ICP DAS CO., LTD.

Product Brochure

Touch HMI Solutions

TouchPAD

Brochure

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AGS-TECH Inc

Phone: +1-505-550-6501 and +1-505-565-5102

Fax: +1-505-814-5778

Email: sales@agstech.net

Web: http://www.agstech.net

Touch HMI Solutions

The Best Choice for Building/Factory/Machine/Home Automation

• Introduction

ICP DAS provides two types of touch HMI devices, the TPD series and the VPD series. The TPD series is designed for home/building automation applications, and the VPD series is designed for factory/machine automation applications. Both have many common features, such as a high-color high-resolution touch screen, RTC, and a variety of communication interfaces, including RS-232/RS-485 and Ethernet, although each is equipped with features specifically designed for the respective target applications. For the TPD series, an external wall box can be used to help smoothly blend the TPD series device with existing decor. For the VPD series, the rubber keypad, IP-65 waterproof front panel and DIN-Rail/panel mounting are designed for harsh environments, and are especially suitable for factories.

HMIWorks is a free development tool that can be used to design SoftPLC logic ladder diagrams for TouchPAD, meaning that a single TouchPAD becomes a touch HMI device running ladder logic.

• Features

- Excellent Cost/Performance Ratio
- High-color, High-resolution Touch Screen
- Power over Ethernet (PoE)
- RS-485 (including SelfTuner)/RS-232 (3 pins)
- RTC (Real Time Clock)
- Speaker
- Rubber Keypad (for VPD Series)
- Graphical User Interface Designer
- Free Development Tool: HMIWorks
- Supports the C Language and Ladder Designer
- Supports User-defined Third-party Protocols (C Language)
- Modbus Protocol Enables Remote Control of I/O Modules and Integration with SCADA Software
- ESD Protection: 4 kV
- Waterproof Front Panel (VPD: IP65, TPD: IP40)
- Operating Temperature: -20 to +50°C (2.8" TPD: -20 to +70°C)

• Selection Guide

T P D - XX X(X) - XX

XX — Touch Screen Size
- 28: 2.8 Inches
- 43: 4.3 Inches

X(X) — Communication Interface
- [2.8"]
  - 0: RS-485
  - 0U: RS-485 + USB
  - 3: Ethernet
  - 3U: RS-485 + USB + Ethernet
- [4.3"]
  - 0: RS-485 + USB
  - 2: RS-485 x 2 + USB
  - 3: RS-485/RS-232 + USB +Ethernet
  - (F): Flat Type

XX — Suffix
- EU: For European 86 x 86 mm Outlet Box
- BK: Black Case

TPD Model	Memory Expansion	Image Storage Capacity (1)	Communication Interface (2)	LCD	RTC	USB 1.1 (Client)	Suitable Outlet Box	Power Input (3)
TPD-280	-	1	RS-485	2.8" TFT (Resolution 240 x 320 x 16)	-	-	OB120	+10 ~ 30 VDC
TPD-280U	16 MB SDRAM/ 8 MB Flash	54 (Max.)			Yes	Yes		
TPD-283	-	1	Ethernet		-	-		PoE (48 V)
TPD-283-BK								
TPD-283U	16 MB SDRAM/ 8 MB Flash	54 (Max.)	RS-485 Ethernet		Yes	Yes		+10 ~ 30 VDC or PoE (48 V)
TPD-430	16 MB SDRAM/ 8 MB Flash	32 (Max.)	RS-485	4.3" TFT (Resolution 480 x 272 x 16)	Yes	Yes	United States (OB120)	+10 ~ 30 VDC
TPD-430-EU							European 86 x 86 mm	
TPD-433			RS-485 Ethernet				United States (OB120)	+10 ~ 30 VDC or PoE (48 V)
TPD-433-EU							European 86 x 86 mm	
TPD-432F			COM1: RS-485 COM2: RS-485				OB140F, OB140FP	+10 ~ 30 VDC
TPD-433F			COM1: RS-485 COM2: RS-232 Ethernet					+10 ~ 30 VDC or PoE (48 V)

(1) The Image Storage Capacity greatly depends on the content and the size of the images. The value indicated illustrates the maximum number of full screen resolution images that can be stored on the device.
(2) Specifications for Communication Interface: RS-485 (Including Self-Tuner), Ethernet (10/100 Mbps)
(3) Specifications for Power Input: PoE (Power over Ethernet, IEEE 802.3af, Class 1, 48 V)

V P D - X X X(X)

X — Form Factor
- 1: 103 × 103 mm Panel Mount

X — Touch Screen Size
- 3: 3.5 Inches
- 4: 4.3 Inches

X(X) — Communication Interface
- 0: RS-485
- 2: RS-232/RS-485 + RS-485
- 3: RS-232/RS-485 + RS-485 + Ethernet
- (N): No Rubber Keypad

VPD Model	Memory Expansion	Image Storage Capacity (1)	Communication Interface (2)	LCD	Ethernet	RTC	USB 1.1 (Client)	Expansion I/O Boards	Rubber Keypad	Ingress Protection	Power Input (3)
VPD-130	16 MB SDRAM/ 8 MB Flash	54 (Max.)	RS-232/RS-485	3.5" TFT (Resolution 320 x 240 x 16)	-	Yes	Yes	-	Yes	Front Panel: IP65	+12 ~ 48 VDC
VPD-130N								-	-		
VPD-132			COM1: RS-485 or RS-232 COM2: RS-485					Yes	Yes		
VPD-132N									-		
VPD-133					RJ-45 x 1				Yes		+12 ~ 48 VDC or PoE (48 V)
VPD-133N									-		
VPD-142	16 MB SDRAM/ 8 MB Flash	32 (Max.)	COM1: RS-485 or RS-232 COM2: RS-485 or RS-232	4.3" TFT (Resolution 480 x 272 x 16)	-	Yes	Yes	Yes	Yes	Front Panel: IP65	+12 ~ 48 VDC
VPD-142N									-		
VPD-143					RJ-45 x 1				Yes		+12 ~ 48 VDC or PoE (48 V)
VPD-143N									-		

(1) The Image Storage Capacity greatly depends on the content and the size of the images. The value indicated illustrates the maximum number of full screen resolution images that can be stored on the device.
(2) Specifications for Communication Interface and Ethernet: RS-485 (Including Self-Tuner), Ethernet (10/100 Base-TX)
(3) Specifications for Power Input: PoE (Power over Ethernet, IEEE 802.3af, Class 1, 48 V)

