

ICP  
Industrial Com  
Touch



# TouchPAD



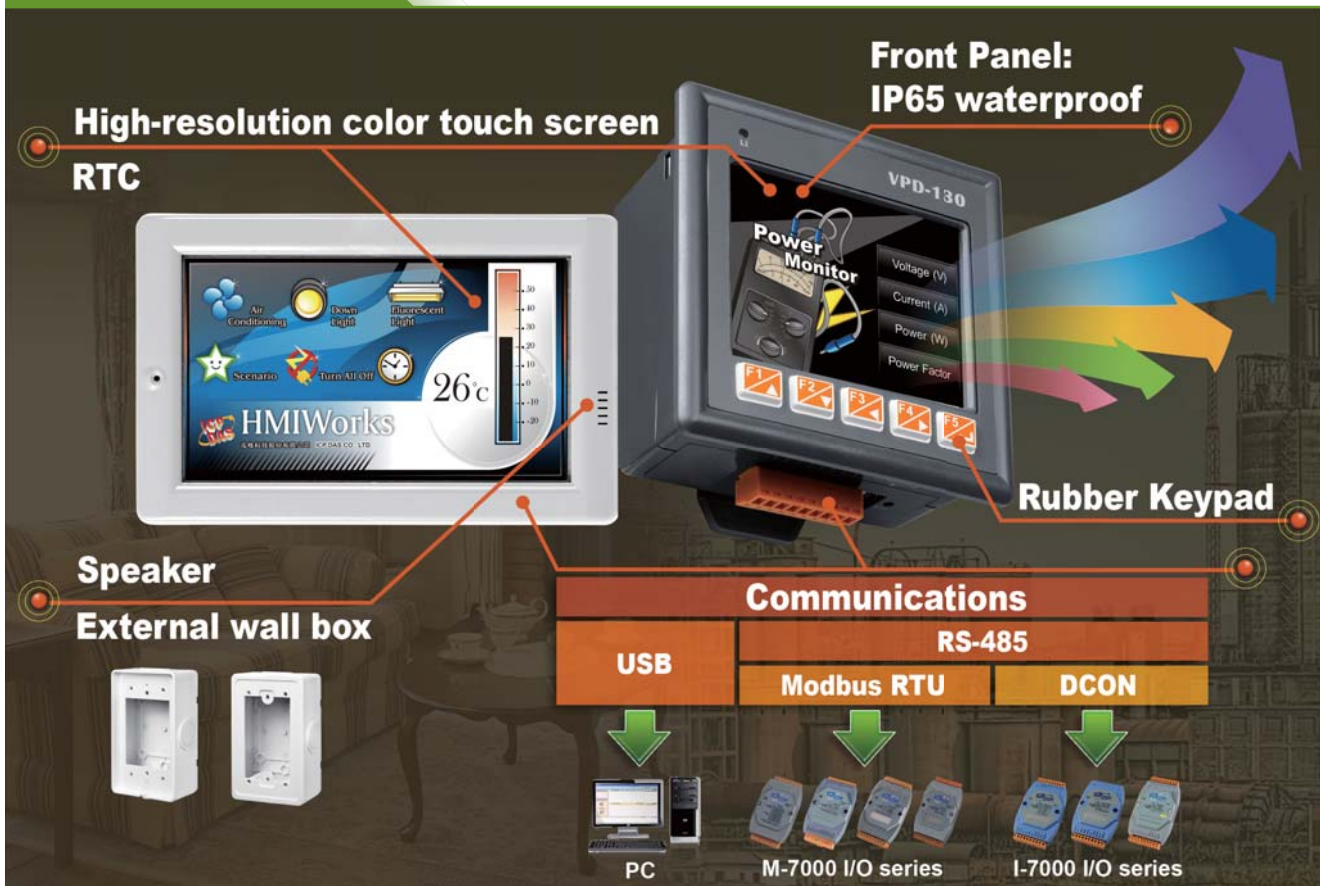
ICP DAS TouchPAD  
2012 Product Catalog

Vol. TouchPAD 1.0.02

# Touch HMI Devices

*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-resolution touch screen, RTC, and a variety of communication interfaces, including RS-232/RS-485, Ethernet, USB. However, each still has its own specific features for its respective target applications. For the TPD series, you can use an external wall box to help you smoothly blend the TPD series device into your decoration. For the VPD series, the rubber keypad, IP-65 waterproof front panel and DIN-Rail/panel mounting are designed for harsh environment, and are especially suitable for factories.



HMIWorks is a free development tool that can be used to design ladder diagrams for softPLC logic for TouchPAD. A single TouchPAD becomes a touch HMI device which runs ladder logics.

