

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

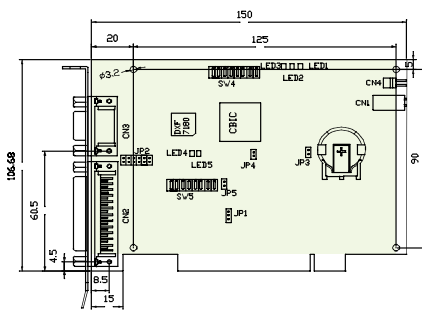
Fics-SRing PCI Ver.3: *Fics* serial controller with *Fics-III* and RS422 communication

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

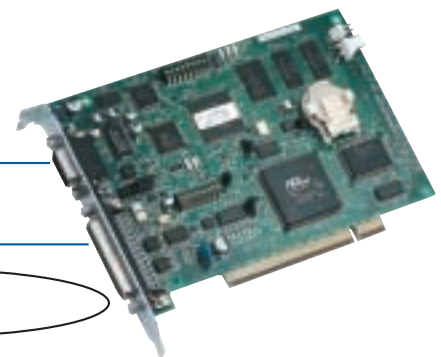
- Advanced motion control software
 - Multi-axis linear interpolation (*Fics-Atoms*)
 - 3-D linear and 2-D arc & circular interpolations (*Fics-SRing*)
 - ± 1 pulse high precision PTP control
 - Easy manual operation and programming with *Fics-RT1* or PC
 - BASIC-like or Ladder Motion programming
 - 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