• HMIWorks - Free Development Software

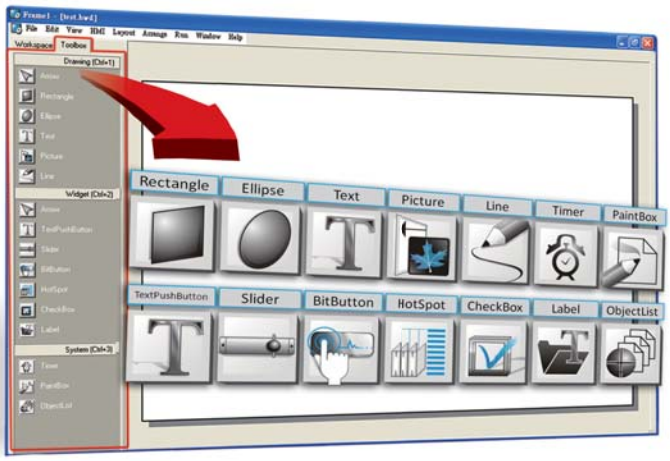
HMIWorks

Development software for the TouchPAD series

HMIWorks is a free development tool for TouchPAD series products from ICP DAS, and features a wide range of widgets, a built-in extensible graphics library, intuitive design, C programming, Ladder Diagram support, and full I/O integration, etc. When used with TouchPAD series devices, HMIWorks enables development time to be reduced and allows the design of sophisticated, cost-effective solutions for complex systems.

1. Includes a wide range of widgets - Reduce Development Time

A wide range of widgets are provided in the HMIWorks development tool, including Rectangle, Ellipse, Text, Picture, Line, TextPushButton, Slider, BitButton, HotSpot, CheckBox, Label, Timer, PaintBox, and ObjectList, together with the most commonly-used functions, such as drawing, event handlers, and timing control, which effectively reduces development time.



2. 65536 Colors - Bright and Clear

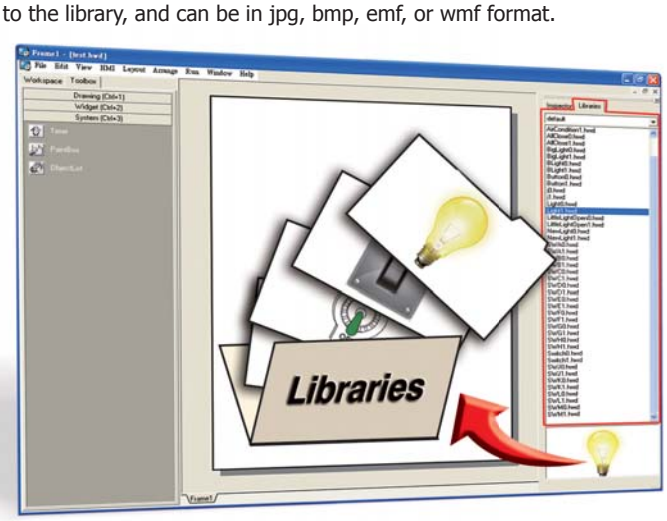
LCD touch screens are currently available in a variety of sizes, including 2.8", 3.5", and 4.3", with the resolutions for the TouchPAD series ranging from 240 x 320 x 16 to 480 x 272 x 16, which ICP DAS expects to expand in the near future.

3. Intuitive Design

HMIWorks provides an intuitive graphical design interface that allows users to focus on the task at hand, eliminating the need for programming and ensuring that projects can be completed easily.

4. Built-in Extensible Graphics Library

HMIWorks supports basic graphics functions and provides a variety of built-in images for common situations. Custom artwork created using common painting or photo editing software packages can also be added to the library, and can be in jpg, bmp, emf, or wmf format.



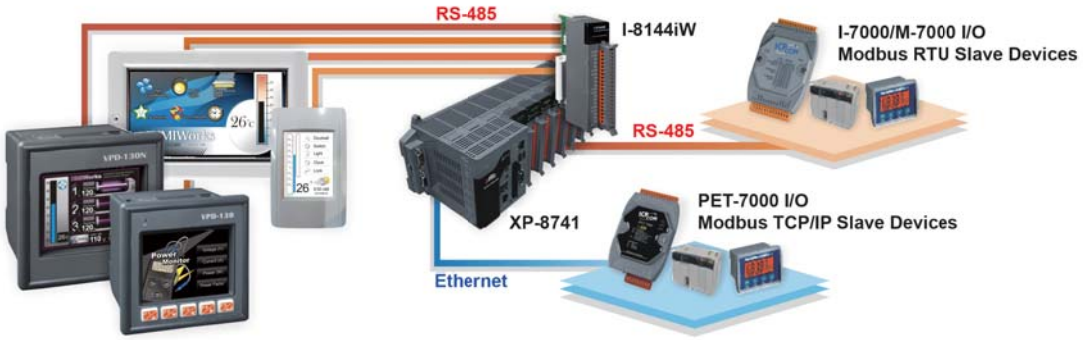
5. C and Ladder Diagram Programming

6. Drag-and-drop Design - full integration with I/O devices (with support for third-party modules)

ICP DAS now supports a wide range of I/O devices, such as ET-7000/PET-7000 series Modbus TCP modules, M-7000 series Modbus RTU modules, I-7000 series DCON modules and user-defined third-party Modbus TCP devices. It is expected that additional I/O devices for the TouchPAD series will be supported by HMIWorks in the near future.

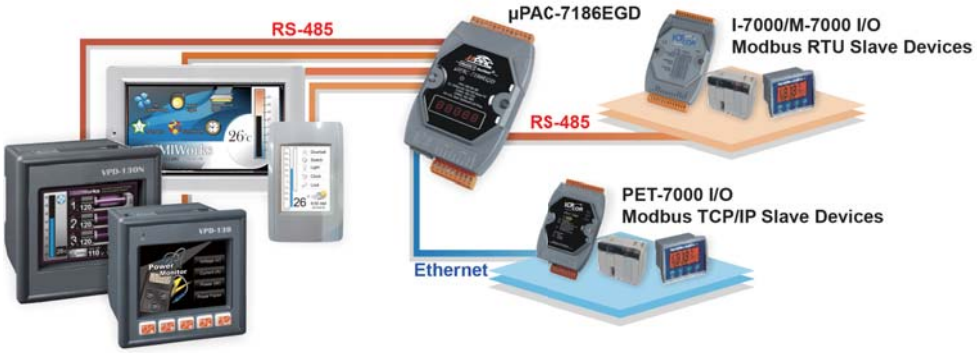
7. Sophisticated Design Solutions

When implementing multi-room touch or multi-terminal control in a large, complex system, an ICP DAS Programmable Automation Controller (PAC) can be used as a bridge between a TouchPAD and a variety of I/O devices. Configured correctly, PACs provide incredible power and flexibility, enabling a comprehensive system to be developed that integrates the TouchPAD devices with a huge range of I/O devices.



