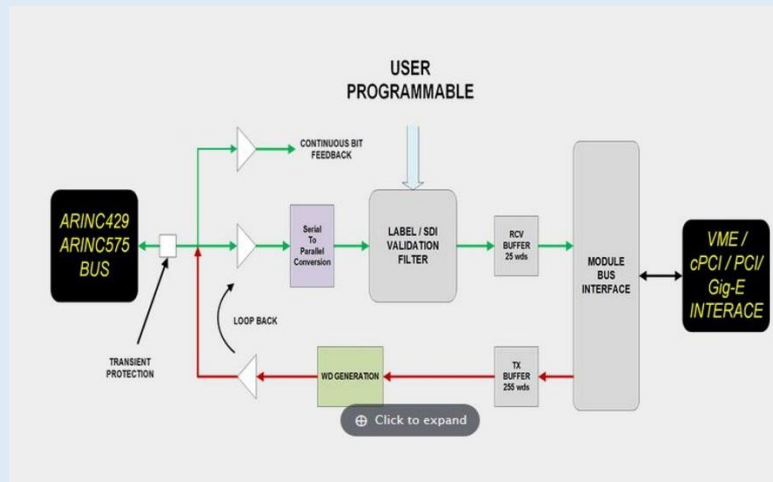


ARINC - NAI's ARINC 429/575 smart function modules provide up to twelve programmable channels. ARINC 429 is a data transfer standard for aircraft avionics. ARINC 575 is an equipment characteristic for a Digital Air Data System (DADS) that provides essential air-data information for displays, autopilots, and other flight controls and instrumentation on commercial and transport-type aircraft. ARINC 568/579 smart function modules provides a communications interface with 2 channels. ARINC 568 is an equipment characteristic for Distance Measurement Equipment (DME). ARINC 579 is an equipment characteristic for a VHF Omnidirectional Radio range (VOR) short range navigation system.



Module	Description
AR1	12 Channels, ARINC 429/575 Communications
AR2	2 Channels, ARINC 568/579 Communications

Transient Protection

The module is normally configured for transient protection but can be specified without if protection is implemented externally

Features

AR1

- Receive/Transmit mode programmable per channel
- 100 kHz or 12.5 kHz operation per channel
- Transmit: 255 message FIFO or scheduled transmits per channel
- Async transmits during scheduled transmits
- Receive: 255 message FIFO or mailbox buffering per channel
- Message Validation (SDI/Label Filtering) on received messages per channel
- Selectable hardware parity generation/checking
- Receive time stamping
- Continuous BIT
- Loop-back test
- Tri-state outputs
- High and Low speed Slew Rate outputs

AR2

- Receive/Transmit mode programmable channel (ARINC-579)

- Separate Receive and Transmit channel (ARINC-568)
- 11 kHz transmission rate
- Programmable gap times
- Transmit: 1024-word FIFO per channel
- Receive: 1024-word FIFO per channel
- Selectable hardware parity generation/checking
- Receive time stamping
- Continuous BIT
- Loop-back test
- Tri-state outputs
- High and Low Speed Slew Rate outputs

New Embedded Soft Panel

North Atlantic Industries offers the newest cross platform (Windows and Linux) GUI for our Gen 5 products that allows a user to quickly interact with our broad range of modular, I/O cards and rugged embedded computing products. Embedded Soft Panel 2 (ESP 2) is coherent and easy to use with a clean, fleshed out UI with features such as drag and drop dock able windows, a dark and light theme, and multi-language support. Multiple ways to open a board are offered, including saving board opening settings for future use. Interacting with and collecting information on hardware is simple to do with the register editor for reading and writing specific addresses, and the API logger which logs all API library calls including their return status and parameters. ESP 2 has many new features and provides an organized and effortless interface for NAI's next generation products. Available for CentOS 7.4 and 8.2 and Windows 10 x64



AR1 Example Demo Mode

Menu

DEMO - ID: AK1

Config		Operations		Scheduling								
Ch	Data Rate	Parity En	Match En	Timestamp	Bit En	Store Error	RX Mailbox	RX FFO	RX En	TX En	RX Buff AF	TX Buff AE
1	12.5KHz	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
2	12.5KHz	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
3	100KHz	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
4	12.5KHz	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
5	12.5KHz	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
6	12.5KHz	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
7	12.5KHz	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
8	12.5KHz	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
9	12.5KHz	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
10	12.5KHz	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
11	12.5KHz	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
12	12.5KHz	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
All	12.5KHz	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text" value="0"/>	<input type="text" value="0"/>

[illegible]

Config

Operations

Scheduling

Ch	TX Mode	TX Trigger	TX Pause	TX Stop	Interval Rate	32-Bit Word	To Write	Write FIFO	Cnt	Clear FIFO	Parity Data	Data/SSM	SDI
1	Immediate	Trigger			0	0	1	Write	0	Clear	0	0x000000	0x0
2	Immediate	Trigger			0	0	1	Write	0	Clear	0	0x000000	0x0
3	Scheduled(NA)	Trigger			0	0	1	Write	0	Clear	0	0x000000	0x0
4	Triggered	Trigger			0	0	1	Write	0	Clear	0	0x000000	0x0
5	Immediate	Trigger			0	0	1	Write	0	Clear	0	0x000000	0x0
6	Immediate	Trigger			0	0	1	Write	0	Clear	0	0x000000	0x0
7	Immediate	Trigger			0	0	1	Write	0	Clear	0	0x000000	0x0
8	Immediate	Trigger			0	0	1	Write	0	Clear	0	0x000000	0x0
9	Immediate	Trigger			0	0	1	Write	0	Clear	0	0x000000	0x0
10	Immediate	Trigger			0	0	1	Write	0	Clear	0	0x000000	0x0
11	Immediate	Trigger			0	0	1	Write	0	Clear	0	0x000000	0x0
12	Immediate	Trigger			0	0	1	Write	0	Clear	0	0x000000	0x0
All	Immediate	Trg All			0	0	1	Write All		Clear All			

TX

Ch	Status Wrđ	32-Bit Wrđ	TimeStamp	Count	To Read	Read FIFO	Read MBox	Clear FIFO	Parity	Data/SSM	SDI	Label
1				0	1	Rd FIFO	Rd MBox	Clear				
2				0	1	Rd FIFO	Rd MBox	Clear				
3				0	1	Rd FIFO	Rd MBox	Clear				
4				0	1	Rd FIFO	Rd MBox	Clear				
5				0	1	Rd FIFO	Rd MBox	Clear				
6				0	1	Rd FIFO	Rd MBox	Clear				
7				0	1	Rd FIFO	Rd MBox	Clear				
8				0	1	Rd FIFO	Rd MBox	Clear				
9				0	1	Rd FIFO	Rd MBox	Clear				
10				0	1	Rd FIFO	Rd MBox	Clear				
11				0	1	Rd FIFO	Rd MBox	Clear				
12				0	1	Rd FIFO	Rd MBox	Clear				
All					1	Rd All	Rd All	Clear All				

RX

For more additional information contact ティー・ピー・ティー株式会社 (TPT K.K.)

www.tptech.co.jp

Telephone: 81-3-5832-7350

TPT KK: [Contact](#)

Rev A