



### Features

- Excellent C/P ratio (cost/performance)
- High-resolution color touch screen
- RTC (Real Time Clock)
- Multiple serial communication interfaces
- Rubber Keypad (VPD-132/VPD-133)
- GUI design
- Free HMIWorks development tool
- Supports the popular C programming language
- Supports Ladder Designer
- ESD Protection: 4 kV
- Front Panel: IP65 Waterproof
- Supports XV Board
- Supports Ethernet (VPD-133/VPD-133N)
- Operating temperature: -20 ~ 70°C



### Introduction

VPD industrial touch HMI device series features, 3.5" high resolution color touch screen LCD. With touchscreen capability, it is easy to deploy into all kinds of automation systems, and make them more intuitive and efficient. Either setup new system installations or complete system retrofits, VPD series stands out for its wide variety of communication methods. Its built-in communication ports include RS-232/RS-485, and Ethernet, USB interface, enable integration into the system allowing users to control, monitor I/O at the remote sides and update firmware directly from the central computer. Besides, the built-in non-volatile storage makes VPD series more reliable for rugged environments.

HMIWorks, the free development software for VPD series, provides an easy-to-use environment, and powerful and intuitive programming with graphic capabilities to let users create appealing graphical interface screens in minutes. For PLC users, HMIWorks provides Ladder Designer and C language environment for IT users. Especially, it only takes no more than 30 minutes to learn how to create an application program when using Ladder Designer. With all the features provided, VPD series touch HMI Devices must be the most cost effective HMI Device ever been in the market.