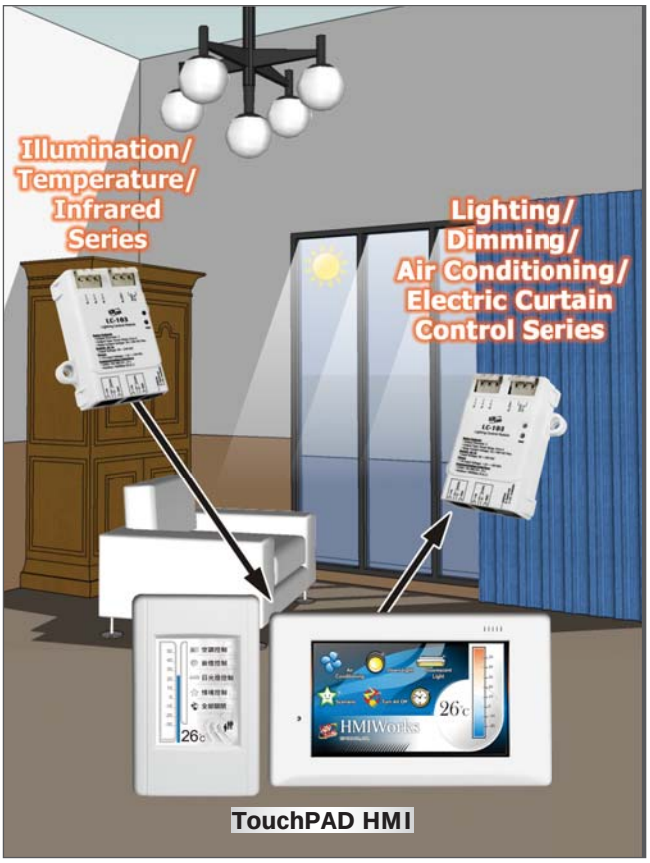
8. Cost-Effective Solutions for Complex Systems

In small- and medium-sized systems, a palm-sized PAC (e.g., a µPAC-7186) can be connected to a TouchPAD device to construct a cost-effective solution with relatively simple functions, but at an economical price.

