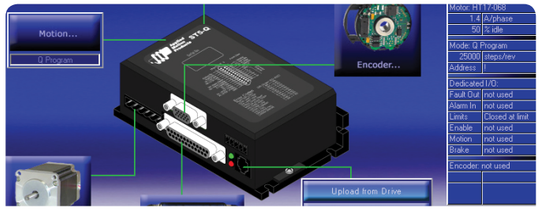
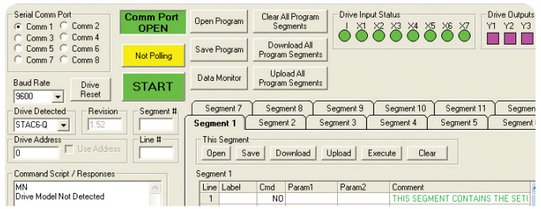
Software



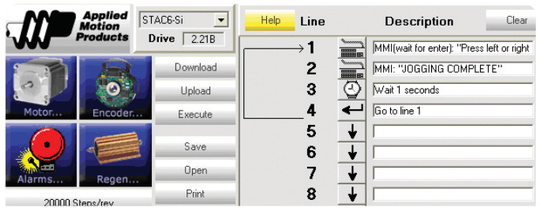
ST Configurator

Used for setup, configuration, uploading and downloading programs to the ST. For more information about the ST Configurator visit the Applied-Motion Products Website



Q Programmer

Q Programmer is used to create and edit stand-alone programs for Q-compatible drives. The functions of these drives include multi-tasking, math, register manipulation, encoder following, and more.



Si Programmer™

Intended for use in stand-alone applications, Si Programmer™ provides a friendly, point-and-click, graphical interface that doesn't require any previous programming experience.

Help Manuals - "Printable Pages"

ST Configurator incorporates new on-line help menus. All the technical data, application information and advice on setting up the drive is now just a mouse click away.

Motors

Comprehensive Motor Range.

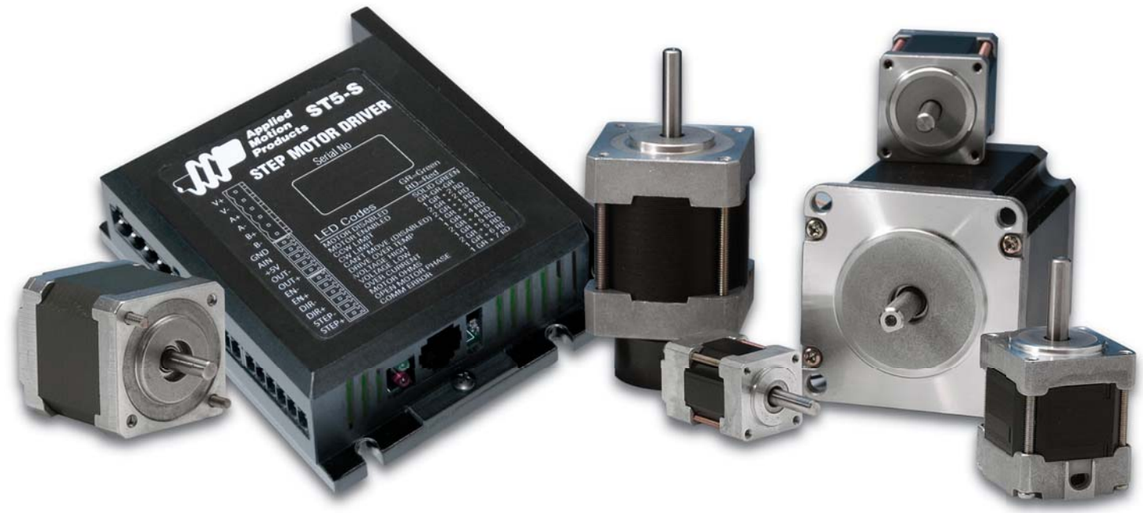
ST drives can be used with almost the entire range of step motors available on the market today from the tiny size 11 to the powerfull HT34 motors used on larger machinery .

Applied Motion Products offers many of these motors from stock at its production facility in Watsonville, CA.

Applied Motion Products
404 Westridge Dr.
Watsonville, CA 95076
Tel: 800-525-1609
Fax: 831-761 -6544
www.applied-motion.com

ST Stepper Drives

Applied Motion Products



A Performance Step Drive with 3 Control Options for OEM Applications

- ✓ Advanced Current Control
- ✓ Anti-Resonance
- ✓ Torque Ripple Smoothing
- ✓ Microstep Emulation

Specifications

POWER SUPPLY:

ST5	24-48 VDC
ST10	24-80 VDC

OUTPUT CURRENT:

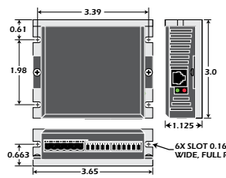
ST5	0.5 - 5.0A Peak
ST10	0.5 - 10.0A Peak

PROTECTION:

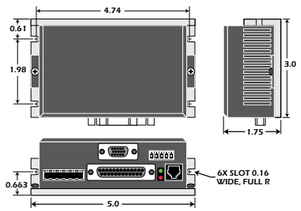
- Over-Voltage
- Under voltage
- Over-Temp
- External Output Shorts

