



Convection Cooled Option

FEATURES

- Multiple functions on a single slot 3U cPCI card.
- User can specify three different function modules.
- Control via either cPCI or Gigabit Ethernet.
- Automatic background BIT testing continually checks and reports the health of each channel.
- Connections via Front panel, Rear panel, or both
- Designed for both Commercial and MIL applications.
- Conduction or Convection cooled versions.
- Software Support Kit and Drivers available.

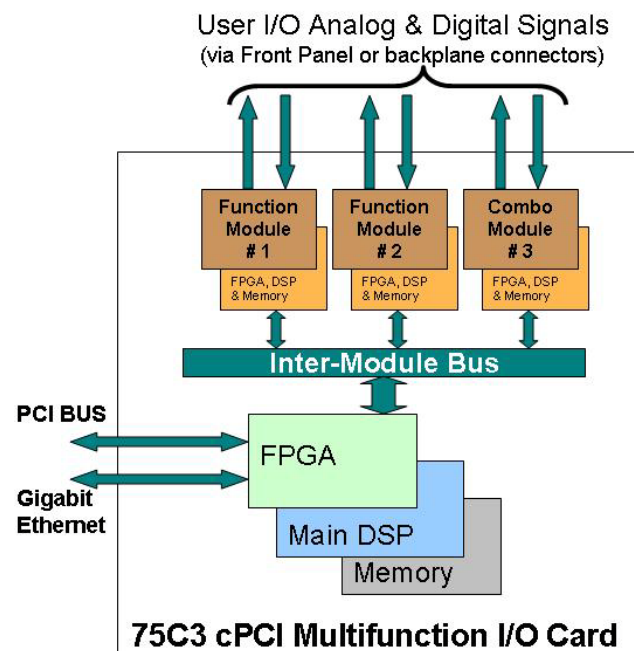


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DESCRIPTION

The 75C3 is a 3U cPCI multifunction I/O and communications card. The “mother board” contains 3 independent module slots, two of which can be populated with a function specific module and the third with either a combination module featuring 4 multiplexed A/D channels and 28 Discrete I/O programmable channels, or with a reference supply. The enhanced Motherboard, using multiple DSP, allows for higher processing power and dedicated control for each module. This unique design eliminates the need for multiple, specialized single function cards by providing a single board solution for a broad assortment of I/O, Synchro/Resolver, LVDT and other signal interface functions that can be controlled either via the cPCI or 10/100/1000BaseT Ethernet. The available functions are listed on the following pages. Additionally, the 75C3 incorporates serial communications modules such as RS232/422/485 and ARINC 429. Our approach increases packaging density, saves enclosure slots, reduces power consumption and adds continuous background BIT testing. A Software Support Kit (SSK) is provided.

Automatic background BIT testing, an important feature, is always enabled and continually checks the health of each channel. There is no need to guess or make assumptions about system performance. A fault is immediately reported and the specific channel is identified. This capability is of tremendous benefit because it identifies and reports a failure, without the need to shut down the equipment for troubleshooting. Testing is totally transparent to the user, requires no external programming and has no effect on the standard operation of the card. (See Operations Manual for more detailed information).



GENERAL BOARD SPECIFICATION

- **Power:** +5VDC
- **Operating Temp:** 0° C to 70° C or -40° C to 85° C
- **Size:** 100mm x 20mm x 160mm (3U)

COMBO MODULE (KA OR REFERENCE)

A/D & Discrete I/O	A/D I/O	Channels	Input Scaling	Resolution	Accuracy	Sampling (programmable)
		4(multiplexed)	±10 VDC	14 bit	0.1% FS	3 KHz max
		28	Input Range	Output Range	Programmable	Resolution
			0 – 50 VDC	0 – 50 VDC	Input or Output	12 bit
Reference	Module	Channels	Frequency	Accuracy	Voltage	Power
	W6	1	360 Hz – 10KHz	+/- 2%	2 – 28 Vrms	3 VA
	W7	1	360 Hz – 10KHz	+/- 2%	115 Vrms	3 VA

