Paar 3,6-4,5]	0.043
Einfüg.-Dämpf. Reserve (dB)	[Paar 3,6]	32.4
Frequenz (MHz)	[Paar 3,6]	500.0
Grenzwert (dB)	[Paar 3,6]	49.3

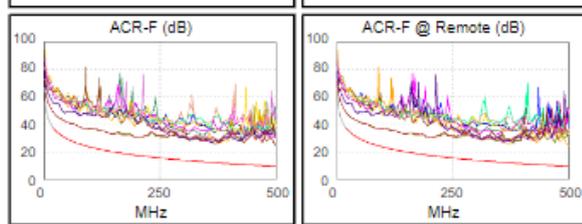


Min. Abstand Min. Wert

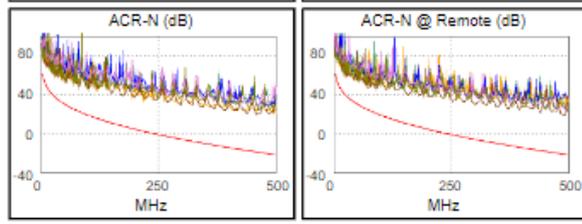
PASS	MAIN	SR	MAIN	SR
Schlechtest Paar	3,6-4,5	3,6-4,5	3,6-4,5	3,6-4,5
NEXT (dB)	6.5	6.6	6.5	6.6
Freq. (MHz)	464.0	488.0	464.0	488.0
Grenzwert (dB)	28.5	28.1	28.5	28.1
Schlechtest Paar	3,6	3,6	3,6	3,6
PS NEXT (dB)	7.5	9.1	7.5	9.1
Freq. (MHz)	464.0	488.0	464.0	488.0
Grenzwert (dB)	25.4	25.0	25.4	25.0



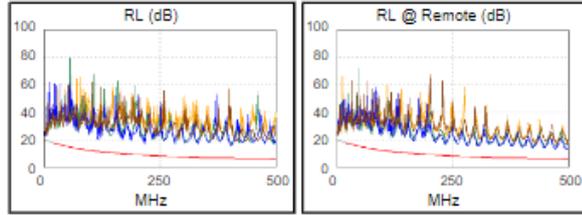
PASS	MAIN	SR	MAIN	SR
Schlechtest Paar	3,6-4,5	3,6-4,5	3,6-1,2	1,2-3,6
ACR-F (dB)	9.7	9.8	15.0	14.4
Freq. (MHz)	1.8	1.8	500.0	500.0
Grenzwert (dB)	58.4	58.4	9.3	9.3
Schlechtest Paar	3,6	3,6	3,6	3,6
PS ACR-F (dB)	12.1	12.0	12.9	13.4
Freq. (MHz)	2.1	2.1	379.0	372.0
Grenzwert (dB)	53.7	53.7	8.7	8.8



PASS	MAIN	SR	MAIN	SR
Schlechtest Paar	3,6-7,8	3,6-7,8	3,6-4,5	3,6-4,5
ACR-N (dB)	16.2	17.2	39.5	38.9
Freq. (MHz)	3.5	3.3	488.0	488.0
Grenzwert (dB)	60.0	60.5	-20.6	-20.6
Schlechtest Paar	3,6	3,6	3,6	3,6
PS ACR-N (dB)	17.4	18.1	38.8	41.3
Freq. (MHz)	3.5	3.3	464.0	488.0
Grenzwert (dB)	57.5	58.0	-21.9	-23.6



PASS	MAIN	SR	MAIN	SR
Schlechtest Paar	4,5	4,5	4,5	4,5
RL (dB)	9.8	6.9	9.8	6.9
Freq. (MHz)	403.0	495.0	403.0	495.0
Grenzwert (dB)	6.0	6.0	6.0	6.0



Erfüllte Network Standards:
 10BASE-T 100BASE-TX 100BASE-T4
 100BASE-T 2.5GBASE-T 5GBASE-T
 10GBASE-T ATM-25 ATM-51
 ATM-155 100VG-AnyLan TR-4
 TR-18 Active TR-18 Passive

LinkWare™ PC Version 10.7

8.3.2 Long – Length



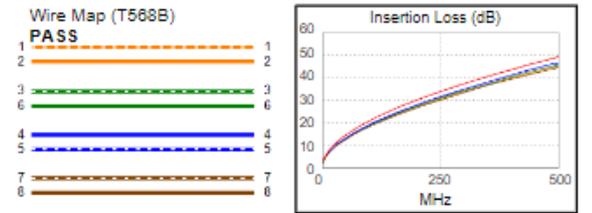
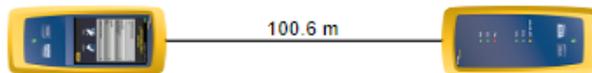
Cable ID: CH [5M PC]-CU692 90M-[5M PC] 100M

Test Limit: ISO11801 Channel Class Ea (+All) Main: Versiv
 Limits Version: V7.7 S/N: 3408173
 Date / Time: 01/10/2023 01:47:57 PM Software Version: V6.8 Build 6
 Operator: Amir Ajvazi Calibration Date: 11/08/2022
 Headroom 8.8 dB (NEXT 1,2-3,6) Adapter: DSX-5000 (DSX-CHA004)
 Cable Type: DATWYLER CU 662 S/N: 3344163
 NVP: 67.0%

Test Summary: PASS

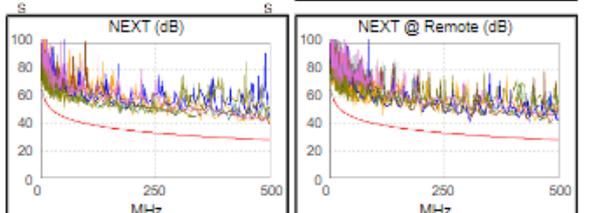
Remote: Versiv
 S/N: 3408084
 Software Version: V6.8 Build 6
 Calibration Date: 11/08/2022
 Adapter: DSX-5000R (DSX-CHA004)
 S/N: 3353349

Length (m), Limit 100.0	[Pair 7,8]	100.6
Prop. Delay (ns), Limit 555	[Pair 4,5]	525
Delay Skew (ns), Limit 50	[Pair 4,5]	24
Resistance (ohms), Limit 25.00	[Pair 4,5]	15.14
Resist. Unbal. (ohms), Limit 0.450	[Pair 3,6]	0.074
Resist. P2P Unbal. (ohms), Limit 0.620	[Pair 4,5-7,8]	0.153
Insertion Loss Margin (dB)	[Pair 4,5]	2.5
Frequency (MHz)	[Pair 4,5]	500.0
Limit (dB)	[Pair 4,5]	49.3

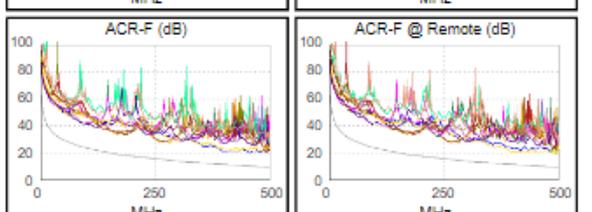


Worst Case Margin Worst Case Value

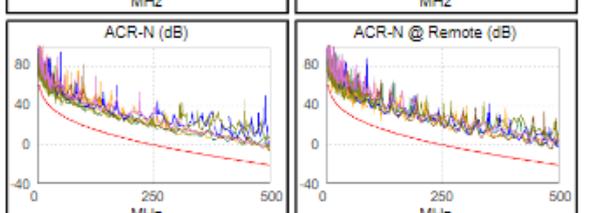
PASS	MAIN	SR	MAIN	SR
Worst Pair	3,6-7,8	1,2-3,6	3,6-4,5	3,6-4,5
NEXT (dB)	9.2	8.8	11.8	11.1
Freq. (MHz)	50.8	116.5	500.0	482.0
Limit (dB)	44.9	38.8	27.9	28.2
Worst Pair	3,6	1,2	4,5	4,5
PS NEXT (dB)	8.8	11.3	12.7	13.3
Freq. (MHz)	5.1	117.0	500.0	482.0
Limit (dB)	58.8	35.9	24.8	25.1



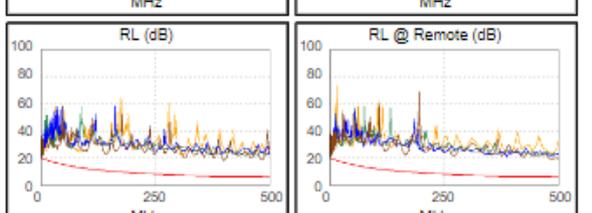
PASS	MAIN	SR	MAIN	SR
Worst Pair	1,2-7,8	7,8-1,2	1,2-7,8	7,8-1,2
ACR-F (dB)	9.5	9.0	9.9	9.5
Freq. (MHz)	403.0	408.0	486.0	486.0
Limit (dB)	11.2	11.0	9.5	9.5
Worst Pair	7,8	1,2	7,8	1,2
PS ACR-F (dB)	11.9	11.6	12.0	12.1
Freq. (MHz)	397.0	412.0	455.0	486.0
Limit (dB)	8.3	8.0	7.1	6.5



PASS	MAIN	SR	MAIN	SR
Worst Pair	3,6-7,8	3,6-7,8	3,6-4,5	3,6-4,5
ACR-N (dB)	8.1	9.8	14.3	13.8
Freq. (MHz)	3.1	3.1	500.0	483.0
Limit (dB)	60.8	60.8	-21.4	-20.2
Worst Pair	3,6	1,2	4,5	4,5
PS ACR-N (dB)	9.3	11.1	15.2	16.0
Freq. (MHz)	5.0	5.0	500.0	483.0
Limit (dB)	54.3	54.3	-24.5	-23.3



