

TCP Server User Manual

V1.0

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1 Overview

1.1 Key Updates

Version	Updated Date	Modification
1.0	2024.08.26	Initial Version

Table 1-1 Key Updates for Each Version

1.2 Camera Devices

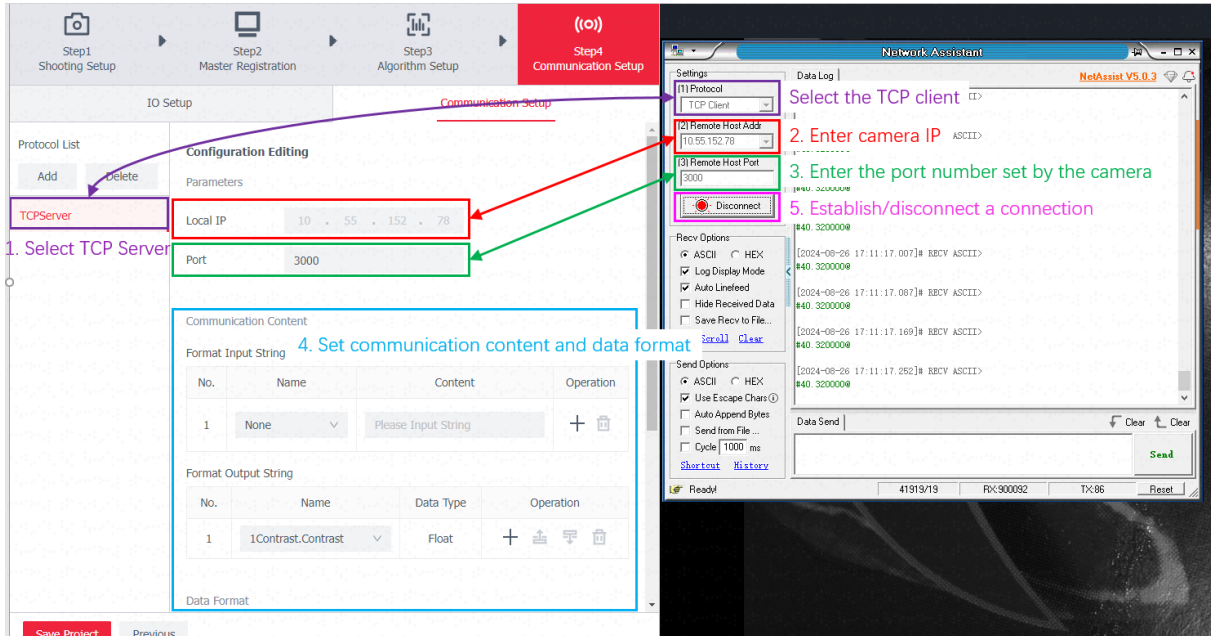
Vision Sensor: The camera can be set as a TCP server based on the Web or the EasyVS client.

1.3 Software Tools

Network Assistant: A TCP communication testing tool that can be set as a TCP client and establish communication with the server.

2 Overall Setup Instructions

The basic setup for TCP communication between the camera side and the tool side is shown in Figure 2-1:



The overall setup steps are as follows:

- ① Add TCP Server in the communication setup on the camera side, and set the protocol type on the tool side as TCP Client.
- ② Fill in the remote host address on the tool side based on the IP address of the camera side.
- ③ Fill in the remote host port on the tool side based on the port of the camera side.
- ④ Complete the communication content and data format settings on the camera side.
- ⑤ Open the communication and establish the connection.

