

The Vedhya Arinc-429



ARINC 429:1T2R

USB 2.0



PRODUCT BRIEF

The VT USB AR429:12 is an Indian designed and manufactured ARINC 429 interface device. Its compact size and USB connectivity makes it a complete solution for developing, testing, and performing system simulation of the ARINC 429 bus, both in the lab and in the field

HIGHLIGHTS:

- The VT USB AR429:12 can transmit on 1 ARINC channel and receive from 2 ARINC channels in either high speed (100 Kbps) or low speed (12.5 Kbps) data rates (or both simultaneously).
- The VT USB AR429:12 can process all 3 channels (1T2R) at full data rates. There are no restrictions on the number of labels that can be transmitted or received.
- There are no batteries to replace or charge and no power cords to hook up (it gets all of its power from the USB port). No installation or setup is required; no device drivers are necessary.
- Plug it in to a USB port with a standard USB adapter and run the application software. It is not even necessary to power down the computer to install the VT USB AR429:12.
- Any program, written in any language, for any computer running any operating system can transmit and receive ARINC 429 data as long as the program can send and receive data to/from the serial port.
- The VT USB AR429:12 with the user friendly VedhInc GUI can be the heart of a powerful and sophisticated ARINC 429 system that is versatile, portable, inexpensive, and easy to use
- A reliable Indian homegrown ARINC 429 that will be locally supported in after sales support and service

VT USB AR429:12

KEY FEATURES

- Robust design
- Powered via USB – no external power adapter required
- USB Hot Plug Capability
- Ruggedized 14-pin female D-SUB Connector
- ARINC bus configuration: 1T2R
- Concurrent Operation for Simulation/ Monitoring on all Channels
- Full Error Injection/Detection Capability
- Multi-Level Triggering for Capturing and Filtering
- UI Compatible with all Variants, Exhaustive Access to device Features
- Driver/DLL provided for Labview interface

RECEIVE CHANNEL OPERATION

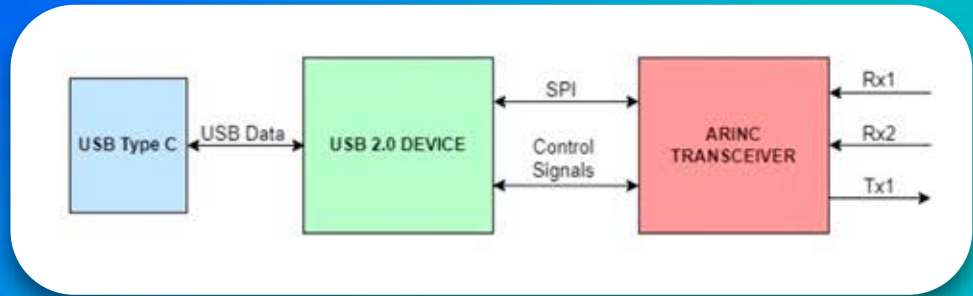
- Label Oriented Receive Mode (individual Buffers for each Label with Multi-Buffering and Real Time Updates)
- Chronological Receive Mode per Channel with 1µs Resolution Time Stamping
- Chronological Mode concurrent to Label Oriented Receive Mode
- Local Monitoring (individual Buffer per Channel) or Global Monitoring (common Buffer for all Channels)
- Continuous or Single Shot Capturin Modes
- Support of SDI Handling
- Notification on Label Reception (configurable per Label/SDI)

TRANSMIT CHANNEL OPERATION:

- Cyclic/Acyclic Label Transmission and Channel Loop Mode
- Error Injection for each Label Transfer: Short Gap, Parity, Bit Count, Coding
- Programmable Gap between Labels: 0 to 255 Bit
- Multi-Buffering with Real Time Update supported per individual Label Transfer
- Reconstruction of previously recorded ARINC429 Traffic physically to the Bus with excellent Timing Accuracy (Physical Replay)
- Notification on Label Transmit (configurable per Label Transfer)

BUS INTERFACE

The ASC429-x Modules have integrated ARINC429 Line Transmitter/Receiver Channels and selectable Transmission Rate for each Single Channel independently



Technical Data

USB2.0 Interface: 480Mbit USB2.0	Operating Temp. Range: 0°C to +50°C ambient
ARINC Connector: 14-pin D-Sub	Storage Temp. Range: -40°C to +85°C
USB-Type: USB Type A host Connector	Power Consumption: 2.5W max
Supply Voltage: +5V from single USB2.0	Dimensions : 120mm X 65mm

ARINC 429 INPUTS - Pins with external 40KOhms (Common Mode Voltage <25V)			ARINC 429 OUTPUTS - Pins with external 32.5 Ohms			BIT RATE		
INPUT	Min	Max	OUTPUT	Min	Max		Min	Max
VIH	6.5	13	VDDIF	9	11	HIGH SPEED	83K BPS	125K BPS
VIL	-13	-6.5	VNDIF	-0.5	0.5	LOW SPEED	10.4K BPS	15.6K BPS
NULL	-2.5	2.5						



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