PASS	MAIN	SR	MAIN	SR
Worst Pair	7,8	7,8	7,8	7,8
RL (dB)	5.8	6.0	11.9	12.2
Freq. (MHz)	3.3	3.4	400.0	485.0
Limit (dB)	19.0	19.0	6.0	6.0



Compliant Network Standards:
 10BASE-T 100BASE-TX 100BASE-T4
 1000BASE-T 2.5GBASE-T 5GBASE-T
 10GBASE-T ATM-25 ATM-51
 ATM-155 100VG-AnyLan TR-4
 TR-16 Active TR-16 Passive

LinkWare™ PC Version 10.8.1

Project: PROJEKT CONSIP 2023
 Site: CU 692 U/UTP Cat.6A
 Consip - 4-Connector.flw

Building: Results
 Page 7

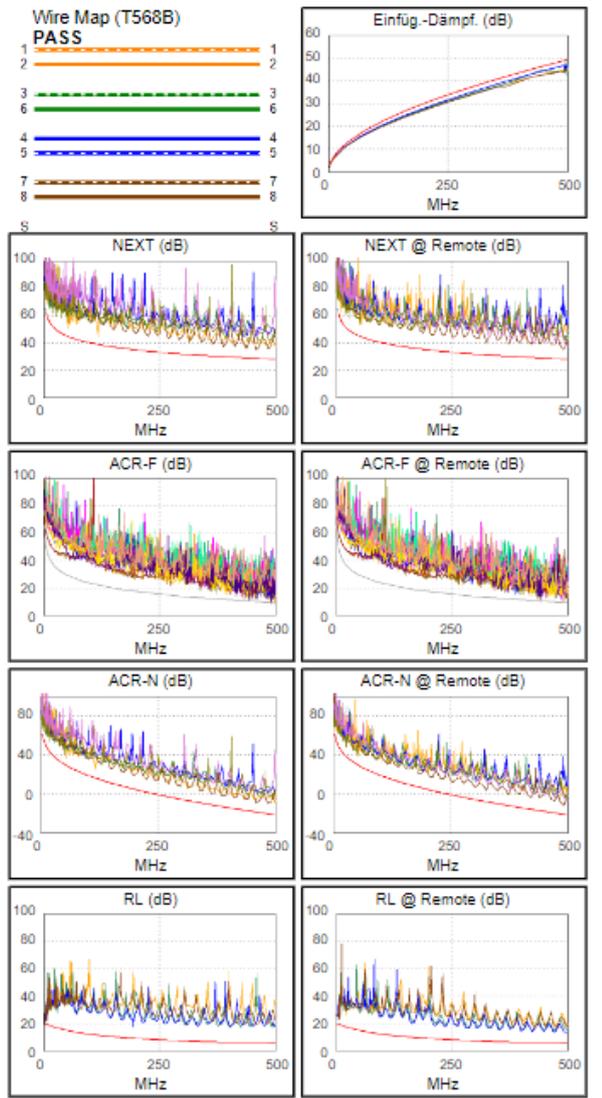




Kabelkennung: CH [3M PC]-[5M PC]-CU692 CAT.6A 83M-[5M PC]-[2M PC] 95.2M
Grenzwert: ISO11801 Channel Class Ea (+All) Hauptgerät: Versiv
 Grenzwerte Version: V7.7 Serien-Nr.: 3408173
 Datum/Uhrzeit: 01/02/2023 10:16:16 Software-Version: V6.8 Build 6
 Bediener: Amir Ajvazi Kalibrierungsdatum: 08/11/2022
Reserve 6.5 dB (NEXT 3,6-4,5) Adapter: DSX-5000 (DSX-CHA004)
 Kabeltyp: DATWYLER CU 692 Serien-Nr.: 3344163
 NVP: 66.0%

Testzusammenfassung: PASS
 Remote: Versiv
 Serien-Nr.: 3408084
 Software-Version: V6.8 Build 6
 Kalibrierungsdatum: 08/11/2022
 Adapter: DSX-5000R (DSX-CHA004)
 Serien-Nr.: 3353349

Länge (m), Grnz. 100.0	[Paar 7,8]	95.2
Laufzeit (ns), Grnz. 555	[Paar 4,5]	501
Abweichung (ns), Grnz. 50	[Paar 4,5]	20
Widerstand (Ohm), Grnz. 25.00	[Paar 4,5]	17.07
Widerst.- Abw. (Ohm), Grnz. 0.500	[Paar 7,8]	0.100
P2P-Widerstandsabw. (Ohm), Grnz. 0.590	[Paar 1,2-4,5]	0.116
Einfüg.-Dämpf. Reserve (dB)	[Paar 3,6]	1.8
Frequenz (MHz)	[Paar 3,6]	498.0
Grenzwert (dB)	[Paar 3,6]	49.2



	Min. Abstand		Min. Wert	
PASS	MAIN	SR	MAIN	SR
Schlechtest Paar	3,6-4,5	3,6-4,5	3,6-4,5	3,6-4,5
NEXT (dB)	6.5	7.3	6.5	7.3
Freq. (MHz)	459.0	491.0	459.0	491.0
Grenzwert (dB)	28.5	28.0	28.5	28.0
Schlechtest Paar	3,6	4,5	3,6	4,5
PS NEXT (dB)	8.0	9.0	8.0	9.0
Freq. (MHz)	461.0	492.0	461.0	492.0
Grenzwert (dB)	25.5	25.0	25.5	25.0
PASS	MAIN	SR	MAIN	SR
Schlechtest Paar	1,2-3,6	7,8-3,6	1,2-3,6	3,6-4,5
ACR-F (dB)	1.3*	1.9*	1.3	2.1
Freq. (MHz)	498.0	443.0	498.0	491.0
Grenzwert (dB)	9.3	10.3	9.3	9.4
Schlechtest Paar	3,6	3,6	3,6	1,2
PS ACR-F (dB)	1.4*	2.3*	1.4	2.7
Freq. (MHz)	490.0	443.0	490.0	486.0
Grenzwert (dB)	6.5	7.3	6.5	6.5
PASS	MAIN	SR	MAIN	SR
Schlechtest Paar	3,6-4,5	3,6-4,5	3,6-4,5	3,6-4,5
ACR-N (dB)	9.2	9.4	10.9	9.4
Freq. (MHz)	459.0	491.0	486.0	491.0
Grenzwert (dB)	-18.5	-20.8	-20.4	-20.8
Schlechtest Paar	3,6	3,6	3,6	4,5
PS ACR-N (dB)	10.7	9.9	11.5	11.2
Freq. (MHz)	437.0	4.3	486.0	491.0
Grenzwert (dB)	-19.9	55.8	-23.5	-23.8
PASS	MAIN	SR	MAIN	SR
Schlechtest Paar	3,6	7,8	3,6	4,5
RL (dB)	5.5	4.6	11.1	7.5
Freq. (MHz)	3.3	3.4	403.0	495.0
Grenzwert (dB)	19.0	19.0	6.0	6.0

Erfüllte Network Standards:
 10BASE-T 100BASE-TX 100BASE-T4
 1000BASE-T 2.5GBASE-T 5GBASE-T
 10GBASE-T ATM-25 ATM-51
 ATM-155 100VG-AnyLan TR-4
 TR-16 Active TR-16 Passive

* Reserve liegt im Bereich der Meßgenauigkeit des Geräts.

8.3.3 3th Party certificate by GHMT



Certificate

No. c7180a-22

Customer:
Dätwyler IT Infra GmbH
Auf der Roos 4-12
65795 Hattersheim, Germany

Class EA

Test sample(s):
data cable:
DATWYLER CU 692 4P AWG23 U/UTP Cat.6a FRNC/LSOH
Part-no.:19462600BL (B2ca); 19462600CL (Cca); 19462600DL (Dca)
Balanced cord:
DATWYLER patch cord Cat. 6a (IEC) shielded, wiring 1:1
Part-no.:653xxxxxxx (1m-25m)
connecting hardware:
DATWYLER RJ45 module KU-TC Plus Cat.6a (IEC) unshielded
Part-no.:418074; 418075
patch panel:
DATWYLER patch panel KU 24x
Part-no.:418021; 418022

Applied standard(s):
ISO/IEC 11801-1 Ed.1.0 (2017-11)

Result(s):
The sample meets the limits of the specified standards and regulations with respect to the parameters indicated above.

2 Connector Channel, Copper, Class EA

GHMT Type Approval

The test results which were determined in the course of the measurement refer to the submitted specimen. Any future technical modifications of the verified products are subject to the responsibility of the manufacturer.

This Certificate refers to the comprehensive test report no. R7180a-22 and shall only be applicable in conjunction with the test report. This certificate is valid 24 months after date of testing.

