PISO-PS600 High-Speed, DSP-based, 6-Axis Motion Control Card with FRnet

Features:

- DSP-based motion control card with PCI interface
- Independent 6-axis motion control
- Support both full-closed and semi-closed control modes
- Maximum pulse output frequency: 4Mpps.
- Maximum Encoder input frequency: 12Mpps
- 4-step home mode with auto-searching
- 2~6-axis linear interpolation function
- 2/3-axis circular interpolation function
- Programmable T/S-curve acceleration and deceleration
- Change speed and position on the fly
- High-speed position latch and compare trigger
- Home sensor, positive and negative limit sensors accepted for each axis
- Support fully-functional manual-pulse-generator and jog functions
- Expandable distributed I/Os: 128 DI & 128 DO via two-wired FRnet interface.

Applications:

- Wafer cutting
- Laser cutting
- Toroid winding machine
- Tag printer
- Fix-Pitch Stamping Machine

Introduction:

PISO-PS600 controller combines a new generation processor 1600 MIPS running up to 200 MHz, 9,526 logic element FPGA (Field Programmable Gate Array), I/O buffering circuitry, and motion control characterization software to control the position of 6-axis pulse command servo/stepper motors. PISO-PS600 not only realizes the motion control with closed-loop (or semi closed-loop) and error handling, but also adopts the feed-forward gain to reduce speed profile following error to meet position control. PISO-PS600 can be used on any IPC with 5V PCI bus, and is suitable for general-purpose motion applications. This card also contains one FRnet port which allows IPC to expand its ability to have fast digital I/O control easily.

ICP DAS has also provided a variety of functions and examples to reduce the need for programming by users, making it a highly cost-effective solution for motion builders.

Specifications:

- DSP: TI TMS320C6720 floating-point DSP with 200MHz/1600MIPS
- 32-bit/33MHz universal PCI-Bus.
- 6 controllable axes
- Maximum Pulse output frequency：4Mpps
- 32-bits up/down counter range： 2,147,483,647 ~ +2,147,483,647
- Maximum Encoder input frequency：12Mpps
- One dedicated emergency input pin
- Input/Output Signals for each axis :
  - All I/O signal are optically isolated：3000Vrms
  - Command Pulse output pins：±CW and ±CCW
  - Encoder signals input pins：±A and ±B
  - Encoder index signal input pins：±Z
  - Mechanical signal input pins：±LMT, HOME and SLD
  - Servo-motor interface I/O pins：INP, ALARM, RDY, ALM_RST, ERC, and SRV_ON（Servo ON）
- Manual pulse generator Interface
  - Programmable OUT/DIR, CW/CCW and EA/EB input modes
  - 6-CH dedicated input for axes selection
  - 3-CH dedicated input for magnification selection
  - 2-CH dedicated input for jog operation
  - 1-CH dedicated input for optional emergency stop
- Connectors：68-pins mini SCSI-type connector
- Operating Temp：0 ~ + 60°C
- Storage Temp：-20 ~ +80°C
- Operating Humidity：10 ~ 85%，non-condensing
- Storage Humidity：5 ~ 95%，non-condensing
- External Power supply(Input)：24V DC (connect to terminal board)

Software supported :

- Driver supports for Windows XP/2K
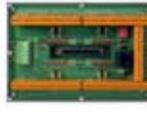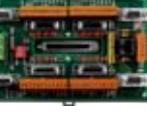- Programming Tools: VC/VB/BCB

Ordering Information:

Model No.	Product Description
PISO-PS600	6-axis motion control card of DSP-based
DN-8368GB	The daughter board is for General Purpose
DN-8368MB	The daughter board is for Mitsubishi J2S Amplifier.
DN-20M	The daughter board is for FRnet connector and Full function Manual-Pule-Generator
CA-SCSIM15	68-pin SCSI-II cable, length: 1.5 m
4PCA-2P4C-0100	The cable for FRNet modules; Length:100m

Accessories

Terminal Boards for PISO-PS200/I-8092F

DN-8237GB
Photo-isolated terminal board for PISO-PS200/I-8092F
- For General Purpose Usage
- High speed photo-coupling isolated.
- Supporting pulse command type step motors or servo motors.
- Providing power led and other status LEDs (home, limit switches, …)
- Providing FRnet terminal for high-speed serial I/O expansion when the mother supports FRnet.

