OCuLink Cable Assemblies

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OCuLink Cable Assemblies

INTRODUCTION

Description

Amphenol OCuLink is a high speed connector and cable assembly solution that can be used in PCIe Gen3/Gen4, SAS3.0/SAS4.0 and other potential applications. The solution can support wire to board application in system.

OCuLink cable assemblies can be provided with 30AWG~34AWG discrete pairs and flat ribbon cable. The OCuLink connector design is scalable to 12 channels and is available in straight, right angle, right side-exit and left side-exit plug configurations to mate with board mount connectors.

OCuLink cables are designed for applications in the data center and networking markets that use SAS, PCIe and other signal protocols. OCuLink cables and connectors support many interconnection configurations including backplane to motherboard, backplane to add-in card and card to motherboard.

Features and Benefits

- Support cable to board application
- Multiple channels are optional: 4X/6X(42pos),8X/12X(80pos)
- Small size design: pitch 0.5mm connector
- Excellent SI performance: signal rates up to PCIe4 16GT/s and SAS 4.0 24Gbps
- Straight, right angle, side exit and customization cable plug are optional
- Supports 85 ohm impedance applications, 100 ohm is available on request
- 30-34AWG cables are available for both discrete and ribbon cable
- RoHS compliant. Halogen free is available on request

Product Applications

- Servers and storage devices
- High performance computing
- Data center & networking equipment

Industry Standards

- SAS 3.0 / 4.0
- PCle Gen 3 / Gen 4

Technical Documents

Product Specification: PS-AST-0868 and PS-AST-917 OCuLink Cable Assembly

OCuLink Cable Assemblies

Plug Part Numbers

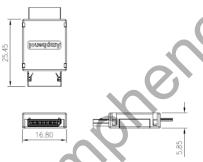
Table 1. Cable Connector Part Number Selection Guide

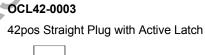
		42position	80position
Part Description	Bulk Cable	Plug Part	Number
Straight Plug with Passive Latch	Discrete pairs or Ribbon Cable	OCL42-0001	OCL80-0001
Straight Plug with Active Latch	Discrete pairs or Ribbon Cable	OCL42-0003	OCL80-0002
Straight Plug with Reverse Active Latch	Discrete pairs or Ribbon Cable	OCL42-0008	NA
Right Angle Plug with Passive Latch	Discrete pairs or Ribbon Cable	OCL42-0005	OCL80-0003
Right Angle Plug with Active Latch	Discrete pairs or Ribbon Cable	OCL42-0007	OCL80-0004
Right Side Exit Plug with Active Latch	Discrete pairs or Ribbon Cable	OCL42-0006	OCL80-0006
Left Side Exit Plug with Active Latch	Discrete pairs or Ribbon Cable	OCL42-0009	OCL80-0005

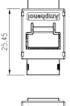
These plugs can be combined each other, please contact Amphenol for customized cable assembly

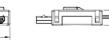
OCL42-0001

42pos Straight Plug with Passive Latch









5.85

OCL42-0008

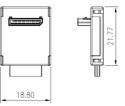
42pos Straight Plug with Reverse Active Latch











Note: the above dimensions proportion is off.

those RD products are subject to change by Amphenol without prior informing customers



Mini Cool Edge IO (MCIO) Cable Assemblies

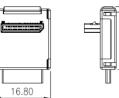
Part Numbers

Cable Connector Part Number Selection Guide

OCL42-0007

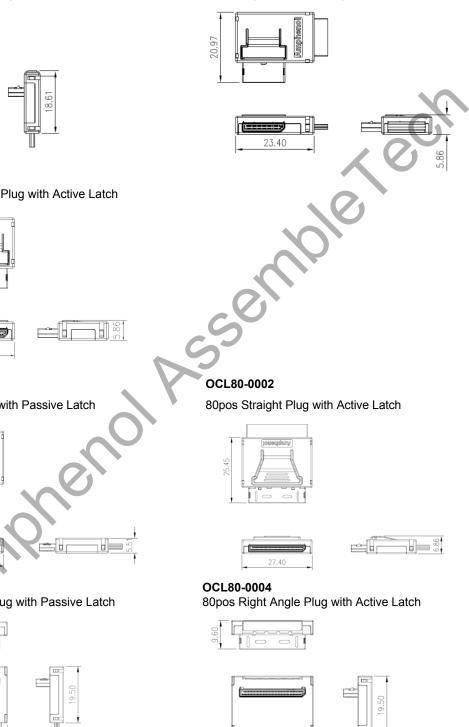
42pos Right Angle Plug with Active Latch





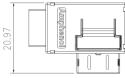
OCL42-0006

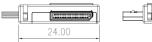
42pos Right Side Exit Plug with Active Latch



OCL42-0009

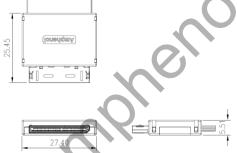
42pos Left Side Exit Plug with Active Latch





OCL80-0001

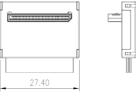
80pos Straight Plug with Passive Latch



OCL80-0003

80pos Right Angle Plug with Passive Latch





Note: the above dimensions proportion is off.



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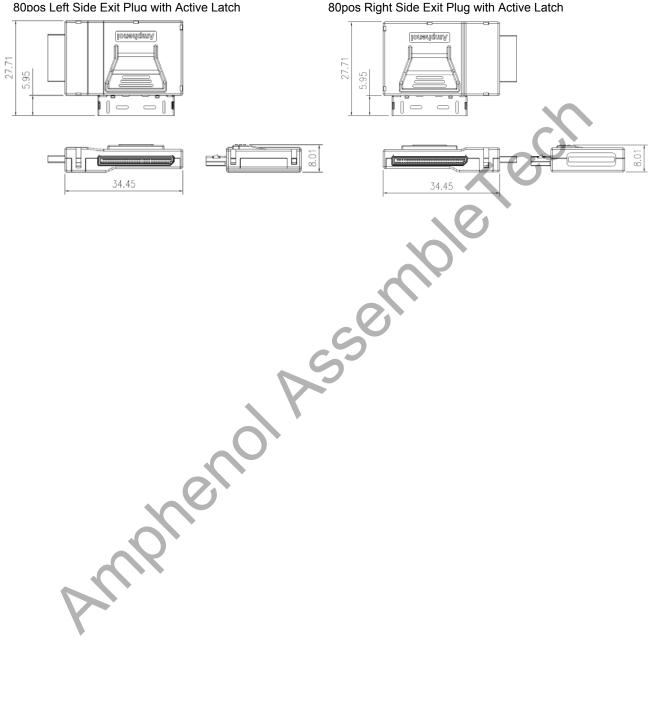
Mini Cool Edge IO (MCIO) Cable Assemblies

Part Numbers

Cable Connector Part Number Selection Guide

OCL80-0005

80pos Left Side Exit Plug with Active Latch



OCL80-0006

Note: the above dimensions proportion is off.