Bexbach, 21. January 2022



Dirk Wilhelm, engineer
(Chairman of the Managing Board)



GHMT AG
In der Kolling 320
66450 Bexbach / Germany

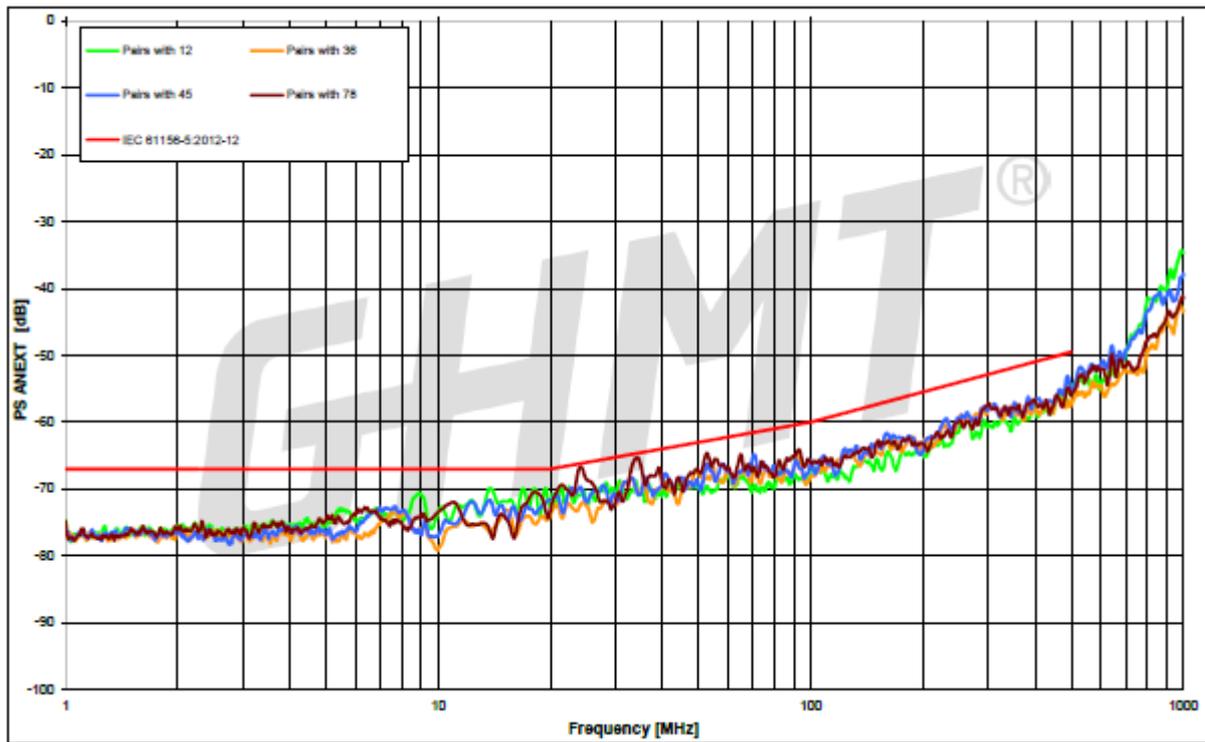
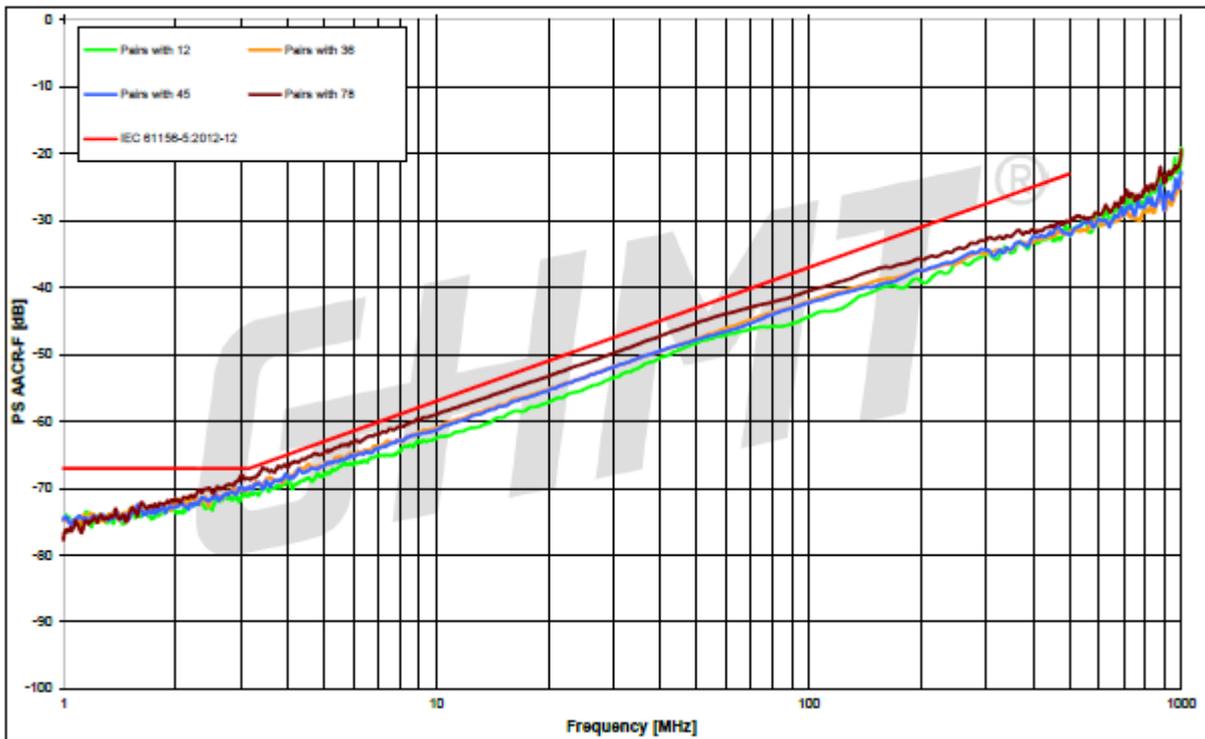
PO box 11 16
66442 Bexbach / Germany

T: +49 6826 92 28-0
F: +49 6826 92 28-290

info@ghmt.de
www.ghmt.de

**RELIABILITY IN TOTAL
REQUIRES ACCURACY IN DETAIL.**

Test laboratory accredited by DAkkS in accordance with DIN EN ISO/IEC 17025:2018.
The accreditation is valid for the test methods listed in certificate D-PL-17559-01-00.

PS ANEXT

PS AACR-F


8.4 Test Report Cat.6 S/FTP B2ca / Cca

8.4.1 Short – Length



Cable ID: CH [2M PC]-CU6060 15M-[2M PC] 19M

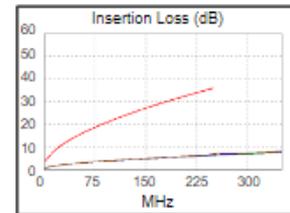
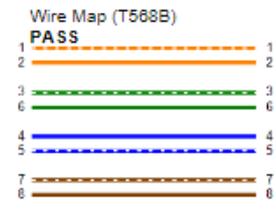
Test Limit: ISO11801 Channel Class E (+All)
Limits Version: V7.7
Date / Time: 01/24/2023 11:10:28 AM
Operator: Amir Ajvazi
Headroom 10.0 dB (NEXT 3,6-4,5)
Cable Type: *CU6060 S/FTP*
NVP: 80.0%

Main: Versiv
S/N: 3408173
Software Version: V6.8 Build 6
Calibration Date: 11/08/2022
Adapter: DSX-5000 (DSX-CHA004)
S/N: 3344163

Test Summary: PASS

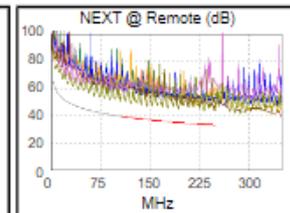
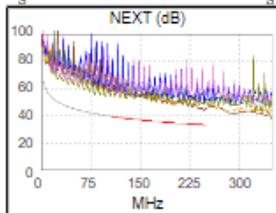
Remote: Versiv
S/N: 3408084
Software Version: V6.8 Build 6
Calibration Date: 11/08/2022
Adapter: DSX-5000R (DSX-CHA004)
S/N: 3353349

Length (m), Limit 100.0	[Pair 1,2]	19.9
Prop. Delay (ns), Limit 555	[Pair 3,6]	85
Delay Skew (ns), Limit 50	[Pair 3,6]	2
Resistance (ohms), Limit 25.00	[Pair 1,2]	3.06
Resist. Unbal. (ohms), Limit 0.200	[Pair 4,5]	0.021
Resist. P2P Unbal. (ohms), Limit 0.200	[Pair 3,6-7,8]	0.008
Insertion Loss Margin (dB)	[Pair 1,2]	29.2
Frequency (MHz)	[Pair 1,2]	248.5
Limit (dB)	[Pair 1,2]	35.8

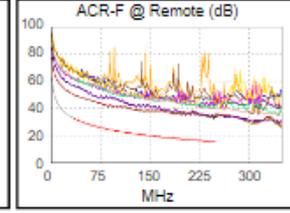
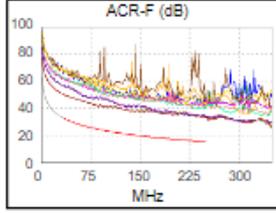


Worst Case Margin Worst Case Value

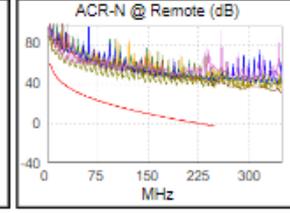
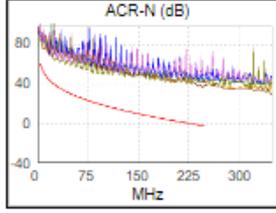
PASS	MAIN	SR	MAIN	SR
Worst Pair	3,6-4,5	3,6-7,8	3,6-4,5	3,6-7,8
NEXT (dB)	10.0	10.0	10.0	10.0
Freq. (MHz)	246.0	232.5	246.0	232.5
Limit (dB)	33.2	33.7	33.2	33.7
Worst Pair	3,6	3,6	3,6	3,6
PS NEXT (dB)	10.8	11.5	10.8	11.8
Freq. (MHz)	246.5	191.5	246.5	247.0
Limit (dB)	30.3	32.2	30.3	30.2