3 Camera Setup

3.1 Communication Setup

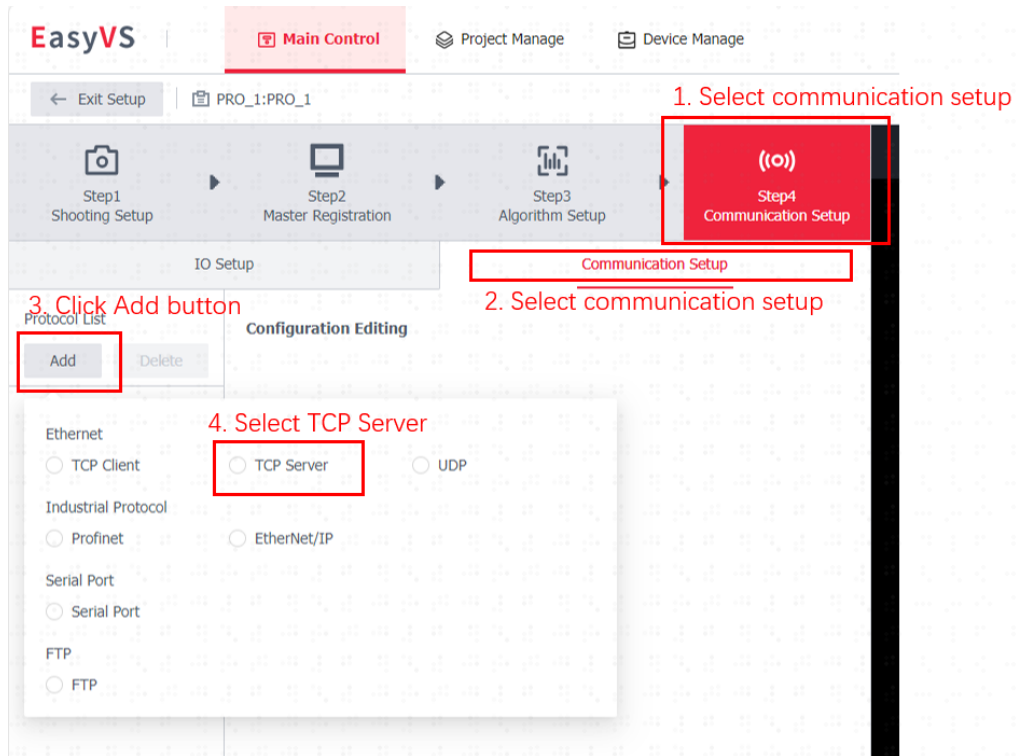


Figure 3-1 Camera Side Adds TCP Server Communication Protocol

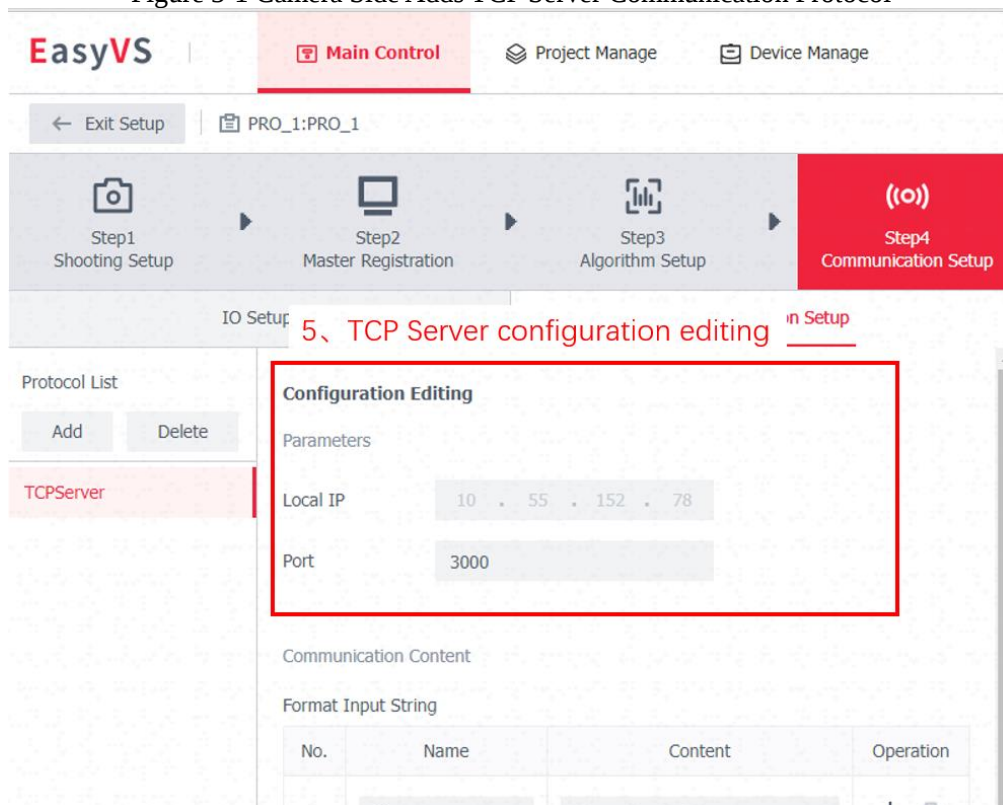


Figure 3-2 Camera Side TCP Server Configuration Editing

3.2 Content Transfer Configuration

Step1 Shooting Setup Step2 Master Registration Step3 Algorithm Setup Step4 Communication Setup

IO Setup Communication Setup

Protocol List

Add Delete

TCPServer

Set communication content and data format according to your needs

Communication Content

Format Input String

No.	Name	Content	Operation
1	None	Please Input String	+ -

Format Output String

No.	Name	Data Type	Operation
1	None		+ -

Data Format

Start String	#
Separate String	,
End String	@
Replace String	None

Condition Output Unlimited

Result Preview

Figure 3-3 Camera Communication Content and Data Format Settings

3.2.1 Configuration for Format Input String

The strings sent from the tool side to the camera side can control the camera's operating status.