OCuLink Cable Assemblies

Product Specifications

Table 2. Material Specifications

Contact	30µin min hard Gold plated contact pads		
Connector housing	Thermoplastic UL94V-0		
Active latch	Stainless steel		
	Silver plated copper conductor		
	Fluoropolymer dielectric		
Raw Cable (30-34AWG)	Tinned copper drain wire		
	Metallic tape pair shield		
	Polyester tape jacket		

Table 3. Electrical/Mechanical Specifications

	Silver plated copper conductor	
	Fluoropolymer dielectric	
Raw Cable (30-34AWG)	Tinned copper drain wire	
(,	Metallic tape pair shield	
	Polyester tape jacket	
able 3. Electrical/Me	echanical Specifications	
Impedance	85Ω, optional 100Ω	
Impedance Data Rate	85Ω, optional 100Ω24Gbps per channel	
-		
Data Rate	24Gbps per channel	
Data Rate Within Pair Skew	24Gbps per channel Max. 10 ps/m	entole
Data Rate Within Pair Skew Rated Voltage	24Gbps per channel Max. 10 ps/m 30V	eniple
Data Rate Within Pair Skew Rated Voltage Rated Current	24Gbps per channel Max. 10 ps/m 30V 0.5A per pin	entole
Data Rate Within Pair Skew Rated Voltage Rated Current Durability	24Gbps per channel Max. 10 ps/m 30V 0.5A per pin 250 mating cycles Connector W/Active latch: 8~40N	entole

Table 4. Environmental Specifications

Storage Temperature	-20° to 80°C
Operating Temperature	0° to 80°C
Flammability Rating	VW-1
Safety Certificates	RoHS compliant, HF optional



Table 5. Typical Cable Specifications



30AWG 85Ω Cable Bend Radius	1.95mm (good way bend)	30AWG 85 Ω Cable Bend Radius	2.1mm (good way bend)			
	Thickness =0.78 mm	Cable Dimensions	Thickness =0.85 mm			
Cable Dimensions	Width per pair = 1.80 mm	Cable Dimensions	Width/12 pairs = 27.30 mm			
31AWG 85Ω Cable Bend Radius	1.8mm (good way bend)	31AWG 85Ω Cable Bend Radius	1.95mm (good way bend)			
Cable Dimensions	Thickness = 0.72mm	Cable Dimensions	Thickness = 0.78mm			
	Width per pair = 1.70 mm		Width/12 pairs = 25.90 mm			
32AWG 85Ω Cable Bend Radius	1.6mm (good way bend)	32AWG 85Ω Cable Bend Radius	1.8mm (good way bend)			
Ochla Dimensione	Thickness =0.65 mm		Thickness =0.71 mm			
Cable Dimensions	Width per pair = 1.56 mm	Cable Dimensions	Width/6 pairs = 13.80 mm			
34AWG 85Ω Cable Bend Radius	1.4 mm (good way bend)	34AWG 85Ω Cable Bend Radius	1.5mm (good way bend)			
Cable Dimensions	Thickness =0.55 mm		Thickness =0.60 mm			
	Width per pair = 1.25 mm	Cable Dimensions	Width/6 pairs = 12.0 mm			

	4.5GHz = 4.5 dB/m			
30AWG 85Ω Cable Attenuation (max)	9.0 GHz = 8.8 dB/m			
	12.0 GHz = 10.7 dB/m			
S.	4.5GHz = 5.0 dB/m			
31AWG 85Ω Cable Attenuation (max)	9.0 GHz = 8.8 dB/m			
	12.0 GHz = 10.7 dB/m			
32AWG 85Ω Cable Attenuation (max) 4.5GHz = 5.8 dB/m 9.0 GHz = 10.5 dB/n	4.5GHz = 5.8 dB/m			
	9.0 GHz = 10.5 dB/m			
	12.0 GHz = 14.0 dB/m			
	4.5GHz = 4.8 dB/0.7m			
34AWG 85Ω Cable Attenuation (max)	9.0 GHz = 9.8 dB/0.7m			
	12.0 GHz = 12.8 dB/0.7m			
	(max) 31AWG 85Ω Cable Attenuation (max) 32AWG 85Ω Cable Attenuation (max) 34AWG 85Ω Cable Attenuation			

Note:

Conductor is solid copper for discrete and ribbon cable. For more details, please contact local Amphenol sales person or visit www.amphenol-ast.com.

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Pin Configurations

OCuLink 42 Position

	P1	P2				
A1	RESERVED]	B1	RESERVED		
A2	GROUND		B2	GROUND		
A3	PERp0	1— ()—	B3	PETp0		
A4	PERn0		B4	PETn0		
A5	GROUND	1 <u> </u>	B5	GROUND		
A6	PERp1	1— ()—	B6	PETp1		
A7	PERn1		B7	PETn1		
A8	GROUND	1 <u> </u>	B8	GROUND		
A9	BP TYPE	- (1 -	B9	BP TYPE		
A10	CWAKE#	\vdash	B10	CWAKE#		
A11	GROUND	1 <u> X </u>	B11	GROUND		
A12	VSP	\vdash	B12	VSP		
A13	VSP		B13	VSP		
A14	GROUND	1 <u> X </u>	B14	GROUND		
A15	PERp2	\vdash	B15	PETp2		
A16	PERn2	\vdash	B16	PETn2		
A17	GROUND	<u>⊢ X</u> —	B17	GROUND		
A18	PERp3	$\vdash \land$	B18	PETp3		
A19	PERn3	$\left \right $	B19	PETn3		
A20	GROUND	⊢	B20	GROUND		
A21	RESERVED]	B21	RESERVED		

