

Credit: Mark Owens, UK MOD
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RUGGED OPTICAL SOLUTIONS

FOR AEROSPACE AND DEFENSE APPLICATIONS

MOOG

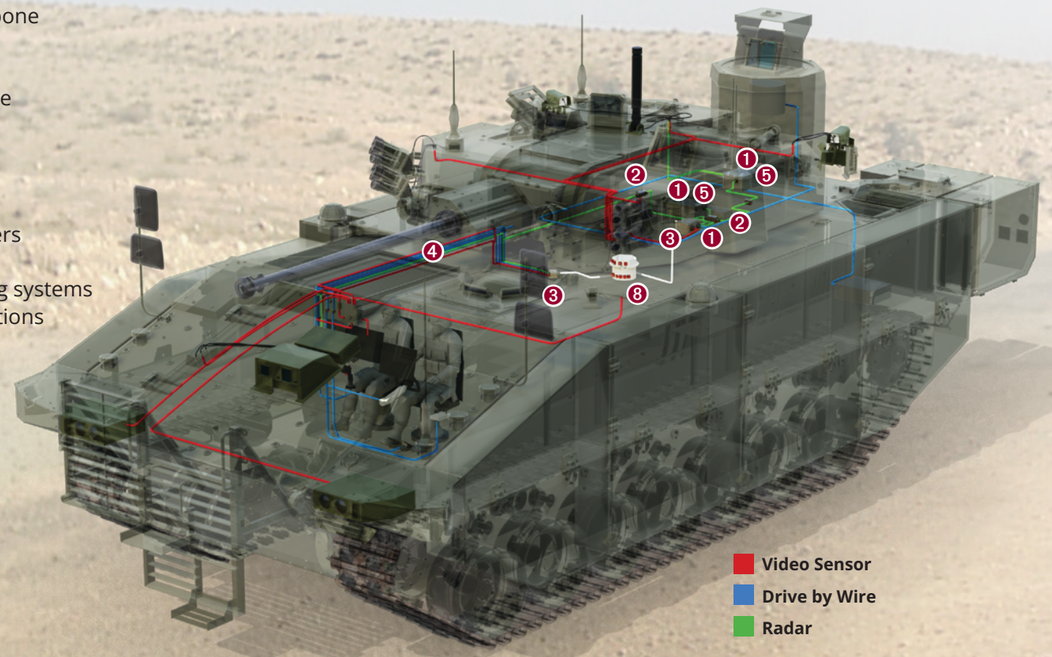
END TO END CONNECTIVITY

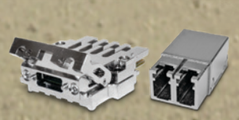
Moog rugged optical solutions addresses a critical gap in the space and defense sector, where no traditional provider individually designs enough of the network to ensure seamless performance. Moog brings full ownership of the system, from design to implementation, beyond just component supply.

Moog provides rugged optical networking solutions for the harsh environments of aerospace and defense applications.

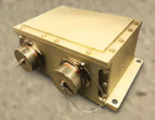
Moog delivers significant advantages, including:
- Lighter system weight
- Lower power demand
- Reduced component size
- Improved reliability
- Lower total cost of ownership
- Upgradeable systems with minimal cost (no need to change the fiber)
- Reduced cost of implementation
- Components and assemblies all made in the USA
- ITAR free solutions available
- Components are ruggedized for harsh environments

Platform Applications:
- Fiber optic backbone
- C4ISR
- Displays
- Electronic warfare
- Vision systems
- Radar sensors
- EO/ISR
- Fire control
- Mission computers
- Data recorders
- Warning jamming systems
- Turreted applications