## Features

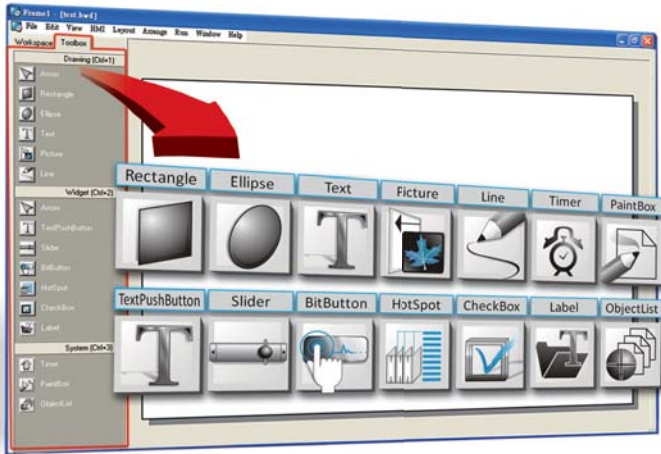


- Excellent C/P ratio (cost/performance)
- High-resolution color touch screen
- PoE (Power over Ethernet)
- RS-485 (including Self-Tuner)
- RTC (Real Time Clock)
- Speaker
- Rubber Keypad (VPD-130 only)
- WYSIWYG (What You See Is What You Get) GUI design
- Free HMIWorks development tool
- Supports the popular C programming language
- Supports Ladder Designer
- Modbus protocol enables remote control of I/O modules and integration with SCADA software
- ESD Protection: 4 kV
- Front Panel: IP65 Waterproof (VPD series only)
- Operating temperature: -20 ~ 70°C



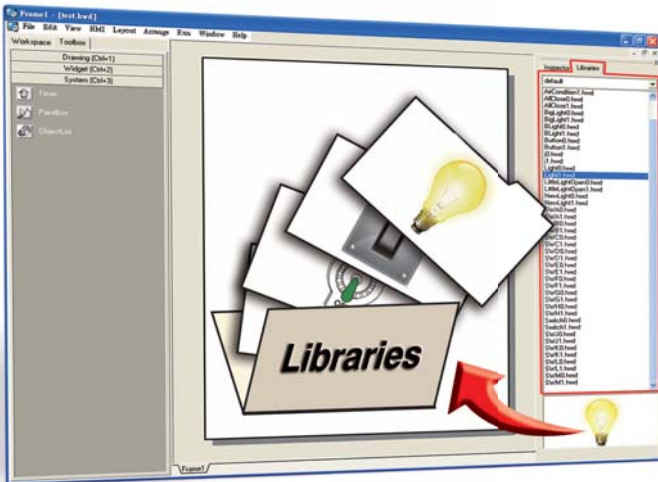
## 1. Support for a wide range of Widgets, Shorten Development Time

There are many widgets included in the HMIWorks development tool, including Rectangle, Ellipse, Text, Picture, Line, TextPushButton, Slider, BitButton, HotSpot, CheckBox, Label, Timer, PictureBox, ObjectList, providing the most commonly-used functions, such as drawings, event handlers, and timing control, which effectively shortens development time.



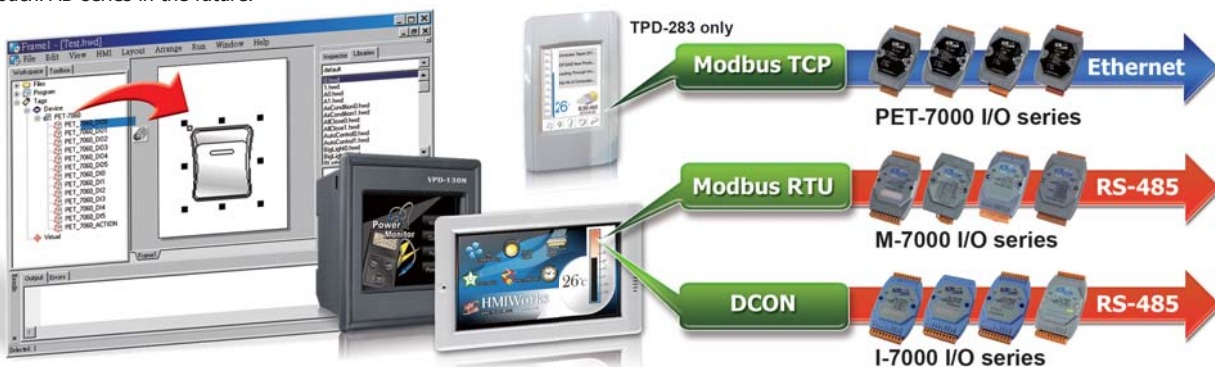
## 4. Built-in and Extensible Graphics Library

HMIWorks supports simple graphics functions and provides users with a variety of built-in graphics for common situations. Users can also add their own graphics to the library by the common painting or photo editing softwares.



## 6. Drag-and-drop, fully-integrated I/O Design

ICP DAS now supports many 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. Users can expect that additional I/O devices will be supported by HMIWorks for the TouchPAD series in the future.



## 2. 65536 Colors, Bright and Clear

Presently, LCD touch screens are available at 2.8", 3.5", 4.3" and the TouchPAD series includes different resolutions from 240 x 320 x 16 to 480 x 272 x 16. ICP DAS will expand this range in the future.