OCuLink 80 Position

A1 GROUND B1 GROUND A2 PERp0 B2 PETp0 A3 PERn0 B3 PETn0 A4 GROUND B4 GROUND A5 PERp1 B5 PETp1 A6 PERn1 B6 PETn1 A7 GROUND B7 GROUND A8 BP TYPE B9 CWAKE# A10 GROUND B10 GROUND A11 VSP B11 VSP A12 VSP B12 VSP A13 GROUND B15 PETn2 A14 PERp2 B15 PETn2 A15 PERn2 B15 PETn2 A16 GROUND B17 PETp3 A18 PERn3 B18 PETn3 A19 GROUND B20 RESERVED A21 RESERVED B21 RESERVED A22 GROUND B22 GROUND A23 PERp5 B26 PETp5 A24 PERn5		P1	P2				
A3 PERn0 B3 PETn0 A4 GROUND B4 GROUND A5 PERp1 B5 PETp1 A6 PERn1 B6 PETn1 A7 GROUND B7 GROUND A8 BP TYPE B8 BP TYPE A9 CWAKE# B9 CWAKE# A10 GROUND B10 GROUND A11 VSP B11 VSP A12 VSP B14 PEng2 A13 GROUND B16 GROUND A14 PERp2 B14 PETp2 A15 PERn2 B14 PETp2 A16 GROUND B17 PETp3 A18 PERn3 B18 PETn2 A19 GROUND B20 RESERVED A21 RESERVED B21 RESERVED A22 GROUND B22 GROUND A23 PEp4 B24 PETn4 A24 PERn5 B27 PETp5 A25 GROUND <td>A1</td> <td>GROUND</td> <td></td> <td>B1</td> <td>GROUND</td> <td></td>	A1	GROUND		B1	GROUND		
A3 PERn0 B3 PETn0 A4 GROUND B4 GROUND A5 PERp1 B5 PETp1 A6 PERn1 B5 PETp1 A7 GROUND B7 GROUND A8 BP TYPE B8 BP TYPE A9 CWAKE# B9 CWAKE# A10 GROUND B10 GROUND A11 VSP B11 VSP A12 VSP B14 PETo2 A13 GROUND B16 GROUND A14 PERp2 B14 PETo2 A15 PERn2 B16 GROUND A17 PERp3 B17 PETp3 A18 PERn3 B19 GROUND A20 RESERVED B20 RESERVED A21 RESERVED B22 GROUND A22 GROUND B22 GROUND A23 PErp4 B24 PETp5 A24 PERn5 B26 PETp5 A27 PERn5 <td>A2</td> <td>PERp0</td> <td>\square</td> <td>B2</td> <td>PETp0</td> <td></td>	A2	PERp0	\square	B2	PETp0		
A5 PERp1 B5 PETp1 A6 PERn1 B6 PETn1 A7 GROUND B7 GROUND A8 BP TYPE B8 BP TYPE A9 CWAKE# B9 CWAKE# A10 GROUND B10 GROUND A11 VSP B11 VSP A12 VSP B12 VSP A13 GROUND B15 GROUND A14 PERp2 B14 PETp2 A15 PERn2 B16 GROUND A16 GROUND B16 GROUND A17 PERp3 B17 PETn2 A18 PERn3 B18 PETn3 A19 GROUND B12 RESERVED A20 RESERVED B21 RESERVED A21 RESERVED B22 GROUND A22 GROUND B22 GROUND A23 PERp4 B24 PETn4 A24 PERn5 B27 PETn5 A27 PER	A3			B3	PETn0		
A6 PERn1 B6 PETn1 A7 GROUND B7 GROUND A8 BP TYPE B8 BP TYPE A9 CWAKE# B9 CWAKE# B9 CWAKE# A10 GROUND B10 GROUND B11 VSP A11 VSP B11 VSP B12 VSP A13 GROUND B13 GROUND B14 PEng2 A14 PERp2 B14 PEng2 B14 PEng2 A15 PERn3 B15 PETn3 B17 PEng3 A18 PERn3 B18 PETn3 B18 PETn3 A19 GROUND B20 RESERVED B21 RESERVED A21 RESERVED B21 RESERVED B22 GROUND A22 GROUND B22 GROUND B23 PETn3 A24 PEn4 B24 PETn4 B25 GROUND A26 PERp5 B27 PETn5 B27 PETn5 A23	A4	GROUND	<u> </u>	B4	GROUND		
A6 PERn1 B6 PETn1 A7 GROUND B7 GROUND A8 BP TYPE B8 BP TYPE A9 CWAKE# B9 CWAKE# A10 GROUND B10 GROUND A11 VSP B11 VSP A12 VSP B12 VSP A13 GROUND B13 GROUND A14 PERp2 B14 PETp2 A15 PERn2 B14 PETp2 A16 GROUND B15 PETn2 A17 PERp3 B18 PETn3 A18 PERn3 B19 GROUND A20 RESERVED B21 RESERVED A21 RESERVED B21 RESERVED A22 GROUND B22 GROUND A22 REVA B23 PETp3 A24 PERn4 B23 PETp4 A25 GROUND B26 PETp5 A27 PERn5 B27 PETn5 A28 QRUN	A5	PERp1	\square	B5	PETp1		
A8 BP TYPE B8 BP TYPE A9 CWAKE# B9 CWAKE# A10 GROUND B10 GROUND A11 VSP B11 VSP A12 VSP B12 VSP A13 GROUND B14 PETo2 A14 PERp2 B14 PETo2 A15 PERn2 B14 PETo2 A16 GROUND B16 GROUND A17 PERp3 B16 GROUND A18 PETn3 B18 PETn3 A19 GROUND B19 GROUND A20 RESERVED B20 RESERVED A21 RESERVED B21 RESERVED A22 GROUND B22 GROUND A23 PErp4 B24 PETo4 A24 PETo5 B25 GROUND A25 GROUND B28 GROUND A26 PErp5 B25 GROUND	A6			B6	PETn1		
A9 CWAKE# B9 CWAKE# A10 GROUND B10 GROUND A11 VSP B11 VSP A12 VSP B11 VSP A13 GROUND B13 GROUND A14 PERp2 B14 PETp2 A15 PERn2 B14 PETp2 A16 GROUND B16 GROUND A17 PERp3 B17 PETp3 A18 PERn3 B18 PETn2 A19 GROUND B19 GROUND A20 RESERVED B20 RESERVED A21 RESERVED B21 RESERVED A22 GROUND B22 GROUND A23 PErp4 B23 PETp4 A24 PERn4 B26 PETp5 A25 GROUND B28 GROUND A26 PErp5 B27 PETn5 A27 PERn5 B20 PEST# A31 GROUND B32 PERST# A31 <t< td=""><td>A7</td><td>GROUND</td><td><u> </u></td><td>B7</td><td>GROUND</td><td></td></t<>	A7	GROUND	<u> </u>	B7	GROUND		
A10 GROUND B10 GROUND A11 VSP B11 VSP A12 VSP B12 VSP A13 GROUND B13 GROUND A14 PERp2 B14 PETp2 A15 PErn2 B16 GROUND A17 PERp3 B17 PETp2 A16 GROUND B18 GROUND A17 PERp3 B18 PETn2 A18 PERn3 B18 PETn3 A19 GROUND B20 RESERVED A20 RESERVED B21 RESERVED A21 RESERVED B22 GROUND A22 GROUND B22 GROUND A23 PERp4 B23 PETp4 A24 PERo5 B26 PETp5 A27 PERn5 B26 PETp5 A28 GROUND B28 GROUND A31 GROUND B32 PERST# A33 CPRSNT# B33 CPRSNT# A34	A8	BP TYPE	- () -	B8	BP TYPE		
A11 VSP B11 VSP A12 VSP B12 VSP A13 GROUND B13 GROUND A14 PERp2 B14 PETp2 A15 PERn2 B14 PETp2 A16 GROUND B15 PETn2 A16 GROUND B16 GROUND A17 PERp3 B17 PETp3 A18 PERn3 B18 PETn3 A19 GROUND B19 GROUND A20 RESERVED B20 RESERVED A21 RESERVED B21 RESERVED A22 GROUND B23 PETp4 A23 PERp4 B24 PETn4 A24 PERn4 B25 GROUND A26 PERp5 B26 PETp5 A27 PERn5 B27 PETn5 A28 GROUND B30 2-WIRE CLOCK A30 2-WIRE DATA B30 D-WIRE DATA A31 GROUND B31 GROUND	A9	CWAKE#		B9	CWAKE#		