(1) Name

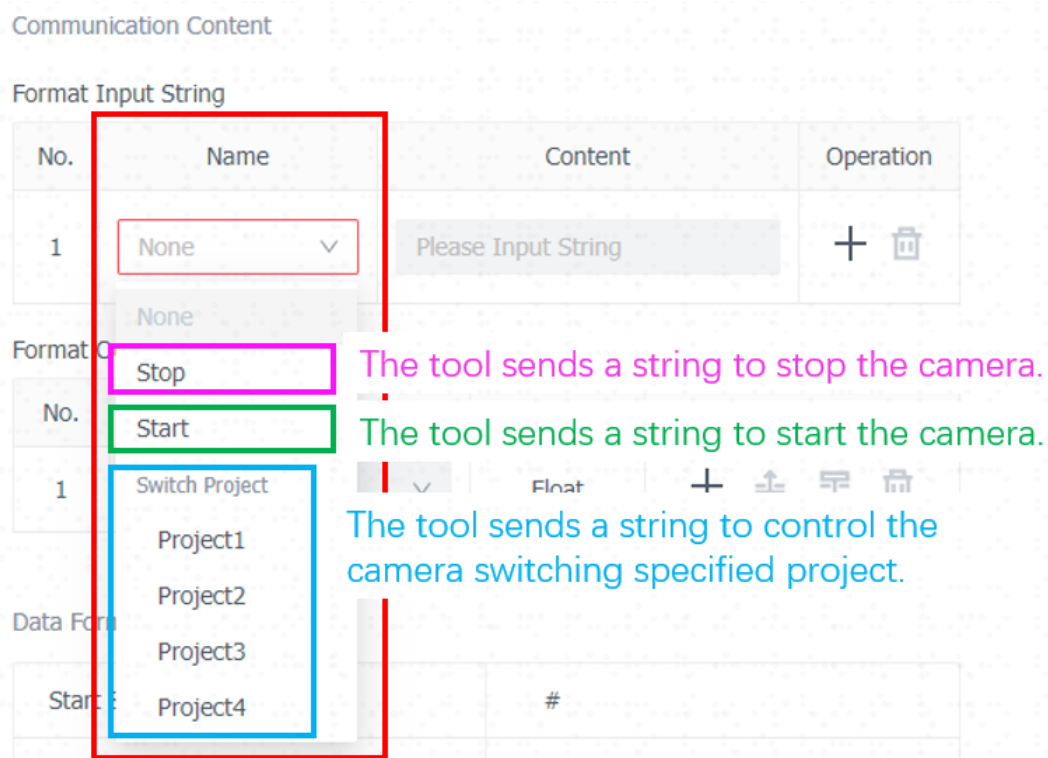


Figure 3-4 Name of Format Output String

(2) Content

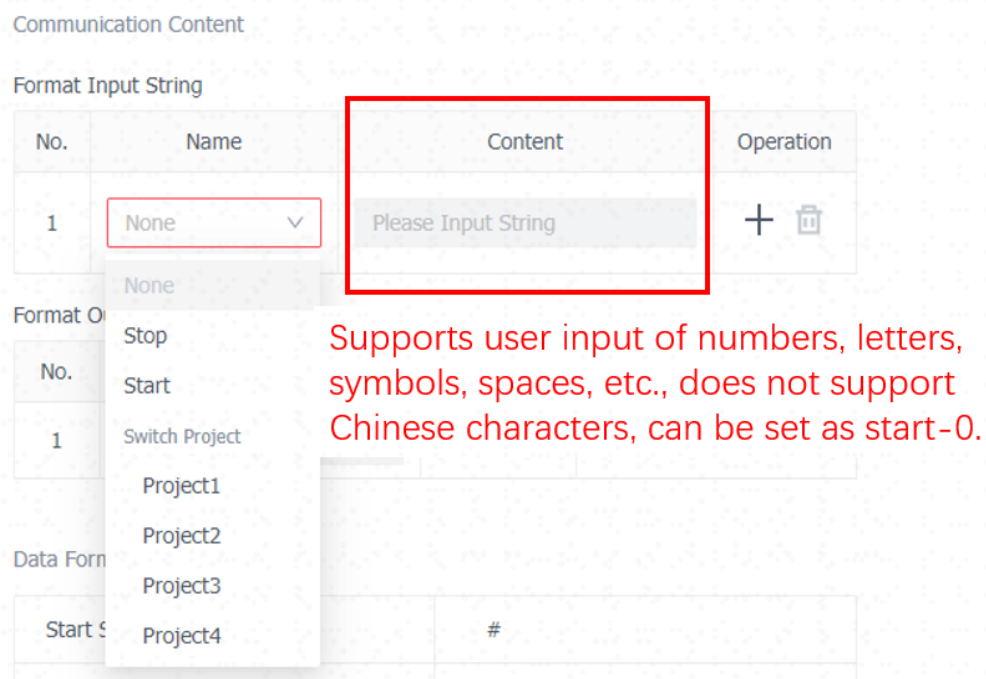


Figure 3-5 Content of Format Output String

(3) Operation

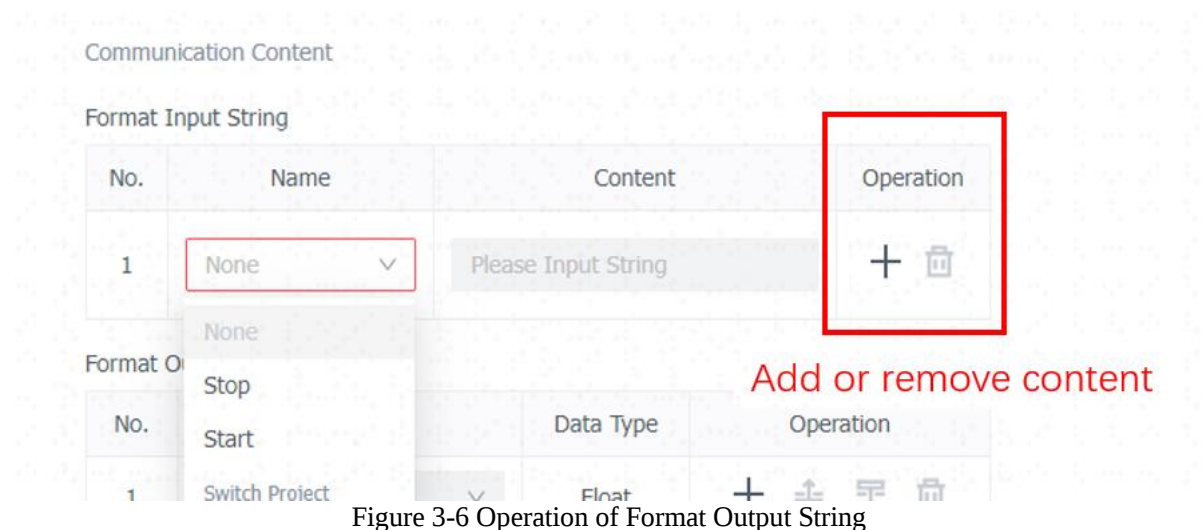


Figure 3-6 Operation of Format Output String

3.2.2 Configuration for Format Output String

Configuring the strings output by the camera side to the tool side, which can display the operator's running result.

