

# CONNECTOR SOLUTIONS MILITARY APPLICATIONS

HDMI     
ODU HIGH SPEED DATA TECHNOLOGY



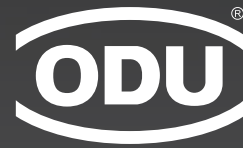
SMALLER - LIGHTER - FASTER



12 mm



# A PERFECT ALLIANCE



## ODU GROUP OVERVIEW

- More than 80 years of experience in connector technology
- Over 2,500 employees worldwide
- Sales offices in China, Denmark, France, Germany, Hong Kong, Italy, Japan, Korea, Romania, Sweden, the UK and the US as well as 6 production and logistics sites
- All technologies under one roof: Design and development, machine tool and special machine construction, injection, stamping, turning, surface technology, assembly and cable assembly

We operate in the following markets: medical, military and security, test and measurement, industrial, and automotive

As of February 2022

## CERTIFIED QUALITY

- ISO 9001
- IATF 16949
- ISO 13485
- ISO 14001
- ISO 50001
- Wide range of UL, CSA, VG and VDE licenses

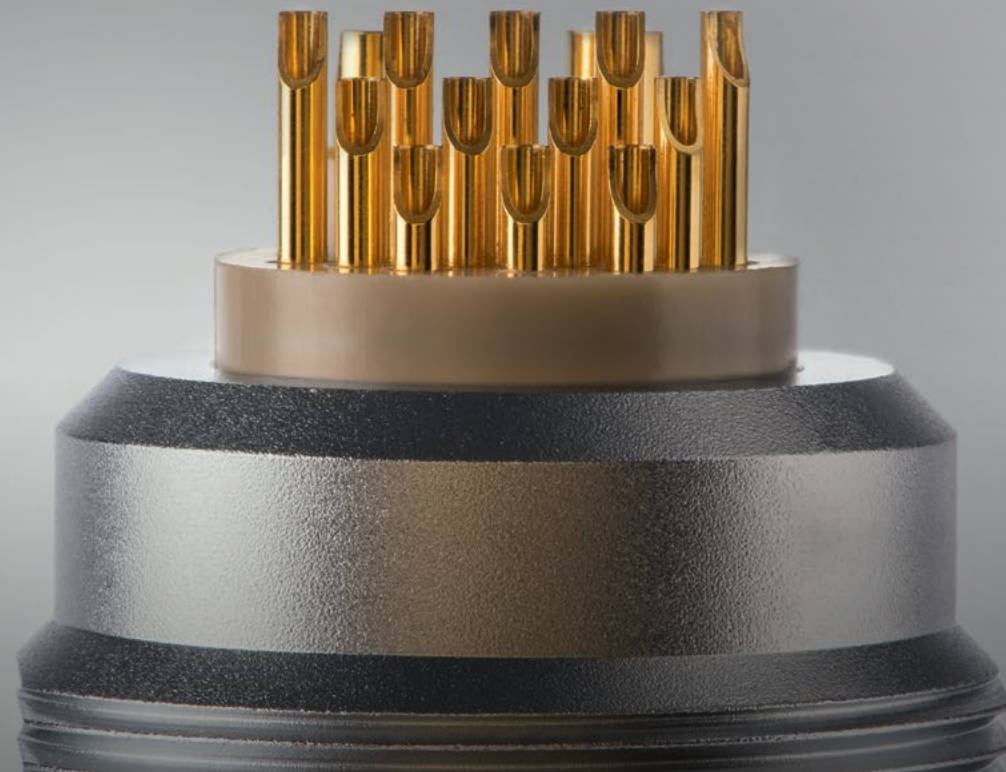
- UL certified cable assembly

For a complete list of our certifications, please visit our website.

## CUSTOMER-SPECIFIC SOLUTIONS

Contacts, connectors and integrated cable assembly solutions meeting the most demanding technical market requirements – ODU's connector solutions and value-added services are characterized by their exclusive focus on meeting the customer's needs.

- Precise implementation of application-specific requirements regarding design, functionality, cost and exclusivity
- Custom connector solutions derived from standard products
- One-to-one local expertise and fair, friendly consulting
- Rapid prototyping and production turnaround



## ODU CONNECTORS APPLICABILITY

### SOLDIER COMMUNICATION SYSTEMS

- + 70 % weight and size reduction
- + Up to IP6K9K



### UNMANNED SYSTEMS: UAV/UGV/UAS

- + High vibration resistance
- + High-speed data transfer



### MILITARY VEHICLES

- + Shock and vibration resistant
- + Ergonomic shape and rapid mate/demate capable