DN-8237DB
Photo-isolated terminal board for PISO-PS200/I-8092F
- For Delta ASDA-A Servo Amplifier
- High speed photo-coupling isolated.
- Supporting pulse command type step motors or servo motors.
- Providing power led and other status LEDs (home, limit switches, …)
- Providing FRnet terminal for high-speed serial I/O expansion when the mother supports FRnet.

DN-8237MB
Photo-isolated terminal board for PISO-PS200/I-8092F
- For Mitsubishi J2 Servo Amplifier
- High speed photo-coupling isolated.
- Supporting pulse command type step motors or servo motors.
- Providing power led and other status LEDs (home, limit switches, …)
- Providing FRnet terminal for high-speed serial I/O expansion when the mother supports FRnet.

DN-8237PB
Photo-isolated terminal board for PISO-PS200/I-8092F
- For Panasonic Minas-A Servo Amplifier
- High speed photo-coupling isolated.
- Supporting pulse command type step motors or servo motors.
- Providing power led and other status LEDs (home, limit switches, …)
- Providing FRnet terminal for high-speed serial I/O expansion when the mother supports FRnet.

DN-8237YB
Photo-isolated terminal board for PISO-PS200/I-8092F
- For Yaskawa Sigma Servo Amplifier
- High speed photo-coupling isolated.
- Supporting pulse command type step motors or servo motors.
- Providing power led and other status LEDs (home, limit switches, …)
- Providing FRnet terminal for high-speed serial I/O expansion when the mother supports FRnet.

Terminal Boards for PISO-PS400/I-8094F/I-8094A/I-8094H

DN-8468GB
Photo-isolated terminal board for PISO-PS400/i-8094/i-8094F/i-8094A/i-8094H
- For General Purpose Usage
- High speed photo-coupling isolated.
- Supporting pulse command type step motors or servo motors.
- Providing power led and other status LEDs (home, limit switches, …)
- Providing FRnet terminal for high-speed serial I/O expansion when the mother supports FRnet.

DN-8468DB
Photo-isolated terminal board for PISO-PS400/i-8094/i-8094F/i-8094A/i-8094H
- For Delta ASDA-A Servo Amplifier
- High speed photo-coupling isolated.
- Supporting pulse command type step motors or servo motors.
- Providing power led and other status LEDs (home, limit switches, …)
- Providing FRnet terminal for high-speed serial I/O expansion when the mother supports FRnet.

DN-8468MB
Photo-isolated terminal board for PISO-PS400/i-8094/i-8094F/i-8094A/i-8094H
- For Mitsubishi J2 Servo Amplifier
- High speed photo-coupling isolated.
- Supporting pulse command type step motors or servo motors.
- Providing power led and other status LEDs (home, limit switches, …)
- Providing FRnet terminal for high-speed serial I/O expansion when the mother supports FRnet.

DN-8468PB
Photo-isolated terminal board for PISO-PS400/i-8094/i-8094F/i-8094A/i-8094H
- For Panasonic Minas-A Servo
- High speed photo-coupling isolated.
- Supporting pulse command type step motors or servo motors.
- Providing power led and other status LEDs (home, limit switches, …)
- Providing FRnet terminal for high-speed serial I/O expansion when the mother supports FRnet.

DN-8468YB
Photo-isolated terminal board for PISO-PS400/i-8094/i-8094F/i-8094A/i-8094H
- For Yaskawa Sigma Servo Amplifier
- High speed photo-coupling isolated.
- Supporting pulse command type step motors or servo motors.
- Providing power led and other status LEDs (home, limit switches, …)
- Providing FRnet terminal for high-speed serial I/O expansion when the mother supports FRnet.

DN-8468FB
Photo-isolated terminal board for PISO-PS400/i-8094/i-8094F/i-8094A/i-8094H
- For FUJI FALDIC-W servo Amplifier
- High speed photo- coupling isolation
- Supporting Pulse command type stepper motors or servo motors.
- Providing power led and other status LEDs(Home, Limit switch…)
- Providing FRnet terminal for high-speed serial I/O expansion when the mother supports FRnet.

Terminal Boards for PISO-PS600/VS600/PMDK

DN-8368GB
Photo-isolated terminal board for PISO-PS600/PISO-VS600/PISO-PMDK
- For General Purpose Usage
- High speed photo- coupling isolation
- Supporting Pulse command type stepper motors or servo motors.
- Providing power led and other status LEDs(Home, Limit switch…)

DN-8368MB
Photo-isolated terminal board for PISO-PS600/PISO-VS600/PISO-PMDK
- For Mitsubishi J2 Servo Amplifier
- High speed photo- coupling isolation
- Supporting Pulse command type stepper motors or servo motors.
- Providing power led and other status LEDs(Home, Limit switch…)
- Providing RS-232 connector for CN3 of Mitsubishi J2 Servo Amplifier.
- Providing jumper to set Encoder source from servo amplifier or expansion linear scar.