(1) Name

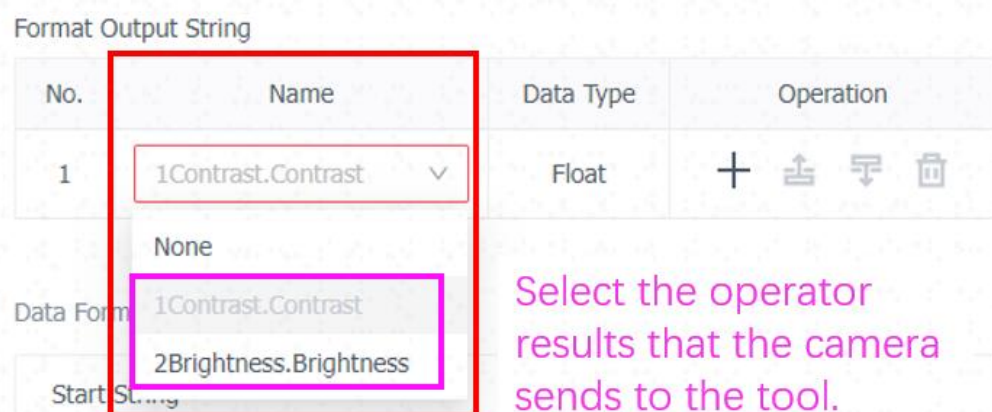


Figure 3-7 Name of Format Output String

(2) Data Type

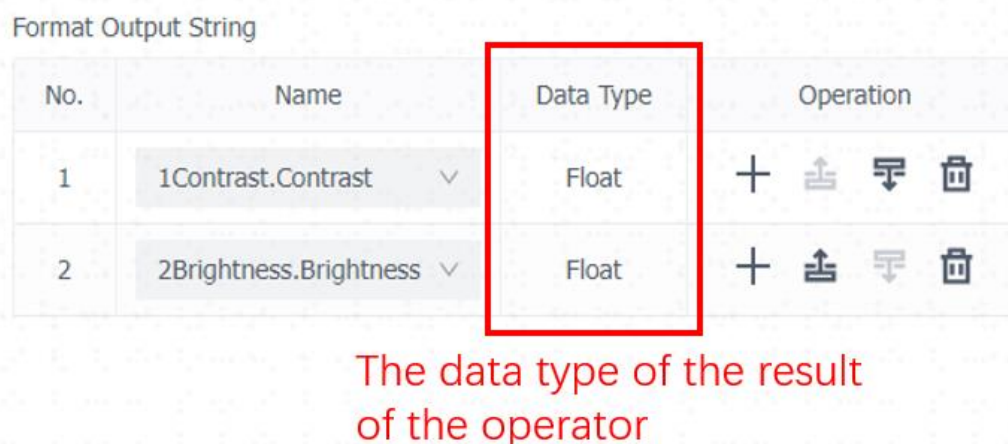


Figure 3-8 Data Type of Format Output String

(3) Operation

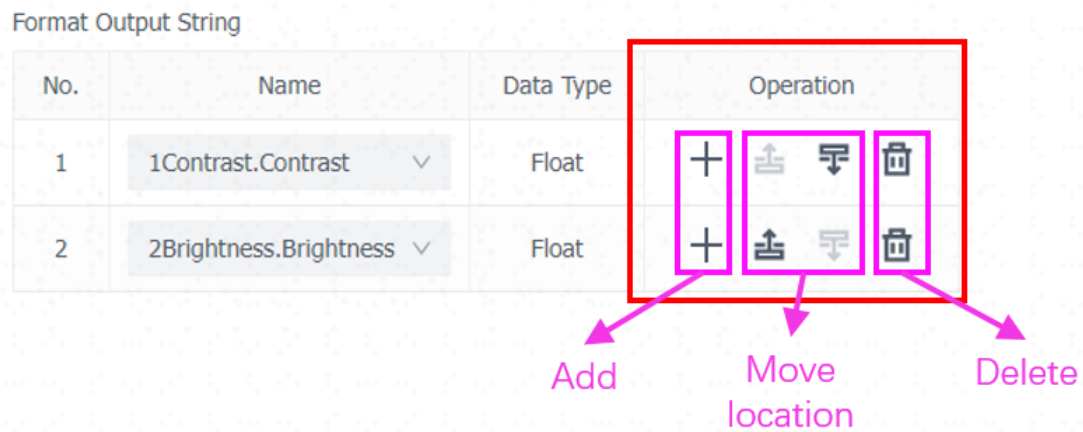


Figure 3-9 Operation of Format Output String

3.2.3 Configuration for Data Format

Includes the start string, delimiter string, end string, missing value replacement, supports user input of numbers, letters, symbols, spaces, etc., does not support Chinese characters.

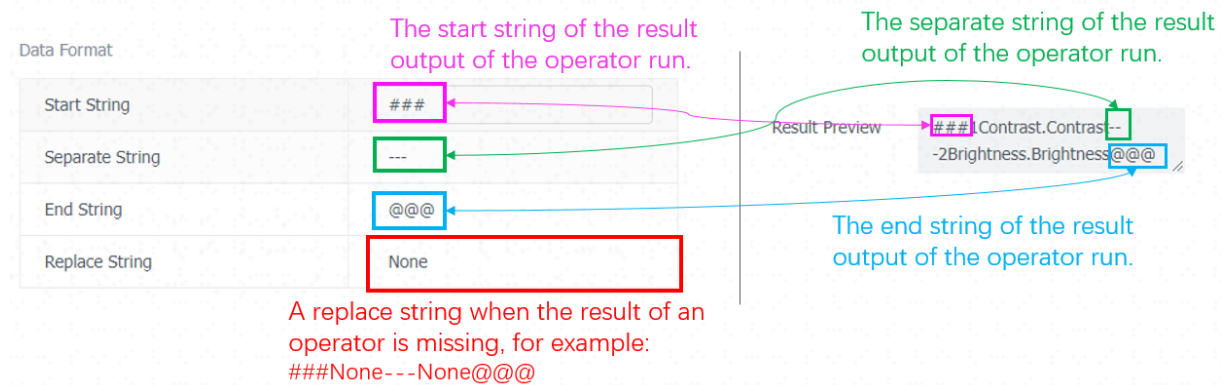


Figure 3-10 Configuration for Data Format

3.2.4 Configuration for Condition Output

When the set output conditions are met, the camera side outputs the operator's running result to the tool side. The supported output conditions include unlimited, project OK, project NG, operator specific result OK, and operator specific result NG.