A12 VSP B12 VSP A13 GROUND B13 GROUND A14 PERp2 B14 PETp2 A15 PERn2 B14 PETp2 A16 GROUND B15 PETn2 A17 PERp3 B17 PETp3 A18 PERn3 B18 PETn3 A19 GROUND B17 GROUND A20 RESERVED B21 RESERVED A21 RESERVED B21 RESERVED A22 GROUND B22 GROUND A23 PERp4 B23 PETp4 A24 PERn5 B26 PETp5 A27 PERn5 B27 PETn5 A28 GROUND B28 GROUND A29 2-WIRE CLOCK B29 2-WIRE CLOCK A30 2-WIRE DATA B31 GROUND A31 GROUND B31 GROUND A33 CPRSNT# B33 CPRSNT# A34 GROUND B34 GROUND A35 PER6 B36 PETn6 A36 PERn6 B36 PETn6 A36 PERn6 B36 PETn6 <td>A10</td> <td>GROUND</td> <td><u>— Х</u>—</td> <td>B10</td> <td>GROUND</td> <td></td>	A10	GROUND	<u>— Х</u> —	B10	GROUND		
A13 GROUND B13 GROUND A14 PERp2 B14 PETp2 A15 PERn2 B14 PETp2 A15 PERn2 B15 PETn2 A16 GROUND B16 GROUND A17 PERp3 B17 PETp3 A18 PERn3 B18 PETn3 A19 GROUND B19 GROUND A20 RESERVED B20 RESERVED A21 RESERVED B21 RESERVED A22 GROUND B22 GROUND A23 PERp4 B24 PETn4 A24 PERn4 B24 PETn4 A25 GROUND B26 PETp5 A26 PERp5 B27 PETn5 A27 PERn5 B27 PETn5 A28 GROUND B31 GROUND A30 2-WIRE DATA B31 GROUND A31 GROUND B32 P	A11	VSP	- () -	B11	VSP		
A14 PERp2 A14 PERp2 A15 PERn2 A16 GROUND A17 PERp3 A18 PETn2 A16 GROUND A17 PERp3 A18 PETn3 A19 GROUND A20 RESERVED A21 RESERVED A22 GROUND A23 PErp4 A24 PERn4 A25 GROUND A26 PErp5 A27 PERn5 A28 GROUND A29 2-WIRE CLOCK A30 2-WIRE DATA A31 GROUND A32 PERST# A33 CPRSNT# A34 GROUND A35 PERp6 B34 GROUND B34 GROUND A32 PERST# A33 CPRSNT# A34 GROUND A35 PERp6	A12	VSP		B12	VSP		
A15 PERn2 B15 PETn2 A16 GROUND B16 GROUND A17 PERp3 B17 PETp3 A18 PERn3 B18 PETn3 A19 GROUND B19 GROUND A20 RESERVED B20 RESERVED A21 RESERVED B21 RESERVED A22 GROUND B22 GROUND A23 PErp4 B24 PETn4 A24 PERn4 B25 GROUND A25 GROUND B26 PETp5 A26 PERp5 B26 PETp5 A27 PERn5 B27 PETn5 A28 GROUND B28 GROUND A29 2-WIRE CLOCK B29 2-WIRE DATA A31 GROUND B31 GROUND A32 PERST# B33 CPRSNT# A33 CPRSNT# B33 CPRSNT# A34 GROUND B34 GROUND A35 PERp6 B36 PETp6	A13	GROUND	<u>— Х —</u>	B13	GROUND		
A16 GROUND B16 GROUND A17 PERp3 B17 PETp3 A18 PERn3 B18 PETn3 A18 PERn3 B18 PETn3 A19 GROUND B19 GROUND A20 RESERVED B20 RESERVED A21 RESERVED B21 RESERVED A22 GROUND B22 GROUND A22 GROUND B23 PETp4 A24 PERn4 B23 PETp4 A25 GROUND B26 PETp4 A26 PERp5 B26 PETp5 A27 PERn5 B27 PETn5 A28 GROUND B28 GROUND A29 2-WIRE CLOCK B29 2-WIRE CLOCK A30 2-WIRE DATA B30 2-WIRE DATA A31 GROUND B34 GROUND A33 CPRSNT# B33 CPRSNT# A33 CPRSNT# B34 GROUND A35 PERp6 B36 PETp6 <td>A14</td> <td>PERp2</td> <td> - () -</td> <td>B14</td> <td>PETp2</td> <td></td>	A14	PERp2	- () -	B14	PETp2		
A17 PERp3 B17 PETp3 A18 PERn3 B18 PETn3 A19 GROUND B19 GROUND A20 RESERVED B20 RESERVED A21 RESERVED B21 RESERVED A22 GROUND B22 GROUND A23 PERp4 B24 PETn4 A24 PERn4 B25 GROUND A25 GROUND B26 PETp5 A27 PERp5 B26 PETp5 A28 GROUND B29 2-WIRE COCK A30 2-WIRE DATA B30 2-WIRE CLOCK A31 GROUND B31 GROUND A32 PERST# B33 CPRSNT# A33 CPRSNT# B33 CPRSNT# A33 CPRSNT# B33 CPRSNT# A34 GROUND B34 GROUND A35 PERp6 B35 PETp6 A36 PERn6 B36 PETn6 A37 GROUND B38	A15	PERn2		B15	PETn2		
A18 PERn3 B18 PETn3 A19 GROUND B19 GROUND A20 RESERVED B20 RESERVED A21 RESERVED B21 RESERVED A22 GROUND B23 PETp4 A24 PERn4 B24 PETn4 A25 GROUND B26 GROUND A26 PERp5 B26 PETp5 A27 PERn5 B27 PETn5 A28 GROUND B28 GROUND A29 2-WIRE CLOCK B29 2-WIRE CLOCK A30 2-WIRE DATA B30 2-WIRE CLOCK A31 GROUND B31 GROUND A32 PERST# B33 CPRSNT# A33 CPRSNT# B33 CPRSNT# A34 GROUND G84 GROUND A35 PERp6 B36 PETn6 A36 PERn6 B37 GROUND A38 PERp7 B38 PETp7 A39 PERn7 B39 PETn7	A16	GROUND	-X-	B16	GROUND		
A19 GROUND B19 GROUND A20 RESERVED B20 RESERVED A21 RESERVED B21 RESERVED A22 GROUND B22 GROUND A23 PERp4 B23 PETp4 A24 PETn4 B26 PETp4 A25 GROUND B26 PETp4 A26 PERp5 B26 PETp5 A27 PERn5 B27 PETn5 A28 GROUND B28 GROUND A29 Z-WIRE CLOCK B29 2-WIRE CLOCK A30 2-WIRE DATA B30 2-WIRE CLOCK A31 GROUND B31 GROUND A32 PERST# B33 CPRSNT# A33 CPRSNT# B33 CPRSNT# A34 GROUND B34 GROUND A35 PERp6 B36 PETp6 A36 PERn6 B36 PETn6 A37 GROUND	A17	PERp3		B17	PETp3		
A20 RESERVED B20 RESERVED A21 RESERVED B21 RESERVED A22 GROUND B22 GROUND A23 PERp4 B23 PETp4 A24 PETn4 B24 PETn4 A25 GROUND B25 GROUND A26 PERp5 B26 PETp5 A27 PERn5 B27 PETn5 A28 GROUND B28 GROUND A29 2-WIRE CLOCK B29 2-WIRE CLOCK A30 2-WIRE DATA B30 2-WIRE DATA A31 GROUND B31 GROUND A32 PERST# B33 CPRSNT# A33 CPRSNT# B33 CPRSNT# A34 GROUND B34 GROUND A35 PERp6 B36 PETp6 A36 PERn6 B36 PETp7 A38 PERp7 B38 PETp7 A39 PERn7 <t< td=""><td>A18</td><td>PERn3</td><td></td><td>B18</td><td>PETn3</td><td></td></t<>	A18	PERn3		B18	PETn3		
