



**VP-1238-CE7 VP-4238-CE7  
VP-6238-CE7**

Win-GRAF based ViewPAC

**Features**

- 5.7"/10.4"/15" TFT LCD
- Cortex-A8 CPU (32-bit & 1 GHz)
- Windows CE.NET 7.0 Inside
- Embedded Win-GRAF SoftLogic (IEC 61131-3)
- Hard Real-Time Capability
- 3 Slots for High Profile I/O Modules
- IP65 Compliant Front Panel
- Modbus RTU/TCP (Master, Slave)
- Support eLogger HMI
- Audio with Microphone-In and Earphone-Out
- Operating Temperature: -20 ~ +70 °C



**Introduction**

The Win-GRAF ViewPAC with I/O slot Series (VP-1238-CE7, VP-4238-CE7, VP-6238-CE7) is the new generation WinCE 7.0 based Win-GRAF PAC (Programmable Automation Controller) from ICP DAS. Each PAC is equipped with a Cortex-A8 CPU (32-bit & 1 GHz) running a Windows CE 7.0 operating system, a variety of input/output ports (USB, Ethernet, RS-232/485), 3 I/O slots that can be used to integrate high performance parallel I/O modules (high profile I-8K Series) or serial I/O modules (high profile I-87K series), and a 5.7" /10.4" /15" TFT LCD with a rubber keypad.

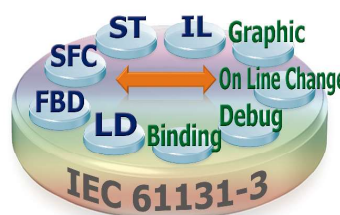
The Win-GRAF ViewPAC are capable of running Win-GRAF (IEC 61131-3 Standard) software to develop logic control, and also provide a free HMI software "eLogger" to edit the HMI by graphical drag and drop the HMI objects, or support M.S. VS 2008 software (VB .NET, C#) to develop HMI and data management applications, and all can exchange data with Win-GRAF applications. So the application's design is more convenient and practical.

**Win-GRAF**

Win-GRAF is a powerful, PLC-like, softlogic development software. It is installed on PC with windows 7/8 (or later version). It supports the international PLC language standard - IEC 61131-3 - Ladder Diagram (LD), Function Block Diagram (FBD), Sequential Function Chart (SFC), Structured Text (ST), Instruction Set (IL), suitable to develop applications for the full range of Win-GRAF PACs from ICP DAS.

**The features of the Win-GRAF:**

- IEC 61131-3 Standard Open PLC Syntax (LD, FBD, SFC, ST, IL)
- Using ST Syntax in the FBD or LD Program
- Event Triggered Data Binding (Exchange Data between PACs)
- Online Debugging/Control/Monitoring, Offline Simulation
- On Line Change
- Various Protocols:
  - Modbus TCP/UDP, Modbus RTU/ASCII Master
  - Modbus TCP, RTU Slave
  - DCON ...
- Plenty of Functions, Function Blocks, I/O Boards
- Redundancy
  - For XP-8xx8-CE6 and RPAC-2658M



