TPD-283U-H
2.8" High Speed Touch Screen HMI Controller
Quick Start Guide

1. Introduction

This quick start manual will guide users to implement the TPD-283U-H module into their applications in a quick and easy way. This will only provide with the basic instructions. For the more detailed information, please refer to the TPD-283U-H user’s manual located on the ICPDAS CD-ROM or from ICP DAS web site:


The ICP DAS TouchPAD is a tiny touch screen controller (electrical switch) HMI which is designed for building and home automation. TPD-283U-H is equipped with a high resolution TFT color touch screen and fits in regular electrical wall-mount outlets.
2. Wirings

1. 2.8” TFT LCD with Touch Panel

   The TouchPAD device is equipped with a removable terminal block connector is designed for easy and robust wiring. For more detailed information regarding the pin assignments, refer to Section 2.2.1 TPD-280/283/430/433 Series Models.

3. Rotary Switch (0 ~ 9)
   The Rotary Switch is used to set the configuration modes, as follows:
   
   - For TPD-283/283-H/283U-H:
     
     0. Run & Update: This is a special run mode which is used in the development stage. The TouchPAD device can be updated by a PC from the remote side through Ethernet.

     1. Force Update: While the application run on the TouchPAD device seriously crashes, use this mode to update a new application to the TouchPAD device.

     2. Run Only: Simply run, a TouchPAD device cannot be updated in this mode.
4. **USB Port (for TPD-280U/283U only)**

   The USB Port is used to downloading application programs.

5. **PoE and Ethernet RJ-45 Jack (for TPD-TPD-283/283U/283-H/283U-H only)**

   The TouchPAD device is equipped with an RJ-45 jack that is used as the 10/100 Base-TX Ethernet port and features networking capabilities. When an Ethernet link is detected and an Ethernet packet is received, the Act LED (Green) indicator will be illuminated. When power is supplied via PoE (Power-over-Ethernet), the PoE LED (Orange) indicator will be illuminated.

6. **Cover Removal Slot**

   Use a flat-head screwdriver in this slit to remove the top cover on the TouchPAD device.

7. **Reset Button**

   Use a flat-head screwdriver to press this button to reset the TouchPAD device. *Note: The reset button does not behave as a reboot to the whole system, only resets the microcontroller and this is not enough to make the program downloading successful. Always cut the power then turn it on before downloading programs.*
3. Install HMIWorks

Follow the steps to install the HMIWorks.

4. Setup Device

**Step1.** Before downloading programs to the TPD-283U-H, be sure to setup TPD-283U-H first. Run HMIWorks_Standard.exe and click on the menu: Run >> Setup Device.
Step 2. In the “Setup Ethernet device” dialog box, click the “search for TouchPAD” button to open “search for TouchPAD” dialog box.

The following is factory default settings of the TouchPAD device:

<table>
<thead>
<tr>
<th>Item</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>IP Address</td>
<td>192.168.255.1</td>
</tr>
<tr>
<td>Type</td>
<td>Static IP</td>
</tr>
<tr>
<td>Mask</td>
<td>255.255.0.0</td>
</tr>
<tr>
<td>Gateway</td>
<td>192.168.255.254</td>
</tr>
</tbody>
</table>
Step 3: If the TouchPAD device is found and displayed in the list on the “Search for TouchPAD” dialog box, select the TouchPAD item depend on MAC Address of your TouchPAD device and click the “OK” button to bring the information back to the “Setup Ethernet Device” dialog box.

Note: You can find the MAC address on the back of the TouchPAD.
Step 4: In the “Setup Ethernet Device” dialog box, select the “DHCP”, “Static IP” or “Runtime Setting” (e.g., DHCP) in the “IP Address Assignment Method” field.

Notes:

1. When using “Static IP” or “DHCP”, the IP settings are stored as a part of the program image, and only successful downloading can update the IP settings.

2. When using “Runtime Setting”, the program image has no information about the IP settings, and TouchPAD loads the IP information from the flash at the runtime. Before IP settings are used, be sure to set the IP settings into the flash by the related API functions. We have demo to do this as well.
Step 5: Verify that “Host IP Address” and “TouchPAD IP Address” in the same subnet.

Step 6: Verify that “TouchPAD MAC Address” must match the MAC Address of your TouchPAD device, and click the “OK” button.

Note: Verify that the new project has been created (see Section 3.2 “Create a New Project in the HMIWorks”).
Step 7: Click the “Run (Build & Download) F9” item from the “Run (Build & Download)” menu, or press F9.

Step 8: The “Download in progress…” dialog box will be displayed showing the progress of the update.

Step 9: The TouchPAD device will then execute the string “Hello TouchPAD!” sample.