Technical Note

Data recording controls

Engineering notes

category	content
Key words	Data recording control panel configuration controls serial
summary	

revise history

version	date	the reason	prepared by	Examine
V1.0	2016/08/30	Create documents	Chien	
V1.1	2017/05/05	Add option is stored	Xie upheld as	
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1. Scope

Documentation for budget, basic, were linked, 86 boxes and other serial-screen products.

2. Development Environment version

1. **VisualTFT Software version: V3.0.0.732 And above;**

View version: (1) Open the software, the software version number displayed in the lower right corner. (2)turn on 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 hardware version: V2.22.915.XXX And above.**

View version:

(1) Check the version number sticker on the back screen.

(2) VisualTFT After the success of the online screen, the version number displayed in the lower right corner.

3. Functional Overview

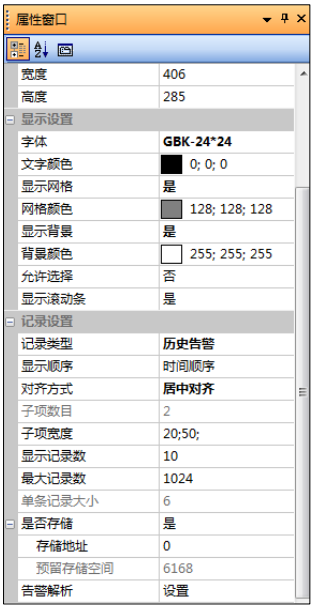
Data recording control for recording data, data table, the value of the alarm time.

Controls alarm recording history, current alarm or as a general-purpose tables, records and data are saved, if you need to view the data recorded for viewing directly on the screen, you can use multiple data slider to view.

4. Technical realization

4.1 Properties window

Familiar with the data recording control property window may be better to set properties of the control, FIG. 4-1 Properties window for the data recording control.



Map 4-1 Properties window text control

4.1.1. display setting

1. Font: set the font and font size of the displayed data records.

2. Text Color: Set the display font color.

3. Show Grid: whether to display the grid.

4. Grid color: color display grid is set.

5. Show Background: whether to display the background.

6. Background color: select the color of the background.

7. Allowed options: whether to allow the selected data row. Yes, click the data row and notice the color change to Host; no, not allowed to choose.

8. Scroll bars: whether to display the scroll bar.

4.1.2 Record Set

1. Record type, can select different record types.

A) current alarms: Alarm same number of data records only once, the recording can not be reused, but not limited to recording order, after the alarm is released if the data can be recorded once again. Figure 4-2 Fig.

0	2017-05-05 08:47:39
2	2017-05-05 08:47:46
9	2017-05-05 08:47:49
3	2017-05-05 08:48:08
5	2017-05-05 08:48:14

Map 4-2 Do not duplicate data records

B) history alarms: an alarm number may be the same number of repeated recording, the recording is not limited, as 4-3 Fig.

高温预警	2017-05-05 08:53:29
高温预警	2017-05-05 08:53:31
2	2017-05-05 08:53:34
低温预警	2017-05-05 08:53:36
低温预警	2017-05-05 08:53:37

Map 4-3 Historical alarm

C) the historical alarm and release time: the table is divided into 3 Columns, the first alarm is resolved, the alarm time the second column, the third column is the time an alarm is released, FIG. 4-4 Fig.

高温预警	2017-05-05 08:59:59	
高温预警	2017-05-05 09:00:13	2017-05-05 09:00:20
低温预警	2017-05-05 09:00:38	2017-05-05 09:00:41
低温预警	2017-05-05 09:00:46	
低温预警	2017-05-05 09:00:54	2017-05-05 09:00:56

Map 4-4 Historical alarm and the release time

D) General form: may be used as a data recording function, the data type may be a Chinese, letters, numbers, FIG. 4-5 Fig.

姓名	科室	排队号
张三	内科	0001
李四	内科	0002

Map 4-5 GF

2. Display order: the display order setting data, can select the "chronological order", "reverse chronological order."

3. Alignment: the alignment of the display data, select "Left", "centered alignment", "right-aligned."

4. The number of children: The number of children included in each record, this option can be selected only under a common table record type.