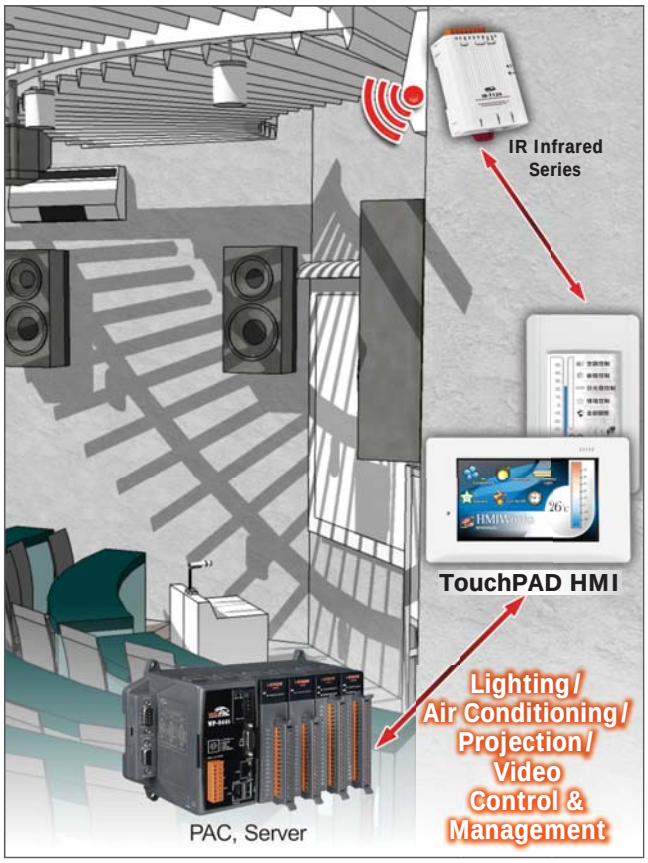


• TPD Series Applications

Smart Home Automation

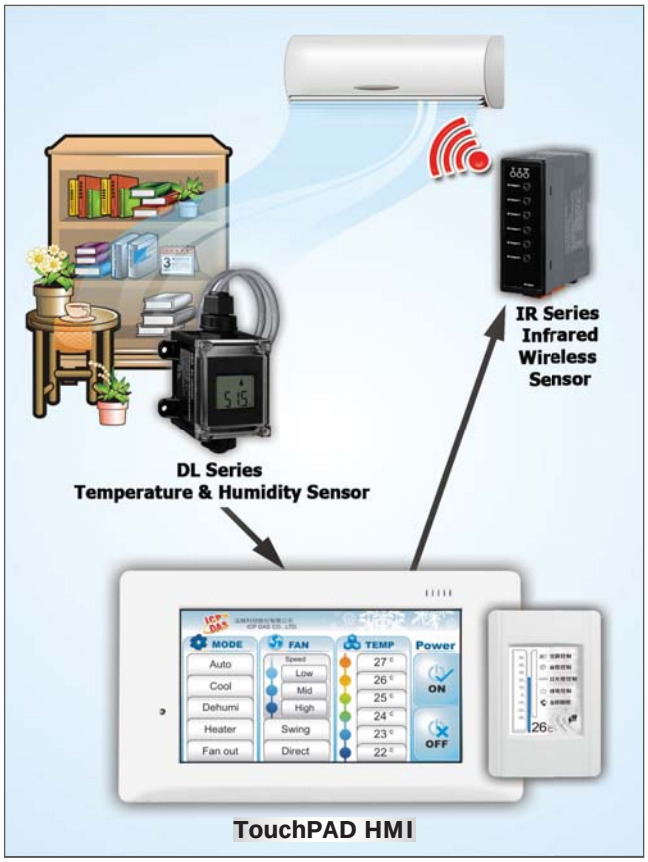


Meeting Room Auto-management



Security Alarm Systems

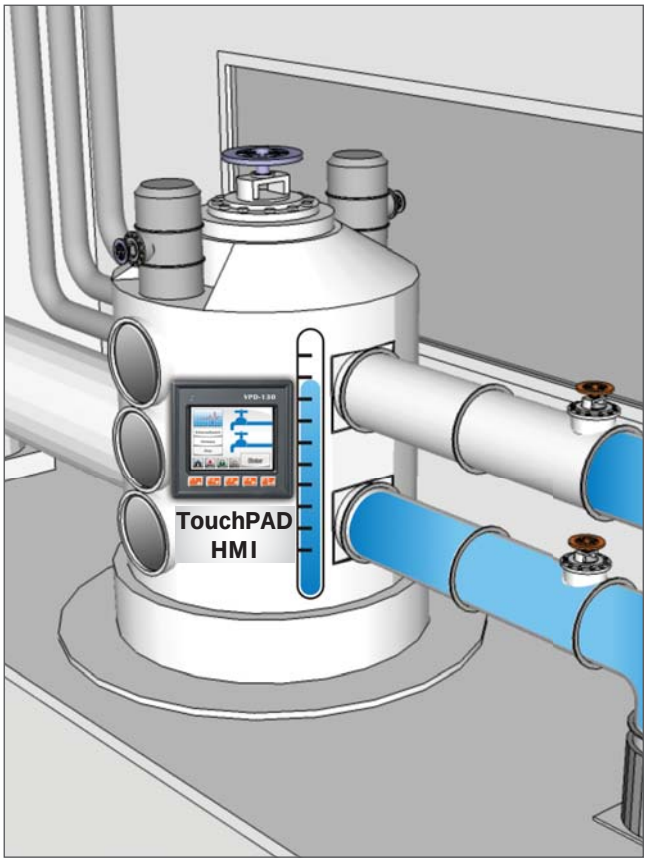
Infrared Device Integration



• VPD Series Applications

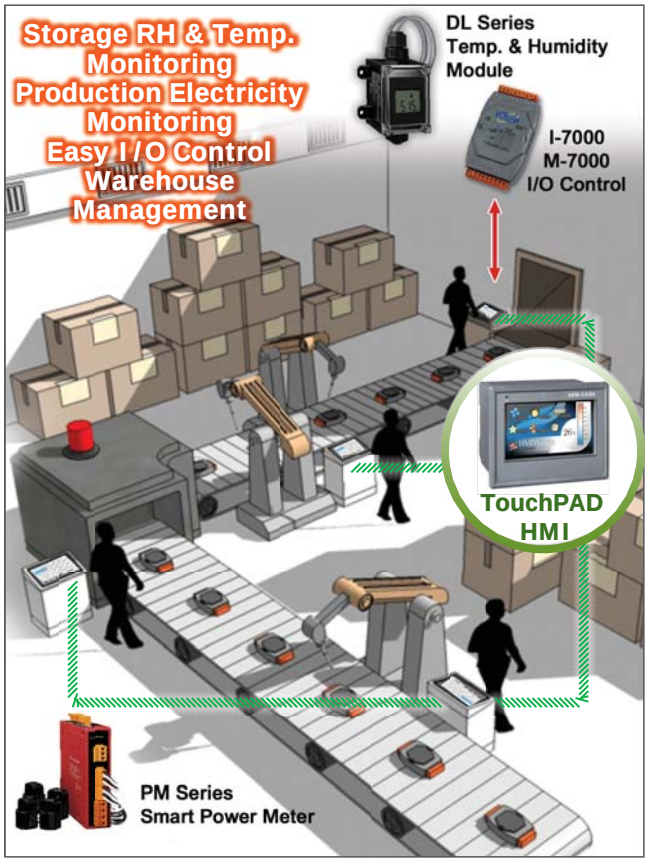
HMI for Small Instruments

HMI on Large Machines



Factory Automation Solution

Warehouse Production Intelligent Management



TPD 2.8" Series

TPD-280 TPD-280U

TPD-283/TPD-283-BK TPD-283U

Features

- Excellent Cost/Performance Ratio
- High-color, High-resolution Touch Screen
- PoE (Power over Ethernet)
- RS-485 (Including Self-Tuner)
- RTC (Real Time Clock)
- GUI Design
- Free HMIWorks Development Tool
- Supports C Language and Ladder Designer
- Supports User-defined Third-party Protocols (C Language)
- Modbus TCP/RTU Protocol
- ESD Protection: 4 kV
- Operating Temperature: -20 to +70°C

Introduction

The **TouchPAD TPD 2.8" Series**, TPD-280/TPD-280U/TPD-283/TPD-283-BK/TPD-283U, is a family of miniature touch HMI devices that are designed for building and home automation. The TPD 2.8" Series is equipped with a high-color, high-resolution TFT touch screen that matches a regular electrical wall-mount outlet. It is seamlessly integrated with a wide range of I/O modules, and provides an attractive, flexible and customizable picture frame. In short, the TouchPAD TPD 2.8" Series is the ideal choice when upgrading from a mechanical switch to an intelligent control pad.

For PLC users, HMIWorks includes the Ladder Designer development application, and for programmers, a C-language environment is provided. Importantly, learning how to create an application for TouchPAD series devices using Ladder Designer takes less than 30 minutes. In addition, redundant control solutions can be easily implemented by utilizing the Ethernet functionality of the TouchPAD. With the wide variety of features provided, the TouchPAD series of touch HMI devices can be considered one of the most cost-effective HMI solutions ever seen in the market.

Applications

TPD 2.8" Series with External Wall Box EWB-T28

TPD 2.8" Series with Outlet Box OB120

The space between the Ethernet socket and the bottom of the external wall box is small.

