

Micro-ARINC429 Decoder

Flight tests of modern Avionic Systems often require to drive analog instruments or recording with data, which are only available as ARINC429 Signals. The Micro-ARINC 429 Decoder module is a small tool to solve this requirement.



Configuration Tool:

To configure the Micro ARINC Decoder a special program running on a PC is used. (Operating System \geq Windows98 or NT4). With this program all parameter which are used to calculate the output values can be inserted. The program then transfers them into the coding used by the Micro-Controller. Over the serial RS232 connection these parameter are then transferred to the Micro ARINC Decoder. They are then stored in the EEPROM and are permanent available for the Micro Decoder.

Following features are implemented:

Inputs:

- Two ARINC429 Bus signals having both the standard bit rate of 100kbit or 12,5kbit
- One RS232 interface to load the parameter for the data selection and load the Micro-Controller program.

Outputs:

- Eight analog output voltages, produced by 13 Bit Digital-Analog-Converter in a range of $\pm 4,096$ Volt (1 mV/Bit). This output voltages can represent any ARINC data with choose able Label and scaling. Selection parameter are:
- Input channel, Label, data mask, scaling, bias, coding BNR, unsigned BNR, BCD, Bit, SDI, SSM.
- Additional features The Micro ARINC 429 Decoder has a size of 52 X 37 X 9 mm. Connection to a mother board is made via two 14 pin connectors at the edge of the device. For supply 5 Volt, with less than. 80mW power consumption is required.
- The selection of the output data is done by a Micro-Controller. Program is stored in a 32KByte Flash memory, 1KByte RAM is used for variables and an EEPROM is used to store all the section parameter.
- All interface logic to the ARINC Decoder IC and to the 8 DAC's is placed in a Logic Cell Array (LCA).



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