Modbus application

category	content
Key words modbus	Serial summary screen

revise history

version	date	the reason
V1.0	2016/05/10	Create documents

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1. Scope

Documentation for budget, basic, were linked, 86 Serial screen box series products.

2. Development Environment version

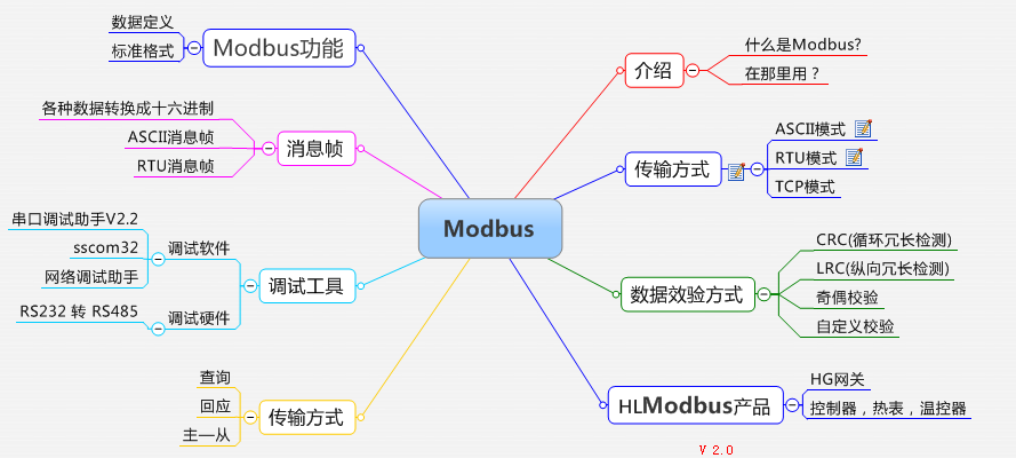
1. VisualTFT Software version: V3.0.0.636 And above; versions View: Open VisualTFT Click Help -> About VisualTFT You can view the current software version number; the latest version can be found at www.gz-dc.com Download

2. Serial screen firmware versions: Serial need to upgrade to screen Modbus Version of the firmware (RS232 with RS485 interface);

3. Functional Overview

Modbus Protocol is applied to an electronic controller on the common language. By this protocol, between the controller, the controller can communicate via a network (e.g. Ethernet) and other devices. Modbus Protocol defines a message structure used by the controller to recognize, whether they are communicating via which the network. It describes the process a controller requests access to other devices, if the response to requests from other devices, as well as how to detect and record errors. It developed a common format and content of the message domain pattern.

Map 3-1 For the decomposition of Modbus Fig.

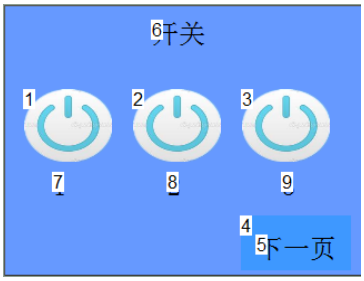


Map 3-1 Modbus Map

4. Technical realization

4.1 build VisualTFT engineering

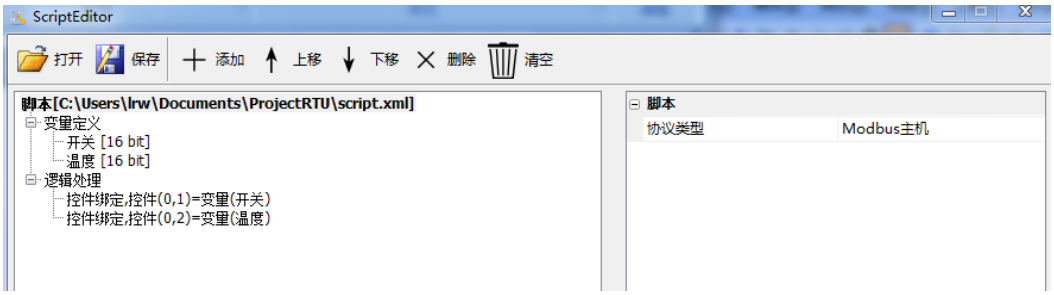
PC VisualTFT Create a new project, you need to place a good control of the screen in the project, as 4-1 As shown, simply place the three button controls, specific construction configuration do not understand, please download Official website Package development study and research, not enumerate here.



Map 4-1 Construction in progress

4.2 Modbus Configuration

My company VisualTFT Built-in Modbus Configuration tool, VisualTFT Software via the menu "Tools" -> " Modbus Configuration Tool ", as shown in the tune 4-2 Software configuration shown;



Map 4-2 Modbus Configuration Tool

1. Setting the protocol type

Mouse to select the upper left corner of the "script" in the right side of the property serial select "protocol type", for example, Modbus Host, Modbus Slave.

