



A NEW ERA OF HIGH SPEED DATA TRANSMISSION

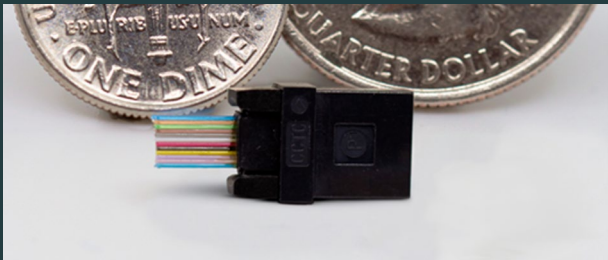
Reliable Connector System Solutions

CURRENT PROBLEMS WITH HIGH DENSITY FIBER IN AEROSPACE



Overview of existing solutions

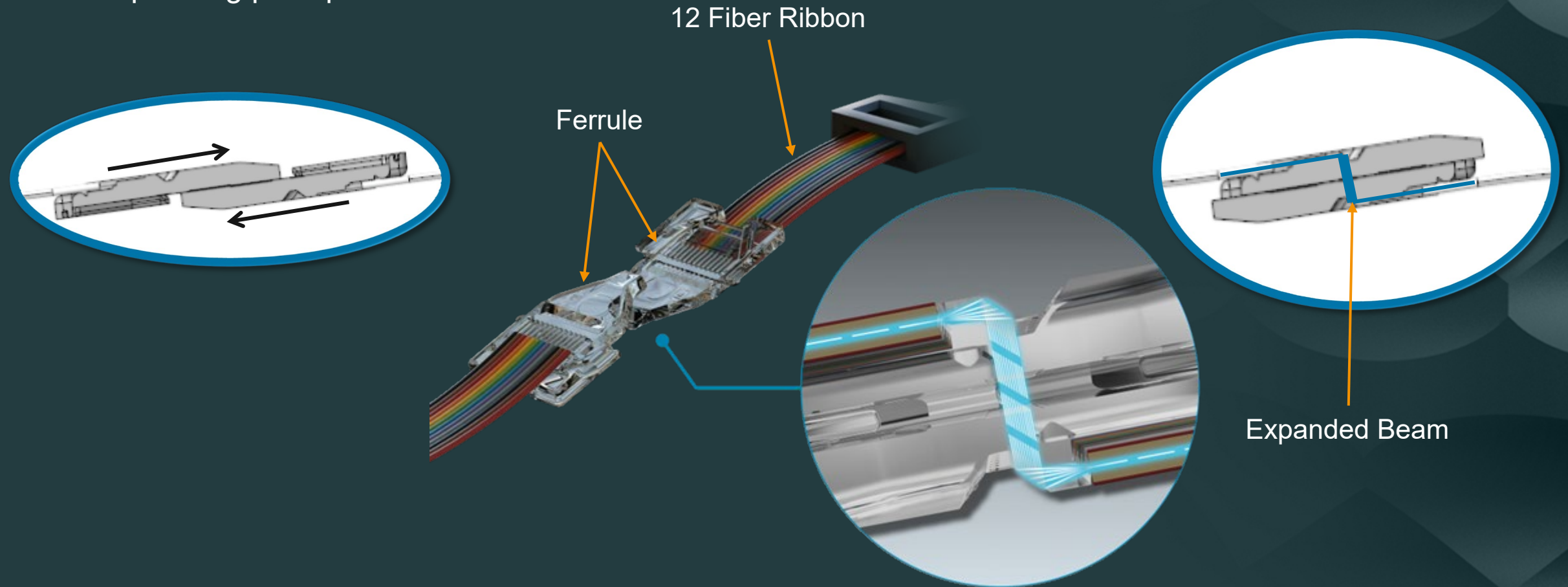
	MT Physical Contact (PC) MM	MT Expanded Beam (EB) MM
Insertion Loss (IL)	0,3 dB typical	0,5 dB typical
Return Loss (RL)	>30 dB typical	>28 dB typical
Dust Sensitivity	High	Moderate
Maintenance Effort	High	Moderate
Mating Cycles	Low durability	Low durability



3M SOLUTION – EBO (EXPANDED BEAM OPTICAL)