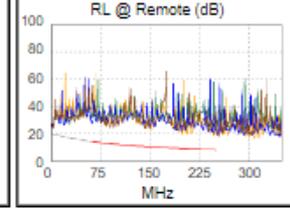
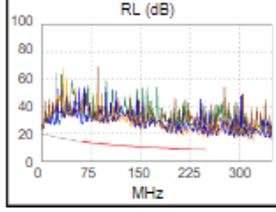
PASS	MAIN	SR	MAIN	SR
Worst Pair	3,6-4,5	3,6-4,5	4,5-3,6	3,6-4,5
ACR-F (dB)	15.5	15.5	16.7	16.5
Freq. (MHz)	3.1	3.1	247.0	247.0
Limit (dB)	53.4	53.4	15.4	15.4
Worst Pair	3,6	3,6	3,6	3,6
PS ACR-F (dB)	17.8	18.0	17.8	18.1
Freq. (MHz)	247.0	4.6	247.0	242.0
Limit (dB)	12.4	47.0	12.4	12.6



PASS	MAIN	SR	MAIN	SR
Worst Pair	3,6-7,8	3,6-7,8	3,6-4,5	3,6-7,8
ACR-N (dB)	22.7	19.2	39.2	40.2
Freq. (MHz)	6.6	5.9	246.0	248.5
Limit (dB)	54.1	55.3	-2.4	-2.7
Worst Pair	3,6	3,6	3,6	3,6
PS ACR-N (dB)	22.7	20.0	40.3	41.2
Freq. (MHz)	5.5	5.4	246.5	247.0
Limit (dB)	53.4	53.6	-5.4	-5.4



PASS	MAIN	SR	MAIN	SR
Worst Pair	1,2	1,2	1,2	1,2
RL (dB)	9.1	10.2	9.3	10.5
Freq. (MHz)	206.0	205.5	246.5	247.0
Limit (dB)	8.9	8.9	8.1	8.1



Compliant Network Standards:
10BASE-T 100BASE-TX 100BASE-T4
100BASE-T 2.5GBASE-T 5GBASE-T
ATM-25 ATM-51 ATM-155
100VG-AnyLan TR-4 TR-16 Active
TR-16 Passive

LinkWare™ PC Version 10.8.1

Project: PROJEKT CONSIP 2023
Site: CU 6060 S/FTP Cat.6
Consip - 4-Connector.flw

Building: Results
Page 13



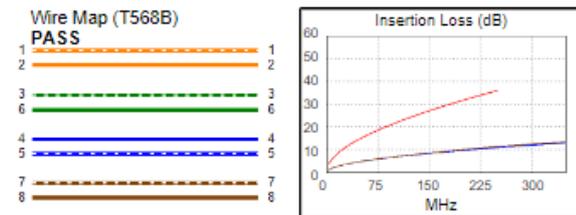

Cable ID: CH [3M PC]-[5M PC]-CU6060 15M-[5M PC]-[2M PC] 30M
Test Summary: PASS

Test Limit: ISO11801 Channel Class E (+All)
 Limits Version: V7.7
 Date / Time: 01/11/2023 09:55:02 AM
 Operator: Amir Ajvazi
 Headroom 7.6 dB (NEXT 3,6-7,8)
 Cable Type: *CU6060 S/FTP*
 NVP: 80.0%

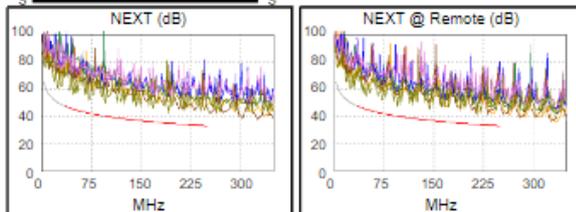
Main: Versiv
 S/N: 3408173
 Software Version: V6.8 Build 6
 Calibration Date: 11/08/2022
 Adapter: DSX-5000 (DSX-CHA004)
 S/N: 3353349

Remote: Versiv
 S/N: 3408084
 Software Version: V6.8 Build 6
 Calibration Date: 11/08/2022
 Adapter: DSX-5000R (DSX-CHA004)
 S/N: 3344163

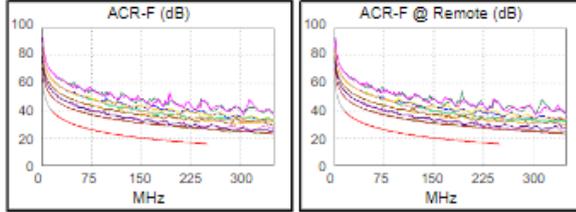
Length (m), Limit 100.0	[Pair 1,2]	30.5
Prop. Delay (ns), Limit 555	[Pair 3,6]	128
Delay Skew (ns), Limit 50	[Pair 3,6]	1
Resistance (ohms), Limit 25.00	[Pair 4,5]	6.90
Resist. Unbal. (ohms), Limit 0.210	[Pair 4,5]	0.193
Resist. P2P Unbal. (ohms), Limit 0.240	[Pair 1,2-4,5]	0.037
Insertion Loss Margin (dB)	[Pair 7,8]	24.7
Frequency (MHz)	[Pair 7,8]	250.0
Limit (dB)	[Pair 7,8]	35.9


Worst Case Margin Worst Case Value

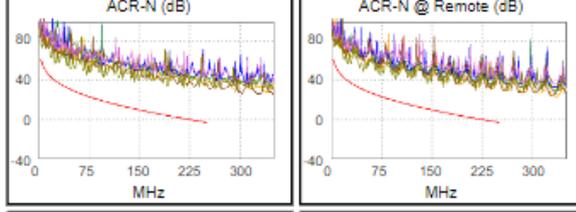
PASS	MAIN	SR	MAIN	SR
Worst Pair	3,6-7,8	3,6-7,8	3,6-7,8	1,2-3,6
NEXT (dB)	8.9	7.6	8.9	8.1
Freq. (MHz)	191.5	215.5	191.5	238.0
Limit (dB)	35.1	34.2	35.1	33.5
Worst Pair	3,6	3,6	3,6	3,6
PS NEXT (dB)	11.2	7.1	12.1	7.4
Freq. (MHz)	191.5	215.0	245.5	238.0
Limit (dB)	32.2	31.3	30.3	30.5



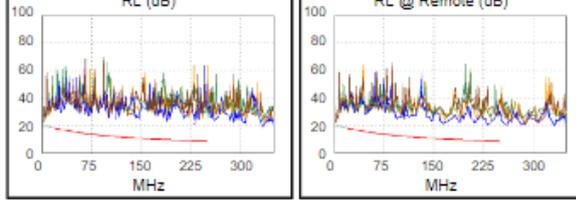
PASS	MAIN	SR	MAIN	SR
Worst Pair	3,6-4,5	4,5-3,6	7,8-3,6	3,6-7,8
ACR-F (dB)	8.5	8.5	10.4	10.2
Freq. (MHz)	1.4	1.4	240.5	240.5
Limit (dB)	60.5	60.5	15.6	15.6
Worst Pair	3,6	3,6	3,6	3,6
PS ACR-F (dB)	10.0	10.0	10.8	10.9
Freq. (MHz)	1.9	1.8	246.5	241.5
Limit (dB)	54.8	55.4	12.4	12.6



PASS	MAIN	SR	MAIN	SR
Worst Pair	3,6-7,8	3,6-7,8	3,6-7,8	1,2-3,6
ACR-N (dB)	16.1	15.9	35.8	32.2
Freq. (MHz)	4.0	4.0	245.0	238.0
Limit (dB)	58.9	58.9	-2.3	-1.5
Worst Pair	3,6	3,6	3,6	3,6
PS ACR-N (dB)	17.3	16.3	36.8	31.4
Freq. (MHz)	3.8	3.6	245.5	238.0
Limit (dB)	56.9	57.2	-5.3	-4.4



PASS	MAIN	SR	MAIN	SR
Worst Pair	4,5	4,5	4,5	4,5
RL (dB)	12.3	10.8	13.5	11.6
Freq. (MHz)	70.3	165.5	189.0	236.5
Limit (dB)	13.5	9.8	9.2	8.3



Compliant Network Standards:
 10BASE-T 100BASE-TX 100BASE-T4
 100BASE-T 2.5GBASE-T 5GBASE-T
 ATM-25 ATM-51 ATM-155
 100VG-AnyLan TR-4 TR-16 Active
 TR-16 Passive

LinkWare™ PC Version 10.8.1

Project: PROJEKT CONSIP 2023
 Site: CU 6060 S/FTP Cat.6
 Consip - 4-Connector.flw

Building: Results
 Page 11



8.4.2 Long – Length



Cable ID: CH [5M PC]-CU6060 90M-[5M PC] 100M

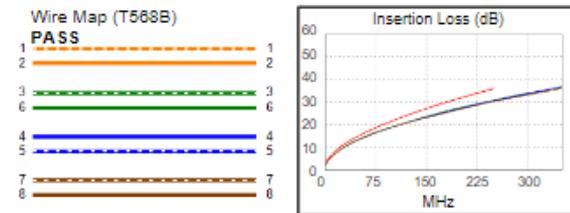
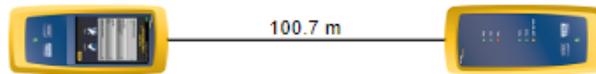
Test Limit: ISO11801 Channel Class E (+All)
 Limits Version: V7.7
 Date / Time: 01/24/2023 11:11:48 AM
 Operator: Amir Ajvazi
 Headroom 10.6 dB (NEXT 1,2-3,6)
 Cable Type: *CU6060 S/FTP*
 NVP: 80.0%

