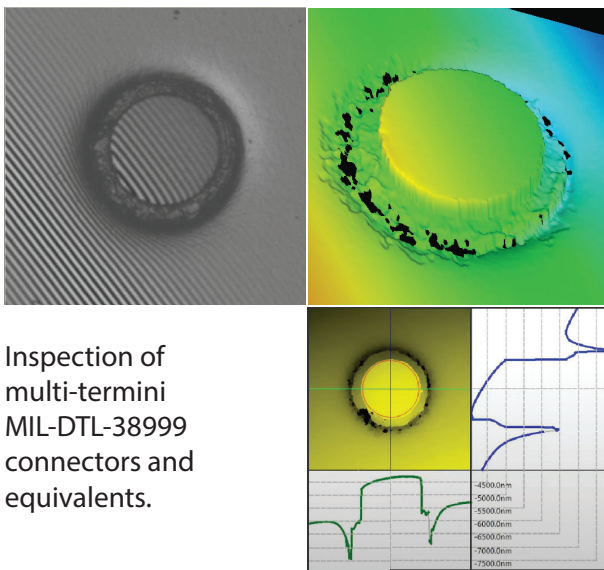


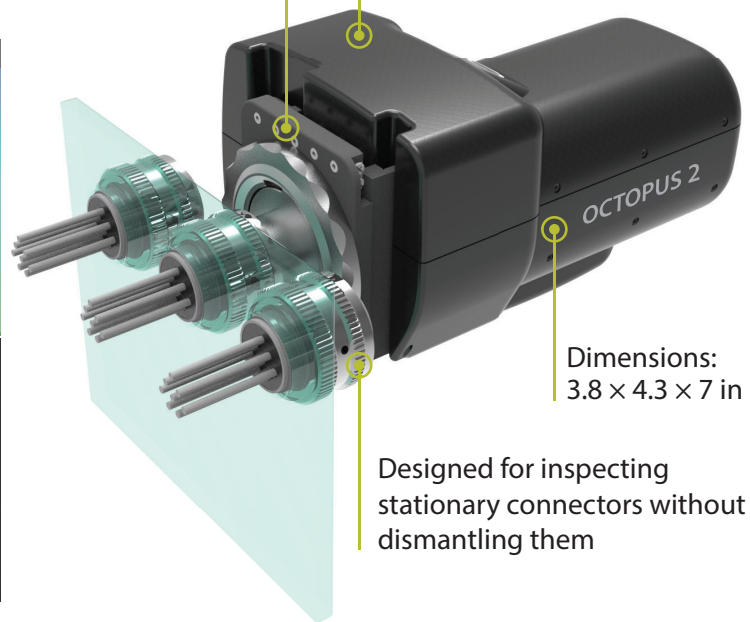
Robotic interferometer for maintenance inspection of multi-termini fiber optic connectors

Automated focusing and movement
from one terminus to another
in a multi-core connector

Compact handheld design
for limited space applications



Inspection of
multi-termini
MIL-DTL-38999
connectors and
equivalents.



Dimensions:
3.8 × 4.3 × 7 in

Designed for inspecting
stationary connectors without
dismantling them

Inspect mounted MIL style connectors in 3D. Ensure reliability and accurate performance of a critical connection.

End face inspection of MIL style connections is crucial as they are used in mission-critical systems demanding high optical performance and are continuously exposed to vibration, temperature cycling, repeated mating, and other harsh environmental conditions.

For critical applications, 2D evaluation of a terminus end face would be insufficient. Additional inspection must be performed by interferometry to:

- obtain 3D information about the defect that can't be removed by cleaning;
- detect fiber chips and cracks;
- register fiber height change of connectors over time to avoid mating issues.

Sumix OCTOPUS 2 robotic interferometer uses a multi-axis motion system allowing geometry inspection of fiber optic termini inside military and harsh environment connectors installed in patch-panels, server boxes, and other optical-network units on board of an aircraft or marine vessel.

PATENTED

Application

- Aerospace, marine and military vehicle field service;
- On-site inspection in harsh environments like oil & gas, backbone telecom etc.

