



MIL-STD-1553B - MIL-STD-1553 is a military standard published by the United States Department of Defense that defines the mechanical, electrical, and functional characteristics of a serial data bus. It features a dual, redundant, balanced-line, physical layer; a (differential) network interface; time division multiplexing; half-duplex command/response protocol; and up to 31 remote terminals (devices). NAI's MIL-STD-1553 communication smart function modules provide programmable 1, 2 or 4-channel and dual-redundant in transformer-coupled or direct-coupled interfaces and possess an improved assisted mode.

Module	Description
FTA	1 Channel, MIL-STD-1553, Dual Redundant, Transformer Coupled, Assisted Mode Capable (AMC)
FTB	2 Channels, MIL-STD-1553, Dual Redundant, Transformer Coupled, Assisted Mode Capable (AMC)
FTC	4 Channels, MIL-STD-1553, Dual Redundant, Transformer Coupled, Assisted Mode Capable (AMC)
FTD	1 Channel, MIL-STD-1553, Dual Redundant, Direct Coupled, Assisted Mode Capable (AMC)
FTE	2 Channel, MIL-STD-1553, Dual Redundant, Direct Coupled, Assisted Mode Capable (AMC)
FTF	4 Channel, MIL-STD-1553, Dual Redundant, Direct Coupled, Assisted Mode Capable (AMC)

Key Features

- Independent (dual-redundant) MIL-STD-1553 interface channels: Bus Controller (BC), Remote Terminal (RT), and Bus Monitor (BM) or RT/BM combined mode operation
- Assisted Mode (AM)
- 16K words on-board memory/channel
- IP-core register-compatible with DDC[™] family of devices
- Ability to set message retry policy
- Message scheduling capability
- Asynchronous message capability Message FIFO capability

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



1553 Example - Module FT4 Demo Mode Screen Shots

두 NAll Embedded Soft Panel			
Menu			
DEMO - ID: FT4			
Mode			Module Settings
Channel 1 Channel 2	2 Channel 3	Channel 4	Module Info 0.0
Remote Terminal 🔽 Remote	e Terminal Remote Termi	inal Remote Terminal	
	Launch Launch		Register Editor
Remote Terminal for Channel 1			8 × 8
Subaddress Legalize Edit T:	x Buffers		
Subaddress Legalize			
		-Тх	
Select/Clear All		Select/Clear All	
⊠ 0 ⊡ 1		✓ 0 ✓ 1	
2		2	
3		✓ 3	
4		✓ 4	
5		✓ 5	
⊠ 6 ⊠ 7		✓ 6 ✓ 7	
		✓ 8	
🗹 9		✓ 9	
10		✓ 10	
		✓ 11 ✓ 12	
Legali	ze kx	Legalize T	*
			RT Address: 0
			Copy RT
			Data
			Start RT Stopped
			Clear

Remote Terminal for Ch	nannel 1	Ð					
Subaddress Legalize	Edit Tx Buffers						
_Data							
	Subaddress: 0						
(01-08)	30ED 338A 3882 2010 6668 5646 5028 6E6F						
(09-16)	767D 61B4 521A 7635 4782 00C4 5821 688B						
(17-24)	578A 3B3A 0A03 518A 3AFC 6B84 4C87 661F						
(25-32)	6624 379C 66CA 65EB 1C39 1130 11D9 389E						
00	00 FFFF Random Increment Clear						
Apply Tx Buffer							

Menu								
DEMO - ID: FT4								
_Mode								
Channel 1	Channel 2	Channel 3	Channel 4					
Bus Monitor	 Remote Terminal 	Remote Terminal	Remote Terminal					
Bus Controller	Launch	Launch	Launch					
L Remote Terminal								
Bus Monitor								

(Su Registor Ed	litor										-	□ ×
Address Values	s		(0x0000000	-Register Width - F					Single Read / Write		
Base Address	Selection M	otherBoard			 16 Bit 32 Bit 	Stop Refresh	Save To	_	i00 Read Interval(ms) Offset Address	0x00000000	Read Reg Write Reg
Count (Dec):				256	• 32 bit		_					
Actual Addr	00	04	08	0C		00	04	08	0C			
0x00000000	0000000	0000000	0000000	0000000								
0x00000010	0000000	0000000	0000000	0000000								
0x00000020	0000000	0000000	0000000	0000000								
0x0000030	0000000	0000000	0000000	00000000								
0x00000040	00000000	0000000	0000000	0000000								
0x00000050	00000000	00000000	0000000	00000000								
0x0000060	00000000	00000000	00000000	00000000								
0x00000070	00000000	00000000	00000000	00000000								
0x00000080	00000000	00000000	00000000	00000000								
0x0000090	00000000	00000000	0000000	00000000								
0x000000A0	00000000	00000000	00000000	00000000								
0x000000B0	00000000	00000000	00000000	00000000								
0x000000C0	0000000	00000000	00000000	00000000								
0x000000D0	0000000	00000000	0000000	00000000								
0x000000E0	00000000	00000000	00000000	00000000								
0x000000F0	00000000	00000000	00000000	00000000								

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