Specifications

Models	TPD-280	TPD-280U	TPD-283/TPD-283-BK	TPD-283U
CPU Module				
CPU	32-bit RISC CPU			
Memory Expansion	-	16 MB SDRAM/8 MB Flash	-	16 MB SDRAM/8 MB Flash
Real Time Clock (RTC)	-	Yes	-	Yes
Buzzer	Yes			
Rotary Switch (0~9)	Yes			
Communication Interface				
Ethernet	-		RJ-45 x 1, 10/100 Base-TX	
COM1	RS-485 (including Self-Tuner)		-	RS-485 (including Self-Tuner)
USB 1.1 Client	-	Firmware updates only	-	Firmware updates only
MMI (Man Machine Interface)				
LCD	2.8" TFT (Resolution 240 x 320 x 16), defective pixels <= 3			
Backlight Life	20,000 hours			
Brightness	160 cd/m2			
Touch Panel	Yes			
Reset Button	Yes			
Electrical				
Power Input Range	+10 ~ 30 V_{DC}		PoE (Power over Ethernet)	+10 ~ 30 V_{DC} or PoE (Power over Ethernet)
Power Consumption	1.2 W		EEE 802.3af, Class 1 (48 V)	1.2 W or IEEE 802.3af, Class 1 (48 V)
Mechanical				
Dimensions (W x L x H)	76 mm x 119 mm x 31 mm			
Installation	Wall Mount			
Ingress Protection	Front Panel: IP40			
Environmental				
Operating Temperature	-20 ~ +70 °C			
Storage Temperature	-30 ~ +80 °C			
Ambient Relative Humidity	10 ~ 90% RH, Non-condensing			

Ordering Information

TPD-280 CR	2.8" Touch HMI Device with RS-485 (RoHS)
TPD-280U CR	2.8" Touch HMI Device with RS-485, RTC, USB (RoHS)
TPD-283 CR	2.8" Touch HMI Device with Ethernet (RoHS)
TPD-283-BK CR	2.8" Touch HMI Device with Ethernet, Black Case (RoHS)
TPD-283U CR	2.8" Touch HMI Device with RS-485, Ethernet, RTC, USB (RoHS)

Accessories

	CA-USB10	USB to 5P Mini-USB, 28AWG, 1.5 m	
	1C016	2.4 mm Screwdriver	
	NS-208PSE CR	Unmanaged Industrial PoE (Power over Ethernet) Ethernet Switch (RoHS)	
	MDR-60-24 CR	24 V_{DC}/2.5 A, 60 W Power Supply, DIN-Rail Mountable (RoHS)	
	DIN-KA52F CR	24 V_{DC}/1.04 A, 25 W Power Supply, DIN-Rail Mountable (RoHS)	
	EWB-T28	External Wall Box for TPD-280/TPD-280U/TPD-283/TPD-283-BK/TPD-283U	
	OB120	Outlet Box for TPD-280/TPD-280U/ TPD-283/TPD-283-BK/TPD-283U/TPD-430/TPD-433	
	EWB-T28-BK	External Wall Box for TPD-283-BK	

• TPD 4.3" Series

Features

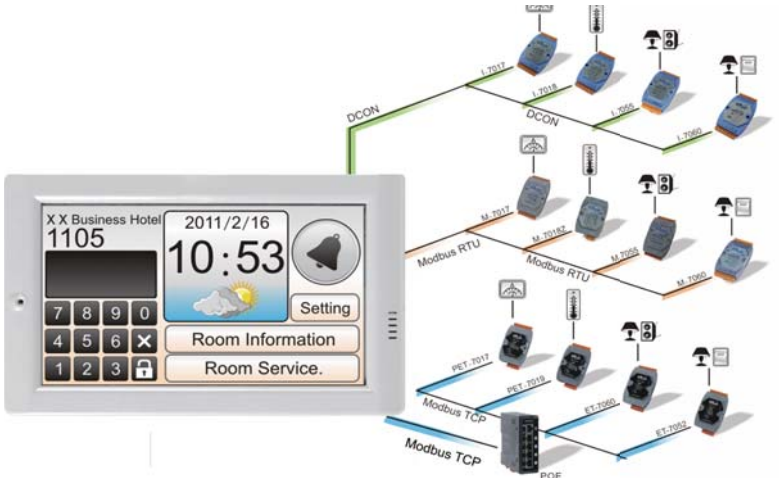
- PoE (Power over Ethernet) for TPD-433 series
- Excellent Cost/Performance Ratio
- High-color, High-resolution Touch Screen
- RS-485 (Including Self-Tuner)
- RTC (Real Time Clock)
- Speaker or Buzzer
- GUI Design
- Free HMIWorks Development Tool
- Supports C Language and Ladder Designer
- Modbus TCP/RTU & DCON Protocols
- Supports User-defined Third-party Protocols (C Language)
- ESD Protection: 4 kV
- Operating Temperature: -20 to +50°C

Introduction

The **TouchPAD TPD 4.3" Series**, TPD-430/TPD-430-EU/TPD-433/TPD-433-EU/TPD-432F/TPD-433F, is a family of miniature touch HMI devices that are designed for building and home automation. The TPD 2.8" Series is equipped with a high-color, high-resolution TFT touch screen that matches a regular electrical wall-mount outlet. It is seamlessly integrated with a wide range I/O modules, and provides an attractive, flexible and customizable picture frame. In short, the TouchPAD TPD 4.3" Series is the best choice when upgrading from a mechanical switch to an intelligent control pad.

For PLC users, HMIWorks includes the Ladder Designer development application, and for programmers, a C-language environment is provided. Importantly, learning how to create an application for TouchPAD series devices using Ladder Designer takes less than 30 minutes. In addition, redundant control solutions can be easily implemented by utilizing the Ethernet functionality of the TouchPAD. With the wide variety of features provided, the TouchPAD series of touch HMI devices can be considered one of the most cost-effective HMI solutions ever seen in the market.

