

DYNASERVO

Reliable, Affordable and High Performance



Fics Serial Controller PCI Ver.3 **PCI Bus Motion Controller with Serial Communications**

Fics serial controller PCI is an intelligent motion controller especially designed for PC-based applications. It can be installed with either **Fics-III** or **Ladder motion** languages and communicates with DYNAX servo drivers via RS485 at 625Kbps or RS422 at 2.5Mbps. Depending on the pre-installed software and the communication interface, *Fics* serial controller SB is classified as

Fics-Atoms PCI Ver.3: *Fics* serial controller with *Fics-III* and RS485 communication

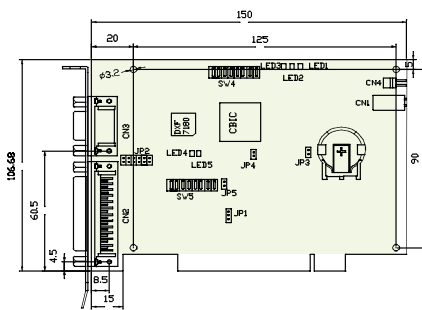
Fics-SRing PCI Ver.3: *Fics* serial controller with *Fics-III* and RS422 communication

LMC PCI Ver.3: *Fics* serial controller with Ladder Motion and RS485 communication

The on-board Dual Port RAM (DPRAM) and the supporting software *Fics*BIOS and HOST option make it easy for the communication between host CPU and servo drivers.

FEATURES

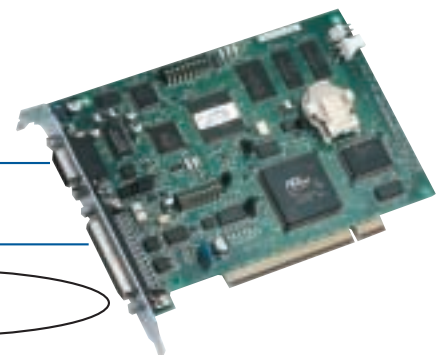
- Advanced motion control software
 - Multi-axis linear interpolation (*Fics-Atoms*)
 - 3-D linear and 2-D arc & circular interpolations (*Fics-SRing*)
 - ± 1 pulse high precision PTP control
 - Easy manual operation and programming with *Fics-RT1* or PC
 - BASIC-like or Ladder Motion programming
 - Trapezoidal and S-curve velocity profiles
 - Multi-tasking (8 tasks)
 - 96 variables & 96 system, flag, monitor variables
 - Pallet & matrix functions
- Capable of controlling a motion system with up to 16 axes (*Fics-Atoms*, LMC), or 8 axes (*Fics-SRing*)
- Serial network digital input/output expansion. (Max 256 bits DI or 256 bits DO).
- Operational as standalone if supplied with +5V.
- Minimal wiring, low cost and high performance



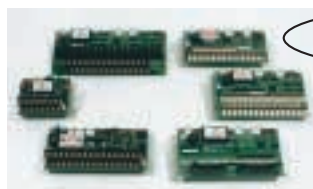
RS485



RS232C



RS422



Fics serial Controller PCI Ver.3

Technical Data

- Power Supply: +5V \pm 5%
(need only when used as standalone)
- Current: 0.6A
- Bus Interface: PCI bus
- Memory Backup: Approx. 3 years
- Working Temperature: 0-50°C
- Working Humidity: 35-85%RH

Main Power Supply DC5V input

[CN1] VHR-2N(JST),BVH-21T-1.1(JST)

Pin	Signal	IN/OUT	Pin	Signal	IN/OUT
1	+5V	IN	2	GND	-

(use only for standalone configuration)

LED

LED1(green)	Power ON
LED2(red)	7180 CH1 Transfer error
LED3(green)	7180 CH1 Receiving
LED4(red)	7180 CH2 Transfer error
LED5(green)	7180 CH2 Receiving

Switch

SW4[CH1],SW5[CH2]: 7180 communication setting

No	Function	ON	OFF	Initial value	
				CH1	CH2
1	Station No.bit0	0	1	ON	ON
2	Station No.bit1	0	1	ON	ON
3	Station No.bit2	0	1	ON	ON
4	Unused	-	-		
5	Master/Slave	Master	Slave	ON	ON
6	Ring Mode	IO-Ring	LAN	ON	OFF
7	Transfer speed	2.5Mbps	1.25Mbps	OFF	ON
8	Reverse twice transfer	yes	no	OFF	OFF

SW3: Board reset (not implemented)

Communication port, DIO

[CN2] HDBB-25P,HDB-CTF(HIROSE) [Female on board side]

Pin	Signal	IN/OUT	Usage	Pin	Signal	IN/OUT	Usage
1	GND	-		14	SD1-	OUT	7180:CH1
2	SD1+	OUT	7180:CH1	15	RD1-	IN	7180:CH1
3	RD1+	IN	7180:CH1	16	GND	-	
4	SD2+	OUT	7180:CH2	17	SD2-	OUT	7180:CH2
5	RD2+	IN	7180:CH2	18	RD2-	IN	7180:CH2
6	485+	IN/OUT	RS485	19	+24V(IN)	IN	
7	485-	IN/OUT	RS485	20	DI1	IN	DI
8	GND	-		21	DO1	OUT	DO
9	RXD-	IN	RS422	22	DO2	OUT	DO
10	RXD/RXD+	IN	RS232/422	23	RTS	OUT	RS232
11	TXD/TXD+	OUT	RS232/422	24	CTS	IN	RS232
12	TXD-	OUT	RS422	25	24VGND	-	
13	GND	-					

Jumpers

- JP1:3pin PCI bus related setting
1-2 closed (fixed)
- JP2:12pin host communication type setting
(choose either one)
1-12, 2-11, 3-10 closed: RS232 (default)
4-9, 5-8,, 6-7 closed: RS422
- JP3:2pin battery backup
1-2 closed: use battery backup
1-2 open: do not use battery backup (default)
- JP4:2pin CPU related system setting
1-2 open: normal operation (default)
1-2 closed: debug mode
- JP5:2pin selection of reset by PCI bus
1-2 closed: valid (default)
1-2 open: invalid

Fics-RT1 RS232C Communication

[CN3] HDEB-9S,HDE-CTF(HIROSE)

[Male on board side]

Pin	Signal	IN/OUT	Pin	Signal	IN/OUT
1	NC	-	6	DSR	IN
2	RXD	IN	7	NC	-
3	TXD	OUT	8	NC	-
4	DTR	OUT	9	+5V	OUT
5	GND	-			

Attachments CN1 and CN2 are attached.

Applications

- Packaging machines
- Chip mounting machines
- Semiconductor processing equipment
- Winding machines
- Indexing machines
- Feeding machines
- Robots
- Other automated applications