AVAILABLE FUNCTION MODULES

A/D Converter	Module	Channels	Input Scaling	Resolution	Accuracy	Sampling (programmable)
	C1	10	1.25,2.5,5 or 10 VDC	16 bit	0.05% FS	200 KHz max
	C2	10	5,10,20 or 40 VDC	16 bit	0.1% FS	200 KHz max
	C3	10	0-25 mA	16 bit	0.1% FS	200 KHz max
	C4	10	6.25,12.5,25 or 50 VDC	16 bit	0.1% FS	200 KHz max
D/A Converter	Module	Channels	Output Range	Resolution	Accuracy	Settling time
	F1	10	±10 or 0-10 VDC	16 bit	0.05% FS	15µs max
	F3	10	±5 or 0-5 VDC	16 bit	0.05% FS	10µs max
	F5	4	±20 or 0-20 VDC	16 bit	0.05% FS	10µs max
	J3	10	±1.25 or 0-1.25 VDC	16 bit	0.05% FS	10µs max
	J5	10	±2.5 or 0-2.5 VDC	16 bit	0.05% FS	350µs max
	J8	4	±20 to ±80 VDC	16 bit	0.15% FS	10µs max
D/S	Module	Channels	Frequency	Resolution	Accuracy	Power
	6 ¹	3	47 Hz – 10KHz	16 bit	± 0.1°	0.25 VA / channel
DLV	Module	Channels	Frequency	Resolution	Accuracy	Power
	5 ¹	3	47 Hz – 10KHz	16 bit	0.2% FS	0.1 VA / channel
Discrete I/O	Module	Channels	Input Range	Output Range	Programmable	
	K6	16	0 – 80 VDC	0 – 80 VDC	Input or Output	
TTL	Module	Channels	Input Range	Output level	Programmable	
	D7	16	0 – 5.5 V	TTL/CMOS	Input or Output	
Differential Transceiver	Module	Channels	Input Range (422)	Input Range (485)	Output Range (422/485)	
	D8	11	-10V to +10V	-7V to +12V	-0.25V to +5V	
LVDT	Module	Channels	Frequency	Resolution	Accuracy	Interface
	L ¹	4	360 Hz to 20 KHz	16 bit	0.025% FS	2,3 or 4 wire
S/D	Module	Channels	Frequency	Resolution	Accuracy	Tracking Rate
	S ¹	4	50 Hz to 20 KHz	16 bit	1 arc-min	190 RPS
RTD	Module	Channels	Update rate	Resolution	Accuracy	Interface
	G4	6	16.7 Hz/channel	16 bit	0.05% FS	2, 3 or 4 wire
ARINC 429	Module	Channels	Frequency	Input/output		
	A4	6	100 KHz or 12.5 KHz	RX/TX		
MIL-STD-1553	Module	Channels	Operational Modes	Onboard RAM	Coupled	
	N7	2	BC,RT, BM, BM/RT	128Kbyte per ch	Transformer	
	N8	2	BC,RT, BM, BM/RT	128Kbyte per ch	Direct	
CANBus	Module	Channels	CAN protocol	Message Buffer		
	P6	4	Version 2.0B	RX/TX (0-8 bytes)		
RS-232/422/485	Module	Channels	Communication	Data rate (Sync)	Data rate (Async)	
	P8	4	Async / Sync	4 Mbits/s per ch.	1 Mbit/s per ch	
Reference	Module	Channels	Frequency	Accuracy	Voltage	Power
	W ¹	1	47 Hz – 10KHz	+/- 2%	2 – 115 Vrms	2.2 VA

1 – Indicates wide selection (See part number in Operations Manual)

PART NUMBER DESIGNATION

75C3 – XX XX XX X X X X – XX
Slot # 1 2

MODULE (SLOT) 1& 2 DEFINITION

Enter Module Designation (i.e. C1) for each one of slots 1 & 2
Enter "Z0" if slot is not populated

MODULE (SLOT) 3 DEFINITION

SLOT 3 can only accept Module 'KA'. Enter "Z0" if slot is not to be populated.

ON-BOARD REFERENCE SUPPLY

0 = No On-Board Reference Supply; 1 = 2-28Vrms, 360-10kHz, Programmable;
2 = Reserved for future use; 3 = 115Vrms Fixed, 360-10kHz, Programmable

MECHANICAL

F = Front Panel (J3 & J4) I/O only; P = Rear (J2) I/O only
W = P with Wedgelocks; B = Front Panel (J3 & J4) and Rear (J2) I/O.

ENVIRONMENTAL

C = 0 TO 70 °C; E = -40 TO +85 °C;
H = E with conformal coating; K = C with conformal coating

ETHERNET

0 = No Ethernet; 1 = Front Panel Ethernet Connection; 2 = Rear I/O Ethernet Connection

ENCODER OUTPUTS FOR SYNCHRO / RESOLVER MODULES

0 = No Encoder outputs; 1 = Encoders included for each specified Synchro module

SPECIAL OPTION CODE (OR LEAVE BLANK)

For detailed specifications & complete part number designation, visit www.naii.com to download Operations Manual.

For Ordering Information:

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