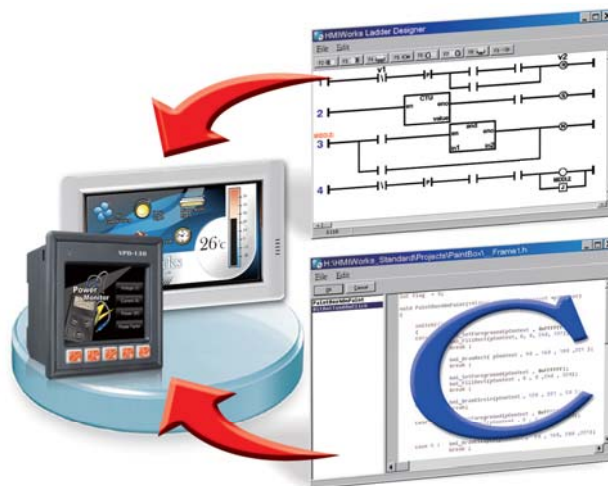


## 3. WYSIWYG Intuitive Design

"What You See Is What You Get" allows you to focus on what you want to do, not what you should do. By getting rid of the programming details and being more intuitive, everyone can easily finish their projects.



## 5. C Language and Ladder Diagram Programming



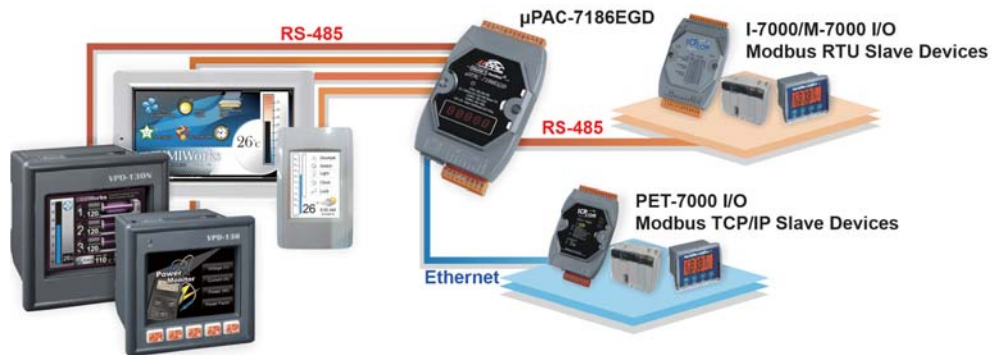
## 7. The Solution of Sophisticated Design

To realize multi-room touch or multi-terminal control in a large, complex system, users can utilize our PACs (Programmable Automation Controller) to bridge TouchPAD and a variety of I/O devices. Configured appropriately, PAC provides incredible power and flexibility to build a comprehensive system which spreads all of TouchPAD and all kinds of I/O devices.



## 8. The Cost Effective Solution for Complex System

Though  $\mu$ PAC-7186 has limited computing resources, using only  $\mu$ PAC-7186 is sufficient in some cases.



## External Wall Box for the TPD Series

The External Wall Box is a firm mounting solution designed to easily mount a TPD series device to a wall. The EWB-Txx is the most suitable mounting solution for concrete, brick, wood, or other solid surfaces where in-wall mounting is not possible. The EWB-Txx provides an endpoint for wiring and conceals cable runs.

EWB-T28	EWB-T43
External Wall Box for the TPD-280/TPD-280U/TPD-283	External Wall Box for the TPD-430

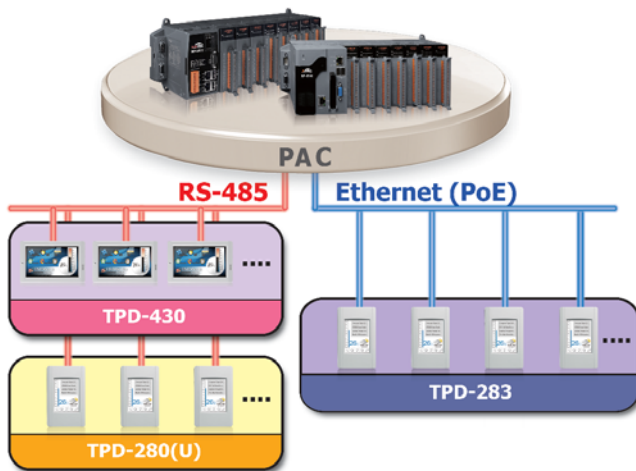
## Mounting

VPD-130/VPD-130N with DIN-Rail Mounting		
		TPD-430 with External Wall Box EWB-T43
		TPD-430 with US Outlet Box
TPD-280/TPD-280U/TPD-283 with External Wall Box EWB-T28	TPD-280/TPD-280U/TPD-283 with Outlet Box OB120	TPD-430-EU with European 86 x 86 mm Outlet Box
VPD-130/VPD-130N Panel Mounting		

