

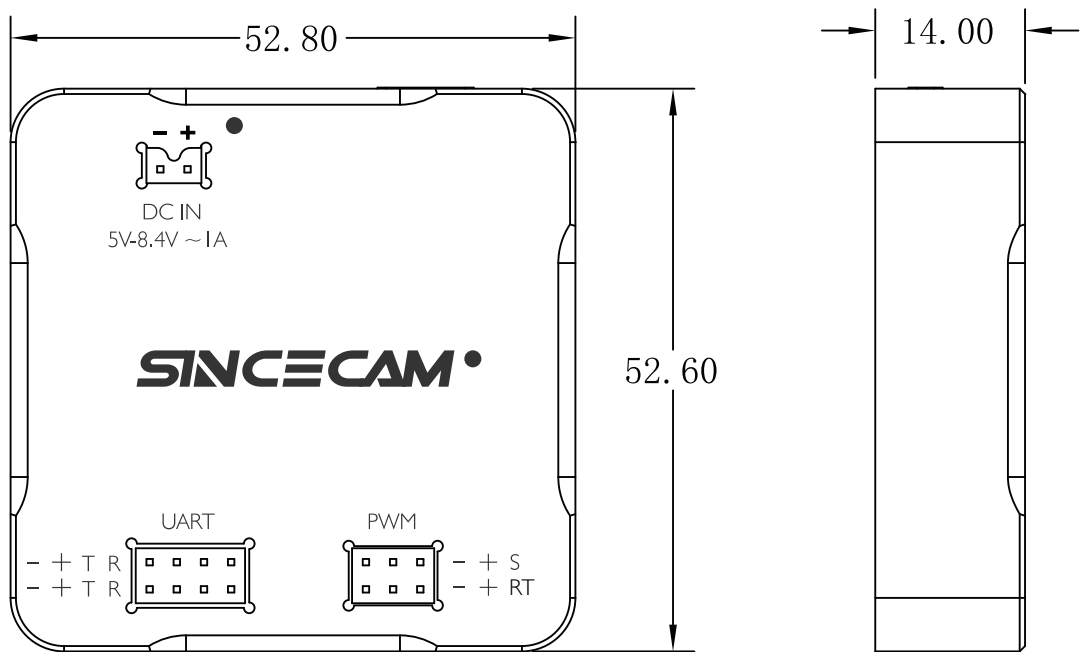
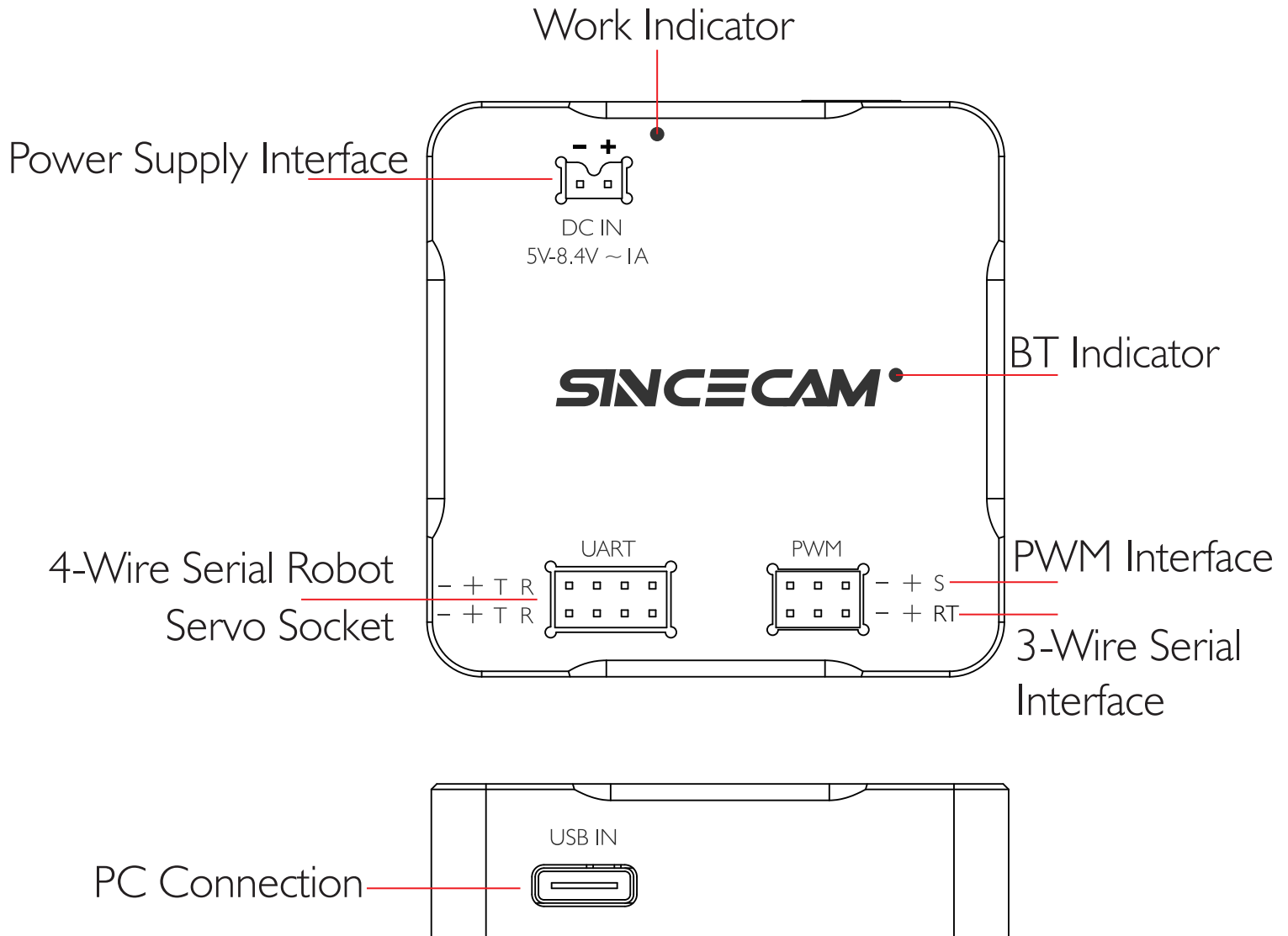
SINCECAM

