



<h1 style="margin: 0;">AEROSPACE STANDARD</h1>	AS5659™/4			
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Physical Layer Specification				

RATIONALE

The aerospace industry requires precise standards for avionics system design. This document helps define interoperability requirements within and between optical Wavelength Division Multiplexed (WDM) Local Area Networks (LANs) used in military and aerospace applications.

AS5659/4 has been reaffirmed to comply with the SAE Five-Year Review policy.

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1. SCOPE

This Aerospace Standard (AS) 5659/4 Physical Layer Specification provides guidance for the physical layer of optical networks which use Wavelength Division Multiplexing (WDM), within the AS5659 WDM LAN specification document family. The physical layer consists of the optical interconnections between the functional components of the network. Performance requirements for general interconnections are described. For guidance, standards are identified, corresponding to each of several environments, which describe physical layer design, installation, maintenance, and training.

2. REFERENCES

2.1 Applicable Documents

The following publications form a part of this document to the extent specified herein. The latest issue of SAE publications shall apply. The applicable issue of other publications shall be the issue in effect on the date of the purchase order. In the event of conflict between the text of this document and references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

2.1.1 SAE Publications

Available from SAE International, 400 Commonwealth Drive, Warrendale, PA 15096-0001, Tel: 877-606-7323 (inside USA and Canada) or +1 724-776-4970 (outside USA), www.sae.org.

AIR6004	Optical Networking Terminology
AIR6005	General Requirements for WDM Backbone Networks
AIR6006	Modeling and Simulation Capabilities for Aerospace WDM LAN Applications
AIR6162	Fusion Splicing for Optical Fibers
AS5658	Platform/Subsystem Common Interface Control Document Format
AS5659	WDM LAN Standard
AS5659/1	Transparent Optical Backbone Network (OBN) Specification
AS5659/2	Access and Aggregation Specification
AS5659/3	Network Management and Control Specification
AS6021	Aerospace Fiber Optic Cable Assembly Drawing Specification
AS6479	Splicer, Fusion, Fiber Optic, Aerospace
MA5405	Splices, Fiber Optics, for Aerospace Inter-Connection Systems

2.1.2 U.S. Military Specifications and Standards

Copies of these documents are available at <http://quicksearch.dla.mil>.

MIL-STD-1678	Part 1- Design and Installation Requirements
MIL-STD-1678	Part 2- Optical Measurements
MIL-STD-1678	Part 3- Physical, Mechanical, Environmental and Material Measurements