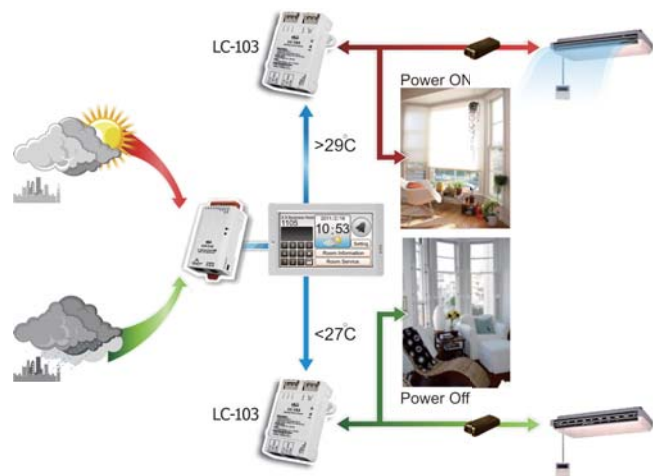


## • Applications

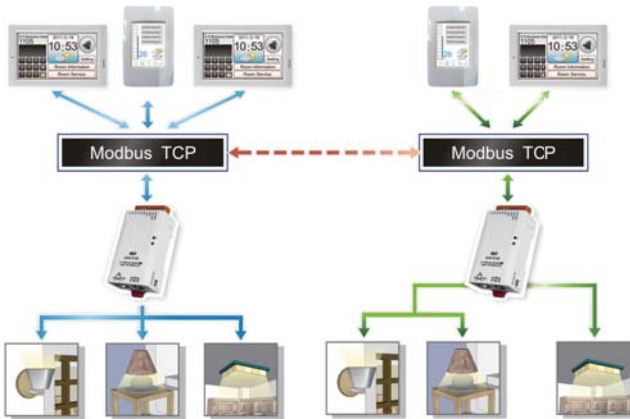
### Multi-Display



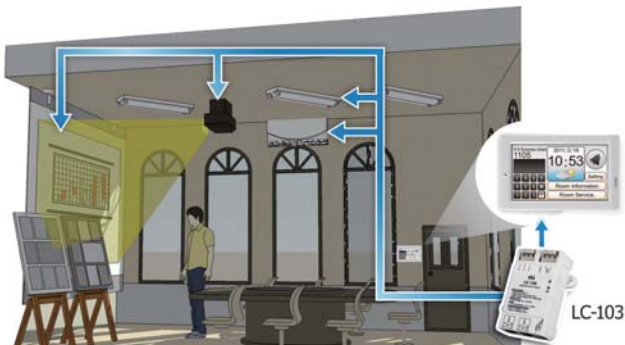
### Temperature Control Example



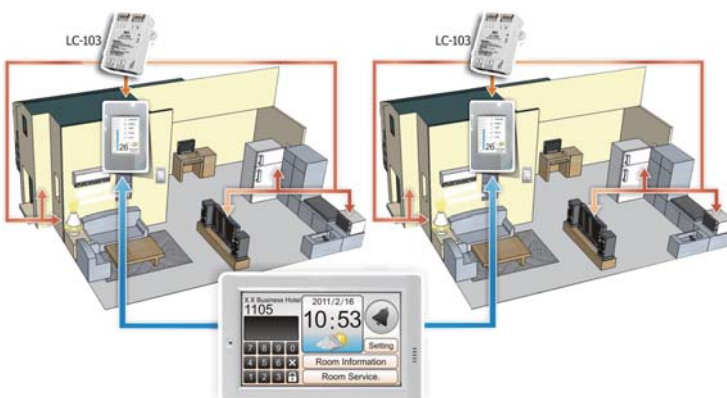
### Single-way, Two-way, Multi-way Switches Example