Main: Versiv
 S/N: 3408173
 Software Version: V6.8 Build 6
 Calibration Date: 11/08/2022
 Adapter: DSX-5000 (DSX-CHA004)
 S/N: 3344163

Test Summary: PASS

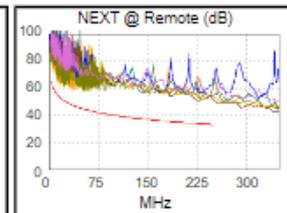
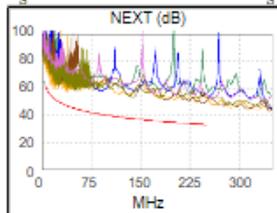
Remote: Versiv
 S/N: 3408084
 Software Version: V6.8 Build 6
 Calibration Date: 11/08/2022
 Adapter: DSX-5000R (DSX-CHA004)
 S/N: 3353349

Length (m), Limit 100.0	[Pair 1,2]	100.7
Prop. Delay (ns), Limit 555	[Pair 3,6]	424
Delay Skew (ns), Limit 50	[Pair 3,6]	4
Resistance (ohms), Limit 25.00	[Pair 4,5]	14.96
Resist. Unbal. (ohms), Limit 0.450	[Pair 4,5]	0.049
Resist. P2P Unbal. (ohms), Limit 0.520	[Pair 4,5-7,8]	0.049
Insertion Loss Margin (dB)	[Pair 3,6]	5.2
Frequency (MHz)	[Pair 3,6]	250.0
Limit (dB)	[Pair 3,6]	35.9

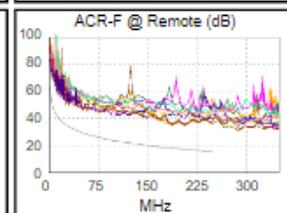
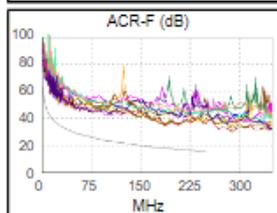


Worst Case Margin Worst Case Value

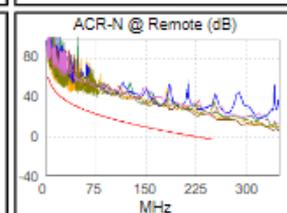
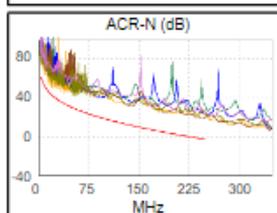
	MAIN	SR	MAIN	SR
PASS				
Worst Pair	1,2-3,6	1,2-3,6	3,6-4,5	3,6-4,5
NEXT (dB)	10.6	10.6	15.4	16.6
Freq. (MHz)	12.4	12.3	245.0	228.0
Limit (dB)	55.1	55.1	33.3	33.8
Worst Pair	3,6	3,6	3,6	3,6
PS NEXT (dB)	12.4	12.4	15.1	16.4
Freq. (MHz)	16.4	12.3	236.5	229.5
Limit (dB)	50.4	52.5	30.6	30.8



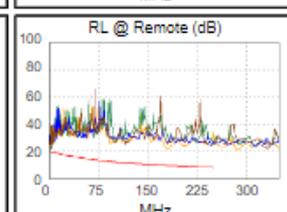
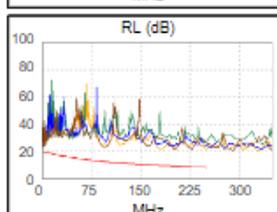
	MAIN	SR	MAIN	SR
PASS				
Worst Pair	1,2-3,6	3,6-1,2	4,5-3,6	4,5-3,6
ACR-F (dB)	16.2	16.3	16.6	17.9
Freq. (MHz)	24.6	24.5	186.5	207.0
Limit (dB)	35.4	35.5	17.8	16.9
Worst Pair	3,6	3,6	3,6	3,6
PS ACR-F (dB)	16.8	17.3	16.9	17.8
Freq. (MHz)	186.0	184.0	186.5	207.0
Limit (dB)	14.9	15.0	14.8	13.9



	MAIN	SR	MAIN	SR
PASS				
Worst Pair	1,2-3,6	1,2-3,6	3,6-4,5	3,6-4,5
ACR-N (dB)	11.5	11.5	20.8	24.0
Freq. (MHz)	12.4	12.3	245.0	250.0
Limit (dB)	47.8	47.9	-2.3	-2.8
Worst Pair	3,6	3,6	3,6	3,6
PS ACR-N (dB)	13.4	13.3	20.1	21.3
Freq. (MHz)	16.4	12.3	236.5	229.5
Limit (dB)	42.0	45.3	-4.3	-3.4



	MAIN	SR	MAIN	SR
PASS				
Worst Pair	7,8	3,6	1,2	1,2
RL (dB)	6.8	5.9	12.1	12.0
Freq. (MHz)	2.8	2.8	201.5	180.0
Limit (dB)	19.0	19.0	9.0	9.4



Compliant Network Standards:
 10BASE-T 100BASE-TX 100BASE-T4
 1000BASE-T 2.5GBASE-T 5GBASE-T
 ATM-25 ATM-51 ATM-155
 100VG-AnyLan TR-4 TR-16 Active
 TR-16 Passive

LinkWare™ PC Version 10.8.1

Project: PROJEKT CONSIP 2023
 Site: CU 6060 S/FTP Cat.6
 Consip - 4-Connector.flw

Building: Results
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Cable ID: CH [3M PC]-[5M PC]-CU6060 90M-[5M PC]-[2M PC] 104M

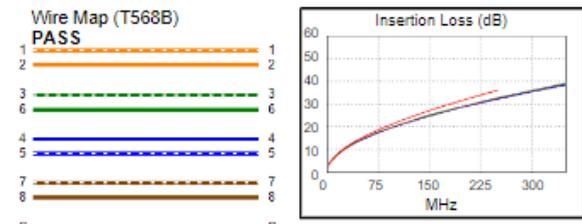
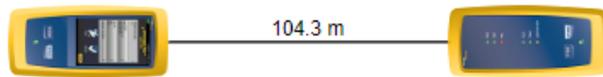
Test Summary: PASS

Test Limit: ISO11801 Channel Class E (+All)
 Limits Version: V7.7
 Date / Time: 01/11/2023 09:57:00 AM
 Operator: Amir Ajvazi
 Headroom 8.6 dB (NEXT 1,2-3,6)
 Cable Type: *CU6060 S/FTP*
 NVP: 80.0%

Main: Versiv
 S/N: 3408173
 Software Version: V6.8 Build 6
 Calibration Date: 11/08/2022
 Adapter: DSX-5000 (DSX-CHA004)
 S/N: 3353349

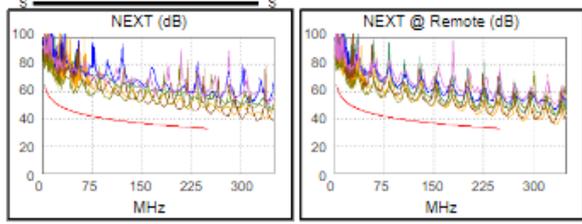
Remote: Versiv
 S/N: 3408084
 Software Version: V6.8 Build 6
 Calibration Date: 11/08/2022
 Adapter: DSX-5000R (DSX-CHA004)
 S/N: 3344163

Length (m), Limit 100.0	[Pair 1,2]	104.3
Prop. Delay (ns), Limit 555	[Pair 3,6]	438
Delay Skew (ns), Limit 50	[Pair 3,6]	3
Resistance (ohms), Limit 25.00	[Pair 4,5]	17.72
Resist. Unbal. (ohms), Limit 0.630	[Pair 4,5]	0.196
Resist. P2P Unbal. (ohms), Limit 0.620	[Pair 1,2-4,5]	0.054
Insertion Loss Margin (dB)	[Pair 3,6]	3.2
Frequency (MHz)	[Pair 3,6]	250.0
Limit (dB)	[Pair 3,6]	35.9

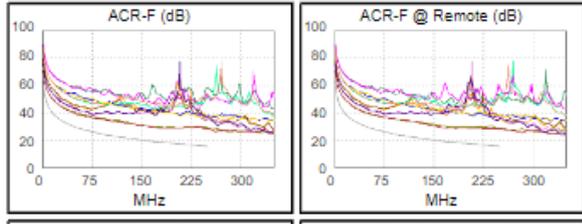


Worst Case Margin Worst Case Value

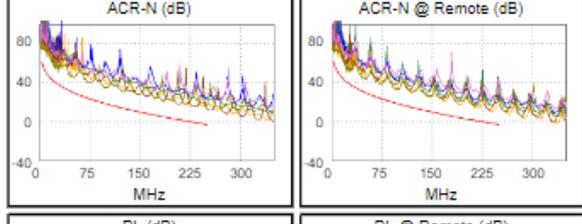
	MAIN	SR	MAIN	SR
PASS				
Worst Pair	3,8-4,5	1,2-3,8	3,8-4,5	1,2-3,8
NEXT (dB)	12.6	8.6	12.6	8.6
Freq. (MHz)	250.0	239.0	250.0	239.0
Limit (dB)	33.1	33.5	33.1	33.5
Worst Pair	3,8	3,8	3,8	3,8
PS NEXT (dB)	12.7	8.9	12.7	9.1
Freq. (MHz)	250.0	215.0	250.0	238.0
Limit (dB)	30.2	31.3	30.2	30.5



