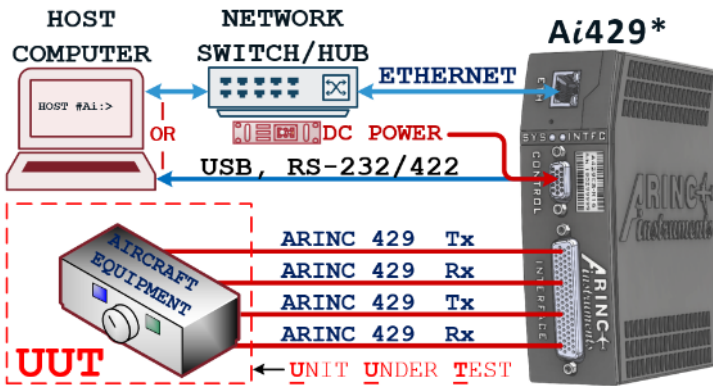**FREE SOFTWARE & API LIBRARY**

■ ARINC 429 ■ TRANSMITTER ■ RECEIVER ■ ANALYZER ■ SWITCHER ■ HUB ■ FILTER ■
■ REPEATER ■ MIXER ■ COMBINER ■ SPLITTER ■ PATTERN GENERATOR ■ TESTER ■

The Ai429 is an ARINC 429 cross-platform bus manager. It allows any host computer to interface and control multiple 429 buses either via Ethernet (for speed) or RS-232/RS-422/USB serial port (for convenience). It comes in three product classes: transceiver, tester and mixer.

It comes with a free user-friendly cross platform Graphical User Interface (GUI) application (AiTerm) allowing intuitively configuration and usage.

A basic platform independent command line interface (CLI) with human readable ASCII data that works with any console/terminal program capable of accessing either the LAN and/or the serial port (Putty, TeraTerm, DOS, etc…).

A free open source platform independent API library (Ai429API) is provided to facilitate software application development.

The Ai429 also allows platform independent script access. Any scripting language capable of accessing either the LAN and/or the serial port will work (Python, PowerShell, etc…).

FUNCTIONS	Ai429XCV Transceiver	Ai429TST Tester	Ai429MXR Mixer
▪ Connects to any host computer ▪ Optionally time stamps all received data ▪ Decodes received data into various numerical bases ▪ Filters received data based on port, label & SDI ▪ Provides restricted Security Access Level for host connection ▪ Stores user configuration into internal nonvolatile memory ▪ Loads user configuration from internal nonvolatile memory ▪ Platform & terminal independent command line interface ▪ Free GUI application ▪ Free open source application development API C library ▪	✔	✔	✔
▪ Allows the connected host computer to transmit, receive and diagnose multiple ARINC 429 buses ▪ Filters only the desired received words ▪	✔	✔	✔
▪ Provides ARINC 429 testing functionalities ▪ Can generate and transmit test patterns and inject up to seven different types of errors on command ▪	✘	✔	✔
▪ Mixes, remixes, repeats, routes, filter, merges & splits ARINC 429 buses like a managed Ethernet switch ▪ Capable of networking multiple ARINC devices/buses ▪ Can create virtual 429 connection between devices ▪ Can inject data into active ARINC 429 DataStream in real-time ▪ Can transmit user defined data pattern in indefinite loop ▪	✘	✘	✔

Please visit Arinc Instruments website for more information: www.Arincinstruments.com
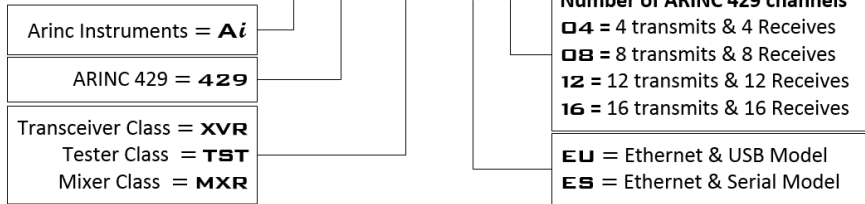
APPLICATIONS

