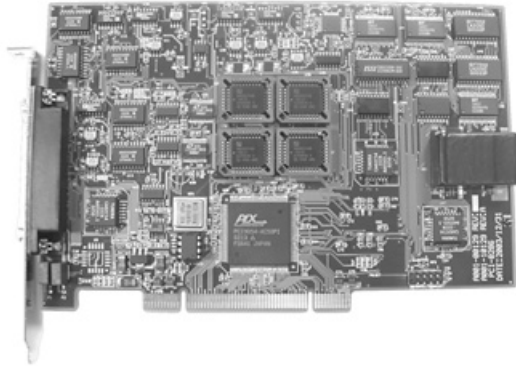


# DASP-52286/52286L

16-bit 1MHz Multifunction Card

DELTA COMPONENTS®

Industrial Automation



## Specifications

| Analog Input                     |   |
|----------------------------------|---|
| Channels                         | 16 single-ended/8 differentials                       |
| Type                             | ADS8401 on Chip Sample and Hold ADC.                  |
| Resolution                       | 16 bits   |
| Sampling rate                    | 1MS/s max.  |
| Input impedance                  | 10,000 MΩ   |
| Over voltage                     | 70Vpp   |
| ADC input range                  | ±5V   |
| Programmable Gain                |   |
|                                  | Gain=0.5    Gain=1    Gain=2    Gain=4    Gain=8      |
| Unipolar                         | -    0~10V    0~5V    0~2.5V    0~1.25V               |
| Bipolar                          | ±10V    ±5V    ±2.5V    ±1.25V    ±0.625V             |
| Analog Outputs (DASP-52286 only) |   |
| Channels                         | 2 independent   |
| Type                             | 16 bits multiplying                                   |
| Linearity                        | ±1/2 bit  |
| Output range                     | ±10V, 0-10V jumper selected                           |
| Output driving                   | ±5mA  |
| Settling time                    | 0.6µs to 0.01% for Full Scale Step                    |
| Max. transfer rate               | 1MS/s for single channel<br>500 KS/s for dual channel |
| Digital I/O                      |   |
| Channels                         | 16 inputs and 16 outputs, TTL level                   |
| Input low                        | VIL = 0.8V max. IIL = -0.4mA max.                     |
| Input high                       | VIH = 2.0V min. IIH = 20µA max.                       |
| Output low                       | VOL = 0.5V max. @IOL = 8mA max.                       |
| Output high                      | VOH = 2.7V min. @IOH = -400µA max.                    |
| Programmable Timer/Counter       |   |
| Type                             | 8254 programmable timer/counter, Counter 0-2          |
| Clock input frequency            | 0~10MHz.  |
| Internal clock                   | 8MHz.   |
| General Environment              |   |
| Power                            | +5V @750mA max.                                       |
| Operating temperature            | 0 to 60°C   |
| Storage temperature              | -20 to 70°C   |
| Humidity                         | 0 to 90% non-condensing                               |
| Dimensions                       | 185mm x 122mm   |

## Ordering Information

| DASP-52286     | 16-bit 1MHz multifunction card                |
|----------------|---|
| DASP-52286L    | DASP-52286 w/o analog output card             |
| Terminal Board |   |
| TB-88268       | 68-pin SCSI-II pin type female terminal board |
| Cable          |   |
| CB-89268-2     | 68-pin SCSI-II pin type male/2M cable         |
| CB-89268-5     | 68-pin SCSI-II pin type male/5M cable         |

## Features

- ▶ PCI Bus Mastering DMA Interface
- ▶ 16-bit A/D converter
- ▶ Maximum sampling rate up to 1MHz
- ▶ Automatic channel scanning
- ▶ On-board FIFO buffer storing up to 1K samples for A/D and 32K samples for D/A
- ▶ A/D trigger mode: software trigger, pacer trigger, external trigger
- ▶ A/D transfer mode: polling, interrupt, FIFO
- ▶ Software programmable gain of 0.5, 1, 2, 4, 8 for AD converting
- ▶ 16 single-ended or 8 differential analog inputs
- ▶ Software selectable input ranges
- ▶ Bipolar and unipolar operation
- ▶ 2-channel 16-bit D/A voltage outputs (DASP-52286)
- ▶ 16 digital inputs and 16 digital outputs (TTL compatible)

## Introduction

The DASP-52286 is a PCI-Bus mastering DMA for high performance, multi-function card. It contains a 16-bit ADC with up to 16 single-ended or 8 differential analog inputs. The DASP-52286 has a 1K FIFO for A/D conversion and 32K FIFO for D/A conversion on board, programmable timer/counters, two 16-bit DAC output, and 16/16 TTL level digital input and digital output. The maximum sampling rate of the A/D converter is about 1MHz with an automatic channel scan capability.

