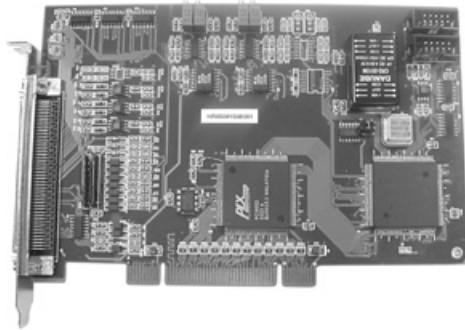


DASP-52504/52504L

4-axis Servo / Stepping Motion Card



Specifications

Data bus	16 bits
Interrupt source	83
Control axes	4
DDA cycle	25µs - 3.35 ms
D/A resolution	16 bits
Pulse command output	Pulse/Direction, CW/CCW, A/B phase
Encoder feedback signal	Pulse/Direction, CW/CCW, A/B phase
DAC	4 D/A, 16 bits, position loop output
Error counter	16 bits
Absolute position recorder	24 bits
Compensator	P, PI mode
Local I/O channels	13 D/I, 5 D/O
Local I/O type	general purpose, interrupt I/O
Remote I/O type	Output sink type (open collector) input source type
Interval timer channel	1
Timer interrupt	0.5µs - 33ms
Watchdog timer	16 bits
Power consumption	+5V @0.9A max.
Operating temperature	0-60°C
Storage temperature	-20 to 70°C
Humidity	0 to 90%
Connector	SCSI-II 100P Pin-type
Dimensions	185mm x 122 mm

Applications

- Digital I/O control
- Real time clock
- Process event counting
- Pulse generation
- Time-delay generation
- Test automation
- Laboratory automation
- PWM output
- Square wave output
- Pulse width measurement

Ordering Information

DASP-52504	4-axis servo / stepping motion card
DASP-52504L	DASP-52504 w/o analog output card
Daughter Board	
DB-87040	4-axis motion daughter board
Cable	
CB-89200-2	SCSI-II 100P pin type cable 2M
CB-89200-5	SCSI-II 100P pin type cable 5M

Features

- ▶ Four, configurable, axes position control for servo or stepper
- ▶ Supports real-time RTX driver (option)
- ▶ The Linear DDA law is designed to do fine interpolation
- ▶ Output Interface can be analog or pulse train and direction
- ▶ PI plus feed forward control law
- ▶ 4 encoder channels with a 32-bit counter
- ▶ 4 DAC channels with a 16-bit resolution
- ▶ Encoder resolution can be amplified by x1, x2 or x4 rates
- ▶ 18 local I/O points
- ▶ Watchdog timer and one programmable timer
- ▶ Windows® 98/NT/2000/XP and Labview 6.0/7.0 driver supported
- ▶ Complete sample program- VB, VC, BCB, Delphi

Introduction

The DASP-52504 is a PCI-bus, four axis motion control card. It's designed to control both servo and stepper motors. The most important feature of the DASP-52504 is to support real-time RTX drivers, making it easy to develop and deploy high performance, mission-critical applications that run on Windows operating systems. The DASP-52504 has two operating modes: The first mode is to work with a velocity mode servo drive. The DASP-52504 compares the segmental movement commands from the Host PC and the encoder feedback from servo motor, calculates, via P controls, the analog output command, then sends the command to the velocity mode drive to control the servo motor. The second mode is to convert the segmental movement command into well behaved, from a frequency variance standpoint, pulse train and feed to either the use position mode servo drive or a stepper drive to control the motor.

Real-time Data Acquisition and Control: RTX Driver

RTX enhances Windows' universally adopted look and give developers real-time determinism, unmatched dependability, and ability. By offering a fully compliant Win32 API set, RTX application portability is simplified between various Windows operating systems. This portability permits the underlying Windows operating system to be upgraded transparently with no impact to the device drivers or real time applications.

On-board Watchdog Timer

Users can set up time intervals for the timer. While the application programs within the time interval have not connected with DASP/DASA products, the DASP/DASA will be sending out a preset safety value to a devices linked to the DASP/DASA. This helps maintain a stable system.

Pin Assignment

AGND	1	51	AGND
DAC/D1	2	52	DAC/D4
DAC/D2	3	53	NC
DAC/D3	4	54	NC
VCC_OUT(+5V)	5	55	COM-
COM+	6	56	COM+
COM	7	57	E_STOP
COM	8	58	P_RDY
HOME	9	59	HOME_I2
OT+_I1	10	60	OT+_I2
OT-_I1	11	61	OT-_I2
INH_O1	12	62	INH_O2
HOME_I3	13	63	OME_I4
OT+_I3	14	64	OT+_I4
OT-_I3	15	65	OT-_I4
INH_O3	16	66	INH_O4
NC	17	67	NC
NC	18	68	NC
NC	19	69	NC
NC	20	70	NC
XENC_INA1	21	71	XENC_INA2
XENC_INA2	22	72	XENC_INA2
XENC_INB1	23	73	XENC_INB2
XENC_INB2	24	74	XENC_INB2
XENC_INB1	25	75	XENC_INC2
XENC_INB1	26	76	XENC_INC2
XENC_INA3	27	77	XENC_INA4
XENC_INA3	28	78	XENC_INA4
XENC_INB3	29	79	XENC_INB4
XENC_INB3	30	80	XENC_INB4
XENC_INC3	31	81	XENC_INC4
XENC_INC3	32	82	XENC_INC4
XENC_INB3	33	83	NC
NC	34	84	NC
NC	35	85	NC
NC	36	86	NC
NC	37	87	NC
NC	38	88	NC
XDDA_OUTA1	39	89	XDDA_OUTA2
XDDA_OUTA1	40	90	XDDA_OUTA2
XDDA_OUTB1	41	91	XDDA_OUTB2
XDDA_OUTB1	42	92	XDDA_OUTB2
XDDA_OUTA3	43	93	XDDA_OUTA4
XDDA_OUTA3	44	94	XDDA_OUTA4
XDDA_OUTB3	45	95	XDDA_OUTB4
XDDA_OUTB3	46	96	XDDA_OUTB4
NC	47	97	NC
NC	48	98	NC
NC	49	99	NC
NC	50	100	NC