- ✓ Aircraft System Simulation (SIM)
- ✓ Automated Test System (ATS)
- ✓ Ground Support Equipment (GSE)
- ✓ Validation & Verification (V&V)
- ✓ Regression Testing (RT)
- ✓ Extended Stress Testing (ESS)
- ✓ System Diagnostic
- ✓ Software Development
- ✓ Flight Line Diagnostic
- ✓ Portable Tester
- ✓ New Product Development (R&D)

FEATURE LIST

- ✓ Tabletop, DIN rail, panel and 1U of 19" rack mountable (3 across 19" shelf)
- ✓ Lightweight: less than 1 lbs.
- ✓ Low power: less than 4 Watts
- ✓ Up to 16/Rx & 16/Tx simultaneous ARINC 429 channels
- ✓ Maximum throughput on all channels
- ✓ Independent programmable bit rate on all transmit & receive channels
- ✓ Internal routing, buffering, blocking, filtering, splitting & combining based on port, label & SDI
- ✓ Bridges/converts ARINC 429 bus with RS-232, RS-422, USB or Gig Ethernet
- ✓ Platform independent – no drivers
- ✓ Command line interface (CLI) console
- ✓ Compatible with terminal software such as PuTTY, TeraTerm and similar
- ✓ Human readable data stream
- ✓ Programmable time tag range, format and accuracy
- ✓ Programmable AutoResponder for special protocol (such as ACARS)
- ✓ Programmable Security Level Access
- ✓ Auto ARINC 429 test pattern generator
- ✓ Cross-platform open source C/C++ software API library (Ai429API)
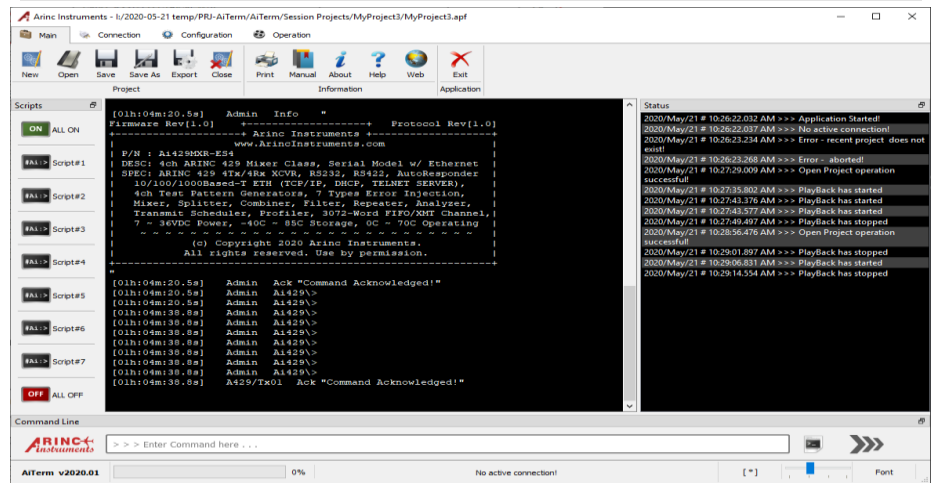- ✓ Free GUI Terminal Application (AiTerm)

Ai429MXR-EU16

- Arinc Instruments = **Ai**
- ARINC 429 = **429**
- Transceiver Class = **XVR**
- Tester Class = **TST**
- Mixer Class = **MXR**

Number of ARINC 429 channels
- **04** = 4 transmits & 4 Receives
- **08** = 8 transmits & 8 Receives
- **12** = 12 transmits & 12 Receives
- **16** = 16 transmits & 16 Receives

- **EU** = Ethernet & USB Model
- **ES** = Ethernet & Serial Model

SERIAL MODEL **USB MODEL**

AiTerm – Arinc Instruments Terminal GUI Application Software

Ai429XCV ARINC 429 Transceiver - & - Ai429TST ARINC 429 Tester

Ai429MXR ARINC 429 Mixer (Router)

SPARK OF INGENUITY

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Locate a Sales Representative visit: www.Arincinstruments.com