Oblique Gears Servo



Only Applicable to Sincecam Server for Upgrading the Server Program
And the Server for Programming.

Programmer Card Body Instruction



Setting Interface Introduction

The screenshot shows the SINCECAM software interface. At the top, there is a title bar with the SINCECAM logo and window controls. Below the title bar, there is a 'PC Connection Port' dropdown menu set to 'COM1', a 'Connection' button, and a 'Data Progress Bar' showing 35% completion. The 'Current Working Status' section displays 'Status : Connected' and 'PWM: 1500'. A large horizontal scale for PWM output ranges from 80 to 2900, with a slider currently positioned at 1500. The interface is divided into three main functional areas:

- Control Signal Input Function Setting:** A table of parameters including PWM MIN (500), PWM MAX (2500), Control Angle (180), Sensor Angle (360), PWM Sensitivity (4), Direction (Positive), Signal Lost (Lock), and a selection of modes (STANDARD, SR, SSR, SFR, SXR, UR).
- Servo Working Angle Position Offset Setting:** Three sliders for LOW PWM (1000), MDN PWM (1500), and HIGH PWM (2000), each with a 'SAVE' button.
- Servo Working Performance Parameter:** A list of performance parameters such as Soft Startup (3), Output Power (98), Brake (-13), Back Center (15), Dead Zone (2), Response Speed (20), Sensitivity (10), Output Protection (50), and Protection Time (5).

At the bottom, there is a navigation bar with buttons for 'Read Parameters', 'Import Parameters', 'Export Parameters', 'Save Settings', and 'Write Device'. Red lines connect these labels to their corresponding parts in the interface.

Read Parameters: Read Existing Parameters Inside Servo

Import Parameters: Load Saved Parameters

Export Parameters: Export All Existing Parameters of the Servo and Save Them.

Save Settings: Save the Current Function Area and Performance Area Modified Parameters for Users to Test on the Computer.
(Data is Not Saved When the Servo is Powered off)

Write Device: Write All Parameters of the Function and Performance Zones to the Servo and Save Them.

The Following Sequence Must be Followed Before Programming Parameters

Step one: Check the Connection Port number of the Selected Computer Click CONNECTION to Connect the Programming Card.

The screenshot displays the SINCECAM software interface. At the top, the connection port is set to 'COM1' and the connection status is 'Connected'. A progress bar shows 35% completion. Below this, a PWM slider is set to 1500. The main interface is divided into several sections: a left sidebar with various servo parameters (PWM MIN, PWM MAX, Control Angle, Sensor Angle, PWM Sensitivity, Direction, Signal Lost, and filter settings), a central control area with three PWM sliders (LOW PWM at 1000, MDN PWM at 1500, and HIGH PWM at 2000), and a right sidebar with additional parameters (Soft Startup, Output Power, Brake, Back Center, Dead Zone, Response Speed, Sensitivity, Output Protection, and Protection Time). At the bottom, there are five buttons: 'Read Parameters', 'Import Parameters', 'Export Parameters', 'Save Settings', and 'Write Device'. Red boxes highlight the 'COM1' dropdown, the 'Connection' button, the three PWM sliders, and the 'Read Parameters' button.