❶ BOARD MOUNT TRANSCEIVERS


❷ ETHERNET MEDIA CONVERTERS

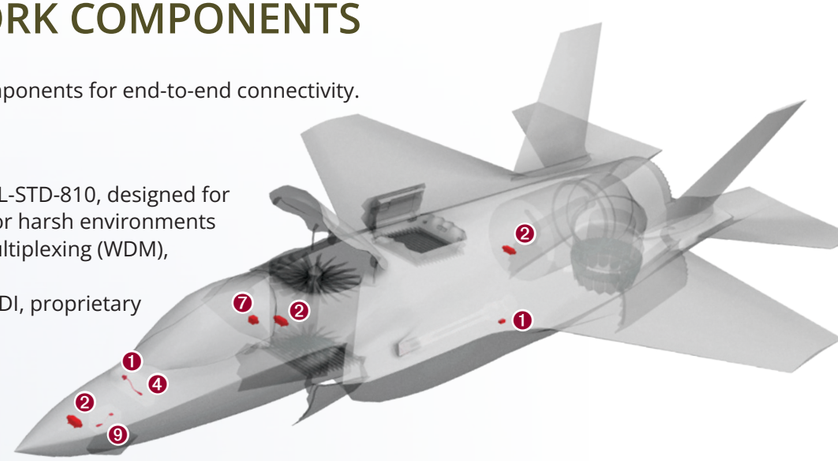

❸ ETHERNET SWITCHES


❹ FIBER HARNESSES


❹ MT/MPO HARNESSES

OPTICAL NETWORK COMPONENTS

Moog provides rugged optical components for end-to-end connectivity.



Board Mount Transceivers
- 100 Mbps –100 Gbps data rates
- Meets IEEE, MIL-STD-883 and MIL-STD-810, designed for shock, vibration, temperature, for harsh environments
- Point-to-point, Wave Division Multiplexing (WDM), MT based multi-fiber solutions
- Protocols: A818, DVI, Ethernet, SDI, proprietary

Ethernet Media Converter
- Fast, GbE and 10 GbE

Ethernet Switches
- Fast, GbE and 10 GbE
- Copper and optical ports

HD Fiber Harnesses
- Configurable fiber optic cable assemblies for LRUs, backbones and networking
- Industry standard and ruggedized termini and connectors

Panel Mount Connectorized Transceivers
- 1 Mbps - 10 Gbps data rates
- Optical transmitters and receivers packaged inside MIL-Spec circular connectors
- D38999, EN3645, D-sub, size 8 contact

Rugged Pluggable Transceivers
- SFP, SFP+, QSFP, and QSFP28 types for multimode and singlemode networking
- IEEE and MSA requirements for optical link budgets

Video Media Converters
- Easily extend link length of typical video
- ARINC 818, DVI, SMPTE 424 (3G-SDI), RS-170 and base mode camera link protocols

WDM Solutions
- Very high throughput up to 320 Gbps on single fiber
- Single or multimode fiber with optical mux/demux solutions
- Using MIL-Spec qualified ruggedized fiber enabling high-speed throughput on slip rings, backbones and networks


❺ PANEL MOUNT CONNECTORIZED TRANSCEIVERS


❻ RUGGED PLUGGABLE TRANSCEIVERS


❼ VIDEO MEDIA CONVERTERS


❽ SLIP RINGS


❾ WDM SOLUTIONS

LOCATIONS

Cleveland Operations



749 Miner Road
Highland Heights, OH 44143
rossales@moog.com
www.moog.com

Capabilities and Support

- 30,000 sq ft manufacturing space
- Optical cleaning equipment
- Cleaning and on-site training
- ISO 7, Class 10,000 cleanroom
- Certifications: AS9100:D, ISO9001:2015, ATEX
- Optical test gear for lab and field use
- Components are ruggedized for harsh environments



26301 Curtiss Wright Parkway
Richmond Heights, OH 44143
rossales@moog.com
www.moog.com

- Sales
- Product management
- Engineering

Johnson City Operations



192 Bob Fitz Road
Johnson City, TN 37615
rossales@moog.com
www.moog.com

Capabilities and Support

- 25,000 sq ft electronics manufacturing space
- Engineering and product development on-site
- Thermal and vibration ESS capabilities
- ISO 7, Class 10,000 cleanroom
- Sales
- Engineering

Fulda Operations



Am Alten Schlachthof 4
36037 Fulda, Germany
emearossales@moog.com
www.moog.com

Capabilities and Support

- Sales
- Engineering

International Network Manufacturers Representatives

Central Southern USA
Mid-Atlantic USA
China
Israel
Italy
Japan
Norway
Portugal
Republic of Korea
Spain
Taiwan

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