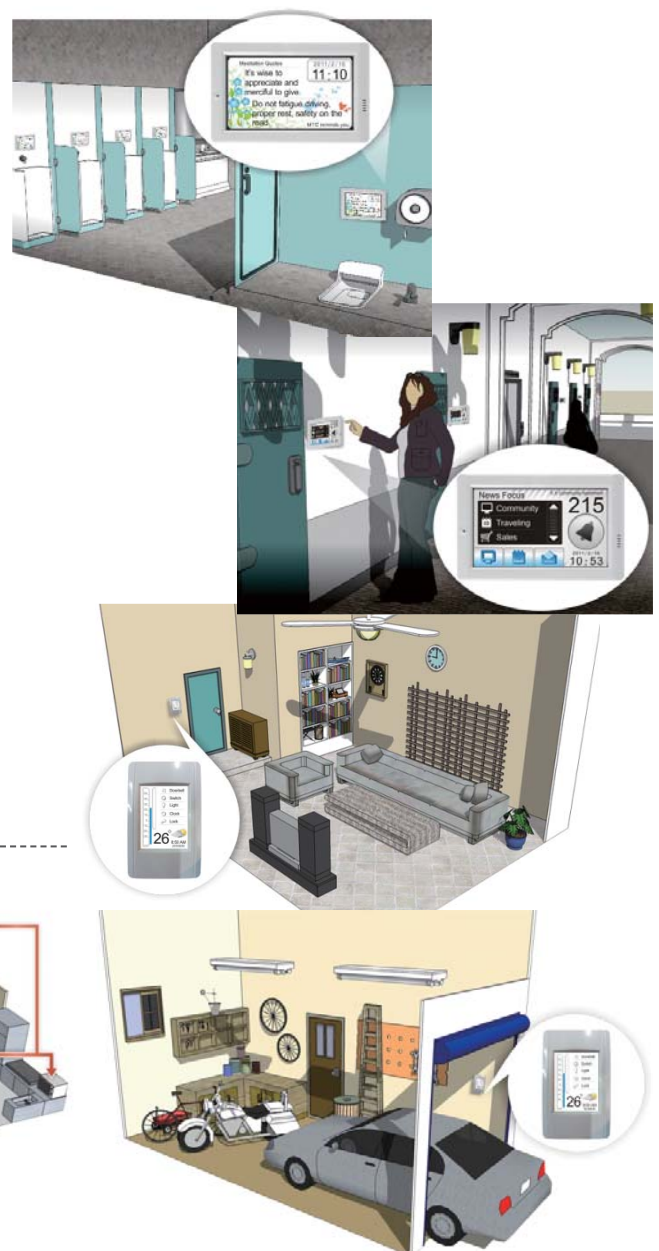
### Meeting Room Example



### Intelligent Building Example



### TouchPAD Anywhere



## • Applications

### Status Display

### Presentations

### User-defined HMI

#### Power Monitor

- Voltage (V)
- Current (A)
- Power (W)
- Power Factor

### Factory/Machine Automation

### Schedule Management with Built-in RTC

### Multi-display

### Multi-page Design

#### Setting CHMIWorks

	Time	Shutdown	Cumulative Time
1	120 <sub>m</sub>	Start	120 <sub>m</sub> Reset
2	120 <sub>m</sub>	Start	120 <sub>m</sub> Reset
3	120 <sub>m</sub>	Start	

#### CHMIWorks

1 120<sub>m</sub> Remaining

2 120<sub>m</sub> Remaining

3 120<sub>m</sub> Remaining

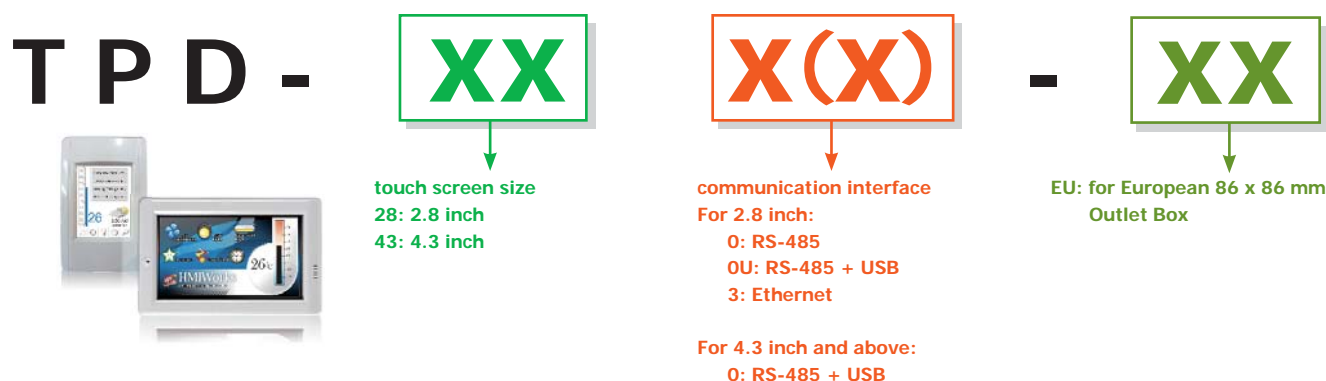
26°C

curr. val. 110 V

2010/03/23 11:25:25

## • Selection Guide

The format of the model name for the TPD series is as follows:

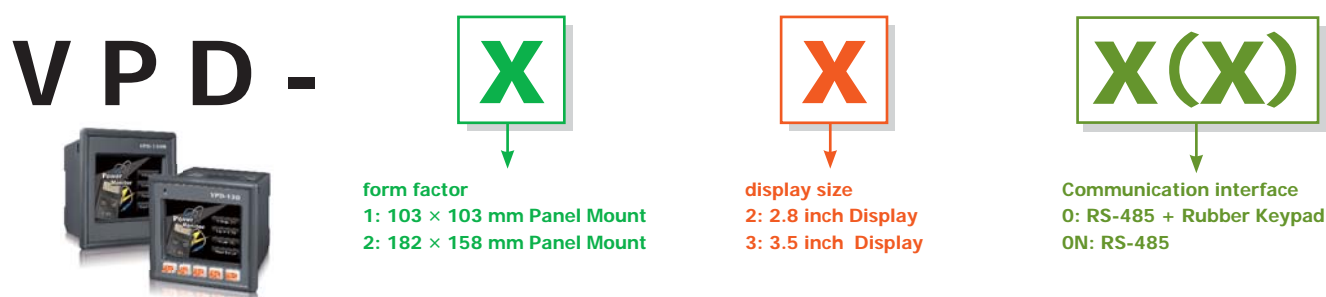


### TPD Series Models

Model Name	Memory Expansion	Image Storage Capacity	Communication Interface	LCD	RTC	USB 1.1 Client	Outlet Box	Power Input
TPD-280	-	1	RS-485 (including Self-Tuner)	2.8" TFT (Resolution 240 x 320 x 16)	-	-	-	+10 ~ 30 V <sub>DC</sub>
TPD-280U	16 MB SDRAM/ 8 MB Flash	54			Yes	Yes	-	
TPD-283	-	1	Ethernet (10/100 Mbps)		-	-	-	PoE (IEEE 802.3af, Class 1)
TPD-430	16 MB SDRAM/ 8 MB Flash	32	RS-485 (including Self-Tuner)	4.3" TFT (Resolution 480 x 272 x 16)	Yes	Yes	Suitable for the Outlet Box in United States	+10 ~ 30 V <sub>DC</sub>
TPD-430-EU		32					Suitable for the European 86 x 86 mm Outlet Box	

\* Image Storage Capacity strongly depends on the content and the size of images. The number in the table shows how many images in full screen size can be stored on the device.