Step two: Click the three buttons to see if the servo will rotate, If the servo will not rotate Please check whether the PC programming Card or the servo are connected correctly.

Step Three: Click The Button to Read the Servo's Internal Raw Parameters, at this Time the Top Progress Bar Will be Raised to Show the Success of Reading Parameters 100%.



Every Time Before Programming Changes Must be This Step Must be Done + Before Every Programming Change.

Servo Angle Offset Settings for High, Medium and Low Positions.

The screenshot shows the SINCECAM software interface. At the top, there is a connection status bar showing 'COM1' and 'Connection' with a 35% progress indicator. Below this, the status is 'Connected' and the PWM value is '1500'. A large horizontal slider is visible, ranging from 80 to 2900, with a blue bar indicating the current position. The main settings area is divided into several sections:

- Left Column:** PWM MIN (500), PWM MAX (2500), Control Angle (180), Sensor Angle (360), PWM Sensitivity (4), Direction (Positive), Signal Lost (Lock), and a row of buttons (STANDARD, SR, SSR, SFR, SXR, UR).
- Center Column (Highlighted):** LOW PWM (1000) with a slider and SAVE button; MDN PWM (1500) with a slider and SAVE button; HIGH PWM (2000) with a slider and SAVE button.
- Right Column:** Soft Startup (3), Output Power (98), Brake (-13), Back Center (15), Dead Zone (2), Response Speed (20), Sensitivity (10), Output Protection (50), and Protection Time (5).

At the bottom, there is a navigation bar with buttons: Read Parameters, Import Parameters, Export Parameters, Save Settings, and Write Device.

Servo Low Side Position Offset Setting:

Click the LOW PWM Button to Let the Servo Return to the Original Low Side Position, Move the Scroll Bar Below, Then the Servo Will be Shifted to the Left or Right According to the Position of the Slider Moving, When Moving to the Desired Position Stop Click the Right Side of the SAVE to Save it.

 There is no Need to Click Writing Device, After Moving the Position, Please Click Read Parameter to Read the Changed Parameters.

Servo Angle Offset Settings for High, Medium and Low Positions.

The screenshot displays the SINCECAM servo control software interface. At the top, the connection status is shown as 'COM1' with a 35% connection strength. The status is 'Connected' and the PWM is set to 1500. A large horizontal slider is visible, with a blue bar indicating the current position at 1500. The main control area is divided into three sections: 'LOW PWM' (1000), 'MDN PWM' (1500), and 'HIGH PWM' (2000). Each section has a 'SAVE' button and a slider. The 'MDN PWM' section is highlighted with a red box, and a red line points from it to the text below. To the right of these sections is a list of other servo parameters like 'Soft Startup', 'Output Power', 'Brake', etc. At the bottom, there are buttons for 'Read Parameters', 'Import Parameters', 'Export Parameters', 'Save Settings', and 'Write Device'.

Servo Back Center Point Offset Setting:

Click on the MDN PWM Button to Return the Servo to the Original Center Point, Move the Scroll Bar Below the Servo Will Move According to the Position of the Slider Left or Right Offset, When Moving to The Desired Position to Stop Clicking on the Right Side of the SAVE to Save.



No Need to Click Writing Device

Servo Angle Offset Settings for High, Medium and Low Positions.

The screenshot shows the SINCECAM software interface. At the top, there is a connection status bar showing 'COM1' and 'Connection' with a 35% progress indicator. Below this, the status is 'Connected' and the PWM value is '1500'. A large slider bar is visible with values from 80 to 2900. The main settings area is divided into several sections:

- General Settings:** PWM MIN (500), PWM MAX (2500), Control Angle (180), Sensor Angle (360), PWM Sensitivity (4), Direction (Positive), Signal Lost (Lock).
- Position Settings:** LOW PWM (1000), MDN PWM (1500), and HIGH PWM (2000). Each has a slider and a 'SAVE' button. The 'HIGH PWM' section is highlighted with a red box.
- Advanced Settings:** Soft Startup (3), Output Power (98), Brake (-13), Back Center (15), Dead Zone (2), Response Speed (20), Sensitivity (10), Output Protection (50), and Protection Time (5).