Dimensions

ST5-S & ST10-S



ST5-Q / ST10-Q & ST5-Si / ST10-Si



Models

S

- Pulse & Direction
- CW/CCW Pulse
- A/B Quadrature
- Analog Velocity (Oscillator) mode
- Host commands (SCL compatible)
- SiNet Hub compatible
- Configurator software for setup

Q

- Q compatibility
- Q Programmer for programming
- Conditional Processing
- Math Functions
- Multi-tasking
- Register Manipulation
- Encoder Following
- "Generic" HMI compatibility

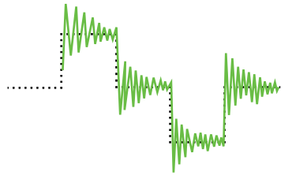
Si

- Si compatibility
- Si Programmer with built-in Configurator
- Point-and-click indexing software
- Friendly GUI
- Excellent I/O and motion programming
- MMI-01 compatibility

Features

Anti Resonance

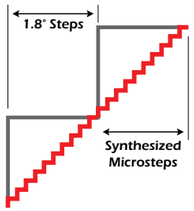
A disadvantage of the step motor is a tendency to "resonate" at some frequency. By entering some system data this natural frequency can be calculated and a damping term entered into the control algorithm. This significantly improves midrange stability and allows higher speeds and more use of the available torque.



Delivers better motor performance and higher speeds

Microstep Emulation

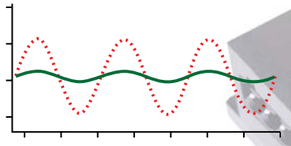
With Microstep Emulation, systems that have a need to use low step resolutions can still provide smooth motion. The drive can take low-resolution step pulses and create fine resolution motion.



Delivers better motor performance and higher speeds

Torque Ripple Smoothing

All step motors have an inherent low speed torque ripple that can effect the motion of the motor. By analyzing this torque ripple the system can apply a negative harmonic to negate this effect, this gives the motor much smoother motion at low speed.



Delivers better motor performance and higher speeds

Command Signal Smoothing

Dynamic smoothing can soften the effect of immediate changes in velocity and direction, making the motion of the motor less jerky. An added advantage is that it can reduce the wear on mechanical components.

Delivers better motor performance and higher speeds

Self Test & Auto Setup

At start-up the drive measures motor parameters, including the resistance and inductance, then uses this information to optimize the system performance. It also compares this information from the last configuration and checks to see if the motor data has changed (this could indicate a fault or system change). The drive can also detect open and short circuits.

Inputs & Outputs

S	Q	Si
3 digital inputs 1 digital output 1 analog input	8 digital inputs 4 digital outputs 2 analog inputs	8 digital inputs 4 digital outputs

Power Ratings

	ST 5	ST 10
Input Voltage:	24-48 VDC	24-80 VDC
Output Current:	5.0A Peak	10.0A Peak

For more information go to www.applied-motion.com/ST

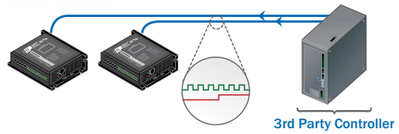
Option - Encoder

With the addition of an encoder on the motor the ST can provide additional functions:

- **Stall Detect**: The drive detects if the motor has stalled and triggers the fault output.
- **Position Maintenance**: when the motor is stopped the drive will hold in position, even if external forces are trying to move it out of position.
- **Stall Prevention**: Even if the motor stalls, the drive will continue to try to finish the move.

Control Options

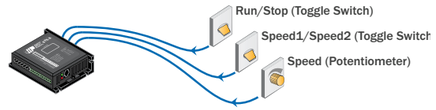
Step & Direction



S Si Q

- Step & Direction
- CW & CCW Pulse
- Master Encoder

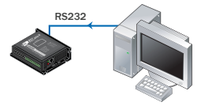
Oscillator / Run-Stop



S Si Q

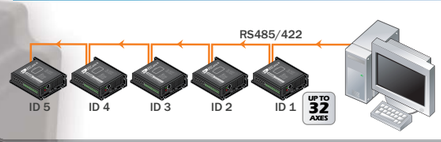
- Software Configuration
- Two Speeds
- Vary speed with analog input
- Joystick Compatible

Host Control



S

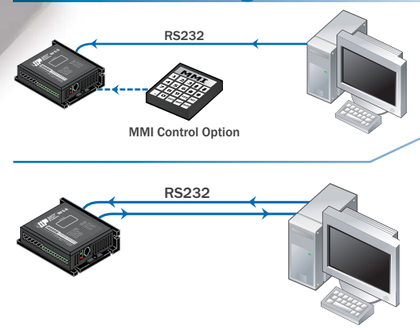
- Accepts Commands from host PC or PLC
- Real Time Control



Si Q

- Accepts Commands from host PC or PLC
- Multi-axis Capable
- Real Time Control

Stand Alone Programmable



Si

- Point & Click Graphical Interface
- MMI Option
- Download, store & execute programs

Q

- Comprehensive text based language
- Download, store & execute programs
- High Level Features: Multi Tasking, Conditional Programming, & Math Functions
- Host Interface While Executing Internal programs

Multi axis Systems

S Si Q

Use SiNet Hub Programmer software to develop your sequence of events, then download them to the hub for a stand-alone system or send serial commands to the drives from a PC, PLC, HMI, or other host controller.