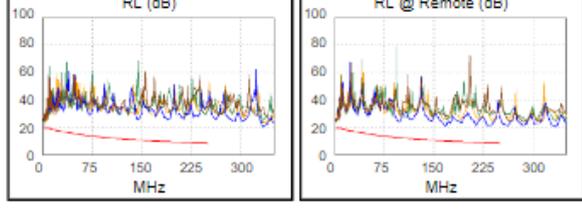
	MAIN	SR	MAIN	SR
PASS				
Worst Pair	3,8-4,5	3,8-4,5	4,5-3,8	4,5-3,8
ACR-F (dB)	8.7	8.7	12.5	12.8
Freq. (MHz)	1.9	1.9	246.0	250.0
Limit (dB)	57.8	57.8	15.4	15.3
Worst Pair	3,8	3,8	3,8	3,8
PS ACR-F (dB)	10.0	10.0	14.7	14.5
Freq. (MHz)	2.1	2.1	246.0	250.0
Limit (dB)	53.7	53.7	12.4	12.3



	MAIN	SR	MAIN	SR
PASS				
Worst Pair	3,8-7,8	1,2-3,8	3,8-4,5	1,2-3,8
ACR-N (dB)	14.1	11.6	16.4	11.6
Freq. (MHz)	47.5	239.0	250.0	239.0
Limit (dB)	30.8	-1.6	-2.8	-1.6
Worst Pair	3,8	3,8	3,8	3,8
PS ACR-N (dB)	15.4	11.9	16.0	12.1
Freq. (MHz)	3.5	215.0	250.0	239.0
Limit (dB)	57.5	-1.7	-5.8	-4.5



	MAIN	SR	MAIN	SR
PASS				
Worst Pair	3,8	3,8	3,8	4,5
RL (dB)	5.2	4.4	5.2	10.9
Freq. (MHz)	2.6	2.6	2.6	168.0
Limit (dB)	19.0	19.0	19.0	9.7



Compliant Network Standards:
 10BASE-T 100BASE-TX 100BASE-T4
 100BASE-T 2.5GBASE-T 5GBASE-T
 ATM-25 ATM-51 ATM-155
 100VG-AnyLan TR-4 TR-16 Active
 TR-16 Passive

LinkWare™ PC Version 10.8.1

Project: PROJEKT CONSIP 2023
 Site: CU 6060 S/FTP Cat.6
 Consip - 4-Connector.flw

Building: Results
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8.5 Test Report Cat.6A S/FTP B2ca / Cca

8.5.1 Short – Length



Cable ID: CH [2M PC]-CU7060 15M-[2M PC] 19M

Test Limit: ISO11801 Channel Class Ea (+All)

Limits Version: V7.7

Date / Time: 01/11/2023 09:27:37 AM

Operator: Amir Ajvazi

Headroom 11.1 dB (NEXT 3,6-7,8)

Cable Type: DATWYLER CU 7060

NVP: 80.0%

Main: Versiv

S/N: 3408173

Software Version: V6.8 Build 6

Calibration Date: 11/08/2022

Adapter: DSX-5000 (DSX-CHA004)

S/N: 3353349

Test Summary: PASS

Remote: Versiv

S/N: 3408084

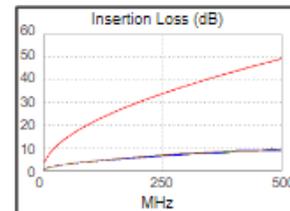
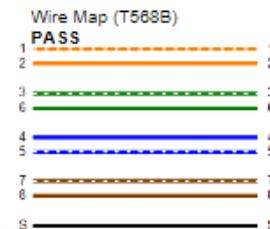
Software Version: V6.8 Build 6

Calibration Date: 11/08/2022

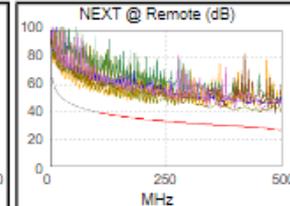
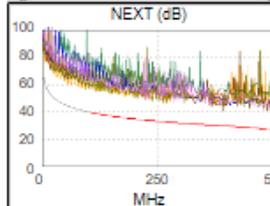
Adapter: DSX-5000R (DSX-CHA004)

S/N: 3344163

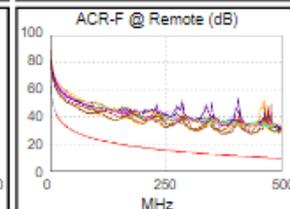
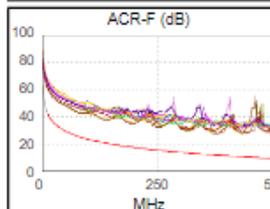
Length (m), Limit 100.0	[Pair 7,8]	19.2
Prop. Delay (ns), Limit 555	[Pair 3,6]	81
Delay Skew (ns), Limit 50	[Pair 1,2]	1
Resistance (ohms), Limit 25.00	[Pair 1,2]	3.53
Resist. Unbal. (ohms), Limit 0.200	[Pair 4,5]	0.050
Resist. P2P Unbal. (ohms), Limit 0.200	[Pair 4,5-7,8]	0.021
Insertion Loss Margin (dB)	[Pair 7,8]	38.7
Frequency (MHz)	[Pair 7,8]	482.0
Limit (dB)	[Pair 7,8]	48.3



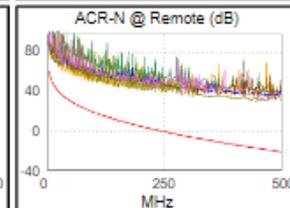
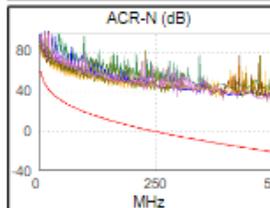
	Worst Case Margin		Worst Case Value	
PASS	MAIN	SR	MAIN	SR
Worst Pair	4,5-7,8	3,6-7,8	3,6-4,5	3,6-7,8
NEXT (dB)	12.9	11.1	14.1	11.1
Freq. (MHz)	367.0	452.0	487.0	452.0
Limit (dB)	30.2	28.6	27.1	28.6
Worst Pair	7,8	7,8	4,5	7,8
PS NEXT (dB)	13.9	12.3	14.2	12.7
Freq. (MHz)	408.0	400.0	472.0	465.0
Limit (dB)	26.4	26.6	24.7	25.0



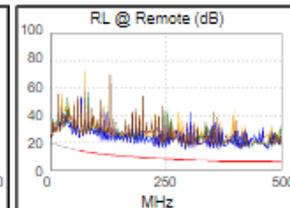
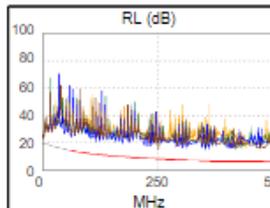
	Worst Case Margin		Worst Case Value	
PASS	MAIN	SR	MAIN	SR
Worst Pair	4,5-3,6	3,6-4,5	4,5-3,6	3,6-4,5
ACR-F (dB)	14.9	15.0	16.0	16.3
Freq. (MHz)	376.0	376.0	441.0	441.0
Limit (dB)	11.8	11.8	10.4	10.4
Worst Pair	3,6	3,6	3,6	3,6
PS ACR-F (dB)	15.7	15.6	15.8	15.8
Freq. (MHz)	376.0	369.0	432.0	432.0
Limit (dB)	8.8	8.9	7.5	7.5



	Worst Case Margin		Worst Case Value	
PASS	MAIN	SR	MAIN	SR
Worst Pair	1,2-3,6	1,2-3,6	4,5-7,8	3,6-7,8
ACR-N (dB)	20.4	19.5	51.6	49.2
Freq. (MHz)	6.1	5.9	473.0	452.0
Limit (dB)	55.0	55.3	-19.5	-18.0
Worst Pair	3,6	3,6	3,6	7,8
PS ACR-N (dB)	21.4	20.4	53.4	50.6
Freq. (MHz)	4.9	5.9	487.0	465.0
Limit (dB)	54.6	52.8	-23.6	-22.0



	Worst Case Margin		Worst Case Value	
PASS	MAIN	SR	MAIN	SR
Worst Pair	4,5	4,5	4,5	4,5
RL (dB)	8.5	8.3	8.8	9.0
Freq. (MHz)	291.0	228.5	408.0	409.0
Limit (dB)	7.4	8.4	6.0	6.0



Compliant Network Standards:
 10BASE-T 100BASE-TX 100BASE-T4
 1000BASE-T 2.5GBASE-T 5GBASE-T
 10GBASE-T ATM-25 ATM-51
 ATM-155 100VG-AnyLan TR-4
 TR-16 Active TR-16 Passive

LinkWare™ PC Version 10.8.1

Project: PROJEKT CONSIP 2023
 Site: CU 7060 S/FTP Cat.6A
 Consip - 4-Connector.flw

Building: Results
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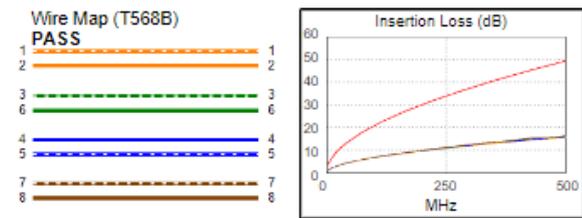
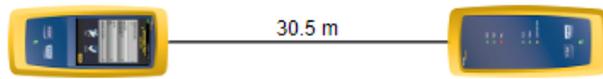

