



※Picture is "MCUSB2ecL"

## Motion control board

# MCPC14sd/IOUSB32sd 其他

### Feature

Motion control board and isolation I/O board which uses our own motor control LSI.

### Specification

Model	MCPC14sd	MCUSB4sd	MCUSB2ecL
Applicable controller	HMC101		
Reference clock	32.768MHz		24MHz
Motor control	Controllable shaft count	4-shafts	2-shafts
	Max. output frequency	8.191Mpps	6Mpps
	Acceleration method	Linear, S-curve	
	Output method	1-pulse(DIR,PULSE), 2-pulse(CW/CCW), 2-phase pulse(A,B phase)	
	Output specification	Line driver output (26LS31 equivalent)	
Controllable equipment	Driver of a pulse-train input type		
Encoder input	Input signal	2-phase, A/B-phase(1/2/4-multiplying enable),Up/down, Z-phase	
	Input specification	High speed photo coupler input (HCPL-0630 equivalent)	
	Input current	6.3mA ~ 15mA	10mA ~ 20mA
	Input voltage	DC+5V	
General output	Max. input frequency	6Mpps(2-phase input, 4-multiplying)	5Mpps(2-phase input, 4-multiplying)
	Output ports	12points	2points(1point for each shaft)
	Output specification	Open collector output of photo coupler (PS2802 equivalent)	Open collector output of photo coupler(TLP281 equivalent)
	Output current	50mA	30mA (MAX)
	Output breakdown voltage	30V	
Collector saturation voltage	1V		
Control signal input	Input ports	17points(control),16points(general)	10points (Control:5points for each shaft)
	Input signal	Quick/Moderate stop function of ON, same as left of CW, general input 1 or origin, general input 2 or Z-phase, general input 3, general input 4, positioning complete, alarm, interlock	
	Input specification	Photo coupler input (TLP281 equivalent), external power supply DC+24V	
	Input current	4.6mA ~ 5.2mA	
Input voltage	DC+24V		
Interrupt function	Controller	N/A	N/A
	Interval timer	N/A	N/A
Communication specification	N/A	USB Rev1.1 Full speed 12Mbps	USB2.0 compatible Hi-speed(480MHz)
Slot occupation	1 slot	N/A	N/A
Occupy space of memory	64 bytes	N/A	N/A
Maximum connection	N/A	16 board	16 board
Maximum cable length	N/A	5m	N/A
Power supply	DC+5V±5%	DC+24V±10%	USB bus power DC+5V±10%
Consumption current	max 800mA	TBD	max 200mA
Compatible bus slot	PCI local bus(Rev2.1 or later)	N/A	N/A
Board size	Short size(106.68 x 175.63mm)	150×100×20mm	W65×D70×H11
I/O connector	CN1 : FX2B-100PA-1.27DSL (Hirose) or equivalent	N/A	CN1:USB(Mini-B) CN2,CN3: B18B-PHDSS-B (※) CN4: B08B-PASK-1(※) (※:J.S.T. Mfg. Co.,Ltd. or equivalent)
	CN2 : IL-S-4P-S2L2-EF (Japan Aviation Electronics Industry, Ltd) or equivalent		
Ambient Temperature	0 ~ 50C		
Ambient Humidity	Less than 85% RH. No condensation		
Corrosive gas environment	Not allowed		
Floating dust	Less severe		

Model	IOPC132sd	IOUSB32sd
Input	Input ports	32points (1 common = 16 points)
	Filter settling time	Set by software:16.384ms,4.096ms,128μs,no filter(313ns)
	Input type	Electrically isolated input by a photo coupler(Current sink output enable)
	Input logic	"0": photo coupler OFF (Open)/"1": photo coupler ON (Short)
	Max rated voltage	DC+50V
	Rated voltage	DC+24V
	Input resistance	4.7kΩ(w/ overvoltage protective diode, leak current protective resistance : 1.5kΩ)
	Input ON current	5mA(TYP)
	Input OFF current	333μA
	Input response time	Photo coupler OFF->ON:Typ. 3μs, ON->OFF:Typ. 42μs
Output	Output ports	32points (1 common = 8 points)
	Output type	Electrically isolated input by a photo coupler(Current sink output)
	Output logic	"0": transistor OFF (Open)/"1": transistor ON (Short)
	Max rated voltage	DC+50V
	Rated output voltage	DC+24V
	Rated output current	max 100mA/point
	Output saturation voltage	max 0.8V(output current 100mA)/max 0.2V(output current 10mA)
	Output OFF leak current	max 10μA
	Output response time	Photo coupler OFF->ON:Typ. 2μs, ON->OFF:Typ. 105μs
	Output logic	Interruption by input signal edge detection Cyclic interruption by timer counter
Slot occupation	1 slot	N/A
Occupy space of memory	64 bytes	N/A
Compatible bus slot	PCI local bus(Rev2.1 or later)	N/A
I/O connector	CN1 : FX2B-80PA-1.27DSL (Hirose) or equivalent	N/A
Communication specification	N/A	USB Rev1.1/Full speed 12Mbps
Maximum connection	N/A	16 board
Maximum cable length	N/A	5m
Power supply	DC+5V±5%	DC+24V±10%
Consumption current	max 600mA	TBD
Board size	Short size(100.5×154.31mm)	150×100×20mm
Ambient Temperature	0 ~ 50C	
Ambient Humidity	Less than 85% RH. No condensation	
Corrosive gas environment	Not allowed	
Floating dust	Less severe	