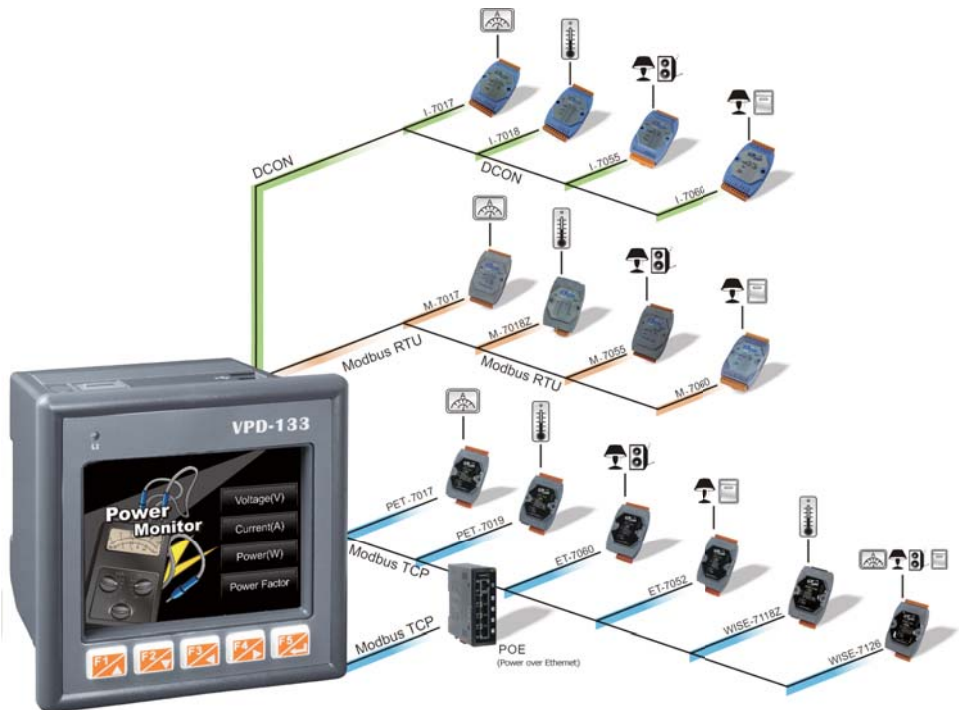
### Applications



VPD-132/VPD-132N/VPD-133/VPD-133N with DIN-Rail Mounting



VPD-132/VPD-132N/VPD-133/VPD-133N Panel Mounting



Applications

**Status Display**

**Presentations**

**Factory/Machine Automation**

**User-defined HMI**

**Power Monitor**

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

**Schedule Management with Built-in RTC**

**Multi-display**

**Multi-page Design**

	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	

**CHIMITWorks** Industrial Computer Product Data Acquisition System

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Touch HMI Devices

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VPD Series

VPD-132/VPD-132N/VPD-133/VPD-133N

## Specifications

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Touch HMI Devices

Models	VPD-132	VPD-132N	VPD-133	VPD-133N
<b>CPU Module</b>				
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			
<b>Communication Interface</b>				
COM1	RS-485 (including Self-Tuner) +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	
<b>I/O Expansion</b>				
I/O Expansion Bus	Yes, XV-board			
<b>MMI (Main Machine Interface)</b>				
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	-
Touch Panel	Yes			
Reset Button	Yes			
Rubber Keypad	5 keys (Programmable)	-	5 keys (Programmable)	-
<b>Electrical</b>				
Power Input Range	+12 ~ 48 Vdc			
Power Consumption	2 W (83 mA @ 24 Vdc)			
<b>Mechanical</b>				
Dimensions (W x L x H)	103 mm x103 mm x 53 mm			
Ingress Protection	Front Panel: IP65			
Installation	DIN-Rail Mounting and Panel Mounting			
<b>Environmental</b>				
Operating Temperature	-20 ~ +70 °C			
Storage Temperature	-30 ~ +80 °C			
Ambient Relative Humidity	10 ~ 90% RH, non-condensing			

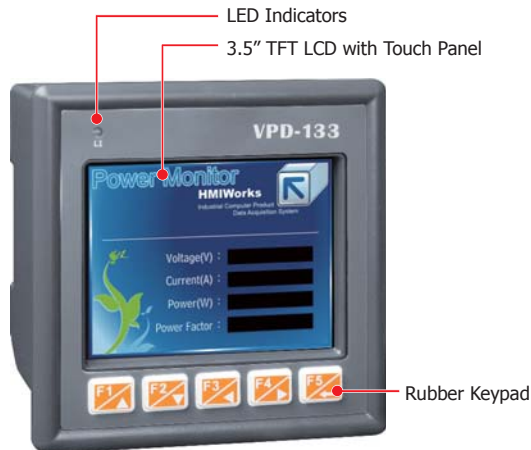
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VPD Series

## Appearance

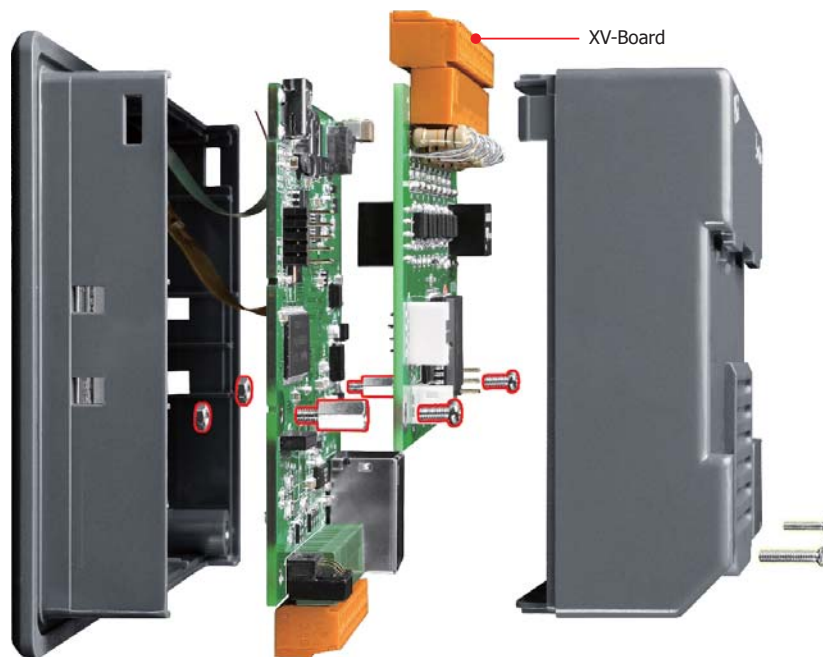
VPD-132/VPD-133 Front View


VPD-132N/VPD-133N Front View



VPD-132/VPD-132N/VPD-133/VPD-133N

## XV-Board Assembly Drawing



Relay output Board		
Model	XV116	
Image	<p>Available soon</p> 	
<b>Relay Output</b>		
Channel	6	
Type	Form A (SPST N.O.)	
Operating Voltage Range	250 VAC or 30 Vdc	
Max. Load Current	Relay 0 ~ 1: 2 A Relay 2 ~ 5: 4 A	
Operating Time	Relay 0 ~ 1: 4 ms Max. Relay 2 ~ 5: 5 ms Max.	
Release Time	Relay 0 ~ 1: 6 ms Max. Relay 2 ~ 5: 1 ms Max.	
Mechanical Life	Relay 0 ~ 1: 100 x 10 <sup>6</sup> cycles Relay 2 ~ 5: 30 x 10 <sup>6</sup> cycles	
On-Resistance	-	
Off-State Leakage Current	-	
Intra-module Isolation, Field to Logic	3750 Vdc	
<b>Digital Input</b>		
Channel	5	
Contact	Wet	
Sink/Source (NPN/PNP)	Sink/Source	
Wet Contact	On Voltage Level	+10 Vdc ~ 50 Vdc
	Off Voltage Level	+4 Vdc Max.
Input Impedance	10 KΩ	
Overvoltage Protection	60 Vdc	
Intra-module Isolation, Field to Logic	3750 Vdc	
<b>Power Requirements</b>		
Consumption	1W	