## Applications

- Fast data acquisition system
- Process status monitoring
- Test automation
- Voltage waveform generation
- Laboratory automation

## Pin Assignment

J1, SCSI-II 68-pin Connector for Single-Ended Signal

|                    |      |                    |      |
|--------------------|------|--------------------|------|
| +5V Out 1          | ●●●● | 35 +12V Out        | ●●●● |
| No Connector 2     | ●●●● | 36 No Connector    | ●●●● |
| AI_CLK_OUT 3       | ●●●● | 37 AI_TRG_OUT      | ●●●● |
| DGND 4             | ●●●● | 38 DGND            | ●●●● |
| DIO15 5            | ●●●● | 39 DIO14           | ●●●● |
| DIO13 6            | ●●●● | 40 DIO12           | ●●●● |
| DIO11 7            | ●●●● | 41 DIO10           | ●●●● |
| DIO09 8            | ●●●● | 42 DIO08           | ●●●● |
| DGND 9             | ●●●● | 43 DGND            | ●●●● |
| DIO06 10           | ●●●● | 44 DIO06           | ●●●● |
| DIO05 11           | ●●●● | 45 DIO04           | ●●●● |
| DIO03 12           | ●●●● | 46 DIO02           | ●●●● |
| DIO01 13           | ●●●● | 47 DIO00           | ●●●● |
| DGND 14            | ●●●● | 48 CNT2_OUT        | ●●●● |
| CNT2_GATE 15       | ●●●● | 49 CNT2_CLK        | ●●●● |
| DGND 16            | ●●●● | 50 CNT1_OUT        | ●●●● |
| CNT1_GATE 17       | ●●●● | 51 CNT1_CLK        | ●●●● |
| DGND 18            | ●●●● | 52 CNT0_OUT        | ●●●● |
| CNT0_GATE 19       | ●●●● | 53 CNT0_CLK        | ●●●● |
| AO_TRG 20          | ●●●● | 54 AO_CLK          | ●●●● |
| DGND 21            | ●●●● | 55 DGND            | ●●●● |
| AI_TRG 22          | ●●●● | 56 AI_CLK          | ●●●● |
| AOGND 23           | ●●●● | 57 AOGND           | ●●●● |
| AO1_OUT 24         | ●●●● | 58 AO0_OUT         | ●●●● |
| AO1_REF 25         | ●●●● | 59 AO0_REF         | ●●●● |
| ANA_TRG 26         | ●●●● | 60 AGND            | ●●●● |
| Analog Input 15 27 | ●●●● | 61 Analog Input 14 | ●●●● |
| Analog Input 13 28 | ●●●● | 62 Analog Input 12 | ●●●● |
| Analog Input 11 29 | ●●●● | 63 Analog Input 10 | ●●●● |
| Analog Input 9 30  | ●●●● | 64 Analog Input 8  | ●●●● |
| Analog Input 7 31  | ●●●● | 65 Analog Input 6  | ●●●● |
| Analog Input 5 32  | ●●●● | 66 Analog Input 4  | ●●●● |
| Analog Input 3 33  | ●●●● | 67 Analog Input 2  | ●●●● |
| Analog Input 1 34  | ●●●● | 68 Analog Input 0  | ●●●● |

J1, SCSI-II 68-pin Connector for Differential Signal

|                    |      |                     |      |
|--------------------|------|---------------------|------|
| +5V Out 1          | ●●●● | 35 +12V Out         | ●●●● |
| No Connector 2     | ●●●● | 36 No Connector     | ●●●● |
| AI_CLK_OUT 3       | ●●●● | 37 AI_TRG_OUT       | ●●●● |
| DGND 4             | ●●●● | 38 DGND             | ●●●● |
| DIO15 5            | ●●●● | 39 DIO14            | ●●●● |
| DIO13 6            | ●●●● | 40 DIO12            | ●●●● |
| DIO11 7            | ●●●● | 41 DIO10            | ●●●● |
| DIO09 8            | ●●●● | 42 DIO08            | ●●●● |
| DGND 9             | ●●●● | 43 DGND             | ●●●● |
| DIO06 10           | ●●●● | 44 DIO06            | ●●●● |
| DIO05 11           | ●●●● | 45 DIO04            | ●●●● |
| DIO03 12           | ●●●● | 46 DIO02            | ●●●● |
| DIO01 13           | ●●●● | 47 DIO00            | ●●●● |
| DGND 14            | ●●●● | 48 CNT2_OUT         | ●●●● |
| CNT2_GATE 15       | ●●●● | 49 CNT2_CLK         | ●●●● |
| DGND 16            | ●●●● | 50 CNT1_OUT         | ●●●● |
| CNT1_GATE 17       | ●●●● | 51 CNT1_CLK         | ●●●● |
| DGND 18            | ●●●● | 52 CNT0_OUT         | ●●●● |
| CNT0_GATE 19       | ●●●● | 53 CNT0_CLK         | ●●●● |
| AO_TRG 20          | ●●●● | 54 AO_CLK           | ●●●● |
| DGND 21            | ●●●● | 55 DGND             | ●●●● |
| AI_TRG 22          | ●●●● | 56 AI_CLK           | ●●●● |
| AOGND 23           | ●●●● | 57 AOGND            | ●●●● |
| AO1_OUT 24         | ●●●● | 58 AO0_OUT          | ●●●● |
| AO1_REF 25         | ●●●● | 59 AO0_REF          | ●●●● |
| ANA_TRG 26         | ●●●● | 60 AGND             | ●●●● |
| Analog Input 7/ 27 | ●●●● | 61 Analog Input 7/4 | ●●●● |
| Analog Input 6/ 28 | ●●●● | 62 Analog Input 6/4 | ●●●● |
| Analog Input 5/ 29 | ●●●● | 63 Analog Input 5/4 | ●●●● |
| Analog Input 4/ 30 | ●●●● | 64 Analog Input 4/4 | ●●●● |
| Analog Input 3/ 31 | ●●●● | 65 Analog Input 3/4 | ●●●● |
| Analog Input 2/ 32 | ●●●● | 66 Analog Input 2/4 | ●●●● |
| Analog Input 1/ 33 | ●●●● | 67 Analog Input 1/4 | ●●●● |
| Analog Input 0/ 34 | ●●●● | 68 Analog Input 0/4 | ●●●● |

\* All the specifications and photos are subjected to be changed without notice.

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