A21 RESERVED B21 RESERVED A22 GROUND B22 GROUND A23 PERp4 B23 PETp4 A24 PERn4 B24 PETn4 A25 GROUND B25 GROUND A26 PERp5 B26 PETp5 A27 PERn5 B27 PETn5 A28 GROUND B28 GROUND A29 2-WIRE CLOCK B29 2-WIRE DATA A31 GROUND B31 GROUND A32 PERST# B33 CPRSNT# A33 CPRSNT# B34 GROUND A35 PERp6 B36 PETp6 A36 PERn6 B37 GROUND A38 PERp7 B38 PETp7 A39 PERn7 B39 PETn7	A19	GROUND		B19	GROUND		
Jac Jac <thjac< th=""> <thjac< th=""> <thjac< th=""></thjac<></thjac<></thjac<>	A20	RESERVED		B20	RESERVED		
A23 PERp4 B23 PETp4 A24 PERn4 B24 PETn4 A25 GROUND B25 GROUND A26 PERp5 B26 PETp5 A27 PERn5 B27 PETn5 A28 GROUND B28 GROUND A29 2-WIRE CLOCK B29 2-WIRE A30 2-WIRE DATA B30 2-WIRE A31 GROUND B31 GROUND A32 PERST# B33 CPRSNT# A33 CPRSNT# B33 CPRSNT# A34 GROUND B34 GROUND A35 PERp6 B35 PETp6 A36 PERn6 B36 PETn6 A37 GROUND B38 PETp7 A38 PERp7 B38 PETp7 A39 PERn7 B39 PETn7	A21	RESERVED		B21	RESERVED		
A24 PERn4 B24 PETn4 A25 GROUND B25 GROUND A26 PERp5 B26 PETp5 A27 PERn5 B27 PETn5 A28 GROUND B28 GROUND A29 2-WIRE CLOCK B30 2-WIRE CLOCK A30 2-WIRE DATA B30 2-WIRE DATA A31 GROUND B31 GROUND A32 PERST# B33 CPRSNT# A33 CPRSNT# B34 GROUND A35 PERp6 B36 PETn6 A36 PERn6 B37 GROUND A38 PERp7 B38 PETp7 A39 PERn7 B39 PETn7	A22	GROUND_		B22	GROUND		
A24 PERn4 B24 PETn4 A25 GROUND B25 GROUND A26 PERp5 B26 PETp5 A27 PERn5 B27 PETn5 A28 GROUND B28 GROUND A29 2-WIRE CLOCK B29 2-WIRE CLOCK A30 2-WIRE DATA B30 2-WIRE DATA A31 GROUND B31 GROUND A32 PERST# B33 CPRSNT# A33 CPRSNT# B35 PETn6 A34 GROUND B35 PETn6 A35 PERp6 B35 PETn6 A36 PERn6 B37 GROUND A38 PERp7 B38 PETp7 A39 PERn7 B39 PETn7	A23	PERp4		B23	PETp4		
A26 PERp5 B26 PETp5 A27 PERn5 B27 PETn5 A28 GROUND B28 GROUND A29 2-WIRE CLOCK B29 2-WIRE CLOCK A30 2-WIRE DATA B30 2-WIRE DATA A31 GROUND B31 GROUND A32 PERST# B32 PERST# A33 CPRSNT# B34 GROUND A35 PERp6 B36 PETp6 A36 PERn6 B37 GROUND A37 GROUND B37 GROUND A38 PERp7 B38 PETp7 A39 PERn7 B39 PETn7	A24_			B24	PETn4		
A27 PERn5 B27 PETn5 A28 GROUND B28 GROUND A29 2-WIRE CLOCK B29 2-WIRE CLOCK A30 2-WIRE DATA B30 2-WIRE DATA A31 GROUND B31 GROUND A31 GROUND B31 GROUND A32 PERST# B33 CPRSNT# A33 CPRSNT# B34 GROUND A35 PERp6 B36 PETp6 A36 PERn6 B36 PETn6 A37 GROUND B38 GROUND A38 PERp7 B38 PETp7 A39 PERn7 B39 PETn7	A25	GROUND	<u>— Х</u> —	B25	GROUND		
A28 GROUND B28 GROUND A29 2-WIRE CLOCK B29 2-WIRE CLOCK A30 2-WIRE DATA B30 2-WIRE DATA A31 GROUND B31 GROUND A32 PERST# B332 PERST# A33 CPRSNT# B33 CPRSNT# A34 GROUND B34 GROUND A35 PERp6 B35 PETp6 A36 PERn6 B36 PETn6 A37 GROUND B38 PETp7 A38 PERp7 B38 PETp7 A39 PERn7 B39 PETn7	A26	PERp5	()	B26	PETp5		
A29 2-WIRE CLOCK B29 2-WIRE CLOCK A30 2-WIRE DATA B30 2-WIRE DATA A31 GROUND B31 GROUND A32 PERST# B32 PERST# A33 CPRSNT# B33 CPRSNT# A34 GROUND B34 GROUND A35 PER6 B35 PETp6 A36 PERn6 B36 PETn6 A37 GROUND B38 PETp7 A38 PER7 B38 PETp7 A39 PERn7 B39 PETn7	A27	PERn5		B27	PETn5		
A30 2 - WIRE DATA A30 2 - WIRE DATA B30 2 - WIRE DATA A31 GROUND B31 GROUND A32 PERST# B32 PERST# A33 CPRSNT# B33 CPRSNT# A34 GROUND B34 GROUND A35 PERp6 B35 PETp6 A36 PERn6 B36 PETn6 A37 GROUND B38 PETp7 A38 PERp7 B38 PETp7 A39 PERn7 B39 PETn7	A28	GROUND	<u>— Х</u> —	B28	GROUND		
A31 GROUND B31 GROUND A32 PERST# B32 PERST# A33 CPRSNT# B33 CPRSNT# A34 GROUND B34 GROUND A35 PERp6 B35 PETp6 A36 PERn6 B37 GROUND A37 GROUND B37 GROUND A38 PERp7 B38 PETp7 A39 PERn7 B39 PETn7	A29	2-WIRE CLOCK	\vdash () —	B29	2-WIRE CLOCK		
A32 PERST# B32 PERST# A33 CPRSNT# B32 PERST# A34 GROUND B34 GROUND A35 PERP6 B35 PETp6 A36 PERn6 B36 PETn6 A37 GROUND B37 GROUND A38 PERp7 B38 PETp7 A39 PERn7 B39 PETn7	A30	2-WIRE DATA		B30	2-WIRE DATA		
A33 CPRSNT# B33 CPRSNT# A34 GROUND B34 GROUND A35 PERp6 B35 PETp6 A36 PERn6 B36 PETn6 A37 GROUND B37 GROUND A38 PERp7 B38 PETp7 A39 PERn7 B39 PETn7	A31	GROUND	<u>— Х</u> —	B31	GROUND		
A34 GROUND B34 GROUND A35 PERp6 B35 PETp6 A36 PERn6 B36 PETn6 A37 GROUND B37 GROUND A38 PERp7 B38 PETp7 A39 PERn7 B39 PETn7	A32	PERST#	\vdash () —	B32	PERST#		
A35 PERp6 B35 PETp6 A36 PERn6 B36 PETn6 A37 GROUND B37 GROUND A38 PERp7 B38 PETp7 A39 PERn7 B39 PETn7	A33	CPRSNT#		B33	CPRSNT#		
A36 PERn6 B36 PETn6 A37 GROUND B37 GROUND A38 PERp7 B38 PETp7 A39 PERn7 B39 PETn7	A34	GROUND	<u>— Х</u> —	B34	GROUND		
A37 GROUND B37 GROUND A38 PERp7 B38 PETp7 A39 PERn7 B39 PETn7	A35	PERp6	\vdash () —	B35	PETp6		
A38 PERp7 B38 PETp7 A39 PERn7 B39 PETn7	A36	PERn6	- -	B36	PETn6		
A39 PERn7 B39 PETn7	A37	GROUND	⊢─ <i>X</i> ──	B37	GROUND		
A39 PERn7 B39 PETn7	A38	PERp7	\vdash ()—	B38	PETp7		
A40 GROUND B40 GROUND	A39		\square	B39	PETn7		
	A40	GROUND	⊢ V	B40	GROUND		