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Touch HMI Devices





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VPD Series

VPD-132/VPD-132N/VPD-133/VPD-133N

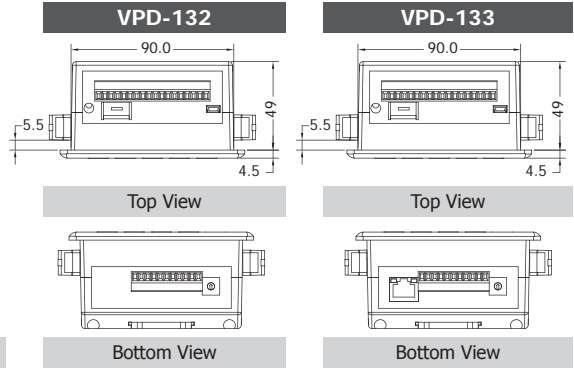
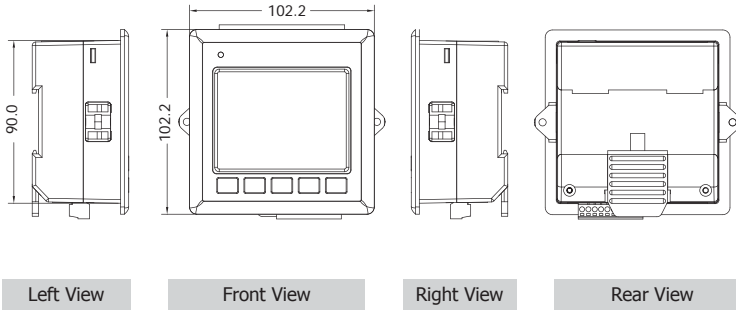
**DIO Board**

Model	XV107i	XV107Ai	XV110i	XV111i	XV111Ai
Image					
<b>Digital Input</b>					
Channel	8	8	16		
Contact	Wet	Wet	Dry+Wet		
Sink/Source (NPN/PNP)	Source	Sink	Sink/Source		
Wet Contact	On Voltage Level	+10 Vdc ~ +50 Vdc			
	Off Voltage Level	+4 Vdc Max.			
Dry Contact	On Voltage Level	-	Close to GND		
	Off Voltage Level	-	Open		
Counters	Max. Count	65535 (16-bit)			
	Max. Input Frequency	100 Hz			
	Min. Pulse Width	5 ms			
Input Impedance	10 KΩ				
Oversvoltage Protection	70 Vdc				
Intra-module Isolation, Field to Logic	3750 Vdc				
<b>Digital Output</b>					
Channel	8			16	
Type	Open Collector	Open Emitter		Open Collector	Open Emitter
Sink/Source (NPN/PNP)	Sink	Source		Sink	Source
Load Voltage	+3.5 Vdc ~ 50 Vdc	+10 Vdc ~ 40 Vdc	-	+3.5 Vdc ~ 50 Vdc	+10 Vdc ~ 40 Vdc
Max. Load Current	700 mA/channel			600 mA/channel	
Overload Protection	1.4 A			1.4 A	
Intra-module Isolation, Field to Logic	3750 Vdc			3750 Vdc	
<b>Power Requirements</b>					
Consumption	0.2 W		0.6 W	0.3 W	