Applications



Specifications

Models	TPD-430	TPD-430-EU	TPD-432F	TPD-433	TPD-433-EU	TPD-433F
CPU Module						
CPU	32-bit RISC CPU					
Memory Expansion	16 MB SDRAM/8 MB Flash					
Real Time Clock (RTC)	Yes					
Speaker	Yes					
Rotary Switch (0~9)	Yes					
Communication Interface						
COM1	RS-485 (including Self-Tuner)					
COM2	-		RS-485 (including Self-Tuner)	-		RS-232
USB 1.1 Client	Firmware updates only					
Ethernet	-			Yes (RJ-45 x 1, 10/100 Base-TX)		
MMI (Man Machine Interface)						
LCD	4.3" TFT(Resolution 480 X 272 X 16), defective pixels <= 3					
Backlight Life	20,000 hours					
Brightness	400 cd/m2					
Touch Panel	Yes					
LED Indicator	Yes					
Reset Button	Yes					
Electrical						
Power Input Range	+10 ~ 30 V_{DC}			+10 ~ 30 V_{DC} or PoE (Power over Ethernet)		
Power Consumption	2.5 W			2.5 W or IEEE 802.3af, Class 1 (48 V)		
Mechanical						
Dimensions (W x L x H) (mm)	126 x 82 x 24	126 x 92 x 29	140 x 87 x 42	126 x 82 x 24	126 x 92 x 29	140 x 87 x 42
Installation (Suitable Outlet Box)	Wall Mount (United States, OB120)	Wall Mount (European 86 mm x 86 mm)	Wall Mount (OB140F, OB140FP)	Wall Mount (United States, OB120)	Wall Mount (European 86 mm x 86 mm)	Wall Mount (OB140F, OB140FP)
Environmental						
Operating Temperature	-20 ~ +50 °C					
Storage Temperature	-30 ~ +80 °C					
Ambient Relative Humidity	10 ~ 90% RH, Non-condensing					

Ordering Information

TPD-430 CR	4.3" Touch HMI Device with RS-485, USB, RTC, Suitable for the United States OB120 Outlet Box (RoHS)
TPD-430-EU CR	4.3" Touch HMI Device with RS-485, USB, RTC, Suitable for the European 86 x 86 mm Outlet Box (RoHS)
TPD-432F CR	4.3" Touch HMI Device with RS-485 x 2, RTC, USB (RoHS)
TPD-433 CR	4.3" Touch HMI Device with Ethernet, RS-485, USB, RTC, Suitable for the United States OB120 Outlet Box (RoHS)
TPD-433-EU CR	4.3" Touch HMI Device with Ethernet, RS-485, USB, RTC, Suitable for the European 86 x 86 mm Outlet Box (RoHS)
TPD-433F CR	4.3" Touch HMI Device with Ethernet, RS-485, RS-232(3-pin), RTC, USB (RoHS)

Accessories

 CA-USB10	USB to 5P Mini-USB, 28AWG, 1.5 m	 EWB-T43	External Wall Box for TPD-430/TPD-433
 1C016	2.4 mm Screwdriver	 OB120	Outlet Box for TPD-280/TPD-280U/ TPD-283/TPD-430/TPD-433
 MDR-60-24 CR	24 V_{DC}/2.5 A, 60 W Power Supply, DIN-Rail Mountable (RoHS)	 OB140F	Outlet Box for TPD-432F/TPD-433F
 EWB-T43F	External Wall Box for TPD-432F/TPD-433F	 OB140FP	Plastic Outlet Box for OB140FP TPD-432F/TPD-433F

• VPD 3.5" Series

VPD-130N

VPD-130

VPD-132N/VPD-132

VPD-133N/VPD-133

Features

- Excellent Cost/Performance Ratio
- High-color, High-resolution Touch Screen
- RTC (Real Time Clock)
- Serial/Ethernet Communication Ports
- Rubber Keypad (VPD-130/VPD-132/VPD-133)
- GUI Design
- Free HMIWorks Development Tool
- Supports C Language and Ladder Designer
- Modbus TCP/RTU & DCON Protocols
- Supports User-defined Third-party Protocols (C Language)
- ESD Protection: 4 kV
- Front Panel: IP65 Waterproof
- I/O Expansion Board: XV-board
- Operating Temperature: -20 to +50°C

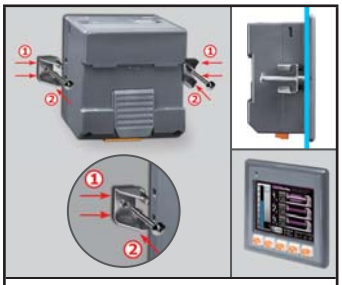
Introduction

The **TouchPAD VPD 3.5" Series** is a family of industrial touch HMI devices that feature a 3.5" high-color, high-resolution LCD touch screen. By taking advantage of the touch screen capabilities, it is easy to deploy and integrate the TouchPAD VPD into a wide range of automation systems, making the systems more intuitive and efficient. Whether you are installing a new system or performing a system retrofit, the VPD series stands out for its variety of communication options, including built-in communication ports for RS-232/RS-485 and Ethernet (VPD-133/VPD-133N) interfaces, enabling seamless integration into the system and allowing users to remotely control and monitor I/O. In addition, the IP65 waterproof front panel, as well as the rubber keypad, makes the VPD series much more reliable for rugged environments.

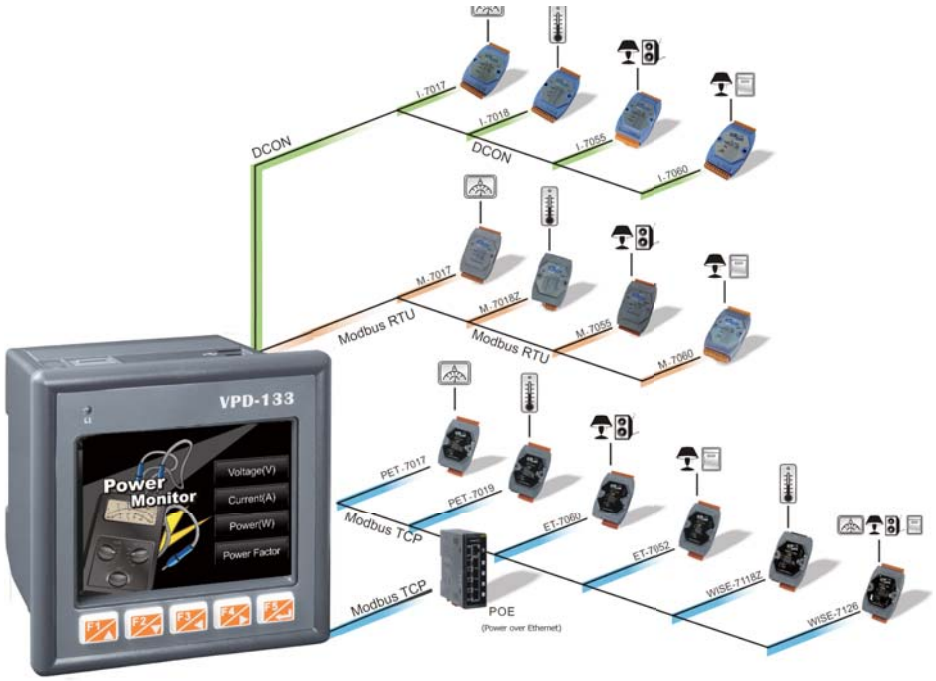
HMIWorks is a free development application for the VPD series that combines an easy-to-use environment with powerful and intuitive programming and graphics capabilities, allowing the creation of appealing graphical interface screens in minutes. For PLC users, HMIWorks includes the Ladder Designer development application, and for programmers, a C-language environment is provided. Importantly, learning how to create an application for TouchPAD series devices using Ladder Designer takes less than 30 minutes. With the wide variety of features provided, the VPD series of touch HMI devices can be considered one of the most cost-effective HMI solutions ever seen in the market.