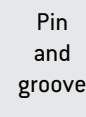

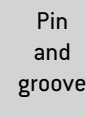

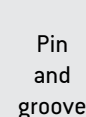

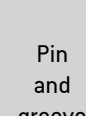

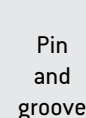

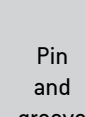




ODU MILITARY CONNECTORS

FAST SAMPLE AVAILABILITY  
Email us at: sales@odu-usa.com



		Keying	Sizes	No. of possible mechanical keying	Diameter plug (mm)	Max. cable diameter (mm)	Max. no. of contacts	Solder	Crimp	Print	IP Class in mated condition	IP Class in unmated condition	Shell material	RoHS compliant	Operating temperature range	Advanced plating technologies for corrosion resistance	Coax transmission	Rapid cable assembly manufacturing	USB® 3.2 Gen 1x1 <sup>1</sup>	USB® 2.0 <sup>1</sup>	HDMI <sup>®1</sup>	Ethernet CAT 5 and 10 GBit Ethernet
<div>ODU AMC® High-Density Break-Away</div> <div><ul style="list-style-type: none"><li>70 % weight and size reduction</li><li>Cable assembly solutions</li><li>Chrome plated version available</li><li>USB® 3.2 Gen 1x1<sup>1</sup> + USB® 2.0<sup>1</sup> + HDMI<sup>®1</sup> + Ethernet</li></ul></div> <div></div>		Pin and groove	00	4	9.8	5.0	7	•		•	Up to IP6K9K	IP68	Brass	•	-51 °C (-60 °F) to +125 °C (+257 °F)	•	•	•	•	•	•	•
			0		12.8	7.0	16															
			1		14.8	8.5	27															
<div>ODU AMC® High-Density Screw-Lock</div> <div><ul style="list-style-type: none"><li>High vibration resistance</li><li>High speed data transfer</li><li>High contact density: 2-16 contacts / 2 sizes</li></ul></div> <div></div>		Pin and groove	00	4	9.8	5.0	7	•		•	Up to IP6K9K	IP68	Brass	•	-51 °C (-60 °F) to +125 °C (+257 °F)	•	•	•	•	•	•	
			0		12.8	7.0	16															
<div>ODU AMC® Push-Pull</div> <div><ul style="list-style-type: none"><li>&gt; 5,000 mating cycles</li><li>High speed data technology</li><li>Quick and easy mating and locking</li></ul></div> <div></div>		Pin and groove	0	4	14.0	5.5	10	•		•	Up to IP6K9K	IP68	Aluminum	•	-51 °C (-60 °F) to +125 °C (+257 °F)	•	•	•	•	•	•	•
			1		15.9	6.5	16															
			1.5		16.5	8.0	19															
			2		19.6	10.0	26															
			3		23.9	11.5	37															
			4.5		33.0	17.5	55															
<div>ODU AMC® Break-Away</div> <div><ul style="list-style-type: none"><li>&gt; 5,000 mating cycles</li><li>High speed data technology</li><li>Quick and easy demating and locking</li></ul></div> <div></div>		Pin and groove	0	4	11.9	5.5	10	•		•	Up to IP6K9K	IP68	Aluminum	•	-51 °C (-60 °F) to +125 °C (+257 °F)	•	•	•	•	•	•	•
			1		13.9	6.5	16															
			1.5		15.9	8.0	19															
			2		17.6	10.0	26															
			3		21.9	11.5	37															
<div>ODU AMC® Easy-Clean</div> <div><ul style="list-style-type: none"><li>Fast and easy cleaning</li><li>Break-Away function</li><li>&gt; 5,000 mating cycles</li><li>Contact inserts with pogo pins</li></ul></div> <div></div>		Pin and groove	0	4	11.9	5.5	7	•		•	Up to IP6K9K	IP6K8	Aluminum	•	-51 °C (-60 °F) to +125 °C (+257 °F)	•	•	•				
			1		13.9	6.5	16															
			1.5		15.9	8.0	19															
<div>ODU AMC® Series T</div> <div><ul style="list-style-type: none"><li>Three locking types to 1 receptacle</li><li>High vibration resistance</li><li>Suitable for MIL 38999 backshells</li></ul></div> <div></div> <div>NEW!</div>		Pin and groove	9	4	18.4	7.6	10	•	•	•	Up to IP6K9K	IP68	Aluminum	•	-65 °C (-85 °F) to + 175 °C (+347 °F)	•		Backshell version & standard cable assemblies				Ethernet CAT 5 / 1 GBit Ethernet available
					18.5																	
					21																	
			12		24.2	14.6	18															
			24.9																			
26																						

¹The contact arrangement of an ODU data transmission connector differs from a standard data transmission connector due to the robust ODU specific design. However, the ODU design meets the electrical specifications of the respective standard data transmission protocol.

# ODU FIBER OPTIC

NEW!

## ODU AMC® SERIES T Expanded Beam Performance



- + Fiber types: Singlemode and Multimode
- + Configurations: 2 to 12 fibers
- + Outstanding optical performance



The ODU AMC® Series T Expanded Beam Performance is an advanced fiber optic solution. It offers high-end transmission characteristics over many mating cycles. The excellent optical performance remains unchanged even under mechanical stress, environmental influences and harsh ambient conditions.

