

1. Product Overview

SCPC-3 is designed specifically to connect programmable devices (servos, drivers, encoders, and integrated units) to PC host software for communication, enabling functional testing, parameter configuration, and firmware upgrades of programmable devices through the host software.
SCPC-3 features a USB-A male connector and can be plugged directly into a computer's USB port. It supports three output signal levels: TTL single-bus, RS485, and CAN. For the CAN signal interface, a 120 Ω termination resistor can be connected or disconnected via a switch.
As a serial port device for a PC, SCPC-3's three converted output signal levels are independently designed. Data relay or protocol conversion can be performed between the different signal levels. Different protocol conversions require specific application firmware; please refer to the instructions for the specific firmware.

2. Product Features

1. Reprogrammable: different program firmware can be used for different scenarios. The factory firmware is for FT servo parameter tuning and upgrading; the test function is compatible with servos from various brands.
2. Three output signal levels: TTL single-bus, RS485, and CAN signals are independently designed and can be converted between each other.
3. Different signal levels can be configured with different baud rates, with a maximum baud rate of up to 3 Mbps.
4. The CAN signal termination resistor can be freely switched between connected and disconnected.
5. RGB full-color LED for rich status indications.
6. Custom firmware development is available for personalized application scenarios.

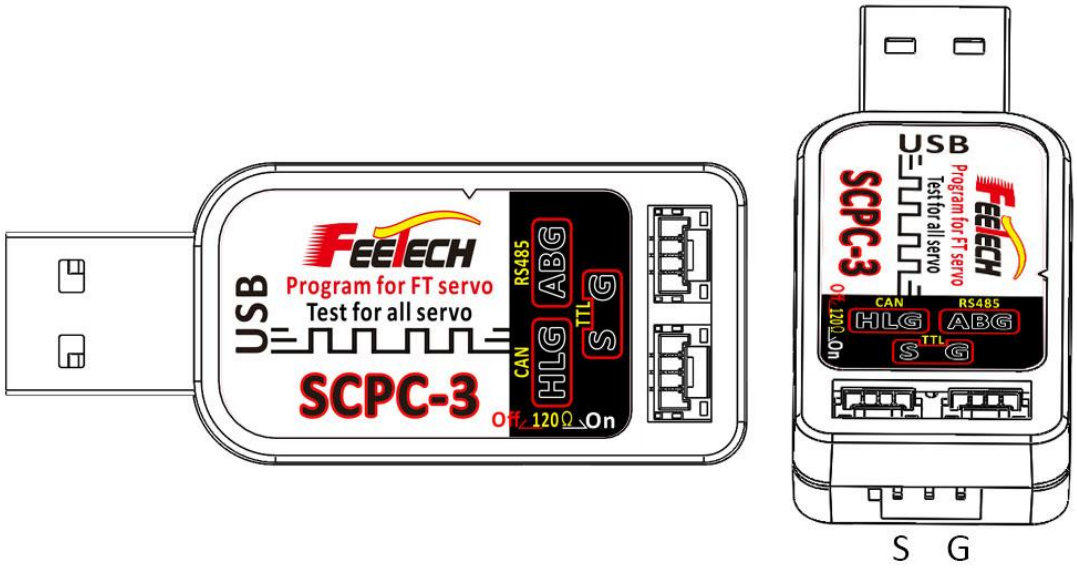
3. Specifications

Supply Voltage: 5 V ± 0.2 V (USB powered)
Quiescent Current: 28 mA ± 2 mA
Signal Levels: 3.3 V (TTL single-bus, RS485), 5 V (CAN)
USB Interface: USB-A (USB 2.0)
Dimensions: 55.2 × 22.2 × 9.6 mm
Indicator: RGB-LED
Weight: 7.6 g (0.27 oz)

4. Port Definitions

SCPC-3 includes three signal-level output interfaces: RS485, TTL single-bus (multiplexed with RC_PWM signal output), and CAN. The wiring definitions for each signal level are as follows:

RS485: RS485_A, RS485_B, GND
TTL Single-Bus: S, GND
CAN: CAN_H, CAN_L, GND



5. Accessories and Related Items

1. GH1.25-3P to 3× Single DuPont Connectors, Black/Red/White Twisted Cable
2. 2.54-3P DuPont Connector, Black/Red/White Y Cable
3. Signal & Power Interface Expansion Board (required when controlling RS485 or CAN devices; sold separately)
4. Power supply for programmable devices (not included)
5. PC host software
6. USB driver
7. Programmable device to be configured (servo, driver, encoder, or integrated unit)

6. Hardware Connection

Connecting a FEETECH programmable servo is shown in the figure below:

1. Use a battery supply voltage that matches the servo's operating voltage. Connect the red and black power wires for power supply.
2. Connect the SCPC-3 USB-A male connector to the computer's USB port.
3. Connect the servo to the female end of the black/red/white Y cable.