At the bottom, there are buttons for 'Read Parameters', 'Import Parameters', 'Export Parameters', 'Save Settings', and 'Write Device'.

Servo High Side Position Offset Setting:

Click the HIGH PWM Button to Let the Servo Return to the Original High Side Position, Move the Scroll Bar Below, Then the Servo will be Shifted to the Left or Right According to the Position of the Slider Moving, When Moving to the Desired Position Stop Click the Right SAVE to Save.

 There is no Need to Click Writing Device, After Moving the Pposition, Please Click Read Parameter Again to Read the Changed Parameter.

Description of Control Signal Input and Operating Performance Parameters.

The screenshot displays the SINCECAM control software interface. At the top, the brand name 'SINCECAM' is visible. Below it, a connection status bar shows 'COM1' selected and a 'Connection' progress bar at 35%. The status is 'Connected' and the current PWM value is '1500'. A large horizontal slider at the bottom of the main area ranges from 80 to 2900, with a blue bar indicating the current position at 1500. On the left, a list of parameters is shown, with a red box highlighting the first seven: PWM MIN (500), PWM MAX (2500), Control Angle (180), Sensor Angle (360), PWM Sensitivity (4), Direction (Positive), and Signal Lost (Lock). In the center, three sliders are visible for 'LOW PWM' (1000), 'MDN PWM' (1500), and 'HIGH PWM' (2000), each with a 'SAVE' button. On the right, a list of performance parameters is shown: Soft Startup (3), Output Power (98), Brake (-13), Back Center (15), Dead Zone (2), Response Speed (20), Sensitivity (10), Output Protection (50), and Protection Time (5). At the bottom, a dark bar contains five buttons: 'Read Parameters', 'Import Parameters', 'Export Parameters', 'Save Settings', and 'Write Device'.

PWM MIN: PWM Control Signal Input Min.

PWM MAX: PWM Control Signal Input Max.

Control Angle: Control Signal Minimum and Maximum Values Maximum Angle of Servo Rotation

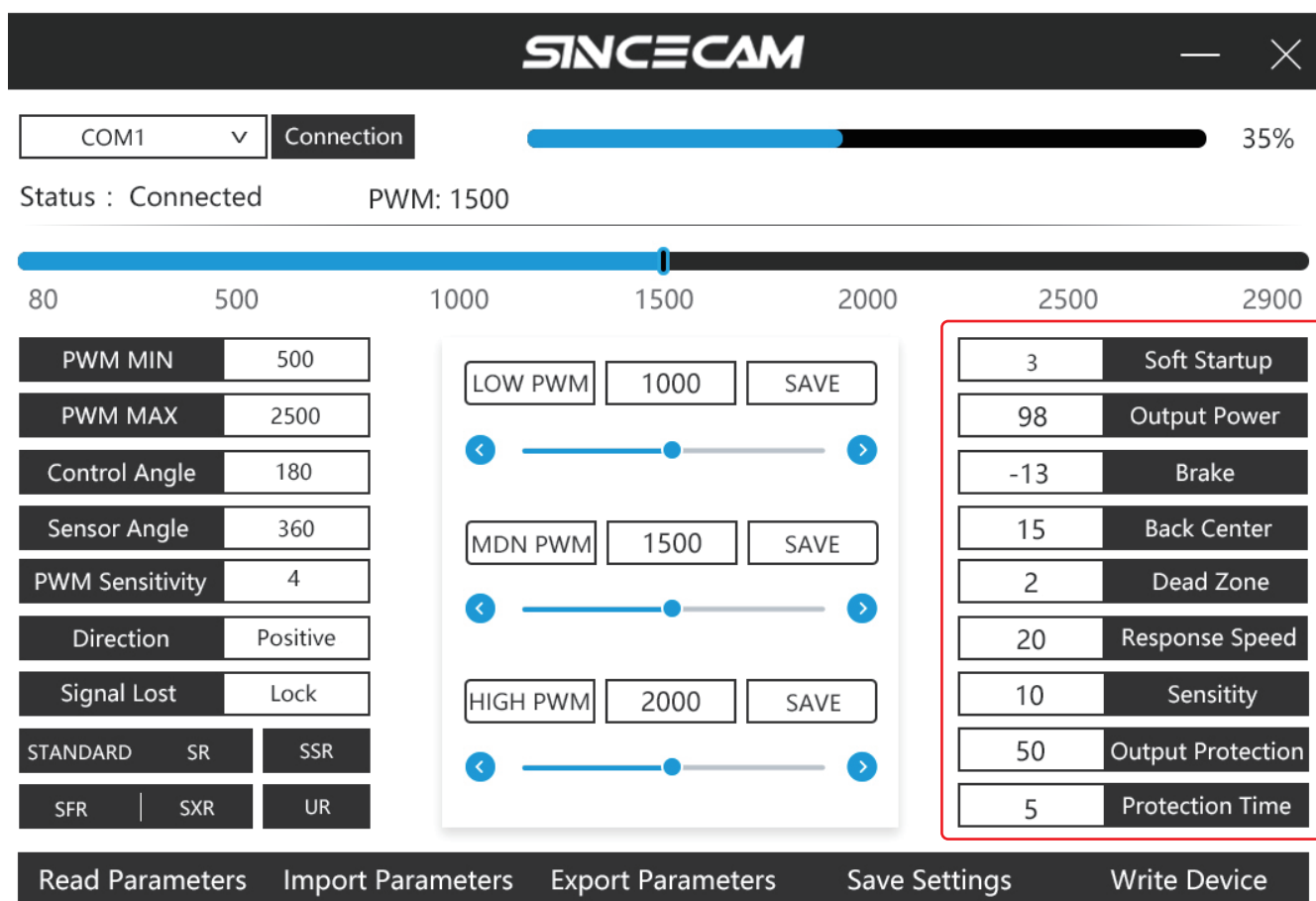
Sensor Angle: Maximum Angle of Angle Sensor
(Cannot be changed without special requirements)

