

## General Features

An Avionics Full Duplex Switched Ethernet (AFDX) Network is composed of several redundant AFDX End Systems and **AFDX Switches**. Utilising 10/100Mbps full duplex links, all the AFDX End Systems are connected via **AFDX Switches** to establish communication between each other and to implement an AFDX Network.

The **AIM AFDX Laboratory Switch** offers the solution for the most essential part of an AFDX/ARINC664 network implementation.

Together with AIM AFDX/ARINC664 Interface modules Test and Integration solutions of entire AFDX/ARINC664 networks and/or End Systems can be offered.

The **AFDX Switch** for Laboratory use is compliant with the requirements of ARINC664 Specification Part 7 - 'Aircraft Data Network Part 7 Avionics Full Duplex Switched Ethernet (AFDX) Network' Chapter 4.0 Switching function.



AFDX Lab-Switch

# AFDX Lab-Switch

## Avionics Full Duplex Switched Ethernet (AFDX) Network Switch

### Key Features

According to the protocol, function and performance requirements defined in ARINC664, the AFDX Network Switch offers the following functions:

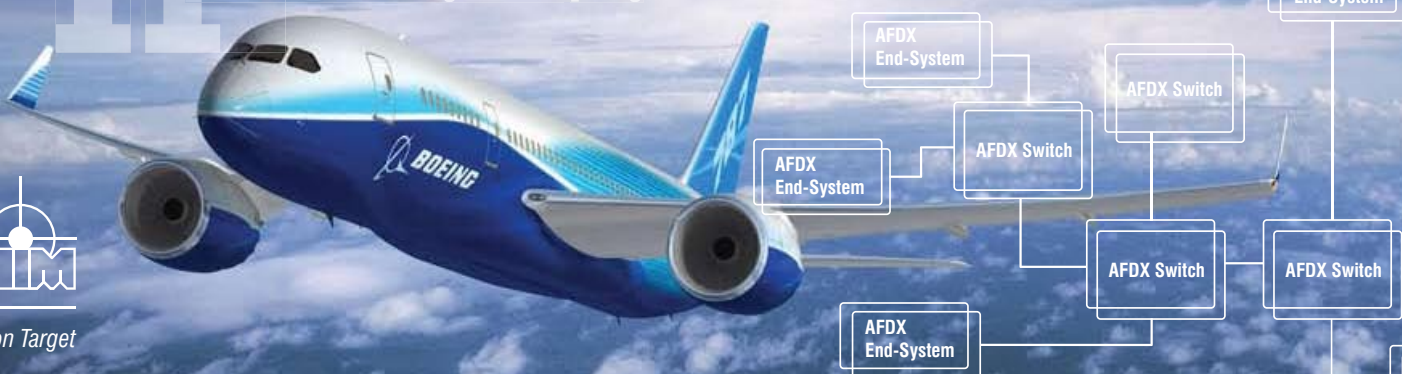
- Providing 8/16/24 Ports with 10/100Mbps full duplex Ethernet physical layer interfaces compliant to IEEE 802.3 MAC layer protocol
- ARINC664 Traffic Policing function
- ARINC664 Frame Filtering function
- ARINC664 Integrity and Error Checking of frames
- Fully configurable Switching function based on Layer 2 (MAC/VL) for maximum of flexibility
- FPGA based Switching core for maximum of switching performance and handling of up to 4096 VLs with High and Low priorities in accordance with ARINC664 specification

*continued overleaf:*

## Avionics Databus Solutions

UDP

• Skew • Queuing • Sampling



continued:

## Key features

- *Embedded processor for End System functionality support (ARINC615A, SNMP, Monitoring, BIT, Configuration and Management) and maintenance support via Standard Ethernet and Serial RS-232Ports*

### Access to:

- *PIN Programming (including Parity)*
- *SHOP Mode Condition Switch*
- *Ground Condition Switch*
- *Ethernet and Serial RS-232Ports*
- *Built-In ARINC664 End System function for Switch Configuration loading function via ARINC615A*
- *Built-In MIB (Management Information Base) and SNMP Agent via ARINC664 End System functionality*
- *Python Scripts for creation, handling and loading Switch Configurations via Standard Ethernet Maintenance Port from any PC Host. Standalone Configuration Application also available*
- *Detailed Test Report of ARINC664 Compliance Testing available*

## Further Software Options

- *AIM EasyLoad615A ARINC615A Data Loader Software for Loading of Switch Configuration Tables (e.g. created with included Configuration Scripts/Tool) contained in ARINC665 compatible media sets. EasyLoad615A is compatible with all AIM AFDX/ARINC664 Interface Boards.*
- *AIM PBA.pro™ Software with Test- and Script Manager Option incl. SNMP Script Library for communication with Switch E/S via SNMP for Monitoring. PBA.pro™ is compatible with all AIM AFDX/ARINC664 Interface Boards.*



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## Technical Data

### Connectors:

8/16/24x RJ-45 female for AFDX connection  
One RJ-45 female, Standard Ethernet maintenance port  
One 9-pin D-type plug , RS-232 maintenance port

### Controls:

13 Switches for manual PIN Coding including Parity  
SHOP and GROUND mode Switches.  
Master Reset Switch

### Power:

Mains power, wide range power supply 100...220V, 50...60Hz,  
28VDC optional.

**Power Consumption:** 30Watts

**Dimensions:** 403mm x 59mm x 230mm  
19" rackmount possible on request

**Operating Temp. Range:** Standard 0°C... + 50°C ambient

**Storage Temp. Range:** -40°C... +85°C

**Humidity:** 5 up to 95% (non-condensing)

**Weight:** 2.3kg



## Ordering Information

### AIM-AFDX-S-8:

8 Ports AFDX Switch

### AIM-AFDX-S-16

16 Ports AFDX Switch

### AIM-AFDX-S-24

24 Ports AFDX Switch

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