Applications

DIN-Rail Mounting



Panel Mounting



Specifications

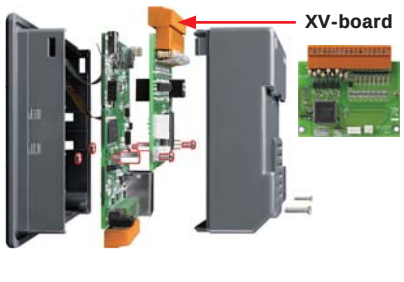
Models	VPD-130	VPD-130N	VPD-132	VPD-132N	VPD-133	VPD-133N
CPU Module						
CPU	32-bit RISC CPU					
Memory Expansion	16 MB SDRAM/8 MB Flash					
Real Time Clock (RTC)	Yes					
Buzzer	Yes					
Rotary Switch (0~9)	Yes					
Communication Interface						
COM1	RS-232/RS-485 including Self-Tuner		RS-485 (including Self-Tuner) and RS-232 (3-pin)			
COM2	-		RS-485 (including Self-Tuner)			
USB 1.1 Client	Firmware updates only					
Ethernet	-		-		RJ-45 x 1, 10/100 Base-TX	
I/O Expansion						
I/O Expansion Bus	-		Yes, XV-board			
MMI (Man Machine Interface)						
LCD	3.5" TFT (Resolution 240 x 320 x 16), defective pixels <= 3					
Backlight Life	20,000 hours					
Brightness	270 cd/m2					
LED Indicator	Yes	-	Yes	-	Yes	-
Touch Panel	Yes					
Reset Button	Yes					
Rubber Keypad	5 keys (Programmable)	-	5 keys (Programmable)	-	5 keys (Programmable)	-
Electrical						
Power Input Range	+12 ~ 48 VDC				+12 ~ 48 VDC or PoE	
Power Consumption	2 W				2 W or IEEE 802.3af, Class 1 (48 V)	
Mechanical						
Dimensions	103 mm x 103 mm x 53 mm (W x L x H)					
Ingress Protection	Front Panel: IP65					
Installation	DIN-Rail Mounting and Panel Mounting					
Environmental						
Operating Temperature	-20 ~ +50 °C					
Storage Temperature	-30 ~ +80 °C					
Ambient Relative Humidity	10 ~ 90% RH, Non-condensing					

Ordering Information

VPD-130 CR	3.5" Touch HMI Device with RS-232/RS-485, RTC, USB, Rubber Keypad (RoHS)
VPD-130N CR	3.5" Touch HMI Device with RS-232/RS-485, RTC, USB (RoHS)
VPD-132 CR	3.5" Touch HMI Device with RS-232/RS-485, RTC, USB, Rubber Keypad, Supports XV-board (RoHS)
VPD-132N CR	3.5" Touch HMI Device with RS-232/RS-485, RTC, USB, Supports XV-board (RoHS)
VPD-133 CR	3.5" Touch HMI Device with Ethernet, RS-232/RS-485, RTC, USB, Rubber Keypad, Supports XV-board (RoHS)
VPD-133N CR	3.5" Touch HMI Device with Ethernet, RS-232/RS-485, RTC, USB, Rubber Keypad, Supports XV-board (RoHS)

Accessories

CA-USB10	USB to 5P Mini-USB, 28AWG, 1.5 m	
MDR-60-24 CR	24 VDC/2.5 A, 60 W Power Supply, DIN-Rail Mountable (RoHS)	
DIN-KA52F CR	24 VDC/1.04 A, 25 W Power Supply, DIN-Rail Mountable (RoHS)	
XV-board 	The XV-board allows the VPD series to monitor/control remote I/O devices. **Note:** New XV-boards that support the VPD series will be coming soon. Contact your sales representative for details of the latest modules available.	
	DIO Board	XV107, XV107A, XV110, XV111, XV111A
	Relay Output Board	XV116
	Multifunction Board	XV308, XV310



VPD 4.3" Series

VPD-142/VPD-142N **VPD-143/VPD-143N**

Features

- Excellent Cost/Performance Ratio
- High-color, High-resolution Touch Screen
- RTC (Real Time Clock)
- Serial/Ethernet Communication Ports
- Rubber Keypad (VPD-142/VPD-143)
- GUI Design
- Free HMIWorks Development Tool
- Supports C Language and Ladder Designer
- Modbus TCP/RTU and DCON Protocols
- Supports User-defined Third-party Protocols (C Language)
- ESD Protection: 4 kV
- Front Panel: IP65 Waterproof
- I/O Expansion Board: XV-board