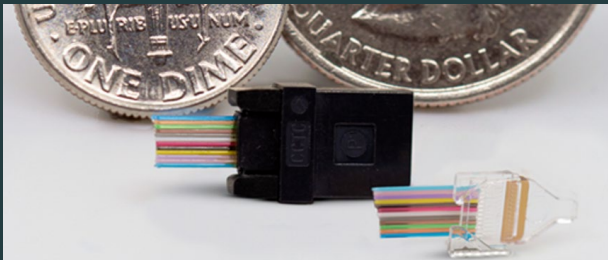
Operating principle



3M SOLUTION – EBO (EXPANDED BEAM OPTICAL)



	MT Physical Contact (PC) MM	MT Expanded Beam (EB) MM	Expanded Beam Optical (EBO) MM
Insertion Loss (IL)	0,3 dB typical	0,5 dB typical	0,15 dB typical
Return Loss (RL)	>30 dB typical	>28 dB typical	45 dB typical
Dust Sensitivity	High	Moderate	Low
Maintenance Effort	High	Moderate	Low
Mating Cycles	Low durability	Low durability	High durability



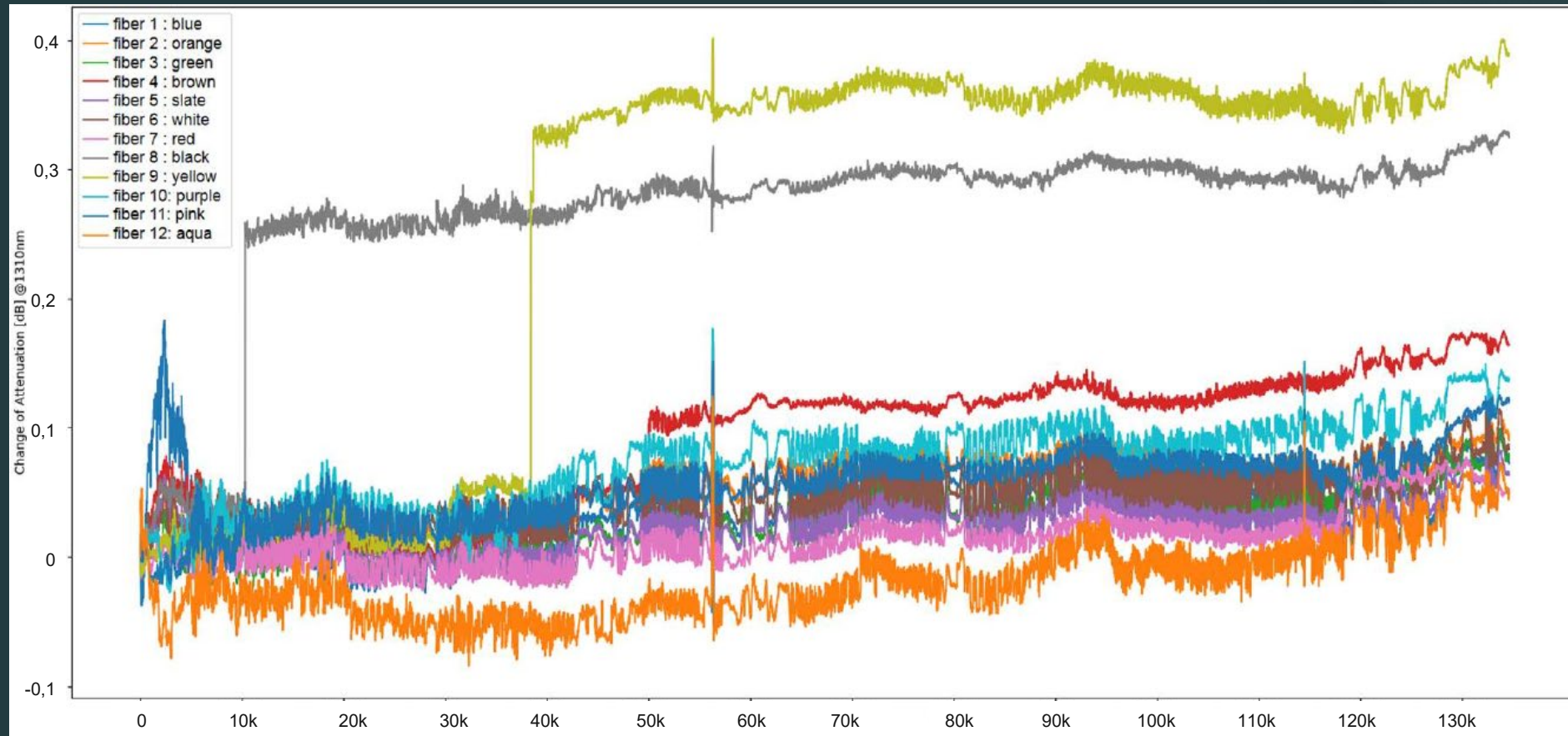
3M SOLUTION – EBO (EXPANDED BEAM OPTICAL)