### MECHANICAL CHARACTERISTICS / ENVIRONMENTAL DATA

Mating cycles	2,000*
IP class in mated condition	IP6K8
Operating temperature	−40 °C to +80 °C
Vibration	MIL 810G 7.7 g
Cleaning	Every 5,000 mating cycles

\* Contact transition allows up to 25,000 mating cycles. Specifics of the connector series may deviate.

### OPTICAL CHARACTERISTICS

		Typical	Max.
Insertion loss	SM	< 0.5 dB	< 0.7 dB
	MM	< 0.2 dB	< 0.3 dB
Return loss	SM	> 65 dB	≥ 55 dB
	MM	> 30 dB	≥ 25 dB

### CABLE SPECIFICATION

	Singlemode	Multimode
Fiber	G.657A2	OM4
Jacket	LSZH black	LSZH black
Cable diameter	6.0 ± 0.2 (mm)	6.0 ± 0.2 (mm)
Min. bending radius [static]	60 mm	60 mm
Min. bending radius [dynamic]	120 mm	120 mm

# CABLE ASSEMBLY SOLUTIONS

CUSTOM COMPONENT OVERMOLD  
(Custom Requirement)

OVERMOLDS WITH TPE, TPU & TPV

POTTING AND ENVIRONMENTAL SEALING

CUSTOMIZED CONNECTOR SOLUTIONS

FLEX LAYER ASSEMBLY

NON ODU CONNECTORS

- High-speed standard connectors such as: USB® 3.2 Gen 1x2<sup>1</sup>, USB® 2.0<sup>1</sup>, HDMI®<sup>1</sup> and Ethernet CAT 5
- Wire to board connectors

<sup>1</sup>The contact arrangement of an ODU data transmission connector differs from a standard data transmission connector due to the robust ODU specific design. However, the ODU design meets the electrical specifications of the respective standard data transmission protocol.

ODU TESTING & QUALITY

- In-process checking
- Data rate testing
- 100 % final inspection
- EMC compatible assembly
- Potting and environmental sealing
- IPC/WHMA-A-620
- Production possible in cleanroom in accordance with EN ISO 14644-1

# MODULAR / RECTANGULAR TECHNOLOGY

ODU-MAC® Silver-Line

- Advanced docking
- High vibration resistance
- > 100,000 mating cycles
- 31 different high speed data inserts
- 6 docking frame options

ODU-MAC® PUSH-LOCK Blue-Line

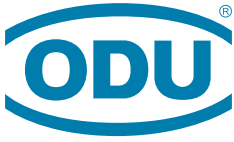
- Easy one handed operation
- Up to 70 signal contacts and power, coax, air, fluid, data rates
- > 5,000 mating cycles
- IP67
- Up to 6 mechanical keying options

# ELECTRICAL CONTACT TECHNOLOGY

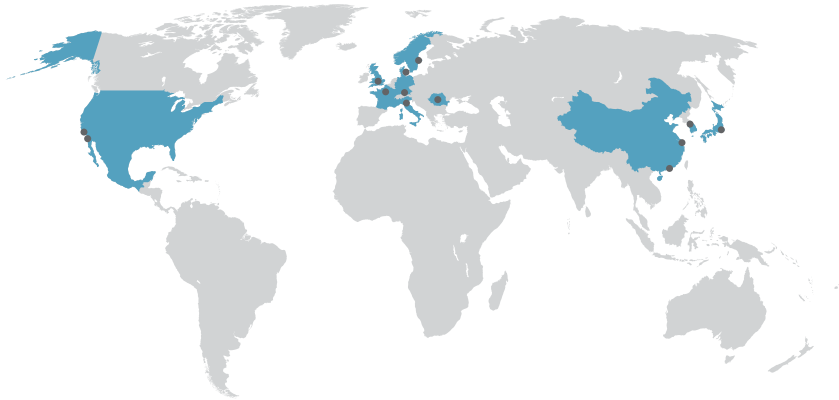
- High precision contacts
- Fully customizable
- Low contact resistance
- High current carrying capacity







## ODU GROUP WORLDWIDE



### ODU USA

#### ODU-USA, Inc.

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### PRODUCTION AND LOGISTICS SITES

Germany	Otto Dunkel GmbH
China	ODU (Shanghai) Connectors Manufacturing Co.Ltd
Mexico	ODU Mexico Manufacturing S.R.L. de C.V.
Romania	ODU Romania Manufacturing S.R.L.
USA	ODU North American Logistics

Further information and specialized  
representatives can be found at:  
[www.odu-usa.com/contact](http://www.odu-usa.com/contact)



Simply scan the QR code  
to download the entire brochure.

### SALES LOCATIONS

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