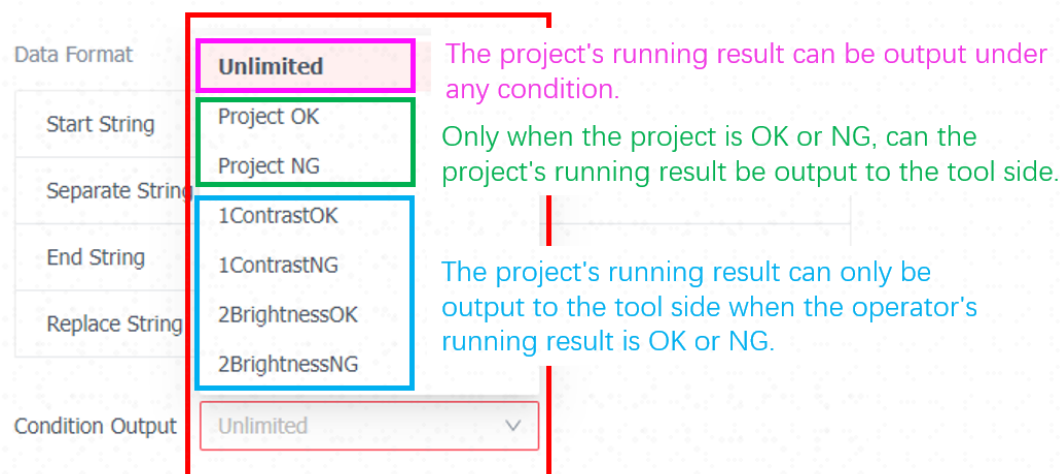


Figure 3-11 Configuration for Condition Output

3.2.5 Result Preview

Based on the above configuration, the output format of project's running result can be previewed for output from the camera side to the tool side.



Figure 3-12 Result Preview of the Project

4 Tool Side Setup

4.1 Installation

Install NetAssist network debugging assistant software and double-click to open.