	Expanded Beam Optical (EBO) Singlemode	Expanded Beam Optical (EBO) Multimode
Operating wavelength	1310 - 1550 nm	850 - 1300 nm
Insertion loss	Typ.: < 0.35 dB, Max.: < 0.7 dB	Typ.: < 0.15 dB, Max.: < 0.3 dB
Return loss	Typ.: > 60 dB, Min: ≥ 55 dB	Typ.: > 45 dB, Min: ≥ 35 dB
Mating cycles	50,000	
Operating temperature	-65°C up to +105°C	
Vibration	30g sine acc. to MIL-STD-202-204 (higher requirement tests pending)	

EBO – SOME TEST RESULTS



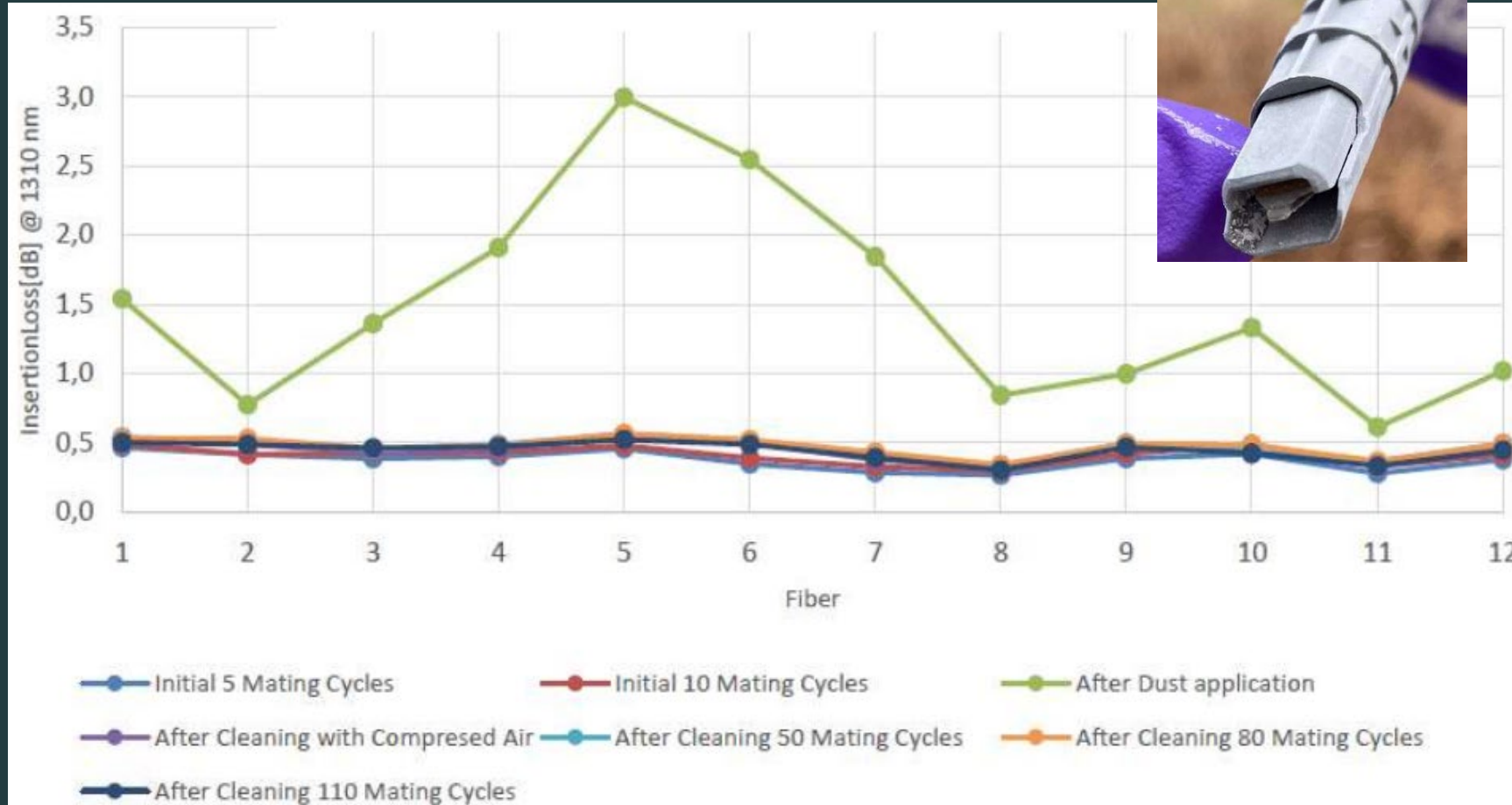
- Mating Cycles



EBO – SOME TEST RESULTS

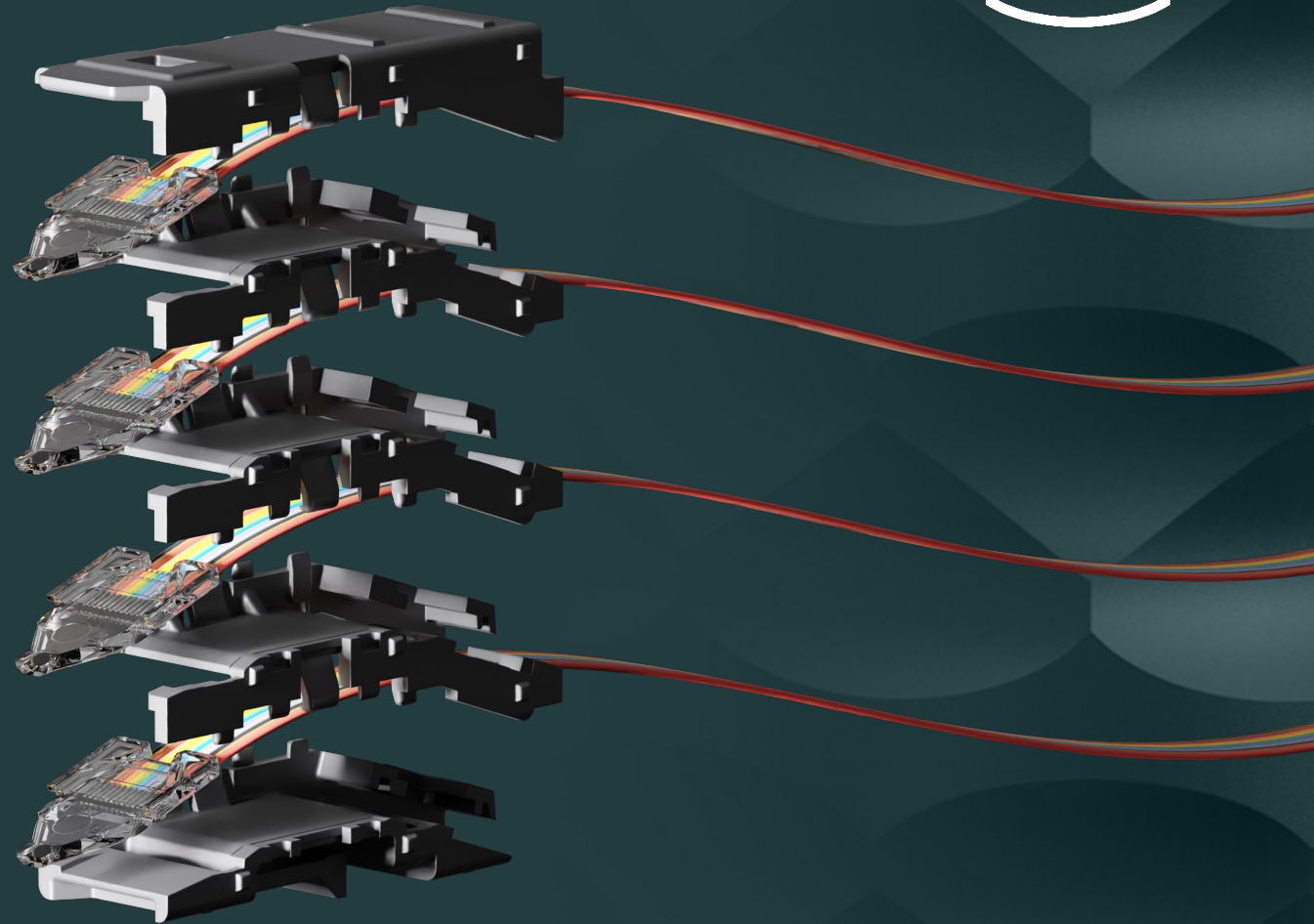


- Sand and Dust (Arizona Dust Test)



SCALEABLE DESIGN