PWM Sensitivity: Input Signal Sensitivity.(The larger the value, the lower the Resolution, the smaller the value, the higher the resolution)

Direction: Control Servo Forward or Reverse Rotation Settings.

Signal Lost: When the Control Signal is Lost the Servo Locks the Current Position or Releases the Rudder Locking Force.

Description of Control Signal Input and Operating Performance Parameters.



Soft Startup: Slow Start Function, The Higher the Value the Faster the Speed.

Output Power: Percentage of Maximum Motor Output Power
Maximum 100 Minimum 0.

Brake: Brake and Overshoot Settings, Values Must not Exceed -16 to +16.

Back Center: Center Return Stiffness, The Larger the Value the Greater the Stiffness
And Easy to Shake the Rudder Value Minimum 0 Maximum 63.

Dead Zone: Deadband at Center Point, The Smaller the Value the More Accurate
The Center Return Under Load and Prone to Rudder Jitter.

Response Speed: The Reaction Speed of the Servo, The Larger the Value,
The Faster the Speed and Easy to Shake the Rudder.

Sensitivity: Servo Operating Response Sensitivity, The Lower the Value the Higher
The Sensitivity.

Output Protection: Percentage of Blocking Power Output, The Larger the Value,
The More Likely to Damage the Motor.

Protection Time: Blocking Protection Time, The Smaller the Value, The Faster it
Enters the Protection, The Larger the Value, The Easier it is to Damage the Motor.

Description of Control Signal Input and Operating Performance Parameters.

The screenshot displays the SINCECAM software interface. At the top, the brand name 'SINCECAM' is visible. Below it, a dropdown menu shows 'COM1' and a 'Connection' status bar is at 35%. The status is 'Connected' and the current PWM value is 1500. A large horizontal slider at the top is set to 1500, with a scale from 80 to 2900. The interface is divided into several sections:

- Left Panel:** A list of parameters including PWM MIN (500), PWM MAX (2500), Control Angle (180), Sensor Angle (360), PWM Sensitivity (4), Direction (Positive), and Signal Lost (Lock). At the bottom, there are three rows of mode selection buttons: 'STANDARD SR SSR', 'SFR | SXR', and 'UR'. The 'STANDARD SR SSR' row is highlighted with a red box.
- Center Panel:** Three sliders for 'LOW PWM' (1000), 'MDN PWM' (1500), and 'HIGH PWM' (2000), each with a 'SAVE' button.
- Right Panel:** A list of performance parameters: Soft Startup (3), Output Power (98), Brake (-13), Back Center (15), Dead Zone (2), Response Speed (20), Sensitivity (10), Output Protection (50), and Protection Time (5).
- Bottom Bar:** A row of buttons: 'Read Parameters', 'Import Parameters', 'Export Parameters', 'Save Settings', and 'Write Device'.

Fast Mode Switching Between Normal Digital Control Signals and Mainstream Remotes, Click on the Corresponding Remote Control Mode Name and Then Click on Writing device to Write to the Servo.



If You can't Read the COM Port of the Servo or the Connection is not Successful, it is Possible that the Power Supply Current of the USB of the Computer is not Enough. If not, Please Download the Driver File of the Programming Card and Install it on Your Computer.