Note: You need to set the slave address slave.

2. Add variable definition

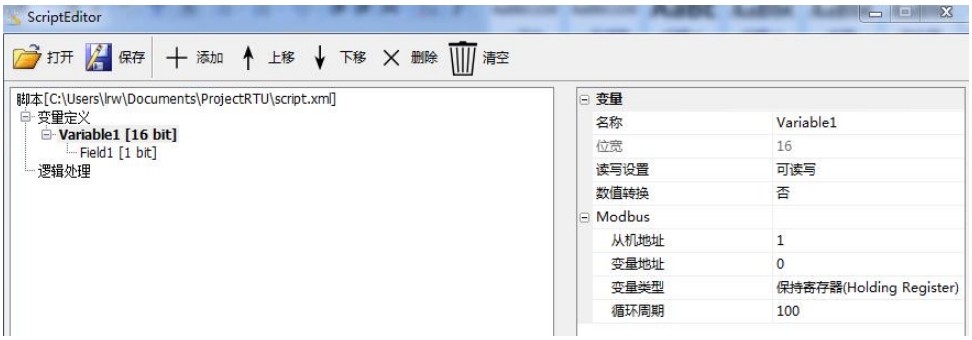
a) Adding variables and fields. Select the left node "variable definitions", click on the toolbar button "Add" variable,

The default name is " Varialbe1 , Varialbe2 , Varialbe3 "" ", You can customize a meaningful name.

b) If you need variable segments. Select the left variable node " Varialbe1 "Click" Add "word

Section, the default name " Field1 , Field2 , Field3 "" ", You can customize a meaningful name.

Note: Note the difference between the above selected node.



Map 4-3 Add Variable

3. Variables defined settings. Select the variable node Variable1 Then set through the property window.

a) Title: can be modified to meaningful names, such as "switch."

b) Set reading and writing: read and write permissions set variables.

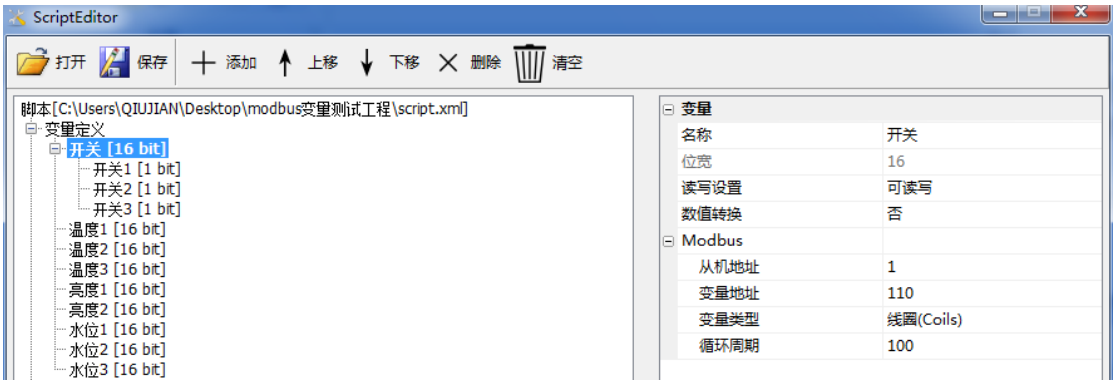
c) Array conversion: conversion of variables may be, for example: temperature = variable value * 0.1 .

d) Slave Address: Host mode only needs to be set.

e) Variable address: address variable (or register).

f) Variable type: a coil (Coils) ; Discrete input (Discrete Inputs) ; Holding register (Holding Register) ;