Cable ID: CH [3M PC]-[5M PC]-CU7060 15M-[5M PC]-[2M PC] 30M
Test Summary: PASS

Test Limit: ISO11801 Channel Class Ea (+All)
 Limits Version: V7.7
 Date / Time: 01/11/2023 09:22:44 AM
 Operator: Amir Ajvazi
Headroom 6.4 dB (NEXT 3,6-4,5)
 Cable Type: DATWYLER CU 7060
 NVP: 80.0%

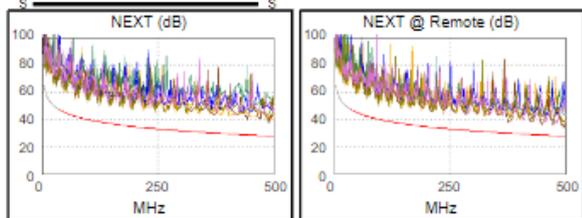
Main: Versiv
 S/N: 3408173
 Software Version: V6.8 Build 6
 Calibration Date: 11/08/2022
 Adapter: DSX-5000 (DSX-CHA004)
 S/N: 3353349

Remote: Versiv
 S/N: 3408084
 Software Version: V6.8 Build 6
 Calibration Date: 11/08/2022
 Adapter: DSX-5000R (DSX-CHA004)
 S/N: 3344163

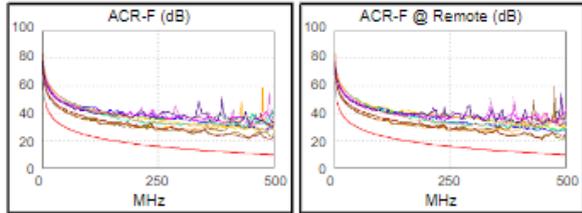
Length (m), Limit 100.0	[Pair 1,2]	30.5
Prop. Delay (ns), Limit 555	[Pair 3,6]	128
Delay Skew (ns), Limit 50	[Pair 3,6]	1
Resistance (ohms), Limit 25.00	[Pair 4,5]	7.01
Resist. Unbal. (ohms), Limit 0.200	[Pair 1,2]	0.083
Resist. P2P Unbal. (ohms), Limit 0.240	[Pair 1,2-4,5]	0.084
Insertion Loss Margin (dB)	[Pair 3,6]	31.9
Frequency (MHz)	[Pair 3,6]	478.0
Limit (dB)	[Pair 3,6]	48.1



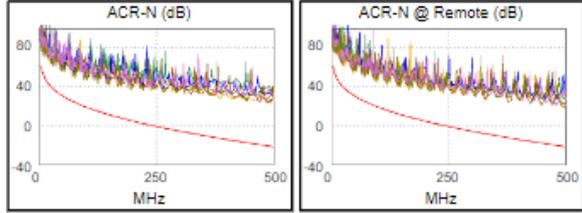
	Worst Case Margin		Worst Case Value	
PASS	MAIN	SR	MAIN	SR
Worst Pair	3,8-4,5	3,8-4,5	3,8-4,5	3,8-4,5
NEXT (dB)	9.7	6.4	9.7	6.4
Freq. (MHz)	489.0	496.0	489.0	496.0
Limit (dB)	28.1	27.9	28.1	27.9
Worst Pair	3,8	3,8	3,8	3,8
PS NEXT (dB)	10.2	7.2	10.2	7.2
Freq. (MHz)	489.0	496.0	489.0	496.0
Limit (dB)	25.0	24.9	25.0	24.9



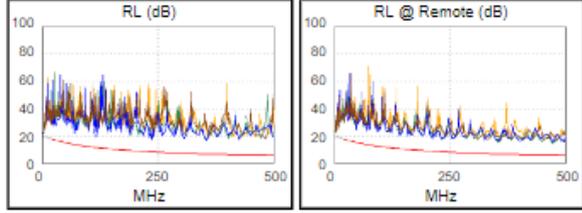
	Worst Case Margin		Worst Case Value	
PASS	MAIN	SR	MAIN	SR
Worst Pair	3,8-1,2	1,2-3,8	4,5-3,8	4,5-3,8
ACR-F (dB)	10.4	10.3	11.4	10.3
Freq. (MHz)	124.5	124.5	495.0	448.0
Limit (dB)	21.4	21.4	9.4	10.2
Worst Pair	3,8	3,8	3,8	3,8
PS ACR-F (dB)	10.0	10.0	13.8	12.5
Freq. (MHz)	1.8	1.8	495.0	448.0
Limit (dB)	55.4	55.4	6.4	7.2



	Worst Case Margin		Worst Case Value	
PASS	MAIN	SR	MAIN	SR
Worst Pair	1,2-3,8	1,2-3,8	3,8-4,5	3,8-4,5
ACR-N (dB)	17.4	17.8	42.7	39.5
Freq. (MHz)	3.5	3.9	489.0	496.0
Limit (dB)	60.0	59.2	-20.7	-21.1
Worst Pair	3,8	3,8	3,8	3,8
PS ACR-N (dB)	16.8	17.0	43.1	40.2
Freq. (MHz)	3.5	3.9	489.0	496.0
Limit (dB)	57.5	56.7	-23.7	-24.2



	Worst Case Margin		Worst Case Value	
PASS	MAIN	SR	MAIN	SR
Worst Pair	4,5	3,8	4,5	3,8
RL (dB)	9.1	7.7	10.0	8.2
Freq. (MHz)	70.5	235.5	354.0	472.0
Limit (dB)	13.5	8.3	6.5	6.0



Compliant Network Standards:
 10BASE-T 100BASE-TX 100BASE-T4
 1000BASE-T 2.5GBASE-T 5GBASE-T
 10GBASE-T ATM-25 ATM-51
 ATM-155 100VG-AnyLan TR-4
 TR-18 Active TR-18 Passive

LinkWare™ PC Version 10.8.1

Project: PROJEKT CONSIP 2023
 Site: CU 7060 S/FTP Cat.6A
 Consip - 4-Connector.flw

Building: Results
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8.5.2 Long – Length



Cable ID: CH [5M PC]-CU7060 90M-[5M PC] 100M

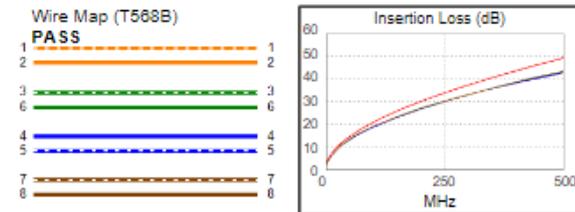
Test Limit: ISO11801 Channel Class Ea (+All)
 Limits Version: V7.7
 Date / Time: 01/11/2023 09:29:24 AM
 Operator: Amir Ajvazi
 Headroom 16.5 dB (NEXT 3,6-7,8)
 Cable Type: DATWYLER CU 7060
 NVP: 80.0%

Main: Versiv
 S/N: 3408173
 Software Version: V6.8 Build 6
 Calibration Date: 11/08/2022
 Adapter: DSX-5000 (DSX-CHA004)
 S/N: 3353349

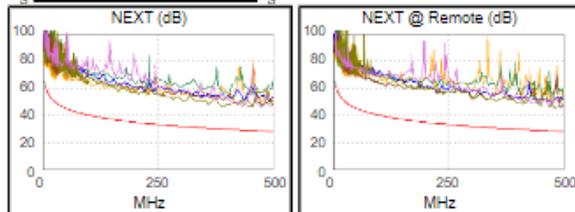
Test Summary: PASS

Remote: Versiv
 S/N: 3408084
 Software Version: V6.8 Build 6
 Calibration Date: 11/08/2022
 Adapter: DSX-5000R (DSX-CHA004)
 S/N: 3344163

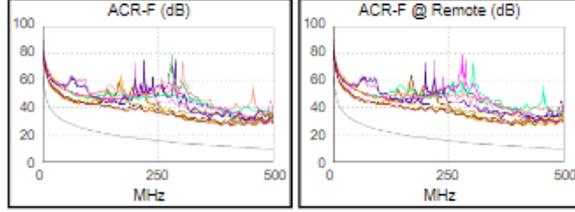
Length (m), Limit 100.0	[Pair 1,2]	99.3
Prop. Delay (ns), Limit 555	[Pair 3,6]	416
Delay Skew (ns), Limit 50	[Pair 3,6]	2
Resistance (ohms), Limit 25.00	[Pair 4,5]	16.11
Resist. Unbal. (ohms), Limit 0.480	[Pair 4,5]	0.086
Resist. P2P Unbal. (ohms), Limit 0.560	[Pair 4,5-7,8]	0.091
Insertion Loss Margin (dB)	[Pair 7,8]	5.7
Frequency (MHz)	[Pair 7,8]	500.0
Limit (dB)	[Pair 7,8]	49.3



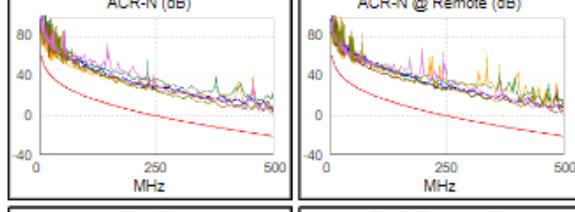
	Worst Case Margin		Worst Case Value	
	MAIN	SR	MAIN	SR
PASS				
Worst Pair	3,8-7,8	4,5-7,8	4,5-7,8	4,5-7,8
NEXT (dB)	16.5	17.0	17.3	17.0
Freq. (MHz)	391.0	498.0	470.0	498.0
Limit (dB)	29.7	27.9	28.4	27.9
Worst Pair	7,8	4,5	3,6	4,5
PS NEXT (dB)	17.7	17.8	17.9	17.8
Freq. (MHz)	438.0	497.0	478.0	497.0
Limit (dB)	25.9	24.9	25.2	24.9



