

SERVO-300 ISA Bus, 3-axis High-speed Servo Motor Control Card (V Command)



Introduction:

The **SERVO-300** is a **3-axis**, command-based servo motor control board. The embedded CPU of the SERVO-300 performs the motion commands transferred from a Host PC via a 2 KB FIFO buffer. It also sends the position and status to the Host PC via a second 2 KB FIFO buffer. These buffers provide time buffer and they are very suitable for Windows operating systems. Device drivers and function libraries for DOS, Windows 7 and Windows XP/2000 are provided.

Features:

- ISA bus servo motor control card
- 3-axis high-speed servo motor control card
- V command
- Drivers for DOS and Windows

Specifications:

Number of Axes3Slot InterfaceISA busMaximum Pulse Output Rate-Command TypeVoltage commandResolution12-bit +/-10 VServo Update Rate3 ms / 3 axesPulse Output Mode-Operation ModeSimulation, closed loop, open loopLinear InterpolationAny 2 to 3 of 3 axesCircular InterpolationAny 2 axesSpeed Curve ProfileT-curveMotion Relative I/OHome, forward, backward limit, EMGEncoder InterfaceCW/CCW, PULSE/DIREncoder Counter32-bitEncoder Rate1 MzDigital Output Channels8Digital Output Channels7I/O Isolation2500 Vrms optical isolationConnector9-pin male & 25-pin female D-SubPower Consumption+5 V @ 500 mAEnvironmental0 ~ +60°CStorage Temperature0 ~ +60°CAmbient Relative Humidity0 ~ 90% RH, non-condensingDimensions120.4 mm * 90.8 mm		
Maximum Pulse Output Rate-Command TypeVoltage commandResolution12-bit +/-10 VServo Update Rate3 ms / 3 axesPulse Output Mode-Operation ModeSimulation, closed loop, open loopLinear InterpolationAny 2 to 3 of 3 axesCircular InterpolationAny 2 axesSpeed Curve ProfileT-curveMotion Relative I/OHome, forward, backward limit, EMGEncoder InterfaceCW/CCW, PULSE/DIREncoder Counter32-bitEncoder Rate1 MzDigital Input Channels8Digital Output Channels7I/O Isolation2500 Vrms optical isolationConnector9-pin male & 25-pin female D-SubPower Consumption+5 V @ 500 mAEnvironmental0 ~ +60°CStorage Temperature0 ~ 90% RH, non-condensing	Number of Axes	3
Rate-Command TypeVoltage commandResolution12-bit +/-10 VServo Update Rate3 ms / 3 axesPulse Output Mode-Operation ModeSimulation, closed loop, open loopLinear InterpolationAny 2 to 3 of 3 axesCircular InterpolationAny 2 axesSpeed Curve ProfileT-curveMotion Relative I/OHome, forward, backward limit, EMGEncoder InterfaceCW/CCW, PULSE/DIREncoder Counter32-bitEncoder Rate1 MzDigital Input Channels8Digital Output Channels7I/O Isolation2500 Vrms optical isolationConnector9-pin male & 25-pin female D-SubPower Consumption+5 V @ 500 mAEnvironmental0 ~ +60°CStorage Temperature0 ~ 480°CAmbient Relative Humidity0 ~ 90% RH, non-condensing	Slot Interface	ISA bus
Resolution12-bit +/-10 VServo Update Rate3 ms / 3 axesPulse Output Mode-Operation ModeSimulation, closed loop, open loopLinear InterpolationAny 2 to 3 of 3 axesCircular InterpolationAny 2 axesSpeed Curve ProfileT-curveMotion Relative I/OHome, forward, backward limit, EMGEncoder InterfaceCW/CCW, PULSE/DIREncoder Counter32-bitEncoder Rate1 MzDigital Input Channels8Digital Output Channels7I/O Isolation2500 Vrms optical isolationConnector9-pin male & 25-pin female D-SubPower Consumption+5 V @ 500 mAEnvironmental0 ~ +60°CStorage Temperature0 ~ 480°CAmbient Relative Humidity0 ~ 90% RH, non-condensing		-