The format of the model name for the VPD series is as follows:










### VPD Series Models

Model Name	Memory Expansion	Image Storage Capacity	Communication Interface	LCD	RTC	USB 1.1 Client	Rubber Keypad	Ingress Protection	Power Input
VPD-130	16 MB SDRAM/ 8 MB Flash	54	RS-232/RS-485 (including Self-Tuner)	3.5" TFT (Resolution 320 x 240 x 16)	Yes	Yes	Yes	Front Panel: IP65	+12 ~ 48 V <sub>DC</sub>
VPD-130N		54					-		

\* Image Storage Capacity strongly depends on the content and the size of images. The number in the table shows how many images in full screen size can be stored on the device.



## Specifications

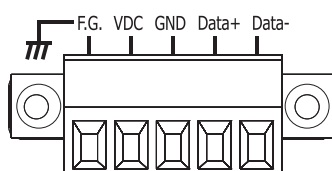
Models	TPD-283	TPD-280	TPD-280U	TPD-430	TPD-430-EU	VPD-130N	VPD-130
Image				<div>NEW</div> 	<div>NEW</div> 		
CPU Module							
CPU	32-bit RISC CPU						
Memory Expansion	-		16 MB SDRAM/8 MB Flash				
Real Time Clock (RTC)	-		Yes				
Speaker	-			Yes		-	
Buzzer	Yes			-		Yes	
Rotary Switch (0~9)	Yes						
Communication Interface							
Ethernet	RJ-45 x 1, 10/100 Base-TX	-					
Serial Port	-	RS-485 (including Self-Tuner)				RS-232/ RS-485 (including Self-Tuner)	
USB 1.1 Client	-		Firmware updates only				
MMI (Main Machine Interface)							
LCD (defective pixels <= 3)	2.8" TFT (Resolution 240 x 320 x 16)			4.3" TFT (Resolution 480 X 272 X 16)		3.5" TFT (Resolution 240 x 320 x 16)	
Backlight Life	20,000 hours						
Brightness	160 cd/m2			400 cd/m2		270 cd/m2	
LED Indicator	-			Yes		-	Yes
Reset Button	Yes						
Rubber Keypad	-						5 keys (Programmable)
Electrical							
Power Input Range	PoE	+10 ~ 30 V <sub>DC</sub>				+12 ~ 48 V <sub>DC</sub>	
Power Consumption	IEEE 802.3af, Class 1	1.2 W (50 mA @ 24 V <sub>DC</sub> )		2.5 W (104 mA @ 24 V <sub>DC</sub> )		2 W (83 mA @ 24 V <sub>DC</sub> )	
Mechanical							
Dimensions (W x L x H)	76 x 119 x 31 mm			126 x 82 x 24 mm	126 x 92 x 29 mm	103 x 103 x 53 mm	
Ingress Protection	-					Front Panel: IP65	
Installation	Wall Mounting			Wall Mounting (Note1)	Wall Mounting (Note2)	DIN-Rail and Panel Mounting	
Environmental							
Operating Temperature	-20 ~ +70 °C						
Storage Temperature	-30 ~ +80 °C						
Ambient Relative Humidity	10 ~ 90% RH, non-condensing						

Note1: Wall Mounting (Suitable for the outlet box in United States).

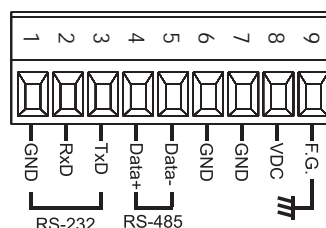
Note2: Wall Mounting (Suitable for the European 86 x 86 mm outlet box).