	P	1			_		P2
B1	RE	ESERVED				A1	RESERVED
B2	GF	ROUND		Λ	_	A2	GROUND
B3	PE	ЕТрО		Α—	_	A3	PERp0
B4	PE	ETn0		\cup	_	A4	PERn0
B5	GF	ROUND		Х	-	A5	GROUND
B6	PE	ETp1		\square	-	A6	PERp1
B7	-	ETn1		H^{-}	-	A7	PERn1
B8	-	ROUND		Х	\neg	A8	GROUND
B9	-	-WIRE CLOCK			-	A9	2-WIRE CLOCK
B10	-	-WIRE DATA		\forall	-	A10 A11	2-WIRE DATA
B11	-	ROUND		X	╞		GROUND
B12	-	ERST#			╞	A12 A13	PERST#
B13	-	PRSNT#		∇	-		CPRSNT#
B14	-	ROUND		Ň			GROUND
B15	-	ETp2				A16	PERp2
B16	-	ETn2		V		A10	PERn2
B17	-	ROUND		Á.	\neg		GROUND
B18	-	ETp3				A10	PERp3
B19 B20	-	ETn 3 ROUND				A19 A20	PERn3
B20	-	ESERVED				A21	GROUND RESERVED
		P1	Ŧ				P2
В	1	GROUND	7			A1	GROUND
B	_	PETp0	1	()		A2	PERp0
B	_	PETn0				A3	PERn0
B	- 4	GROUND	1	X		A4	GROUND
B	-	PETp1	1	()		A5	PERp1
B	-	PETn1	-			A6	PERn1
B	-	GROUND	1	<u>-</u> X		A7	GROUND
B	_	BP TYPE	1	$ \rightarrow $		A8	BP TYPE
B	-	CWAKE#	1			A9	CWAKE#
	10	GROUND	1	<u>-</u> X		A10	GROUND
В	11	VSP	1	+		A11	VSP
В	12	VSP	1	+ +		A12	VSP
	13	GROUND	1	<u>-</u> X		A13	GROUND
	14	PETp2	1	()		A14	PERp2
	15	PETn2	1	+		A15	PERn2
	16	GROUND	1	-X-		A16	GROUND
-	17	PETp3	1	+		A17	PERp3
	18	PETn3	1	+		A18	PERn3
	19	GROUND	1	V		A19	GROUND
	20	RESERVED	1			A20	RESERVED
	21	RESERVED	1			A21	RESERVED
	22	GROUND	1			A22	GROUND
	23	PETp4	1	()		A23	PERp4
	24	PETn4	1	$\left \right $		A24	PERn4
	25	GROUND	1	-X-		A25	GROUND
	26	PETp5	1	()		A26	PERp5
	27	PETn5	1	+		A27	PERn5
	28	GROUND	1	X		A28	GROUND
	29	2-WIRE CLOCK	1	()		A29	2-WIRE CLOCK
-	30	2-WIRE DATA	1			A30	2-WIRE DATA
	31	GROUND	1	V		A30	GROUND
	32	PERST#		Δ		A31	PERST#
	33	CPRSNT#				A32	CPRSNT#
	34			V			
	35 35	GROUND	-[\cap		A34	GROUND
	36	PETp6				A35	PERp6
	37 37	PETn6	-[V		A36	PERn6
	-	GROUND PETo7	-	\wedge		A37	GROUND PERo7

