Multi-purpose UART Bus Robot Servo for Arduino DIY
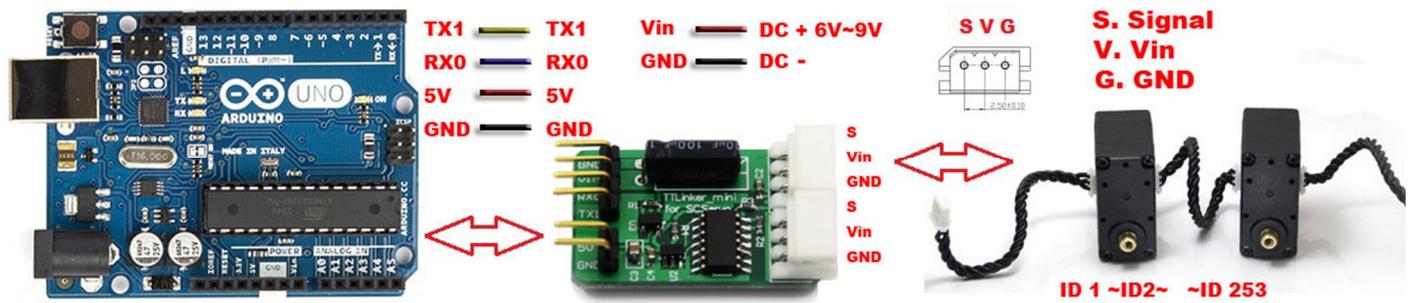
Model:SCS15

Description:

- **SC Servo is meaning that Smart Control Servo was R&D**
- **SC Servo can work at servo mode and wheel mode:**
  - The servo mode can be used to multi-joints robot since the robots can be controlled with specific angles. (The factory default setting is servo mode)
  - The wheel mode can be used to wheel-type operation robots since motors of the robots spin infinitely. (If wheel mode is available you need to program the value of position limitation the both are 0.)
  - If you want to reprogram servo, you need to download the PC software and to connect SCPC-2(or use SC Servo controller SCM-1) between servo and PC. Also can use Arduino and TTLinker_mini to reprogram it.

- **SC Servo has a unique ID number to identify on BUS network:**
  - The range from 0 to 253 (0xFD) can be used (The factory default setting is ID 1), and, especially, 254(0xFE) is used as the Broadcast ID. If the Broadcast ID is used to transmit Instruction Packet, we can command to all SC Servo.
  - After programmed servo ID, to be best way is written it on the sticker of servo. If not, maybe you will forget the ID when you programmed many servos.

- **SC Servo have kinds of baud rate available:**
  - The baud rate from 38400 bps to 1M bps can be used.
  - They are 38400, 57600,76800,115200,128000,250000,500000,1000000. (The factory default setting is 1000000 bps)

- **Can feedback the value of position, temperature, load, speed and input voltage**

- **SC Servo is easy to be control by Arduino:**
  - SC Servo needs to have a TTLinker_mini connect to between Arduino and SC Servo.

- TTLinker_mini is a signal conversion board. Arduino needs to convert its UART signals to the half-duplex type and through TTLinker_mini connect to SC Servo.

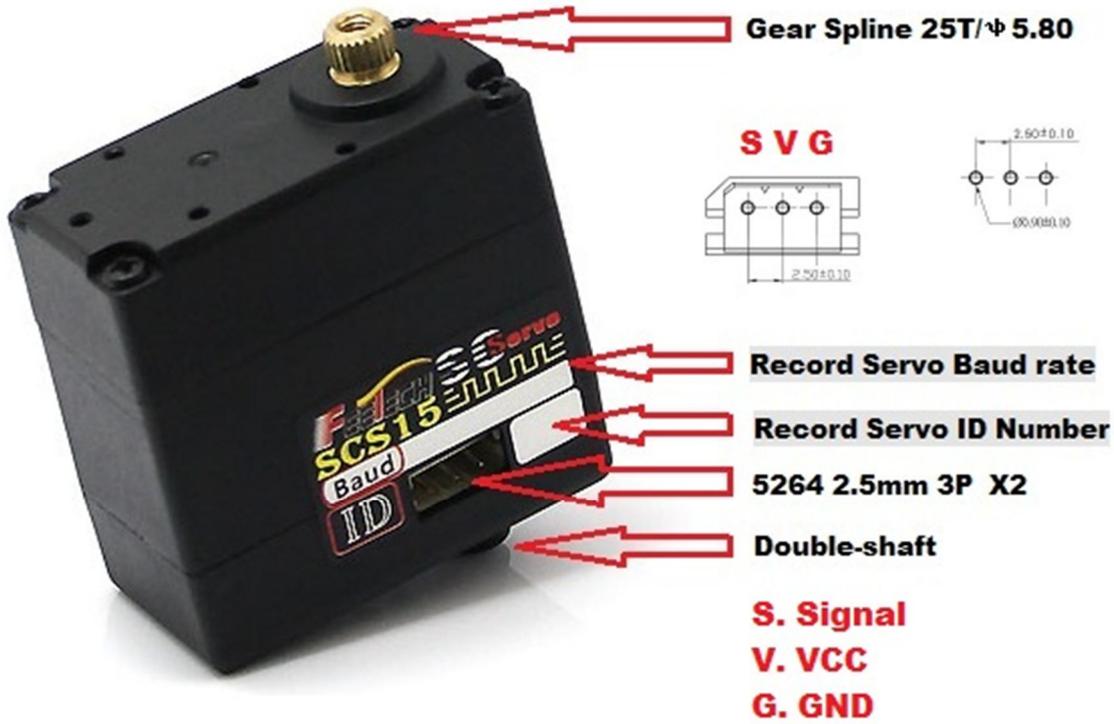- **TTLinker_mini Connection between Arduino and SC Servo:**