Figure 4-1 NetAssist Software Icon

4.2 Interface Explanation

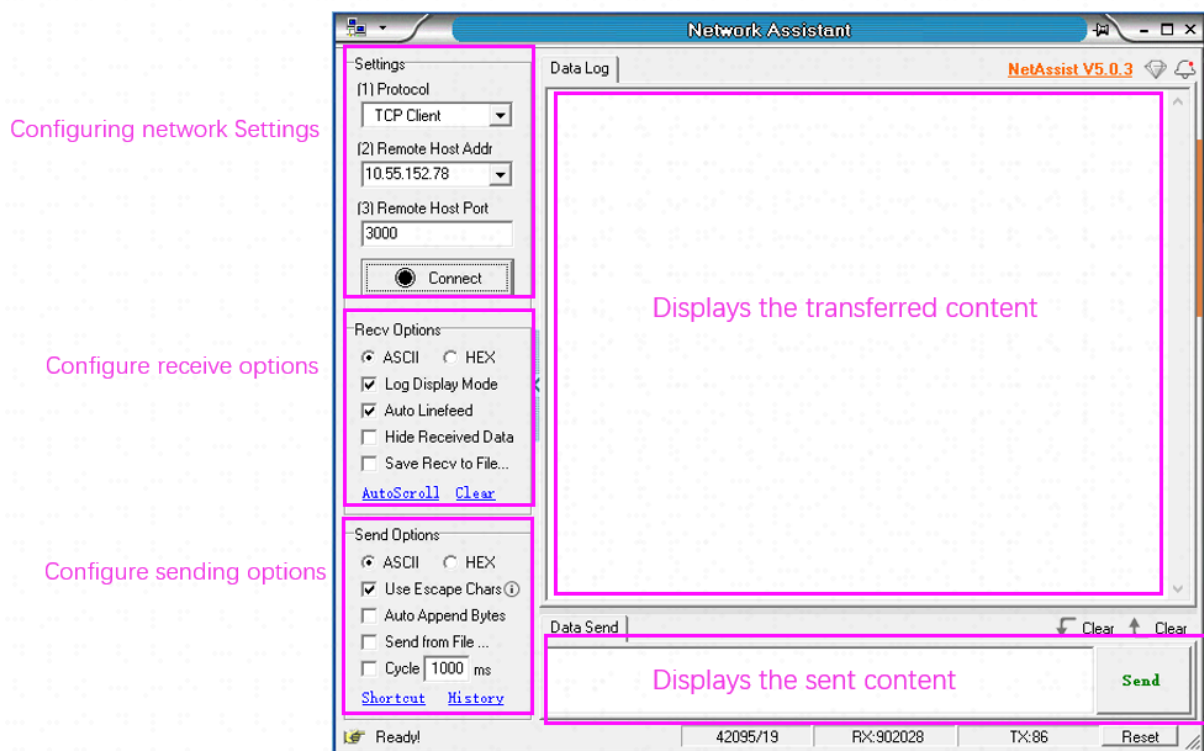


Figure 4-2 Explanation of the NetAssist Software Interface

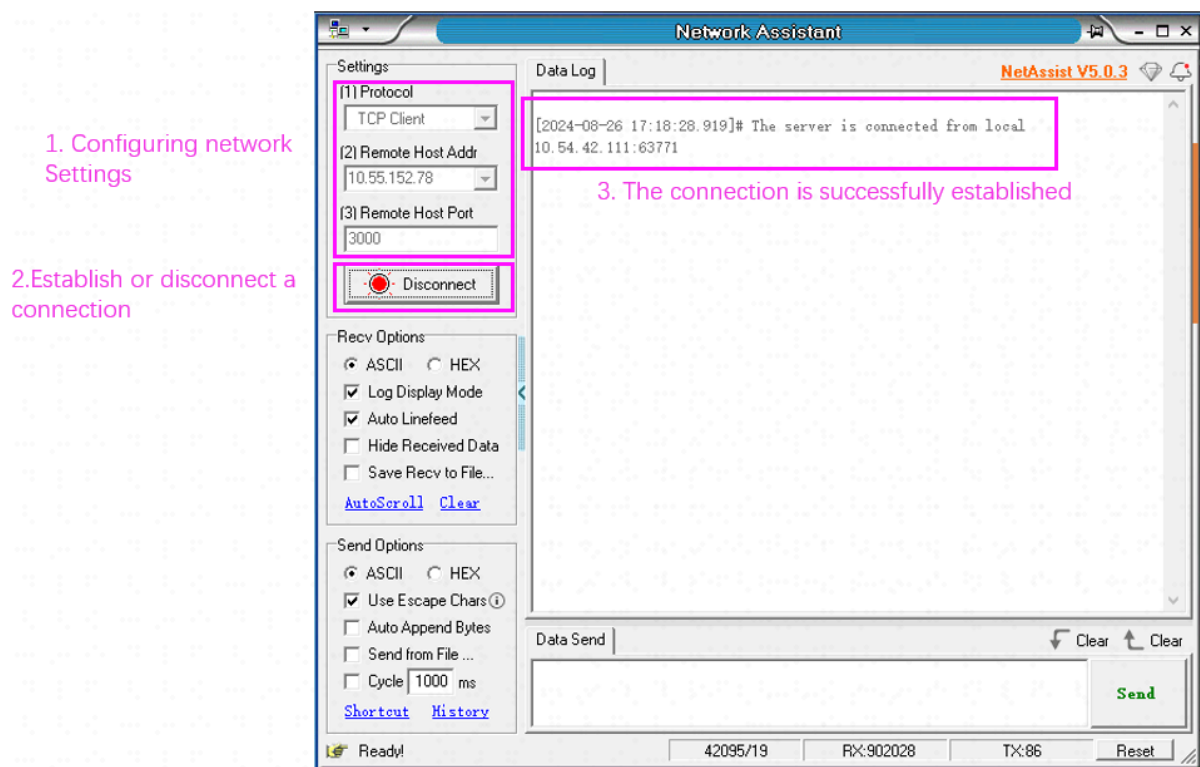


Figure 4-3 Network Connection Process of NetAssist Software

5 Examples of Configuration and Data Format

The result of the camera is formatted according to the specified packing configuration and outputted as a string.

Communication Content

Format Input String

No.	Name	Content	Operation
1	Start	start	+
2	Stop	stop	+
3	Project2	switch-2	+

The tool sends 'start', and the camera starts running.

The tool sends 'stop', and the camera stops running.

The tool sends 'switch-2', and the camera switches to Project 2.

Format Output String

No.	Name	Data Type	Operation
1	1Contrast.Contrast	Float	+
2	2Brightness.Brightness	Float	+

The operator's execution result outputted by the camera:

1Contrast. Contrast

2Brightness. Brightness

Data Format

Start String	###
Separate String	---
End String	@@@
Replace String	None

Configuration data format

Condition Output

Unlimited

The operator execution result can only be outputted to the tool when the project is in the OK state.