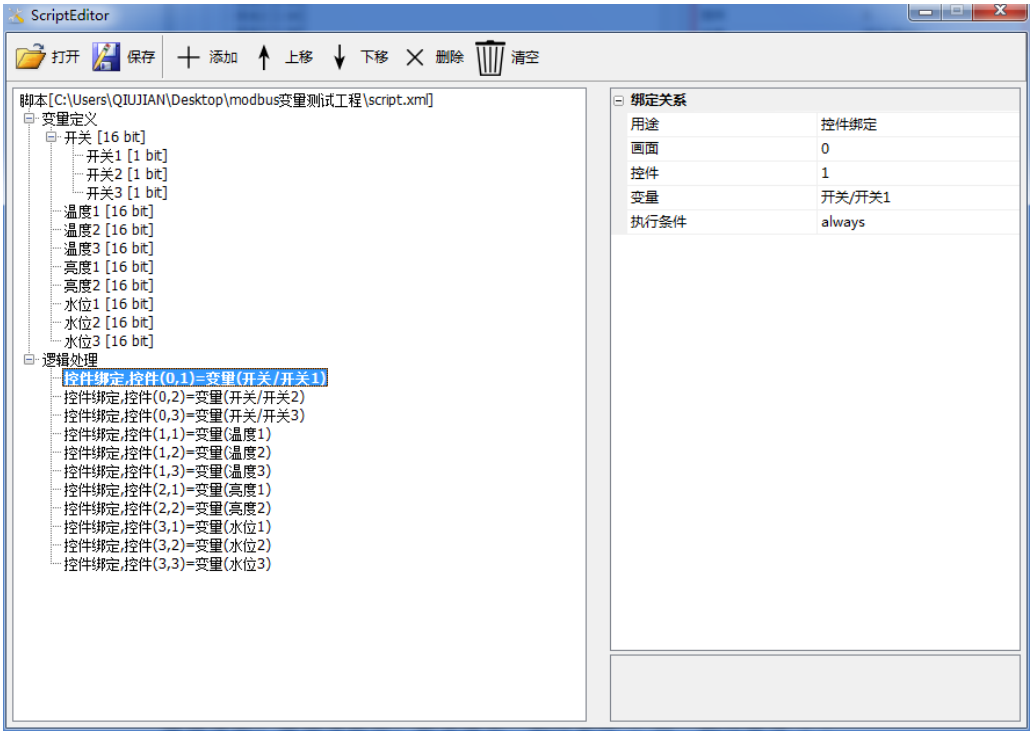
Input register (Input Register).



Map 4-4 Variable definitions set

4. Setting logic

Select the left node "logic" toolbar button "Add" Add "binding relationship", the following picture shows binding variable "switch 1 "Set the controls that you need to bind a picture control ID , Set the variable that you need to bind the other variables in order to bind Figure 4-5 Fig.



Map 4-5 Logical bond

When the button is pressed, a "switch" variable write 1 (Write bounce 0), Whereas the button will update the state variables change. Text control is bound to the "temperature" tag, text control is automatically updated when the temperature changes, progress bars, sliders, icons and other controls also apply.

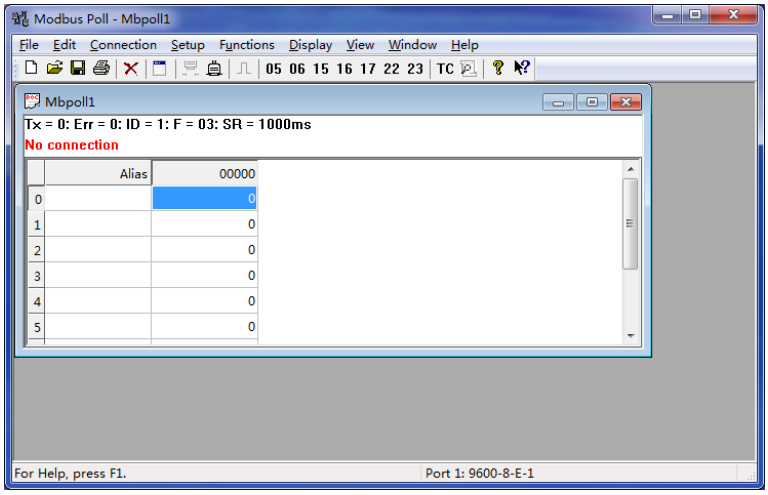
Note:

Control displays. By setting the "execution condition", set the control's appearance. Animation. By setting the "execution condition", whether animate start playing. Button is pressed. When the button is pressed, if the "execution condition" is satisfied, the "perform an action." Button up. When the button up, if the "execution condition" is satisfied, "the implementation of the action." Conditional execution. When the "execution condition" satisfied "perform actions" only once in the moment to meet the conditions. Binding screen. The current picture is bound to the "variable" value.

4.3 Modbus Poll (Slave) Configuration

Modbus Poll (Slave) Simulator used to simulate a serial signal given screen, free to download from the Internet, or find our sales is acquired. Here to Modbus Slave As a demonstration, a demonstration button control as a case of the switch.