## Pin Assignments

TPD-280/TPD-280U/TPD-430/TPD-430-EU



VPD-130/VPD-130N



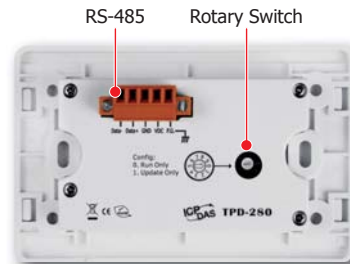


## • Appearance

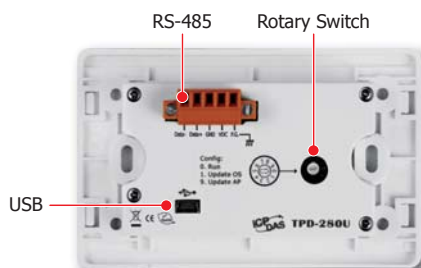
TPD-280/TPD-280U/TPD-283 Front View



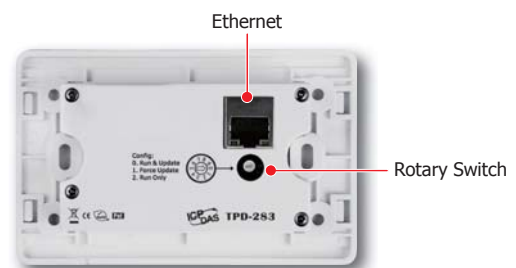
TPD-280 Rear View



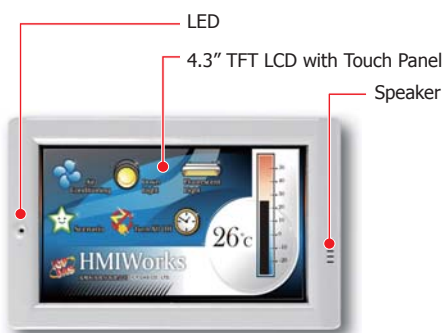
TPD-280U Rear View



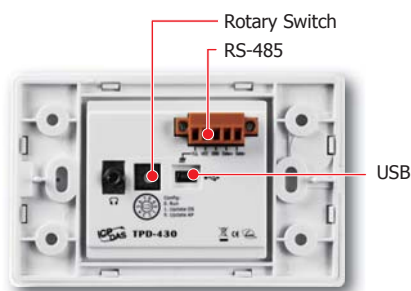
TPD-283 Rear View



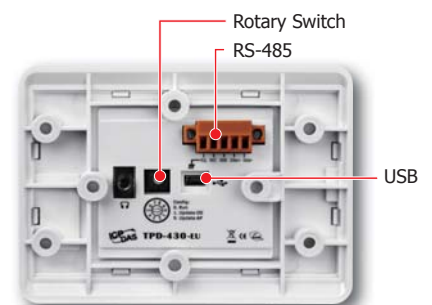
TPD-430/TPD-430-EU Front View



TPD-430 Rear View



TPD-430-EU Rear View



VPD-130 Front View



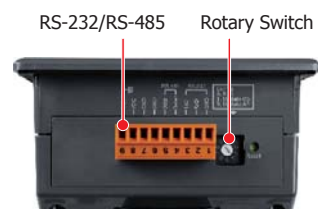
VPD-130N Front View



VPD-130/VPD-130N Top View



VPD-130/VPD-130N Bottom View

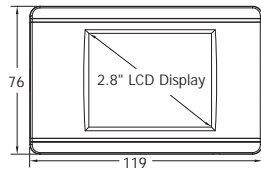


## • Dimensions (Units: mm)

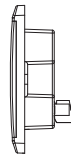
### TPD-280/TPD-280U



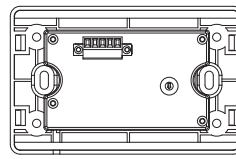
Left View



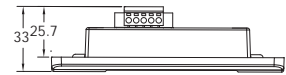
Front View



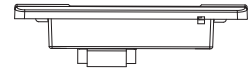
Right View



Rear View

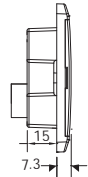


Top View

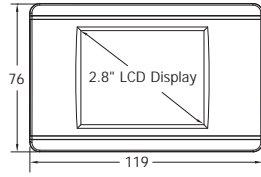


Bottom View

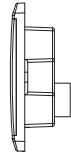
### TPD-283



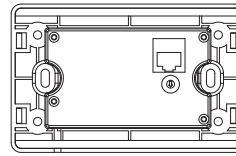
Left View



Front View



Right View



Rear View

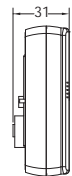


Top View

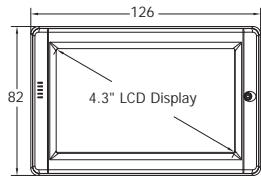


Bottom View

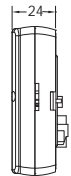
### TPD-430



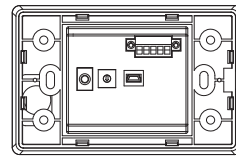
Left View



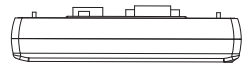
Front View



Right View



Rear View

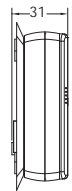


Top View

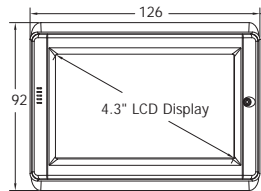


Bottom View

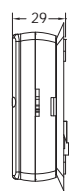
### TPD-430-EU



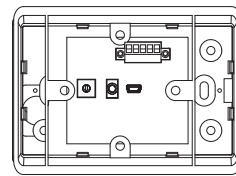
Left View



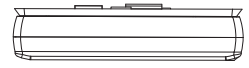
Front View



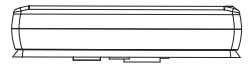
Right View



Rear View

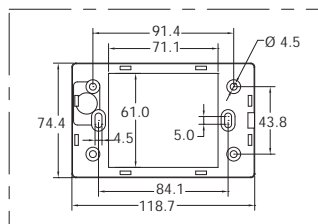


Top View



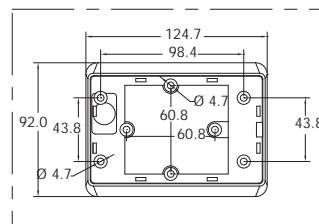
Bottom View

### TPD-430



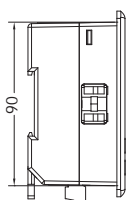
Wall Mounting

### TPD-430-EU

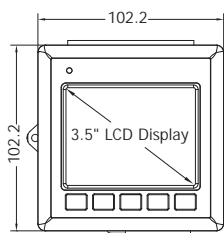


Wall Mounting