Specification

- Connectors inspected:** MIL-DTL-38999 and other MIL style and harsh environment connectors
- Field of view:** D = 1.6 mm
- Area covered:** Y, X-axis motion: ± 12.5 mm
- Optical resolution:** 3.2 μm
- Magnification:** 300×
- Focus:** Autofocus
- Focus range:** 6 mm
- Measurement mode:** white light
- Power supply:** external, USB 3.0 cable, 12 V DC power adapter
- Dimensions (H × W × L):** 97 × 110 × 176 mm (3.8 × 4.3 × 7 in)
- Weight:** 1.3 kg (2.86 lbs)
- Compatible with:** desktop PC, laptop, tablet
- Operating system:** Windows 10

NIST traceable factory calibration

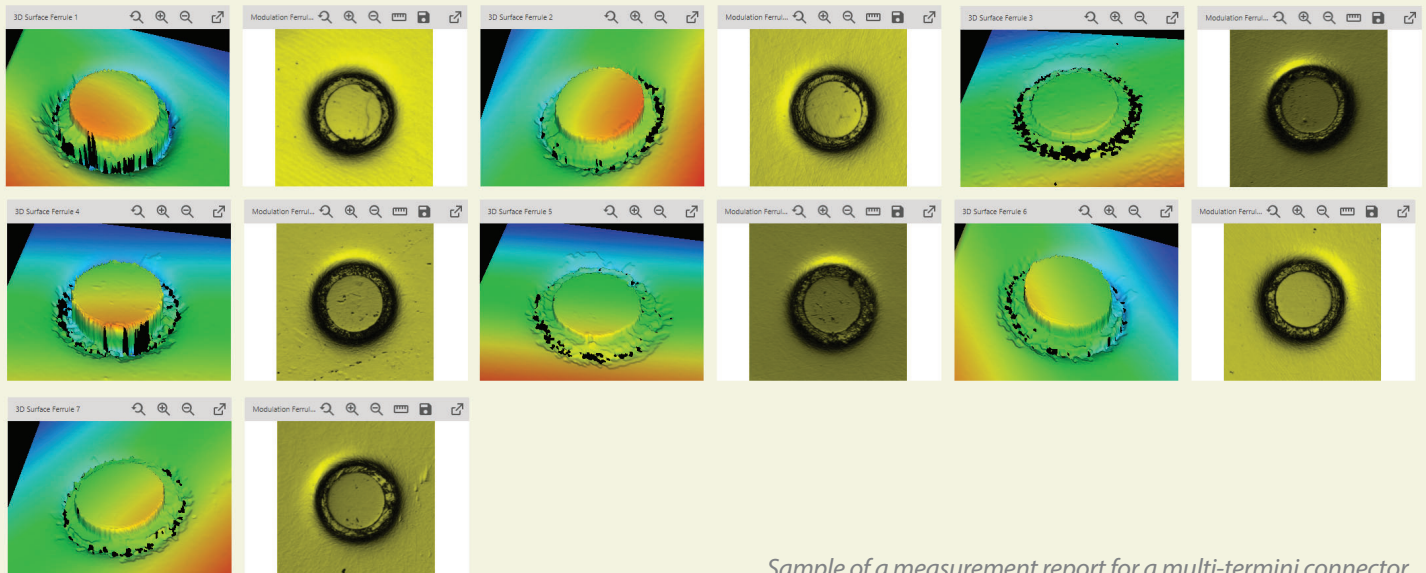
Capabilities

- Fiber Height and Radius of Curvature measurement
- 3D anomalies detection.

Name:	Result7747
Date & Time:	4/14/2021 10:42:7 AM
Task name:	Mininterferometer SF scenario.
Device SN, Fixture SN:	MINI 65003
Connector ID:	
Customer:	
Technician:	Mykola
Company:	Sumix

FIBERS

Measurement Parameter	Units	Pass/Fail Limits		Fiber Number / Measured Value / Verdict							
		Min	Max	1	2	3	4	5	6	7	
Height	nm			1571.92	2192.13	1343.22	1692.61	1614.40	2556.26	1728.28	
ROC	mm			17.56	8.08	8.85	3.02	15.78	16.27	4.89	



Sample of a measurement report for a multi-termini connector