5. Child Width: width ratio of each child as 4-6 , Tables ratio 30; 40; 50 .

Map 4-6 The proportion of children

6. The maximum number of records: how many records are set up to store after store filled overwrite the old record.

7. Single record size: single record size in bytes, the maximum 256 bytes.

8. It is stored, whether recorded data is stored in FLASH (power failure save). Storage Address: Place a data record for each control must be reset once the storage location, to avoid occupying a memory address. Reserve storage space: reserve storage space size of a single record * = maximum number of records + twenty four .

Figure 4-7 Shown, a single record size 10 The maximum number of records to 1024 , Then the control reserve storage space 10264 .

显示记录数	10
最大记录数	1024
单条记录大小	10
是否存储	是
存储地址	0
预留存储空间	10264

Map 4-7 Reserve storage space

Figure 4-8 Shown, if more placed 1 Data recording control, you should set the storage address 10265 Otherwise, the address will overlap, resulting in compilation error.

最大记录数	1024
单条记录大小	30
是否存储	是
存储地址	10265
预留存储空间	30744

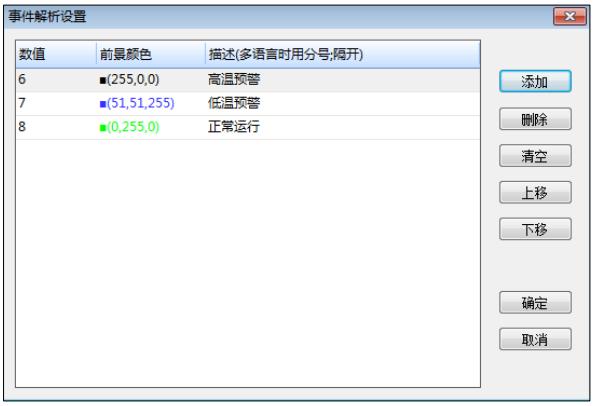
Map 4-8 The second set controls memory address

Similarly, if placed third control, the storage address is the address of the first two controls and plus 1 .

Note: Historical control data recording block curve shared memory, data storage is turned on, the memory address should be set, there would be, abnormality data storage, display anomalies.

Data storage address calculation: A, Control data storage size = maximum number of records a single record size * +24 (unit: byte); B, Storage size history curve +30 = number of samples (unit: bytes).

9. Alarm Analysis: Set Record Type "current alarm", "alarm history", "history alarm and release time" can be defined alarm parsed text display **for alarms, such as: the value defined 6 , High-temperature warning; value 7 , Low temperature warning; value of 8 is running, as shown in 4-9 Fig.**



Map 4-9 The event analysis settings

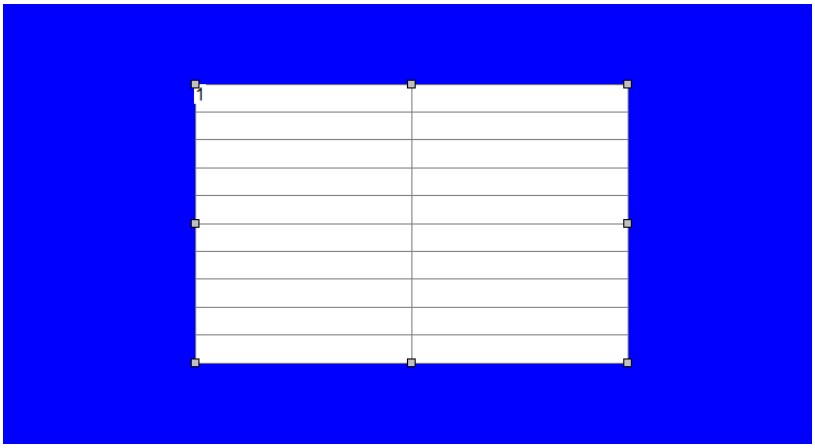
When the transmission of the control value, respectively 6 ,1, 7 , 0, 8 When, in FIG. 4-10 FIG, 6, 7 at this time is defined as the warning display is resolved, 0 not defined the value is displayed.

高温预警	2017-05-05 08:42:42
1	2017-05-05 08:42:47
低温预警	2017-05-05 08:42:52
0	2017-05-05 08:42:56
正常运行	2017-05-05 08:42:58

Map 4-10 Alarm resolve

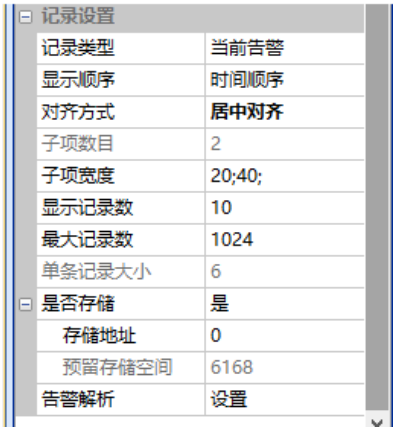
4.2 Routine Operation

Inserting a control data is recorded in the project, as shown in 4-11 Fig.



