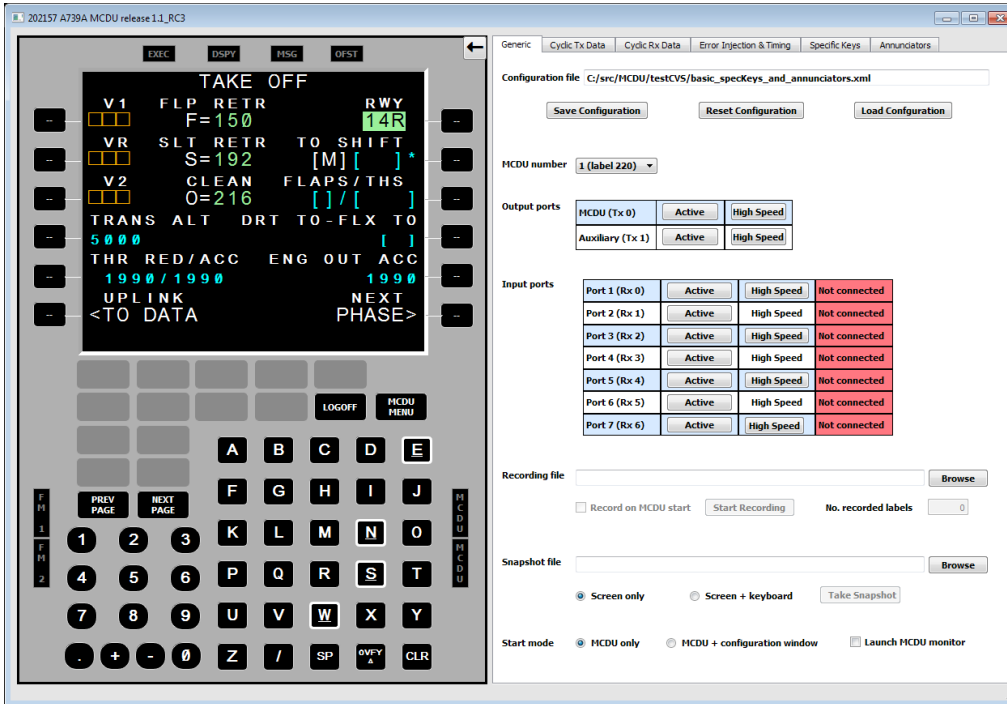


A739A-MCDU

ARINC 739A Multi-Purpose Control and Display Unit (MCDU) Simulation



- Full multiple input MCDU simulation according to ARINC 739A specification
- Up to 7 subsystems connected in parallel using TechSAT's A429-USB-NT interface
- Dual-MCDU mode for testing the communication with 2 MCDUs
- Triple-MCDU mode for testing the communication with 3 MCDUs
- Protocol error injection and detection
- Fully configurable specific keys and annunciators
- All display features supported (ISO5 characters, colors, reverse video, flashing)
- Real-time and offline analysis of the A429 communication including decoding of protocol messages
- Scripting interface supporting remote control of the simulation



A739A-MCDU

ARINC 739A Multi-Purpose Control and Display Unit (MCDU) Simulation

Application Scope

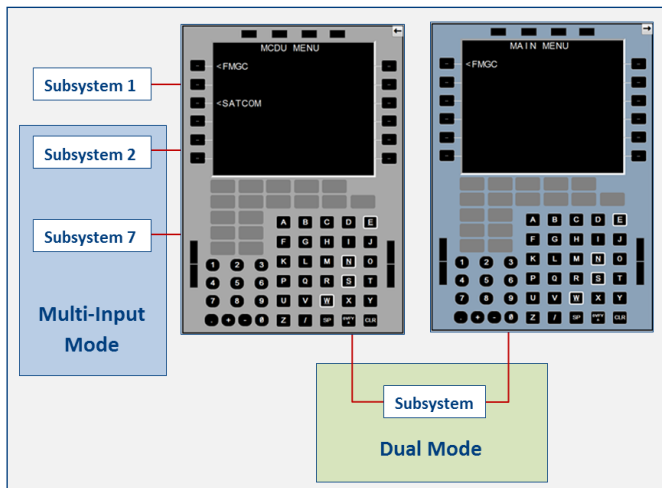
The **A739A-MCDU** ARINC 739A Multi-Purpose Control and Display Unit application program allows simulating the ARINC 739A MCDU interface with up to seven LRUs. The program operates in conjunction with any of the following TechSAT ARINC 429 USB interfaces:

- > A429-USB-NT-2TX4RX
- > A429-USB-NT-4TX8RX

- > Multiple Input MCDU for testing communication with up to 7 subsystems
- > Dual MCDU for testing communication of an LRU with 2 distinct MCDUs
- > Triple MCDU for testing communication of an LRU with 3 distinct MCDUs

In addition to the MCDU interface composed of keyboard and display, the A739A-MCDU application provides additional panels used to configure the enhanced functions of the application, including:

- > Activation/deactivation and configuration of A429 transmitters and receivers
- > Definition of periodic labels transmitted to the subsystems
- > Definition of periodic labels from subsystems to be monitored
- > Configuration of the error injection/handling and timing features
- > Configuration of the specific keys and annunciators



A739A -MCDU Simulation System & Simulation Modes

MCDU Simulation System

The ARINC 739A MCDU simulation is an exact replica of a real MCDU with realistic colors and an ISO5-compliant font. The whole scope of MCDU operations and displays is implemented, including:

- > Automatic detection of connected LRU through label 172
- > Full scratchpad functionality (data input via the MCDU keyboard and moving through Line Select keys)
- > Menu browsing supported by Previous page, Next page, and MCDU Menu keys
- > 17 user-definable specific function keys (which can be assigned to LRUs)
- > 8 user-definable annunciators

The simulation also supports the real-time display and recording of all transferred ARINC 429 data.

Standard/Enhanced MCDU Simulation

You can start the A739A-MCDU simulation in three different modes, as

A739A Messages Viewer

The MCDU messages viewer application shows all A739A messages exchanged between the MCDU simulation and all connected subsystems, including the message timestamp, the 32-bit label value, and the message decoding. The Messages Viewer window can be launched automatically with the A739A-MCDU simulation to show the communication in real time. It can be also used for offline analysis of recording files created with the application.

Scripting Interface

The XML-RPC scripting interface allows controlling all features of the A739A-MCDU simulation either locally or from a remote computer.

Technical Data
Supported I/O
■ A429-USB-NT-2TX4RX (PN 403557)
■ A429-USB-NT-4TX8RX (PN 403568)
Operating System Options
■ Windows 10 64 bit
Part Number
■ 202157