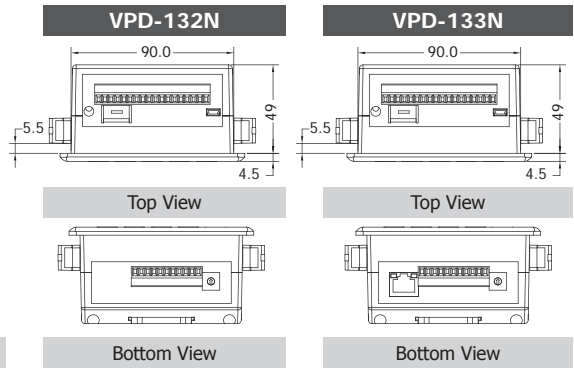
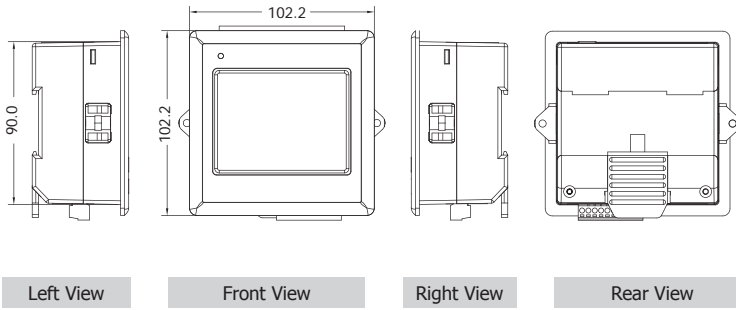
Multifunction Board				
Model	XV304i	XV308i	XV310i	XV305i
Image				
<b>Analog Input</b>				
Channel	6	8	4	8
Wiring	Single-Ended			Differential
Sensor Type	+/- 1 V, +/- 2.5 V, +/- 5 V, +/- 10 V, 0 ~ 20 mA, 4 ~ 20 mA, +/-20 mA ( Jumper selectable )			<b>Thermistor</b> Precon ST-A3, Fenwell U, YSI L100, YSI L300, YSI L1000, YSI B2252, SI B3000, YSI B5000, SI B6000, YSI B10000, YSI H10000, YSI H30000, User-defined
Resolution	Normal Mode	14-bit		16-bit
	Fast Mode	12-bit		
Sampling Rate	Normal Mode	10 Hz		8 Hz
	Fast Mode	200 Hz		
Input Impedance	10 MΩ			-
Overvoltage Protection	120 VDC			
Overcurrent Protection	1000 mA			
Isolation	2500 VDC			
<b>Analog Output</b>				
Channel	1	-	2	-
Range	0 ~ 10 VDC, 0 ~ 20 mA, 4 ~ 20 mA, ( Jumper selectable )		0 ~ 10 VDC, 0 ~ 20 mA, 4 ~ 20 mA, ( Jumper selectable )	
Resolution	12-bit		12-bit	
Output Capacity	20 mA		10 mA	
Isolation	2500 VDC		2500 VDC	
<b>Digital Input</b>				
Channel	4			-
Contact	Dry			
Sink/Source (NPN/PNP)	Source			
Wet Contact	On Voltage Level	Close to GND		
	Off Voltage Level	Open		
Overload Protection	30 Vdc			
<b>Digital Output</b>				
Channel	4	4	4	8
Type	Open Collector			
Sink/Source (NPN/PNP)	Sink			
Load Voltage	+10 VDC ~ +50 VDC			
Max. Load Current	700 mA/Channel			
Overload Protection	1.4 A			
<b>Power Requirements</b>				
Consumption	1 W			

### ■ Dimensions (Units: mm)

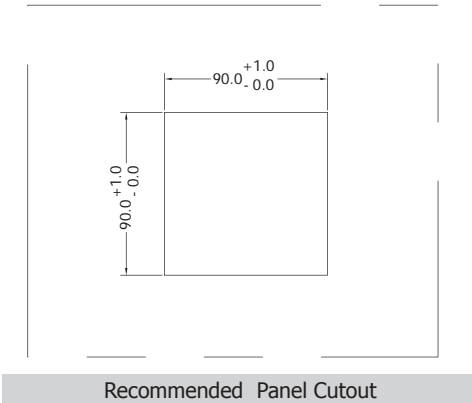
#### VPD-132/VPD-133



#### VPD-132N/VPD-133N

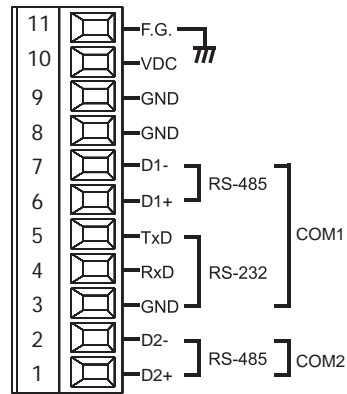


#### VPD-132/VPD-132N/VPD-133/VPD-133N



### ■ Pin Assignments

#### VPD-132/VPD-132N/VPD-133/VPD-133N



### ■ Ordering Information

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

### ■ Accessories

CA-USB10	USB to 5P Mini-USB, 28AWG, 1.5 m
MDR-60-24 CR	24 Vdc/2.5A, 60 W Power Supply with DIN-Rail Mounting (RoHS)
DIN-KA52F CR	24 Vdc/1.04 A, 25 W Power Supply with DIN-Rail Mounting (RoHS)