- Ferrule is stackable
- Spacesaving design
- ODU developed field serviceable cassette for max. density at min. space

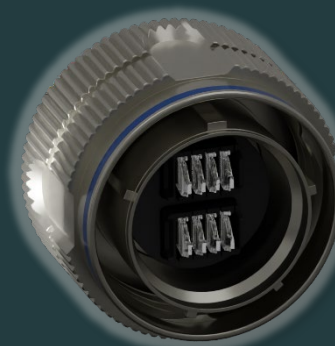
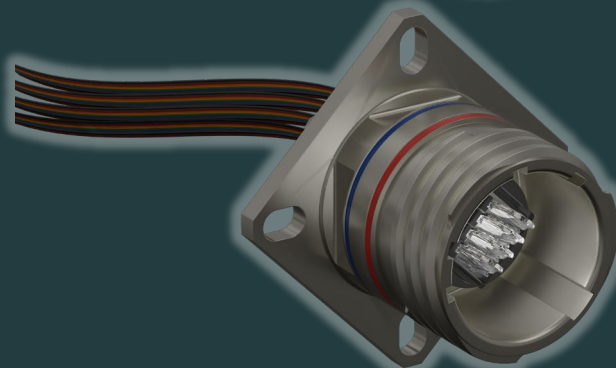


APPLICATION EXAMPLES

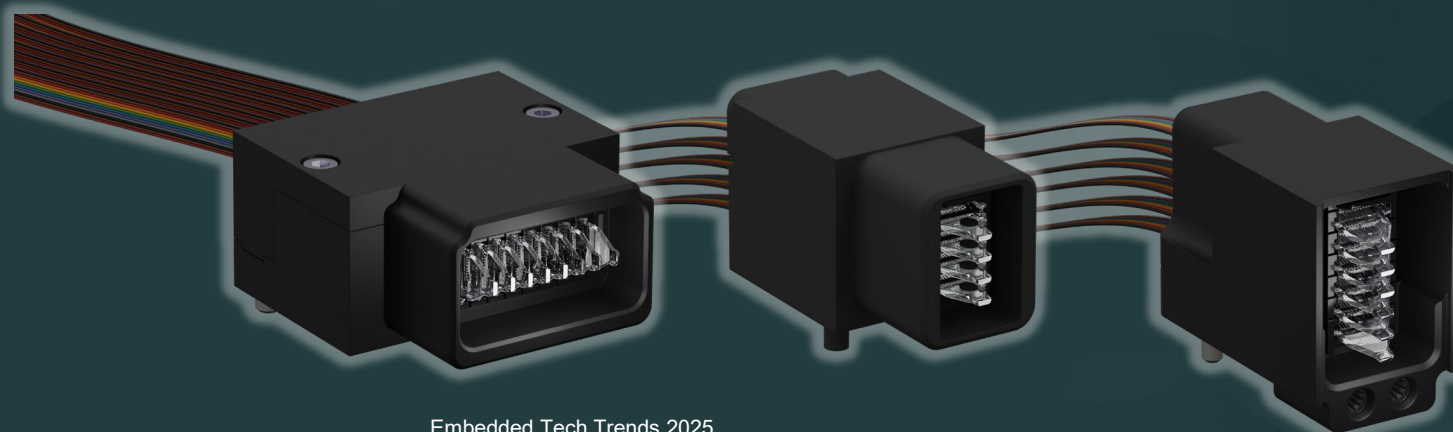
- Circular Connectors
 - ODU AMC Series T



