Classification	☐ tDS ☐ tGW ☐ PETL/tET/tPET ☐ DS/PDS/PPDS ☑ TouchPAD ☐ I/O Card ☐ VXC Card ☐ VxComm ☐ Other				
Author	Jack Lin	**Date**	2020-04-23	**NO.**	FAQ041

Q: How to send and display Chinese, Japanese and Korean with the TouchPAD?

A:

TouchPAD can send Chinese, Japanese and Korean by using TCP and Modbus TCP/RTU. For the TCP part, refer to the "**TCP/IP**" example, it can send and receive Chinese, Japanese and Korean without the settings changed. For the Modbus part, refer to the "MXXX_ebfont_Display_XXXXX_c.zip" in the "**ebFont**" example. Put the UTF-8(hex) encoding of the words into the data of Modbus command and set the font of the display widgets.

Install ebFont into TouchPAD to display Chinese, Japanese and Korean. It supports more languages, such as CJK (Chinese/Japanese/Korean), Russian and others. All multilingual characters can be used on the same time.

The example list of TouchPAD is below:

http://www.icpdas.com/en/download/show.php?num=1000&root=&model=&kw=HMIWorks

The following is a detailed operation and information.

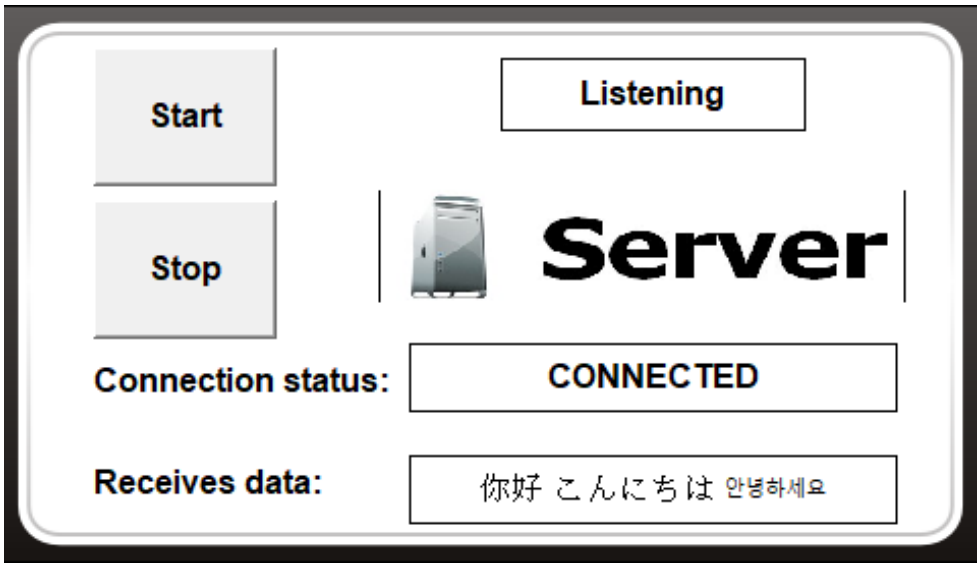
◆TCP

Refer to the "**TCP/IP**" example, use client_c as an example, you change the content of the send_buf to string you want. (displaying Label requires changing the font)

```
59  if (hmi_TCPState(h) == STATE_TCP_CONNECTED)
60  {
61      usprintf((char*)send_buf, "DATA%05d", index);  → usprintf((char*)send_buf, "你好 こんにちは 안녕하세요");
62      //sends data and then receives data through a TCP session.
63      hmi_TCPSendCmdEx(h, send_buf, BUF_LEN, recv_buf, BUF_LEN, TIMEOUT);
64      recv_buf[BUF_LEN -1] = 0;      // null-terminated
65      LabelTextSet(&Label12, (char*)send_buf);
66  }
```