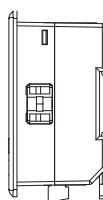
### VPD-130



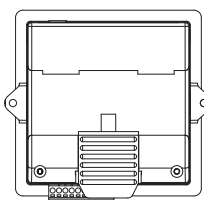
Left View



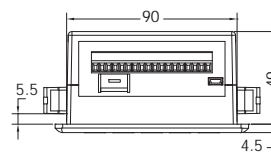
Front View



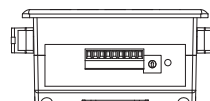
Right View



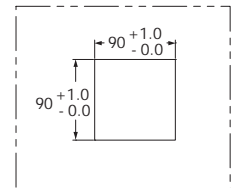
Rear View



Top View

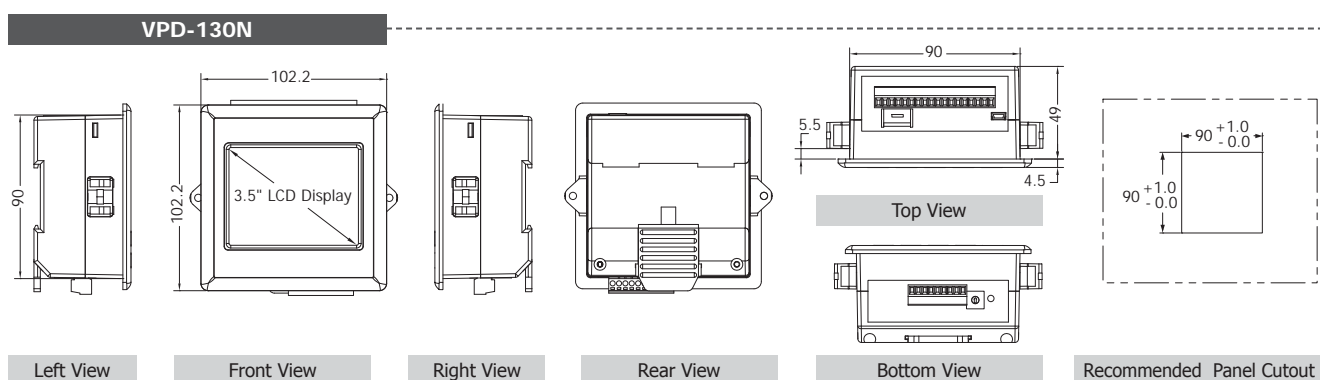


Bottom View



Recommended Panel Cutout





## • 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, USB, RTC (RoHS)
TPD-283 CR	2.8" Touch HMI device with Ethernet (PoE) (RoHS)
TPD-280U/S1 CR	2.8" Touch HMI device with RS-485, USB, RTC (RoHS) Includes Software CD x 1, 1C016 x 1, CA-USB10 x 1
TPD-430 CR	4.3" Touch HMI device with RS-485, USB, RTC, Suitable for the Outlet Box in United States (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-430/S1 CR	4.3" Touch HMI device with RS-485, USB, RTC, Suitable for the Outlet Box in United States (RoHS) Includes Software CD x 1, 1C016 x 1, CA-USB10 x 1
TPD-430-EU/S1 CR	4.3" Touch HMI device with RS-485, USB, RTC, Suitable for the European 86 x 86 mm Outlet Box (RoHS) Includes Software CD x 1, 1C016 x 1, CA-USB10 x 1
VPD-130 CR	3.5" Touch HMI device with RS-232/RS-485, USB, RTC, Rubber Keypad (RoHS)
VPD-130N CR	3.5" Touch HMI device with RS-232/RS-485, USB, RTC (RoHS)
VPD-130/S1 CR	3.5" Touch HMI device with RS-232/RS-485, USB, RTC, Rubber Keypad (RoHS) Includes Software CD x 1, CA-USB10 x 1
VPD-130N/S1 CR	3.5" Touch HMI device with RS-232/RS-485, USB, RTC (RoHS) Includes Software CD x 1, CA-USB10 x 1

## • Accessories

CA-USB10	1C016	NS-208PSE CR	MDR-60-24 CR	
				
USB to 5P Mini-USB, 28AWG, 1.5 m	2.4 mm Screw driver	Unmanaged Industrial PoE (Power over Ethernet) Ethernet Switch (RoHS)	24 Vdc/2.5 A, 60 W Power Supply with DIN-Rail Mounting (RoHS)	
DIN-KA52F CR	EWB-T28	EWB-T43	OB120	LC-103
				
24 Vdc/1.04 A, 25 W Power Supply with DIN-Rail Mounting (RoHS)	External Wall Box for TPD-280/TPD-280U/TPD-283 Devices	External Wall Box for TPD-430	Outlet Box for TPD-280/TPD-280U/TPD-283/ TPD-430 Devices	Lighting Control Module with RS-485

## Worldwide Contacts

### Taiwan

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