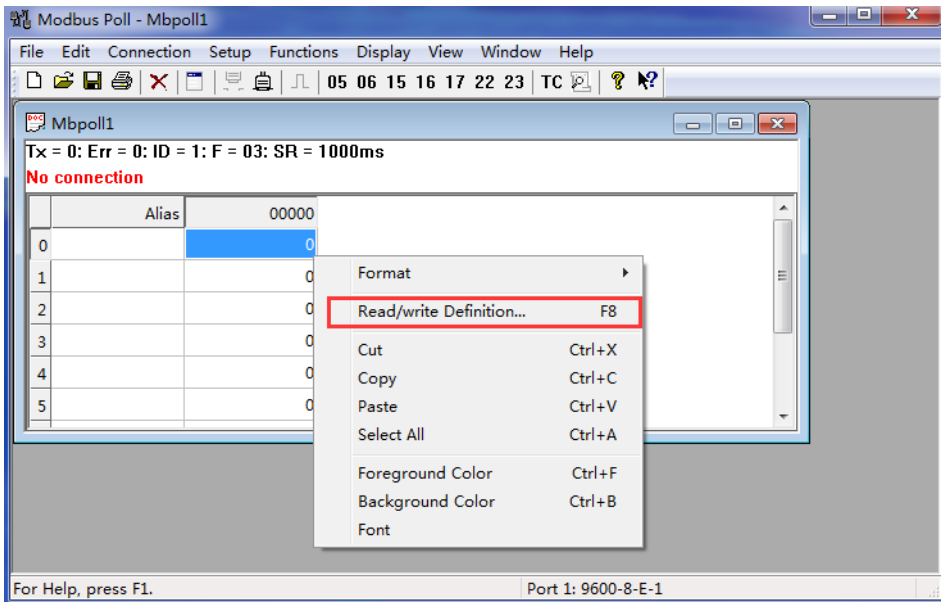
1. turn on Modbus Slave Click on the top left corner. " File "->" New "Create a new project, as 4-6 Fig.



Map 4-6 New Construction

2. Set to read and write the definition.

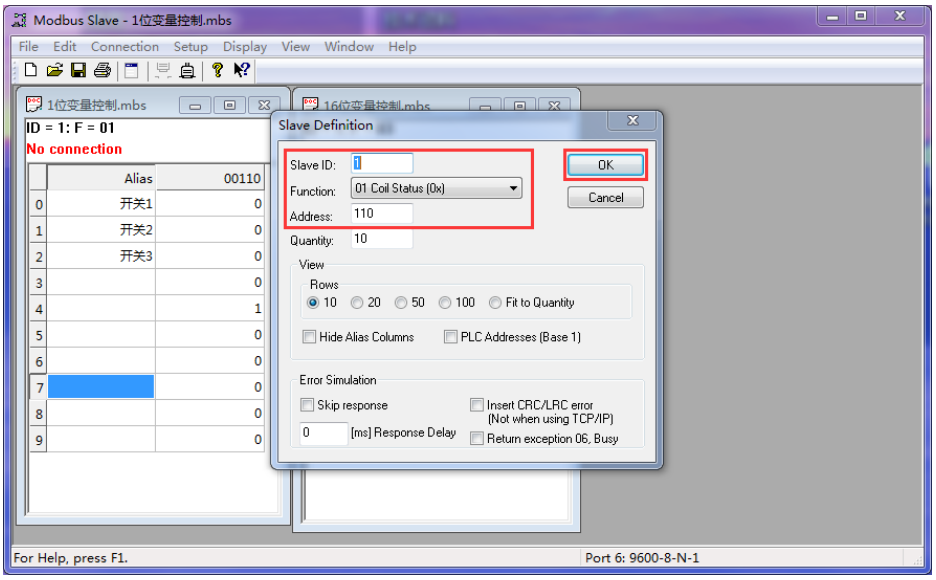
a) Right-click on the project editing area, the pop-up menu, click on " Read / Write Definition . "



Map 4-7 Define a read-write

b) Click ' Read / Write Definition "After a pop-up will set the bar, where the set from the machine ID " S lave ID "Settings" Function "->" 01 Coil Status (0x) "Set slave address" Addess . "