Result Preview

###1Contrast.Contrast--
-2Brightness.Brightness@@@

Figure 5-1 Camera Configuration Example

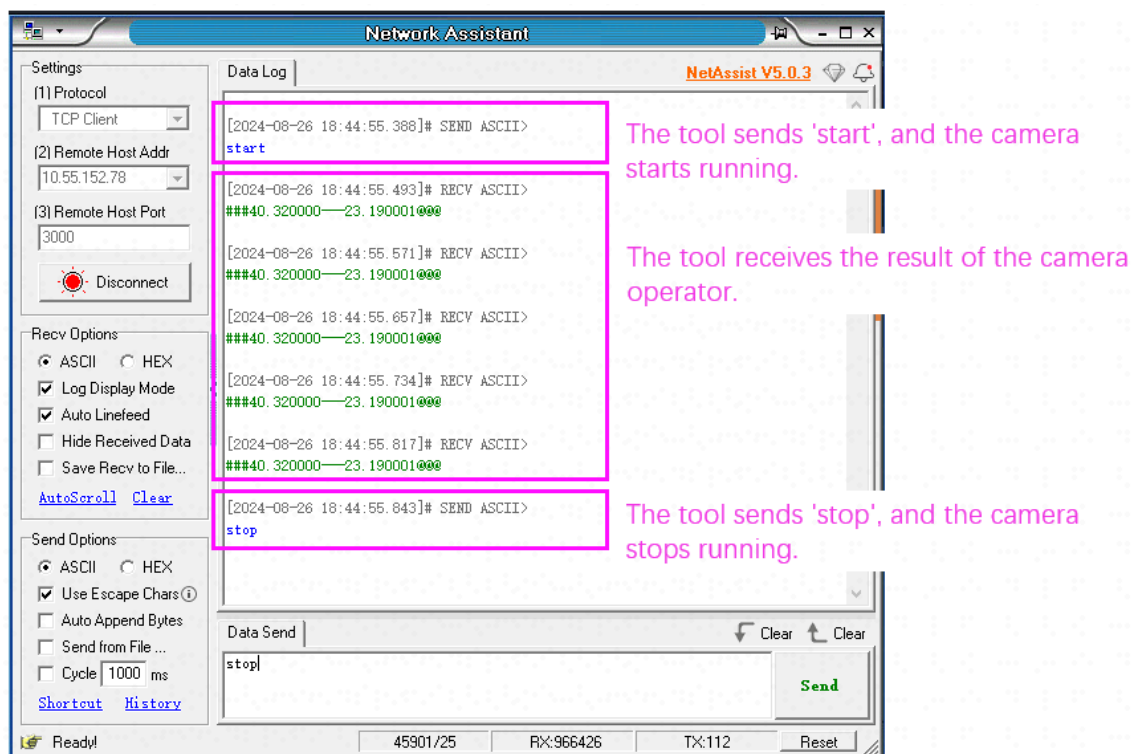


Figure 5-2 Tool Side Configuration Example

Taking the packaging setting as an example, the output results are as follows:

###40.320000---23.190001@@@

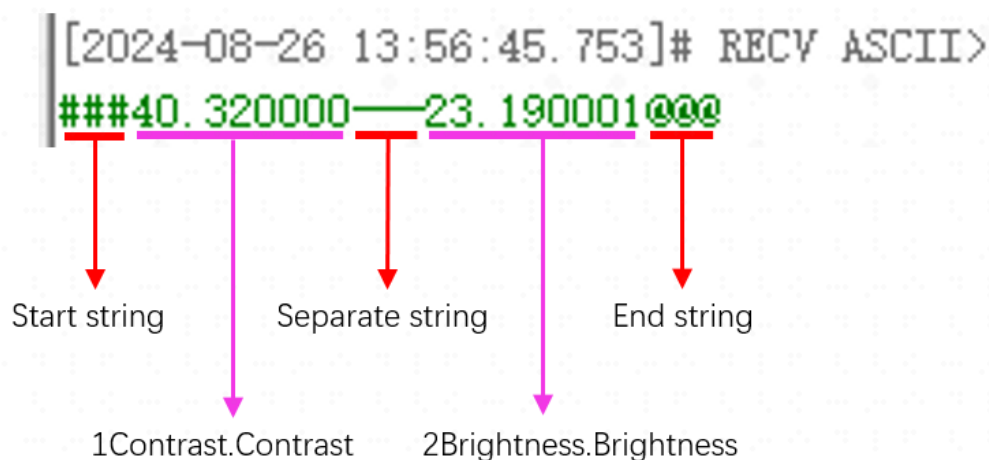


Figure 5-3 Camera Output Results Analysis