Note: P1 and P2 are connectors on both ends of cable assembly.

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A38 PERp7 A39 PERn7

A40 GROUND

 B38
 PETp7

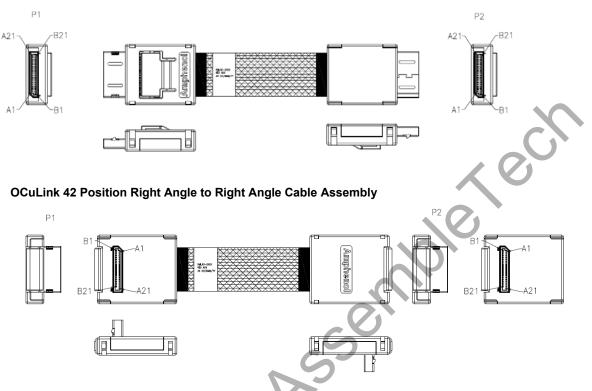
 B39
 PETn7

 B40
 GROUND

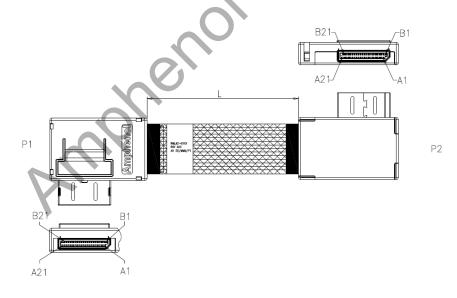


OCuLink CABLE ASSEMBLY MECHANICAL SCHEMATICS

OCuLink 42 Position Straight to Straight Cable Assembly

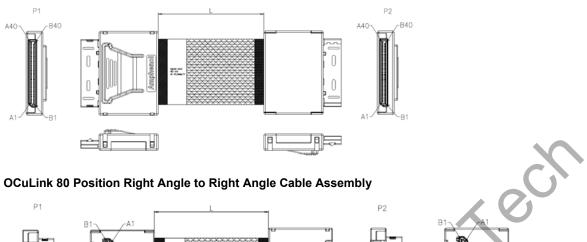


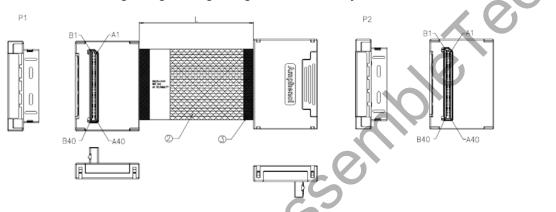
OCuLink 42 Position Right Side Exit to Left Side Exit Cable Assembly