- **Arduino library SC Servo:**
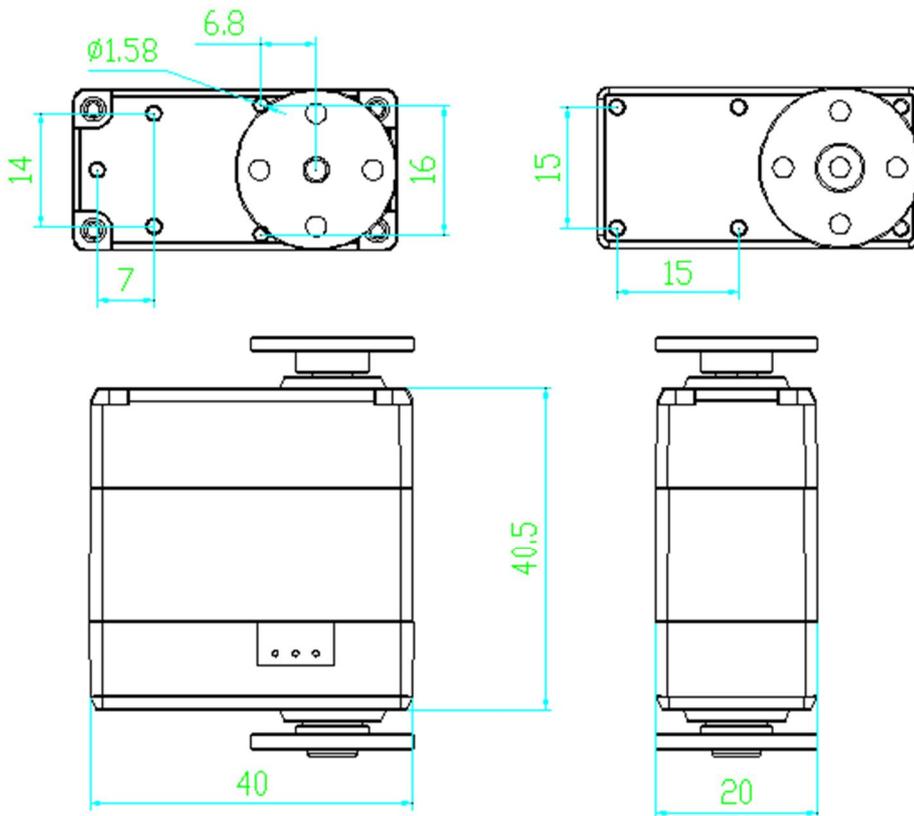 - We have SC Servo library to be used when you are using Arduino to control SC Servo.

Specifications:

Model	SCS15
Dimensions	40.0X20.0X40.5mm
Weight	56g
Gear Type(Ratio)	Metal(275:1)
Bus Interface	TTL Level Multi Drop
Position Sensor(Resolution)	Potentiometer(215°/1024)
Operating Angle	200°(Servo Mode)
Control System	Bus Packet Communication
ID	254 ID (0~253)
Communication Speed	38400bps 1 Mbps
Feedback	
Motor Type	Carbon
Bearing Type	2BB
Operating Voltage	6V~8.4V
Stall Torque(Kg.cm)	15(6V) 16.5(7.4V)17(8.4V)
Stall Current(A) :	1.5A(7.4)
Operating Speed(RPM)	55(6V)65(7.4V)73(8.4V)
Connector(Wire Length)	3P&5264 (15cm)

IO and Connection:

Gear Spline 25T/Ψ 5.80

S V G

Record Servo Baud rate

Record Servo ID Number

5264 2.5mm 3P X2

Double-shaft

S. Signal
V. VCC
G. GND

Drawing:

Ø1.58
6.8
14
16
7
15
15
40.5
40
20