DN-20M
Manual-Pulsar-Generator(MPG) and FRnet input board for PISO-PS600/VS600/PMDK
- MPG and FRnet connector Block with Din-Rail mounting
- 20-pin SCSI-II connector
- Pin to Pin screw terminal for Manual Pulsar Generator connected
- Screw terminals for easy field wiring
- RJ-45 for FRnet connector
- Dimension:103mm x 86mm

Encoder Input Board

DN-68
Encoder Input Board for PISO-Encoder300/600
- I/O connector Block with Din-Rail Mounting
- 68-pin SCSI-II connector
- Pin to Pin screw terminal for I/O connected
- Screw terminals for easy field wiring
- Dimension:103mm x 86mm

Accessories for MAVIS

CA-1394-45
IEEE 1394a 4.5m cable

1394R3B
1394 Repeater (1port to 2ports)

Accessories for Sparrow

CA-1394AB-45
1394a to 1394b high-flex bilingual 4.5m cable

CA-1394B-45
1394b high-flex 4.5m cable

Power Module

DP-665
24V/2.5A, 5V/0.5A Power Supply
Input voltage : 85Vac to 264Vac
Input frequency : 47Hz to 63Hz
Outputs : +24V/2.5A ; +5V/0.5A

DP-1200
24V/5A Power Supply
Input voltage : 85Vac to 264Vac
Input frequency : 47Hz to 63Hz
Outputs : +24V/5A

Cables:

CA-3710
DB-37 Male-Male D-sub cable 1M
Cable for Daughter Board(45º)

CA-3720
DB-37 Male-Male D-sub cable 2M
Cable for Daughter Board(45º)

CA-3710DM
DB-37 Male-Male D-sub cable 1M
Cable for Daughter Board(180º)

CA-3730DM
DB-37 Male-Male D-sub cable 3M
Cable for Daughter Board(180º)

CA-3750DM
DB-37 Male-Male D-sub cable 5M
Cable for Daughter Board(180º)

CA-SCSI15
SCSI II 68-pin & 68-pin Male connector cable 1.5M

CA-SCSI30
SCSI II 68-pin & 68-pin Male connector cable 3M

CA-SCSI50
SCSI II 68-pin & 68-pin Male connector cable 5M

4PCA-MINI68-15
Mini SCSI II 68-pin to SCSI II 68-pin & 68-pin Male connector cable 1.5M

CA-SCSI20-M1
SCSI II 20-pin & 20-pin Male connector cable 1M, for Mitsubishi motor

CA-SCSI20-M3
SCSI II 20-pin & 20-pin Male connector cable 3M, for Mitsubishi motor

CA-SCSI20-M5
SCSI II 20-pin & 20-pin Male connector cable 5M, for Mitsubishi motor

CA-SCSI50-D1
SCSI II 50-pin & 50-pin Male connector cable 1M, for Delta ASDA A series motor

CA-SCSI-D3
SCSI II 50-pin & 50-pin Male connector cable 3M, for Delta ASDA A series motor

CA-SCSI50-D5
SCSI II 50-pin & 50-pin Male connector cable 5M, for Delta ASDA A series motor

CA-SCSI50-PY1
SCSI II 50-pin & 50-pin Male connector cable 1M, for Panasonic & Yaskawa motor

CA-SCSI30-PY3
SCSI II 50-pin & 50-pin Male connector cable 3M, for Panasonic & Yaskawa motor

CA-SCSI50-PY5
SCSI II 50-pin & 50-pin Male connector cable 5M, for Panasonic & Yaskawa motor

4PCA-2P4C-0100
2P4C cable For FRNet-Modules, Length:100M

Accessories for FALCON

CA-SF1LAN
6-pin Hirose Female to RJ-45 LAN cable

CA-SF1TRIG
6-pin Hirose Male to open end Trigger and power cable

CA-SF1COM
12-pin Hirose Female to open end COM port serial I/O cable

CA-SF1VGA
10-pin Hirose Male to VGA D-sub interface cable (SF-163V)

PAC

I8K Module

Vision Box

Industrial Camera

PCI Control Card

Remote Control

Remote I/O

Acssories