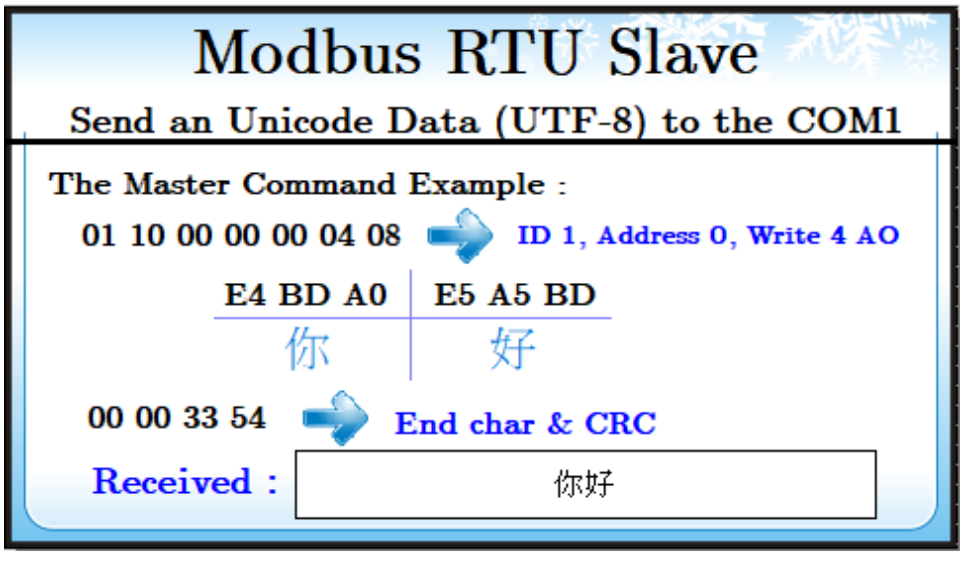
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◆Modbus TCP/RTU

Refer to the Modbus related example in the "**ebFont**". In this example, TouchPAD as a Modbus RTU Slave and displays value received on the Label as a string. The Master puts the UTF-8 (hex) encoding of the words into the data of Modbus command.



UTF-8(hex) encoding can refer to the following website:
https://www.branah.com/unicode-converter

Change font of the widgets to display

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◆ebFont：

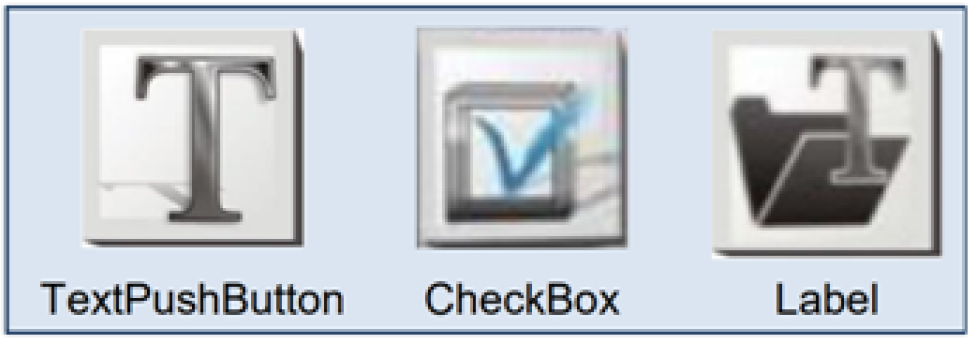
This method requires to install ebFont into TouchPAD. For detailed steps, please refer to: FAQ030: How to show multilingual text with ebFont on TouchPAD?. **You can use multilingual characters at the same time.**

Support models:

☑ TPD-28xU-H/Mx	☑ TPD-430-H
☑ TPD-433-H/Mx	☑ TPD-43xF-H
☑ TPD-703 (-64)	☑ VPD-13x-H
☑ VPD-14x-H	☑ VPD-173N/X (-64)

The widgets can be change string when standard C run:

TextPushButton、Checkbox、Label.



Font style:

Regular.

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