



Description

- Controls up to 32 servo motors
- Comes preassembled
- USB interface (cable included), Xbee socket, and TTL serial
- Bidirectional communication with Query commands
- Large capacitors to prevent brownouts

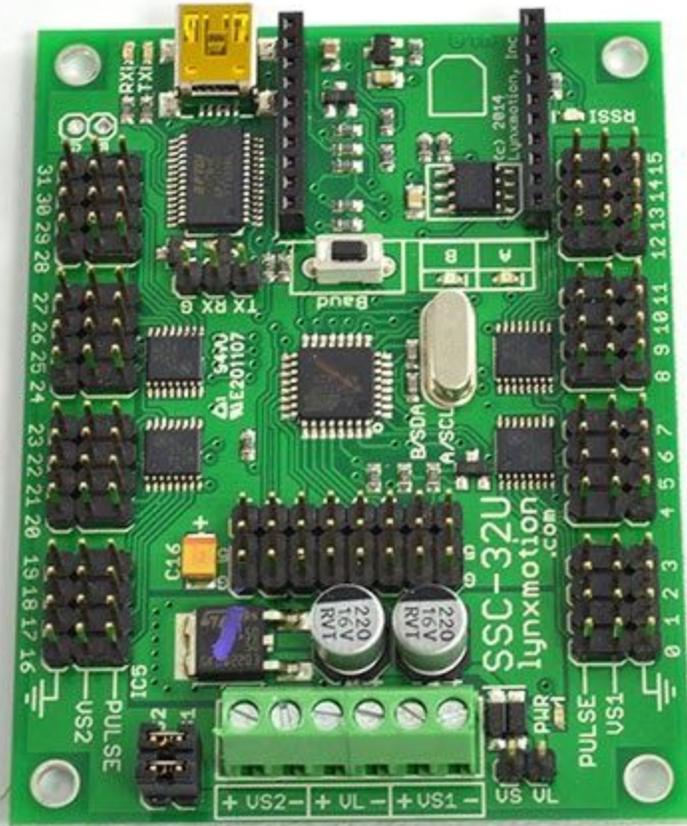
The Lynxmotion SSC-32U USB Servo Controller is the latest version of the very popular SSC-32 servo controller board. It has a USB port, an Xbee socket, improved power circuit, and a many other improvements.

Lynxmotion SSC-32U Servo Controller

The Lynxmotion SSC-32U Servo Controller is a small preassembled servo controller with some big features. It has high resolution (1uS) for accurate positioning, and extremely smooth moves. The range is 0.50mS to 2.50mS for a range of about 180°. The motion control can be immediate response, speed controlled, timed motion, or a combination. A unique "Group Move" allows any combination of servos to begin and end motion at the same time, even if the servos have to move different distances. This is a very powerful feature for creating complex walking gaits for multi servo walking robots. The servo's position or movement can be Queried to provide feedback to the host computer.

There is even a 12 servo Hexapod sequencer built in. This allows complete control of all aspects of the alternating tripod gait simply by transferring a few values from the host controller. Any output pin can be used as a TTL level output. There are 8 analog inputs pins for reading sensor values, and 6 of them can be used as static or latched digital inputs, so you don't have to worry about missing a short event.

The new SSC-32U board has improved power and communication management. The board still has three terminal blocks, but the new power circuit means that most of the time you will only need to use VS1. With the new board, the logic circuits have large capacitors to protect against brownouts, and the logic has auto power select so the VL=VS1 jumper isn't needed anymore. For communication, in addition to having USB on-board, the SSC-32U has an Xbee socket for easy use with wireless devices such as XBees and Bluetooth.



Features:

- 32 channels of 1uS resolution servo control
- Bidirectional communication with Query commands
- Synchronized, or "Group" moves
- 12 Servo Hexapod Gait Sequencer built in
- MiniSSC-II emulation, like having 4 of them

SSC-32 Servo Sequencer Utility (created using FlowBotics Studio)

The Lynxmotion SSC-32 Servo Controller board can be easily controlled with the new SSC-32 Servo Sequencer Utility. It is available as a free downloadable utility which makes it easy to experiment with robotics and animatronics. It can be found in the Useful Links section.

This utility is an example of the type of program which can be built using FlowBotics Studio (Download) , which includes this program as an open source demo project. The SSC-32 Servo Sequencer Utility program enables you to easily move servo motors, calibrate their position, store and playback motion sequences, upgrade the SSC-32 firmware and more.



Specifications

- Firmware: 2.50USB
- Microcontroller: Atmel ATmega328P
- External EEPROM: 512 kbit
- Internal Sequencer: 12 Servo Hexapod (Alternating Tripod)
- Serial input: USB, 3.3V Xbee, TTL UART, N81
- Baud speeds: 9600, 38.4k, and 115.2k selectable via push button; other speeds through register configuration
- RC PWM Outputs: 32 (Servo or TTL)
- Inputs: 8 (8 Analog, 6 Static or Latching Digital)
- PC interface: USB Mini B (cable included)
- Microcontroller interface: 0.1" Header
- Servo control: Up to 32 servos plug in directly
- Servo type supported: Futaba, Hitec and general 0.1" spaced 3-pin R/C
- Servo travel range: 0.5ms to 2.5ms (most RC servos travel 180°)
- Servo resolution: 1 μ S (~0.09° for 180 degree servos, if servo permits)
- Servo speed resolution: 1 μ S / Second
- Servo motion control: Immediate, Timed, Speed or Synchronized.
- PC board size: 3.0" x 2.3" (mounting holes set 0.15" from each edge)
- Logic power: auto select between VS1 and VL
- VS peak current: max 15 amps per side



- VS steady current: max 3-5 amps per side recommended

Useful Links

PDF Files

- [SSC-32U User Guide](#)

FREE Utility

- [SSC-32 Servo Sequencer Utility](#) (created using FlowBotics Studio)

Website

- [Lynxmotion User and Assembly Guides](#)
- [Blog Post: Guide to the Power Supply Options for Lynxmotion Controllers](#)

Multimedia

https://www.youtube.com/watch?v=JV8Unhsgu_M