Serve Update Rate3 ms / 3 axesPulse Output Mode-Operation ModeSimulation, closed loop, open loopLinear InterpolationAny 2 to 3 of 3 axesCircular InterpolationAny 2 axesSpeed Curve ProfileT-curveMotion Relative I/OHome, forward, backward limit, EMGEncoder InterfaceCW/CCW, PULSE/DIREncoder Counter32-bitEncoder Rate1 MzDigital Input Channels8Digital Output Channels7I/O Isolation2500 Vrms optical isolationConnector9-pin male & 25-pin female D-SubPower Consumption+5 V @ 500 mAEnvironmental0 ~ +60°CStorage Temperature0 ~ 90% RH, non-condensing	Command Type	Voltage command
Pulse Output Mode-Operation ModeSimulation, closed loop, open loopLinear InterpolationAny 2 to 3 of 3 axesCircular InterpolationAny 2 axesSpeed Curve ProfileT-curveMotion Relative I/OHome, forward, backward limit, EMGEncoder InterfaceCW/CCW, PULSE/DIREncoder Counter32-bitEncoder Rate1 MzDigital Input Channels8Digital Output Channels7I/O Isolation2500 Vrms optical isolationConnector9-pin male & 25-pin female D-SubPower Consumption+5 V @ 500 mAEnvironmental0 ~ +60°CStorage Temperature0 ~ 90% RH, non-condensing	Resolution	12-bit +/-10 V
Operation ModeSimulation, closed loop, open loopLinear InterpolationAny 2 to 3 of 3 axesCircular InterpolationAny 2 axesSpeed Curve ProfileT-curveMotion Relative I/OHome, forward, backward limit, EMGEncoder InterfaceCW/CCW, PULSE/DIREncoder Counter32-bitEncoder Rate1 MzDigital Input Channels8Digital Output Channels7I/O Isolation2500 Vrms optical isolationConnector9-pin male & 25-pin female D-SubPower Consumption+5 V @ 500 mAEnvironmental0 ~ +60°CStorage Temperature0 ~ 90% RH, non-condensing	Servo Update Rate	3 ms / 3 axes
Linear InterpolationAny 2 to 3 of 3 axesCircular InterpolationAny 2 axesSpeed Curve ProfileT-curveMotion Relative I/OHome, forward, backward limit, EMGEncoder InterfaceCW/CCW, PULSE/DIREncoder Counter32-bitEncoder Rate1 MzDigital Input Channels8Digital Output Channels7I/O Isolation2500 Vrms optical isolationConnector9-pin male & 25-pin female D-SubPower Consumption $+5 V \oplus 500 mA$ Environmental0 ~ $+60^{\circ}$ CStorage Temperature $0 \sim 90\%$ RH, non-condensing	Pulse Output Mode	-
Circular InterpolationAny 2 axesSpeed Curve ProfileT-curveMotion Relative I/OHome, forward, backward limit, EMGEncoder InterfaceCW/CCW, PULSE/DIREncoder Counter32-bitEncoder Rate1 MzDigital Input Channels8Digital Output Channels7I/O Isolation2500 Vrms optical isolationConnector9-pin male & 25-pin female D-SubPower Consumption+5 V @ 500 mAEnvironmental0 ~ +60°CStorage Temperature0 ~ 90% RH, non-condensing	Operation Mode	Simulation, closed loop, open loop
Speed Curve ProfileT-curveMotion Relative I/OHome, forward, backward limit, EMGEncoder InterfaceCW/CCW, PULSE/DIREncoder Counter32-bitEncoder Rate1 MzDigital Input Channels8Digital Output Channels7I/O Isolation2500 Vrms optical isolationConnector9-pin male & 25-pin female D-SubPower Consumption+5 V @ 500 mAEnvironmental0 ~ +60°CStorage Temperature0 ~ 90% RH, non-condensing	Linear Interpolation	Any 2 to 3 of 3 axes
Notion Relative I/OHome, forward, backward limit, EMGEncoder InterfaceCW/CCW, PULSE/DIREncoder Counter32-bitEncoder Rate1 MzDigital Input Channels8Digital Output Channels7I/O Isolation2500 Vrms optical isolationConnector9-pin male & 25-pin female D-SubPower Consumption+5 V @ 500 mAEnvironmental0 ~ +60°CStorage Temperature0 ~ 0~ 90% RH, non-condensing	Circular Interpolation	Any 2 axes