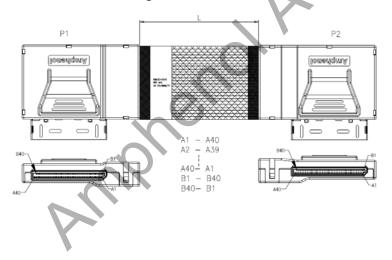


OCuLink 80 Position Straight to Straight Cable Assembly





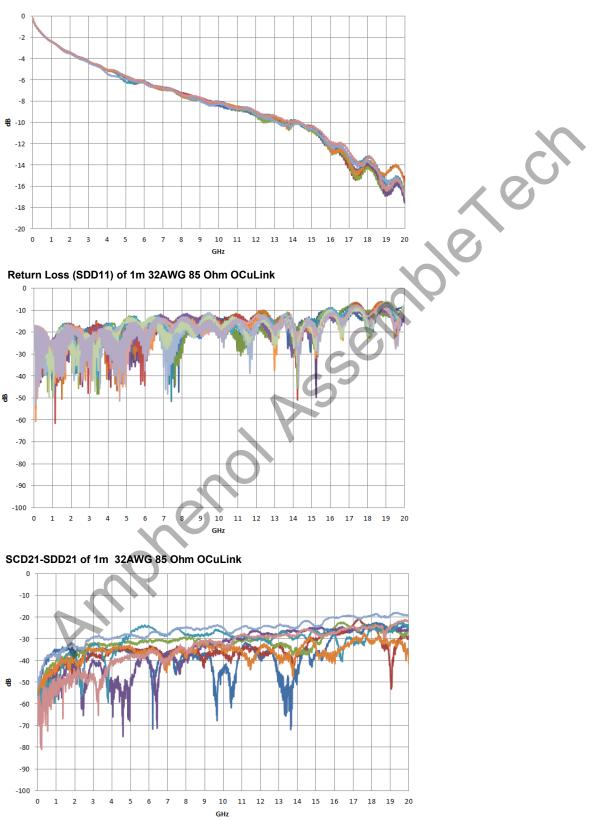
OCuLink 80 Position Right Side Exit to Left side Exit Cable Assembly





Signal Integrity Performance

Insertion Loss (SDD21) of 1m 32AWG 85 Ohm OCuLink



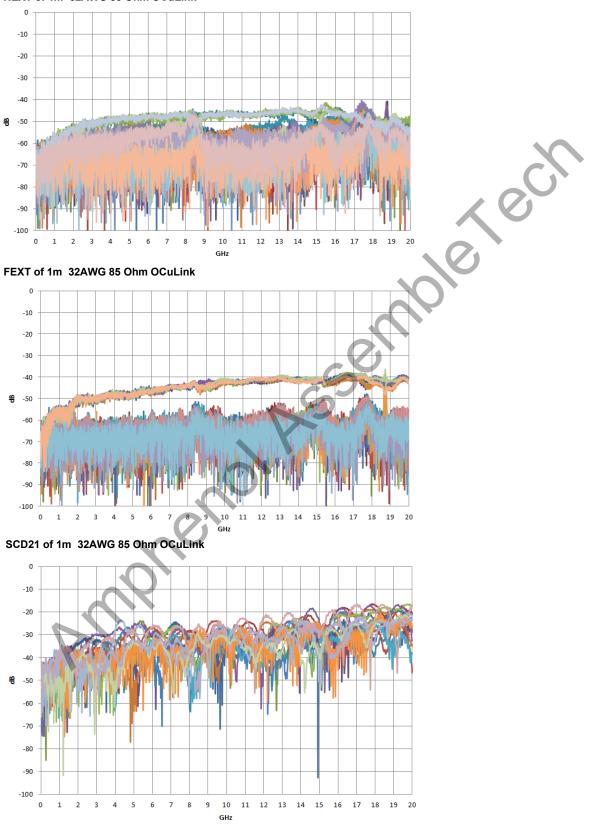
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Amphenol AssembleTech Technical Datasheet

OCuLink Cable Assemblies

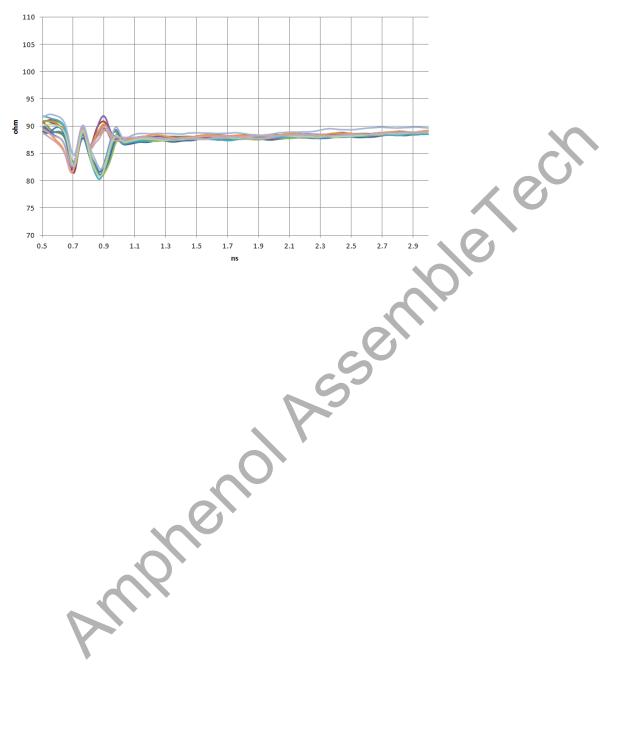


NEXT of 1m 32AWG 85 Ohm OCuLink

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Differential Impedance @ Tr=40ps(20%-80%) of 1m 32AWG 85 Ohm OCuLink

Note:

1. Please visit our website <u>http://www.amphenol-ast.com/V3/en/product.aspx?classId=164</u> to find specific product information. 2. Any requirement, please send email to <u>sales@amphenol-ast.com</u> or inquire our local sales.