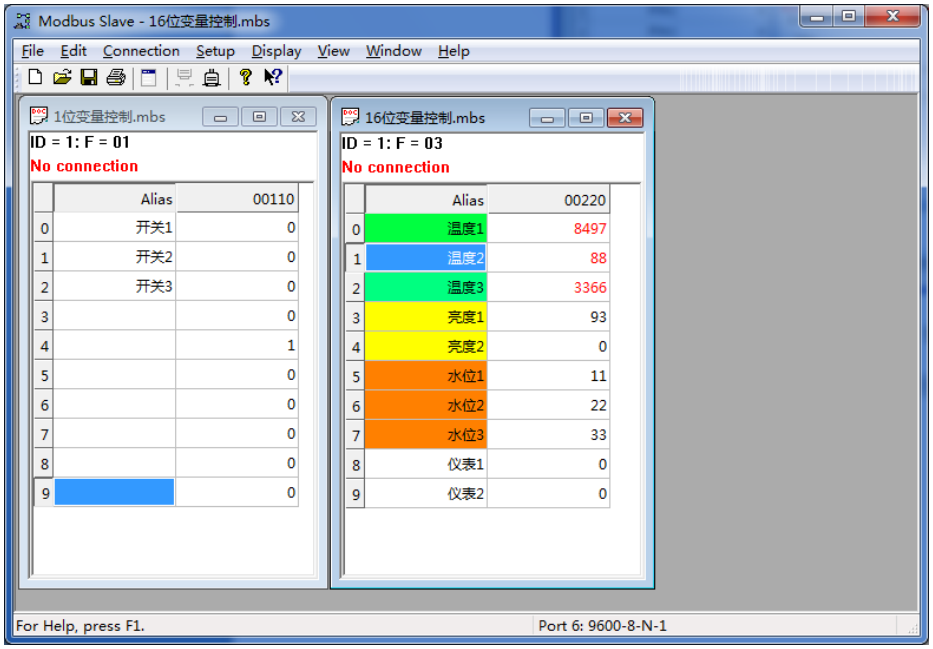
Note: Slave ID "Slave ID " Slave address "Addess", "Function" must be provided in association with the step of setting variable defined previously.



Map 4-8 Set to read and write

3. Similarly, another set of control variables, as 4-9 Fig.

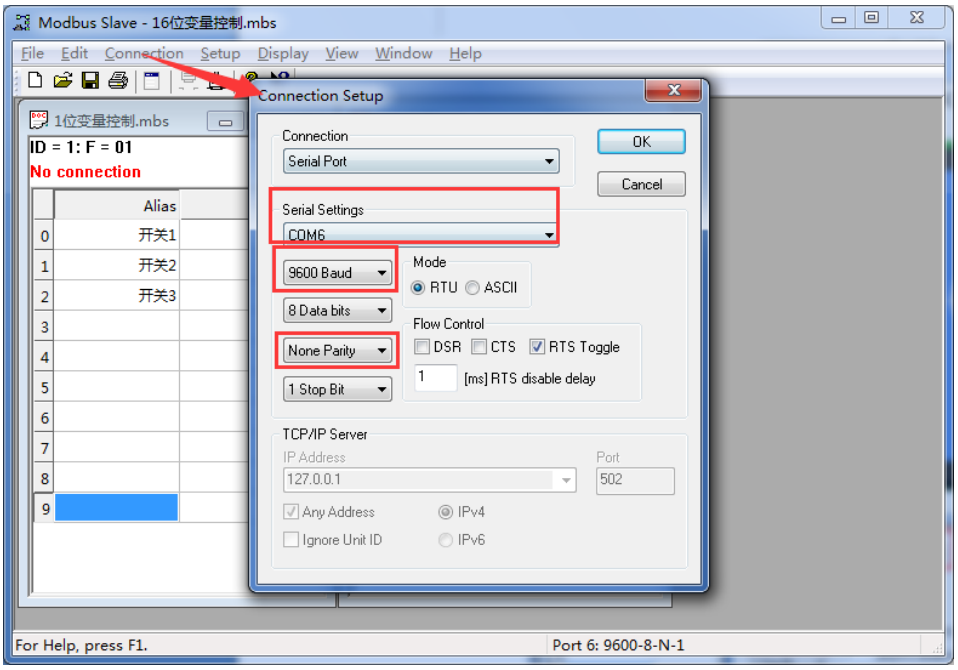
Note: a switch 16 and an amount of variables need to be distinguished from the value of a variable, not placed in the same screen window, placed as shown, a new multi-project screen, two separate windows, pop-up menu background color can "background color" is set, easily distinguish the different types of variables.



Map 4-9 Variable settings

4. Click on the toolbar " Connection "Carried out with entities or virtual serial screen serial communication screen. Set a good screen where the port connected to a computer, the screen of the current set baud rate, set no parity" None Parity . "

Note: The screen with virtual serial line communication need to create one pair of virtual serial port, virtual serial port with Modbus screen programming can be acquired with sales.



Map 4-10 And serial communication

5. After online Modbus Slave The project's online configuration screen will flip to " Connection "Screen press the button, Modbus Slave The variable region of the screen corresponding to the button is displayed corresponding to the pressed state " 1 "Up state" 0 " Modbus Slave Conversely Settings " ON "or" OFF "Serial screen will also respond to other controls similar effect.