Encoder InterfaceCW/CCW, PULSE/DIREncoder Counter32-bitEncoder Rate1 MzDigital Input Channels8Digital Output Channels7I/O Isolation2500 Vrms optical isolationConnector9-pin male & 25-pin female D-SubPower Consumption+5 V @ 500 mAEnvironmental0 ~ +60°COperating Temperature0 ~ +80°CAmbient Relative Humidity0 ~ 90% RH, non-condensing	Speed Curve Profile	T-curve
Encoder Counter32-bitEncoder Rate1 MzDigital Input Channels8Digital Output Channels7I/O Isolation2500 Vrms optical isolationConnector9-pin male & 25-pin female D-SubPower Consumption+5 V @ 500 mAEnvironmental0 ~ +60°COperating Temperature0 ~ +80°CAmbient Relative Humidity0 ~ 90% RH, non-condensing	Motion Relative I/O	Home, forward, backward limit, EMG
Encoder Rate1 MzDigital Input Channels8Digital Output Channels7I/O Isolation2500 Vrms optical isolationConnector9-pin male & 25-pin female D-SubPower Consumption+5 V @ 500 mAEnvironmental0 ~ +60°COperating Temperature0 ~ +60°CStorage Temperature-20 ~ +80°CAmbient Relative Humidity0 ~ 90% RH, non-condensing	Encoder Interface	CW/CCW, PULSE/DIR
Digital Input Channels8Digital Output Channels7I/O Isolation2500 Vrms optical isolationConnector9-pin male & 25-pin female D-SubPower Consumption+5 V @ 500 mAEnvironmental0 ~ +60°COperating Temperature0 ~ +80°CAmbient Relative Humidity0 ~ 90% RH, non-condensing	Encoder Counter	32-bit
Digital Output Channels7I/O Isolation2500 Vrms optical isolationConnector9-pin male & 25-pin female D-SubPower Consumption+5 V @ 500 mAEnvironmental0 ~ +60°COperating Temperature0 ~ +80°CAmbient Relative Humidity0 ~ 90% RH, non-condensing	Encoder Rate	1 Mz
I/O Isolation2500 Vrms optical isolationConnector9-pin male & 25-pin female D-SubPower Consumption+5 V @ 500 mAEnvironmentalOperating Temperature0 ~ +60°CStorage Temperature-20 ~ +80°CAmbient Relative Humidity0 ~ 90% RH, non-condensing	Digital Input Channels	8
Connector9-pin male & 25-pin female D-SubPower Consumption $+5 V @ 500 mA$ EnvironmentalOperating Temperature $0 \sim +60^{\circ}C$ Storage Temperature $-20 \sim +80^{\circ}C$ Ambient Relative Humidity $0 \sim 90\%$ RH, non-condensing	Digital Output Channels	7
Power Consumption $+5 V @ 500 mA$ EnvironmentalOperating Temperature $0 \sim +60^{\circ}C$ Storage Temperature $-20 \sim +80^{\circ}C$ Ambient Relative Humidity $0 \sim 90\%$ RH, non-condensing	I/O Isolation	2500 Vrms optical isolation
EnvironmentalOperating Temperature0 ~ +60°CStorage Temperature-20 ~ +80°CAmbient Relative Humidity0 ~ 90% RH, non-condensing	Connector	9-pin male & 25-pin female D-Sub
Operating Temperature0 ~ +60°CStorage Temperature-20 ~ +80°CAmbient Relative Humidity0 ~ 90% RH, non-condensing	Power Consumption	+5 V @ 500 mA
Storage Temperature-20 ~ +80°CAmbient Relative Humidity0 ~ 90% RH, non-condensing	Environmental	
Ambient Relative Humidity 0 ~ 90% RH, non-condensing	Operating Temperature	0 ~ +60°C
	Storage Temperature	-20 ~ +80°C
Dimensions 120.4 mm * 90.8 mm	Ambient Relative Humidity	$0 \sim 90\%$ RH, non-condensing
	Dimensions	120.4 mm * 90.8 mm

Software Support:

Windows Driver/DLL/Lib	Windows 95/98/ME/NT4.0
DOS Library	DOS 6.2
Labview Development Kit	-
Linux Library	-

Ordering Information/Accessories:

Model No.	Description
SERVO-300 CR	ISA Bus, 3-axis High-speed Servo Motor Control Card (V Command) Includes: CA-9-2502 (9-pin Male & 25-pin Female D-Sub Cable 0.2 M) CA-PC09F (9-pin Female D-Sub Connector with Plastic Cover) CA-PC09M (9-pin Male D-Sub Connector with Plastic Cover) CA-PC25M (25-pin Male D-Sub Connector with Plastic Cover)
DB-8R	Relay Board for SERVO-300 and PISO-PS300(U)
DB-200	Encoder Input Board for SERVO-300