Introduction

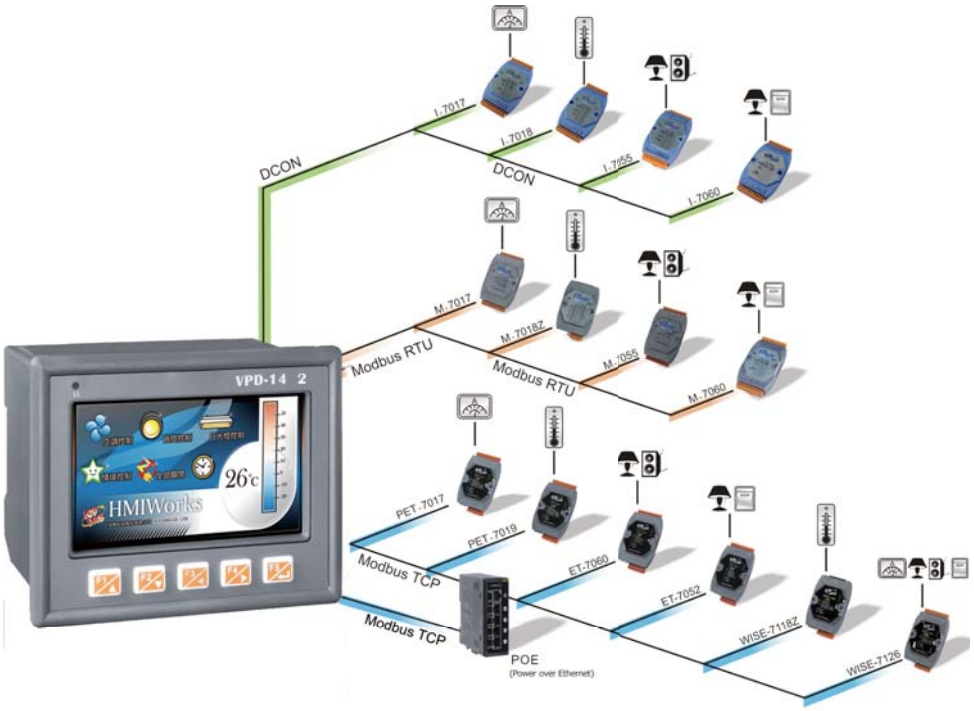
The **TouchPAD VPD 4.3" Series** is a family of industrial touch HMI devices that feature a 4.3" high-color, high-resolution LCD touch screen. By taking advantage of the touch screen capabilities, it is easy to deploy and integrate the TouchPAD VPD into a wide range of automation systems, making the systems more intuitive and efficient. Whether you are installing a new system or performing a system retrofit, the VPD series stands out for its variety of communication options, including built-in communication ports for RS-232/RS-485 and Ethernet (VPD-143/VPD-143N) interface, enabling seamless integration into the system and allowing users to remotely control and monitor I/O. In addition, the IP65 waterproof front panel, as well as the rubber keypad, makes the VPD series more reliable for rugged environments.

HMIWorks is a free development application for the VPD series that combines an easy-to-use environment with powerful and intuitive programming and graphics capabilities, allowing the creation of appealing graphical interface screens in minutes. For PLC users, HMIWorks includes the Ladder Designer development application, and for programmers, a C-language environment is provided. Importantly, learning how to create an application for TouchPAD series devices using Ladder Designer takes less than 30 minutes. With the wide variety of features provided, the VPD series of touch HMI devices can be considered one of the most cost-effective HMI solutions ever seen in the market.

Applications

DIN-Rail Mounting

Panel Mounting



Specifications

Models	VPD-142	VPD-142N	VPD-143	VPD-143N
CPU Module				
CPU	32-bit RISC CPU			
Memory Expansion	16 MB SDRAM / 8 MB Flash			
Real Time Clock (RTC)	Yes			
Buzzer	Yes			
Rotary Switch (0~9)	Yes			
Communication Interface				
COM1	One of RS-232 (3-pin) / RS-485 (including Self-Tuner)			
COM2	One of RS-232 (3-pin) / RS-485 (including Self-Tuner)			
USB 1.1 Client	Firmware updates only			
Ethernet	-		RJ-45 x 1, 10/100 Base-TX	
I/O Expansion				
I/O Expansion Bus	Yes, XV-board			
MMI (Man Machine Interface)				
LCD	4.3" TFT (Resolution 480 x 272 x 16), defective pixels <= 3			
Backlight Life	20,000 hours			
Brightness	400 cd/m2			
LED Indicator	Yes	-	Yes	-
Touch Panel	Yes			
Reset Button	Yes			
Rubber Keypad	5 keys (Programmable)	-	5 keys (Programmable)	-
Electrical				
Power Input Range	+12 ~ 48 V_{DC}			
PoE (Power over Ethernet)	-		IEEE 802.3af, Class1 (48 V)	
Power Consumption	2.5 W			
Mechanical				
Dimensions (W x L x H)	131 mm x 105 mm x 54 mm			
Ingress Protection	Front Panel: IP65			
Installation	DIN-Rail Mounting and Panel Mounting			
Environmental				
Operating Temperature	-20 ~ +50 °C			
Storage Temperature	-30 ~ +80 °C			
Ambient Relative Humidity	10 ~ 90% RH, non-condensing			

Ordering Information

VPD-142 CR	4.3" Touch HMI Device with RS-232/RS-485, RTC, USB, Rubber Keypad, Supports XV-board (RoHS)
VPD-142N CR	4.3" Touch HMI Device with RS-232/RS-485, RTC, USB, Supports XV-board (RoHS)
VPD-143 CR	4.3" Touch HMI Device with Ethernet, RS-232/RS-485, RTC, USB, Rubber Keypad, Supports XV-board(RoHS)
VPD-143N CR	4.3" Touch HMI Device with Ethernet, RS-232/RS-485, RTC, USB, Supports XV-board (RoHS)

Accessories

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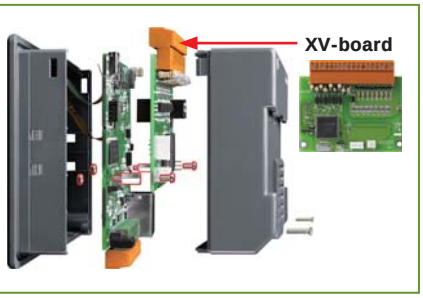

Color GUI

Touch Screen

Data Display

Multiple Communication Interfaces

Total Solutions for TouchPAD

Free Integrated Development Environment: HMIWorks Supports RS-485 & Ethernet Interfaces

- Excellent Cost/Performance Ratio
- High-color, High-resolution Touch Screen
- Supports C Language and Ladder Designer
- Supports the Modbus RTU/TCP and DCON Protocols
- Supports User-defined Third-party Protocols (C Language)
- Supports RS-232/RS-485 & PoE (Power over Ethernet)
- Wide Temperature Range (-20°C to +70°C), so functions perfectly in harsh environments
- Free HMIWorks Development Tool

3.5"
VPD-13x Series

2.8"
TPD-28x Series

4.3"
TPD-43x Series

I/O Expansion Board
(XV-board)

4.3"
VPD-14x Series

HMIWorks Software

The free HMIWorks development tool provides an easy-to-learn, rich and flexible graphical interface that allows a wide variety of applications to be implemented in a short period of time.