

# PBA.pro-AFDX®

## Analysis Software

### AFDX®/ARINC664P7 Resource Component

The ► **PBA.pro-AFDX®** Component handles single or multiple AFDX®/ARINC664P7 resources for extended Databus simulation, monitoring and analysis tasks. It provides full and intuitive configuration and access to all Capture, Send and Simulation units of each port resp. Network.

The PBA.pro-AFDX® Component is fully scriptable (using the optional PBA.pro-TSM Component) and is accessed via the PBA.pro Resource Manager.

### General Board & Status Information

The PBA.pro-AFDX® Resource Overview offers visualisation and control of resource/board level information.

► **AFDX®/ARINC664P7** ports can be configured for Single or Redundant Operation and support different Capture and Send modes as well as EDE Subscriber Simulation modes to handle the Boeing ARINC664 implementation.

### Capture

Capture ports can be operated in 'Chronological' or 'Sampling and Queuing' mode.

#### Chronological Mode (Bus Monitor)

The receive port captures all frames in a chronological manner:

- Protocol Decoding of MAC-, IP- and UDP-address fields
- Automatic Message re-assembly of captured, fragmented frames
- Decoding of AFDX® specific fields (VL, SN)
- Enhanced Error Information
- Various Payload Reduction and Save modes supported
- Real Time - Online Activity Monitor
- Tabular session files with search, filter, merge, data export options and customizable column ordering (incl. data columns)
- Detailed message display with 'stack-walk' controls and visualization of all message attributes & data
- Event marker generation and correlation with stack display
- Filter library for definition and handling of conditions applied to captured messages for online (stream scanner) and offline (post analysis) operations
- Alias definition for customized packet analysis

#### Sampling and Queuing Mode

The receive port operates in a receiving End-System simulation mode:

- Support of multiple End-Systems
- Virtual Link (VL) definition
- Integrity Checking, Redundancy Management and Traffic Policing configurable per VL
- Sampling/Queuing port definition with configurable message history

#### Runtime Info

The Runtime Info node provides global statistics, VL-Activity and Event-Log information.

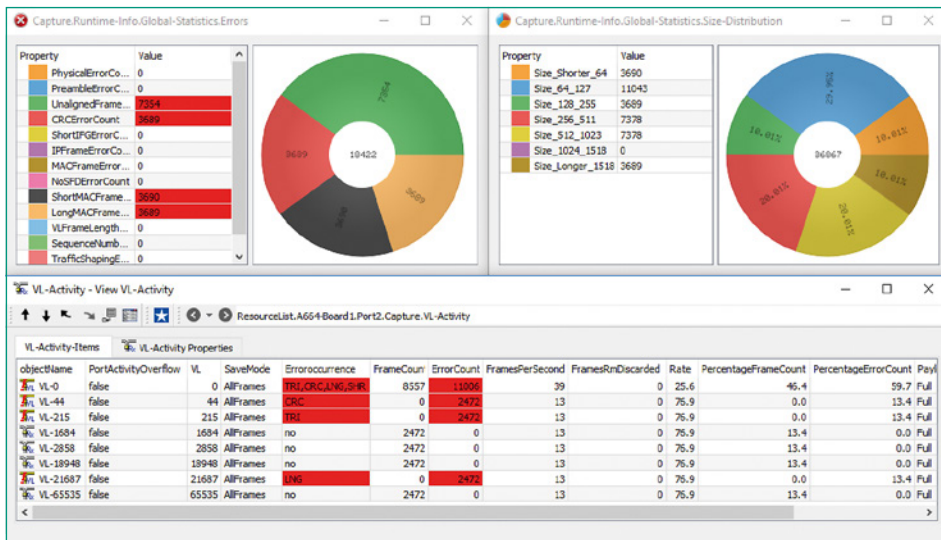
#### Send

Send ports can be operated in 'Sampling and Queuing', 'Generic Send List' or 'Replay' mode.

#### Sampling and Queuing Mode

The send ports operate in a transmitting End-System simulation mode:

- Support of multiple End-Systems
- Virtual Link (VL) definition
- Sampling/Queuing port definition with message generation and Traffic Shaping
- Message Scenarios
- Enable/Disable VL's or Sampling/Queuing ports on the fly
- Error Injection features



## Generic Send List Mode

Traffic is generated using a list of data packets:

- Programmable timing and sequencing of packets
- Programmable Wire Speed Scenarios
- Error Injection features like CRC, MAC, Alignment etc.
- Payload Generation and Time-tag insertion supported for Latency Measurements
- Automatic or User Defined control of Sequence Numbering
- Support for synchronization between multiple ports by means of strobe inputs, outputs and IRIG-B time
- Definable Skew of redundant frames

## Replay

The Replay node supports replay of previously recorded AFDX®/ARINC664P7 files physically to the bus. Multiple AFDX®/ARINC664P7 ports can be selected for synchronous replay.

## Simulation

Simulation operation for so called EDE Subscribers is available for AFDX®/ARINC664P7 interfaces which include the Boeing ARINC664 specific EDE (Error Detection Encoding) extensions. Detailed documentation is available upon request.

## Database Manager

The AFDX®/ARINC664P7 Database Manager Component provides Engineering Unit Conversion and several extensions:

- Display Parameters on resource node
- Parameter information added to individual messages in the chronological bus monitor
- Use Parameters to setup messages of a Sampling/Queuing port or packets of the Generic Send List
- PBA.pro-x-DBM Assign display to show any Parameter or object information with options to logically arrange, evaluate and dynamically control the displayed values
- Online and off-line time graphs and export support of Parameters for built in analysis and for third party tools

## Ordering Information

### PBA.pro-AFDX®-2

AFDX®/ARINC664P7 Resource Component, 2 Ports

### PBA.pro-AFDX®-X2

AFDX®/ARINC664P7 Resource Component, additional 2 Ports

### PBA.pro-AFDX®-DBM

AFDX®/ARINC664P7 Data Base Manager Component, required for Engineering Unit Conversion

### PBA.pro-LIGHT-AFDX®

Reduced function option to support simple application needs, based on PBA.pro-FD and PBA.pro-AFDX®-2

\* AFDX® is a registered trademark of Airbus

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