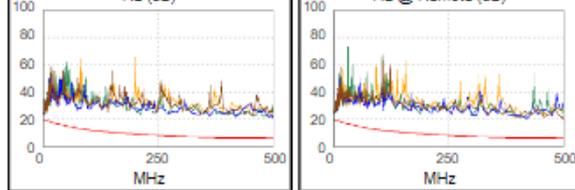
	Worst Case Margin		Worst Case Value	
	MAIN	SR	MAIN	SR
PASS				
Worst Pair	3,8-1,2	1,2-3,6	3,6-1,2	1,2-3,6
ACR-F (dB)	14.5	14.4	14.5	14.4
Freq. (MHz)	411.0	411.0	411.0	411.0
Limit (dB)	11.0	11.0	11.0	11.0
Worst Pair	3,6	3,6	3,6	3,6
PS ACR-F (dB)	15.2	15.4	15.2	15.5
Freq. (MHz)	411.0	411.0	411.0	413.0
Limit (dB)	8.0	8.0	8.0	7.9



	Worst Case Margin		Worst Case Value	
	MAIN	SR	MAIN	SR
PASS				
Worst Pair	1,2-3,6	1,2-3,6	4,5-7,8	4,5-7,8
ACR-N (dB)	16.7	18.1	23.7	22.9
Freq. (MHz)	3.6	2.3	500.0	499.0
Limit (dB)	59.7	61.0	-21.4	-21.4
Worst Pair	3,8	3,6	7,8	4,5
PS ACR-N (dB)	17.4	18.4	24.7	24.3
Freq. (MHz)	3.5	2.3	500.0	497.0
Limit (dB)	57.5	58.0	-24.5	-24.3



	Worst Case Margin		Worst Case Value	
	MAIN	SR	MAIN	SR
PASS				
Worst Pair	4,5	3,6	4,5	4,5
RL (dB)	6.2	4.9	15.3	14.3
Freq. (MHz)	2.9	2.8	491.0	420.0
Limit (dB)	19.0	19.0	6.0	6.0



Compliant Network Standards:
 10BASE-T 100BASE-TX 100BASE-T4
 100BASE-T 2.5GBASE-T 5GBASE-T
 10GBASE-T ATM-25 ATM-51
 ATM-155 100VG-AnyLan TR-4
 TR-16 Active TR-16 Passive

LinkWare™ PC Version 10.8.1

Project: PROJEKT CONSIP 2023
 Site: CU 7060 S/FTP Cat.6A
 Consip - 4-Connector.flw

Building: Results
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Cable ID: CH [3M PC]-[5M PC]-CU7060 90M-[5M PC]-[2M PC] 104M

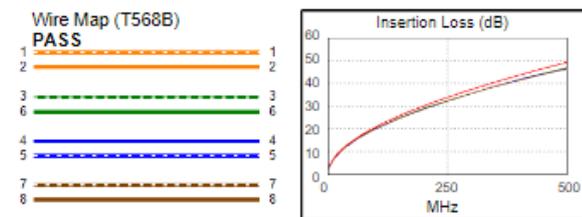
Test Summary: **PASS**

Test Limit: ISO11801 Channel Class Ea (+All)
 Limits Version: V7.7
 Date / Time: 01/11/2023 09:25:02 AM
 Operator: Amir Ajvazi
Headroom 7.2 dB (NEXT 3,6-4,5)
 Cable Type: DATWYLER CU 7060
 NVP: 80.0%

Main: Versiv
 S/N: 3408173
 Software Version: V6.8 Build 6
 Calibration Date: 11/08/2022
 Adapter: DSX-5000 (DSX-CHA004)
 S/N: 3353349

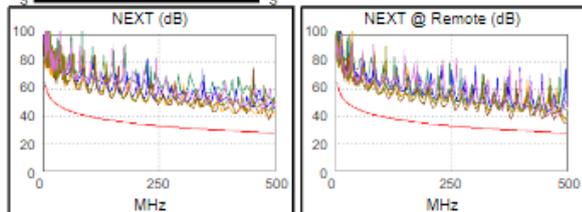
Remote: Versiv
 S/N: 3408084
 Software Version: V6.8 Build 6
 Calibration Date: 11/08/2022
 Adapter: DSX-5000R (DSX-CHA004)
 S/N: 3344163

Length (m), Limit 100.0	[Pair 7,8]	104.3
Prop. Delay (ns), Limit 555	[Pair 3,6]	438
Delay Skew (ns), Limit 50	[Pair 3,6]	3
Resistance (ohms), Limit 25.00	[Pair 4,5]	17.72
Resist. Unbal. (ohms), Limit 0.620	[Pair 1,2]	0.103
Resist. P2P Unbal. (ohms), Limit 0.620	[Pair 1,2-4,5]	0.093
Insertion Loss Margin (dB)	[Pair 3,6]	2.4
Frequency (MHz)	[Pair 3,6]	500.0
Limit (dB)	[Pair 3,6]	49.3

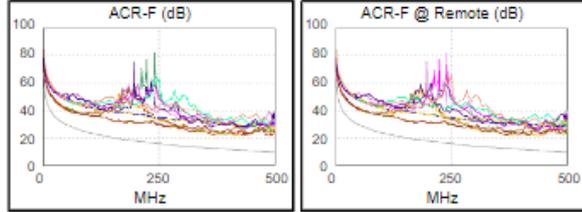


Worst Case Margin Worst Case Value

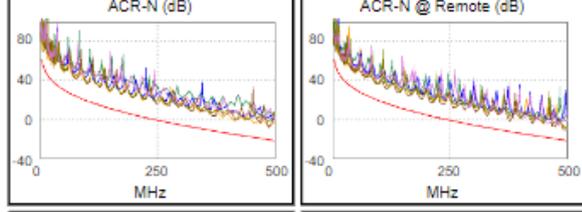
PASS	MAIN	SR	MAIN	SR
Worst Pair	3,6-4,5	3,6-4,5	3,6-4,5	3,6-4,5
NEXT (dB)	9.9	7.2	9.9	7.2
Freq. (MHz)	487.0	494.0	487.0	494.0
Limit (dB)	28.1	28.0	28.1	28.0
Worst Pair	3,6	3,6	3,6	3,6
PS NEXT (dB)	10.5	7.4	10.5	7.4
Freq. (MHz)	487.0	495.0	487.0	495.0
Limit (dB)	25.0	24.9	25.0	24.9



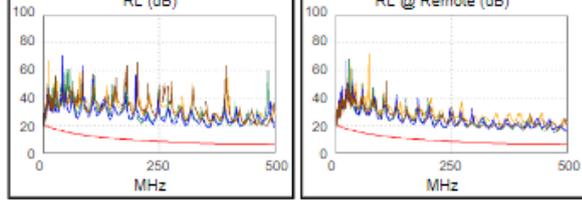
PASS	MAIN	SR	MAIN	SR
Worst Pair	1,2-3,6	1,2-3,6	3,6-4,5	1,2-3,6
ACR-F (dB)	9.9	9.9	11.0	10.9
Freq. (MHz)	371.0	362.0	434.0	437.0
Limit (dB)	11.9	12.1	10.5	10.4
Worst Pair	3,6	3,6	3,6	3,6
PS ACR-F (dB)	10.2	10.2	11.3	10.8
Freq. (MHz)	2.3	2.3	419.0	444.0
Limit (dB)	53.2	53.2	7.8	7.3



PASS	MAIN	SR	MAIN	SR
Worst Pair	3,6-4,5	3,6-4,5	3,6-4,5	3,6-4,5
ACR-N (dB)	12.5	10.0	12.6	10.1
Freq. (MHz)	487.0	379.0	488.0	494.0
Limit (dB)	-20.5	-12.4	-20.6	-21.0
Worst Pair	3,6	3,6	3,6	3,6
PS ACR-N (dB)	13.0	9.7	13.0	9.9
Freq. (MHz)	487.0	495.0	487.0	497.0
Limit (dB)	-23.6	-24.1	-23.6	-24.3



PASS	MAIN	SR	MAIN	SR
Worst Pair	3,6	3,6	4,5	3,6
RL (dB)	5.2	4.4	11.0	8.1
Freq. (MHz)	2.6	2.6	356.0	474.0
Limit (dB)	19.0	19.0	6.5	6.0



Compliant Network Standards:
 10BASE-T 100BASE-TX 100BASE-T4
 1000BASE-T 2.5GBASE-T 5GBASE-T
 10GBASE-T ATM-25 ATM-51
 ATM-155 100VG-AnyLan TR-4
 TR-18 Active TR-18 Passive

LinkWare™ PC Version 10.8.1

Project: PROJEKT CONSIP 2023
 Site: CU 7060 S/FTP Cat.6A
 Consip - 4-Connector.flw

Building: Results
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8.5.3 Coupling attenuation Results

8.5.3.1 Coupling attenuation requirements according IEC 61156-5:2020

Table 3 – Coupling attenuation in dB

Coupling attenuation type	Frequency range MHz	
	30 to 100	100 to 1 000
Type I	≥ 85	≥ 85 – 20 × log ₁₀ (f/100)
Type Ib	≥ 70	≥ 70 – 20 × log ₁₀ (f/100)
Type II	≥ 55	≥ 55 – 20 × log ₁₀ (f/100)
Type III	≥ 40	≥ 40 – 20 × log ₁₀ (f/100)

8.5.3.2 DATWYLER Coupling Attenuation test results.

DATWYLER CU 7060 4P → CA = 74dB → Type Ib

Coupling Attenuation IEC 62153-4-9
[CU7060 600MHz AWG23 {09:TUBE}]