- ODU TACTICS



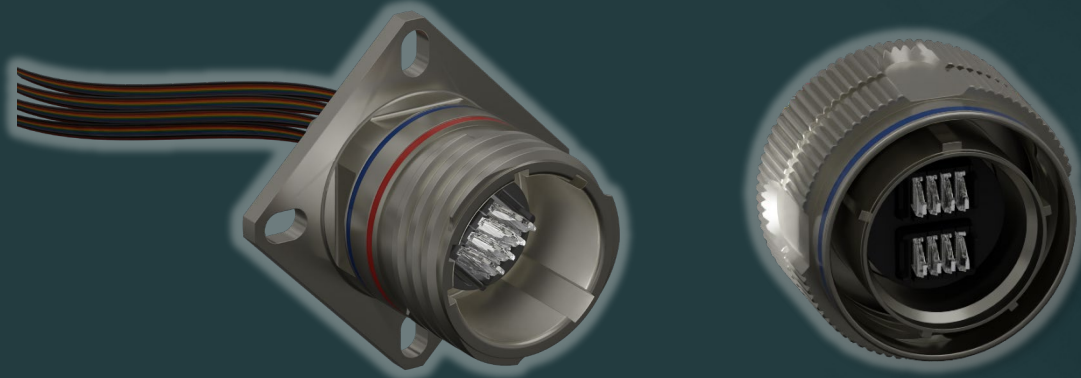
- Backplane Connectors
 - ODU BACKPLANE



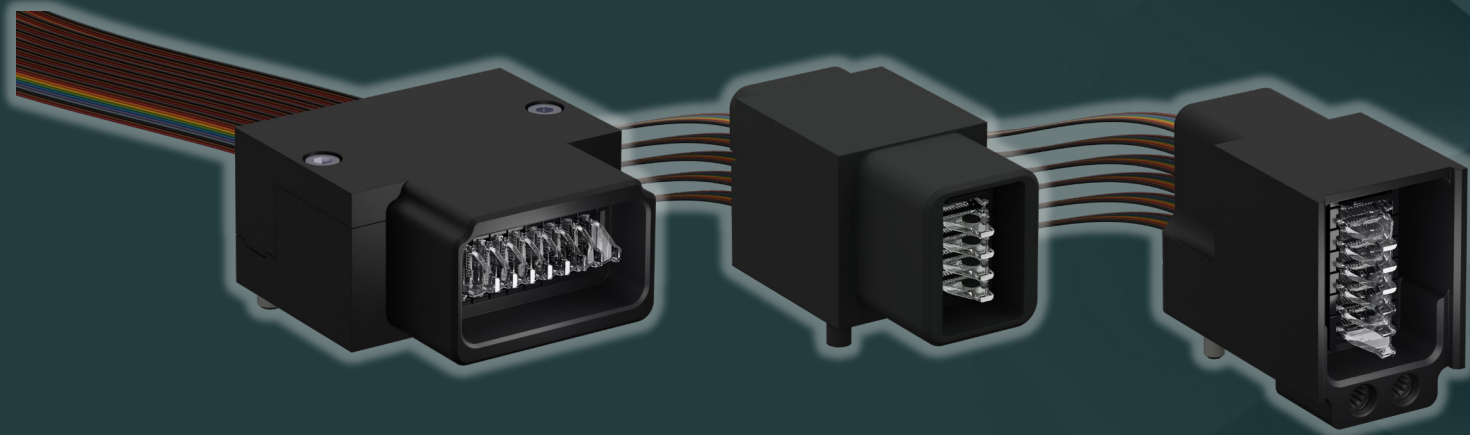
STANDARDIZATION



- Vita 95



- Vita 96 (96.1, 96.4, 96.5)





THANK YOU VERY MUCH
FOR YOUR ATTENTION

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