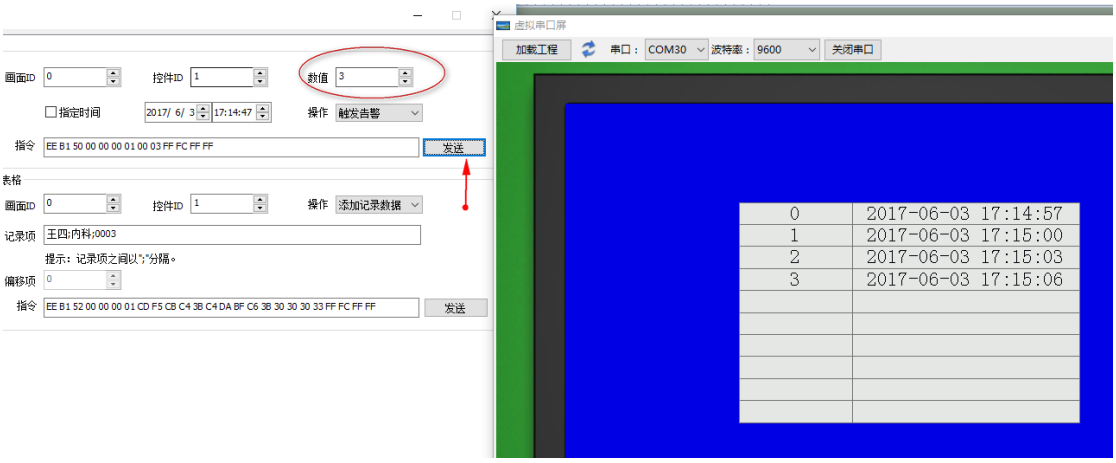
Map 4-11 Insert Control

Set Properties window: → current alarm record type; subkey width → 20 ; 40 , As 4-12 Fig.



Map 4-12 Set the properties window

Compile correctly, run screen virtual serial port, the virtual serial port connection, open instruction assistant to send data recording command (see serial command analysis instruction set), send value respectively " 0 "" 1 "" 2 "" 3 "Figure 4-13 Fig.



Map 4-13 Analog screen virtual serial port

Appendix: Basic instruction set control data recording

Adding data control data recording instruction format is as follows:

Offset data item		length	Explanation
00H	EE	1	Header
01H-02H	B1 52	2	Add command data recording control
03H-04H	0002	2	Picture 2
05H-06H	00 0D	2	Data recording controls ID (13 For the control ID)
07H-0AH	31 3B 32 3B	4	Value added data, i.e., 1 ; 2 ; Data bytes determined by the user;
0BH-0EH	FF FC FF FF	4	End of frame

Data recording control data recording clear instruction format is as follows:

Offset data item		length	Explanation
00H	EE	1	Header
01H-02H	B1 53	2	Clear instruction for recording data
03H-05H	0002	2	Picture 2
06H-07H	00 0D	2	Data recording controls ID (13 For the control ID)
08H-0BH	FF FC FF FF	4	End of frame

Setting a recording format display instruction offset term is as follows:

Offset data item		length	Explanation
00H	EE	1	Header
01H-02H	B1 54	2	Recording offset item display instruction
03H-04H	0002	2	Picture 2
05H-06H	00 0D	2	Data recording controls ID (13 For the control ID)
07H-08H	00 01	2	The first row represents slider jump from 0 Start, two bytes;
09H-0CH	FF FC FF FF	4	End of frame

Get the current number of records in the instruction format is as follows:

Offset data item		length	Explanation
00H	EE	1	Header
01H-02H	B1 55	2	Get the current number of records of instructions
03H-04H	0002	2	Picture 2
05H-06H	00 0D	2	Data recording controls ID (13 For the control ID)
07H-0AH	FF FC FF FF	4	End of frame

PS: When the number of the recording instruction to get the current, get number of records corresponding return instruction, the corresponding instruction format is as follows:

Offset data item		length	Explanation
00H	EE	1	Header
01H-02H	B1 55	2	Returns the current record number of instructions
03H-04H	0002	2	Picture 2
05H-06H	00 0D	2	Data recording controls ID (13 For the control ID)
07H	1D	1	Fixed code corresponding read, moot
08H-09H	0003	2	The number of records returned
0AH-0DH	FF FC FF FF	4	End of frame

Reading a row of recorded instruction format is as follows:

Offset data item		length	Explanation
00H	EE	1	Header
01H-02H	B1 56	2	Rows of a read command
03H-04H	0002	2	Picture 2
05H-06H	00 0D	2	Data recording controls ID (13 For the control ID)
07H-08H	0001	2	Corresponding to the read line, from 0 Start
09H-0CH	FF FC FF FF	4	End of frame

PS: After a row is read using a recording instruction, will receive a corresponding return line data recording instruction, the corresponding instruction format is as follows:

Offset data item		length	Explanation
00H	EE	1	Header
01H-02H	B1 56	2	Rows of a return instruction
03H-04H	0002	2	Picture 2
05H-06H	00 0D	2	Data recording controls ID (13 For the control ID)
07H	1D	1	Fixed code corresponding read, moot
08H-0DH	30 3B 31 3B 32 3B 6		A line data record is returned, i.e., 0 ; 1 ; 2 ; Determines the number of bytes input by a user;
0EH-12H	FF FC FF FF	4	End of frame

Modified conventional recording instruction format is as follows:

Offset data item		length	Explanation
00H	EE	1	Header
01H-02H	B1 57	2	Conventional modification instructions recorded
03H-04H	0002	2	Picture 2
05H-06H	00 0D	2	Data recording controls ID (13 For the control ID)
07H-0CH	30 3B 31 3B 32 3B 6		Modify the data content to a string input, i.e., 0 ; 1 ; 2 ;, Defined by the user
0DH-10H	FF FC FF FF	4	End of frame

Delete a row record instruction format is as follows:

Offset data item		length	Explanation
00H	EE	1	Header
01H-02H	B1 58	2	Delete command a row record
03H-04H	0002	2	Picture 2
05H-06H	00 0D	2	Data recording controls ID (13 For the control ID)
07H-08H	0001	2	Delete the appropriate row, from 0 Start
09H-0CH	FF FC FF FF	4	End of frame

Insert conventional recording instruction format is as follows:

Offset data item		length	Explanation
00H	EE	1	Header
01H-02H	B1 59	2	Insert conventional recording instruction
03H-04H	0002	2	Picture 2
05H-06H	00 0D	2	Data recording controls ID (13 For the control ID)
07H-08H	0001	2	Inserted into the respective rows, from 0 Start
09H-0EH	30 3B 31 3B 32 3B 6		Inserting data content, in the form of a string input, i.e., 0 ; 1 ; 2 ;, Defined by the user to
0FH-12H	FF FC FF FF	4	End of frame

Select a record instruction format is as follows:

Offset data item		length	Explanation
00H	EE	1	Header
01H-02H	B1 5A	2	A record selection instruction
03H-04H	0002	2	Picture 2
05H-06H	00 0D	2	Data recording controls ID (13 For the control ID)
07H-08H	0001	2	Select the appropriate line, from 0 Start
09H-0CH	FF FC FF FF	4	End of frame

PS: Use the command asked to select a record, to "allow the selection" in the software settings select "Yes" in order to enable the command to select the appropriate line. The corresponding row is selected, the corresponding line will change color to indicate the selected state.

Instruction by exporting data recording control SD card format is as follows :(exported as a CSV format)

Offset data item		length	Explanation
00H	EE	1	Header
01H-02H	B1 5C	2	Instruction export of data records
03H-04H	0002	2	Picture 2
05H-06H	00 0D	2	Data recording controls ID (13 For the control ID)
07H-0AH	FF FC FF FF	4	End of frame

Deriving control data records returned instruction format is as follows:

Offset data item		length	Explanation

00H	EE	1	Header
01H-02H B1 5C		2	Instruction export of data records
03H-04H 0002		2	Picture 2
05H-06H 00 0D		2	Data recording controls ID (13 For the control ID)
07H	00	1	Fixed-code, no practical significance
08H-0BH FF FC FF FF		4	End of frame

PS: If the return instruction corresponding export data recording control screen returns received, the corresponding data record control has been successfully exported to CSV format to the SD card, the corresponding data records can be viewed via the SD card, you can open the software opened with EXCEL form.