## ■ PAC Specifications

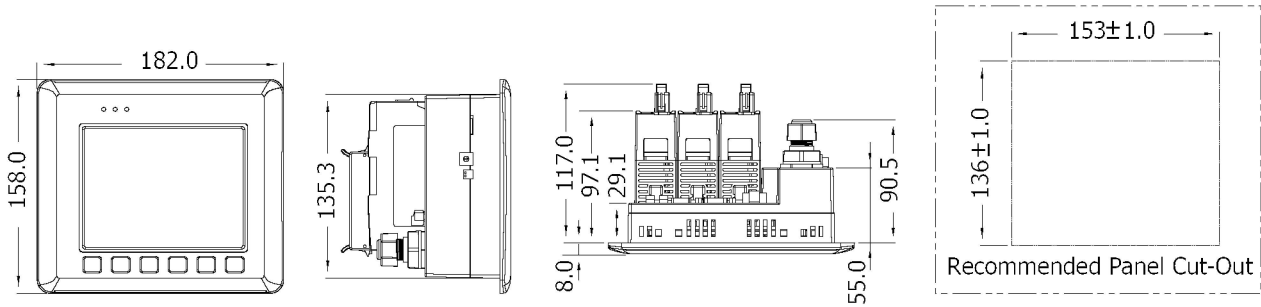
Models	VP-1238-CE7	VP-4238-CE7	VP-6238-CE7
<b>MMI (Man Machine Interface)</b>			
LCD	5.7" TFT (Resolution 640 x 480)	10.4" TFT (Resolution 800 x 600)	15" TFT (Resolution 1027 x 768)
Touch Panel	Yes		
Rubber Keypad	6 Keys	-	
Audio	Microphone-In and Earphone-Out	Earphone-Out	Microphone-In and Earphone-Out
LED Indicators	1 x System, 1 x Power, 1 x Ethernet, 3 x Programmable	1 x System, 1 x Power	
<b>System Software</b>			
OS	Windows CE 7.0		
Framework Support	.NET Compact Framework 3.5		
Embedded Service	FTP server, Web server (support VB script, JAVA script), SQL Compact Edition 3.5		
SDK Provided	DII for VC, DII for Visual Studio.Net 2008		
Multilanguage Support	English, German, French, Spanish, Russian, Italian, Korean, Simplified Chinese, Traditional Chinese		
<b>Development Software</b>			
Win-GRAF Software	Win-GRAF	IEC 61131-3 standard	
	Languages	LD, ST, FBD, SFC, IL	
	Max. Code Size	2 MB	
	Scan Time	3 ~ 15 ms for normal program; 15 ~ 50 ms (or more) for complex or large program	
Non-Win-GRAF	Options: VS.NET 2008 (VB.NET, C#.NET, C)		
<b>CPU Module</b>			
CPU	Cortex-A8 (32-bit and 1 GHz)		
SDRAM	512 MB		
MRAM	128 MB		
Flash	256 MB		
EEPROM	16 KB		
Expansion Flash Memory	4 GB microSD card (up to 32 GB)	A SD/microSD adapter and 4 GB microSD card (up to 32 GB)	
RTC (Real Time Clock)	Provides seconds, minutes, hours, day of week/month, month and year, valid from 1980 to 2079		
64-bit Hardware Serial Number	Yes		
Watchdog Timer	Yes		
Rotary Switch	1 x 10 Position (0 ~ 9)		
<b>Communication Interface</b>			
Ethernet	RJ-45 x 1, 10/100/1000 Base-T (Auto-negotiating, Auto MDI/MDI-X, LED indicators)		
USB 2.0 (host)	1	2	
COM 0	Internal communication with I-87K modules in slots		
COM 1	-	RS-232 (Rx/D, Tx/D, CTS, RTS, DSR, DTR, CD, RI and GND); Non-isolated	
COM 2	RS-485 (D2+, D2-); self-tuner ASIC inside; 2500 VDC Isolated		
COM 3	RS-232 (Rx/D, Tx/D, CTS, RTS, DSR, DTR, CD, RI and GND); Non-isolated	-	
<b>I/O Expansion Slot</b>			
Slot Number	3 (For High Profile I-8K and I-87K Modules Only)		
<b>Mechanical</b>			
Dimensions (W x H x D)	182 mm x 158 mm x 125 mm	293 mm x 229 mm x 129 mm	381 mm x 305 mm x 139 mm
Panel Cut-out (W x H)	153 mm x 136 mm ± 1.0 mm	276 mm x 214 mm ± 1.0 mm	366 mm x 290 mm ± 1.0 mm
Ingress Protection	Front panel: IP65		
Weight	1.5 Kg	3.6 Kg	4.9 Kg
<b>Environmental</b>			
Operating Temperature	-20 ° C ~ +70 ° C		
Storage Temperature	-30 ° C ~ +80 ° C		
Ambient Relative Humidity	10% ~ 90% RH, non-condensing		
<b>Power</b>			
Input Range	+10 ~ +30 VDC	+10 ~ +30 VDC (Redundant Power Inputs)	
Isolation	1 kV		
Capacity	2.5 A, 5 V supply to I/O expansion slots		
Consumption	0.3 A @ 24 VDC	0.45 A @ 24 VDC	0.65 A @ 24 VDC

## Win-GRAF Specifications

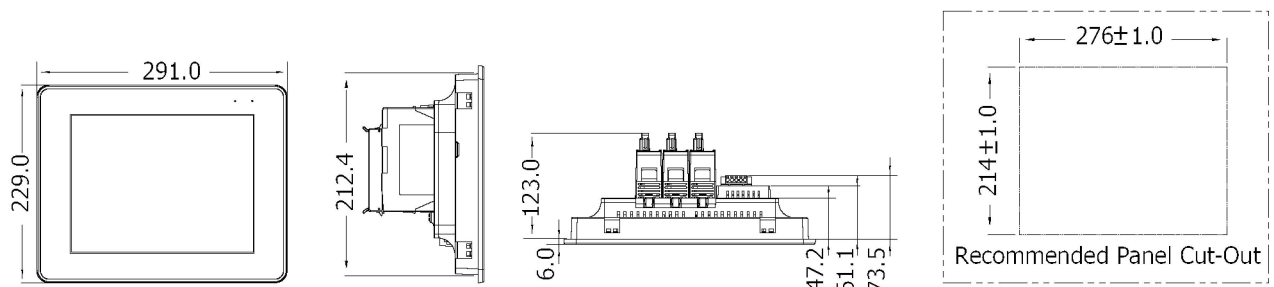
Protocols (Note that certain protocols require optional devices)	
NET ID	1~255, for Modbus TCP/RTU Slave, user-assigned
Modbus TCP/IP Master	A max. of 200 IP links to access/control the devices supporting Standard Modbus TCP/IP Slave protocol.
Modbus RTU/ASCII Master	A max. of 14 ports: COM1, 2, 3 and COM5 to 16 (*)
	Using COM ports to connect other Modbus Slave devices (Like M-7000). Recommend connecting no more than 32 devices in each port for better scan rate.
Modbus RTU Slave	A max. of 14 ports: COM1, 2, 3 and COM5 to 16 (*)
	Using COM ports for connecting SCADA/HMI.
Modbus TCP/IP Slave	One Ethernet ports (LAN1) support up to 64 connections. If the PAC uses 1 connection to connect each PC/HMI, it can connect up to 64 PCs/HMIs; If the PAC uses 2 connections to connect each PC/HMI, it can connect up to 32 PCs/HMIs; If one of the Ethernet port malfunctions, the other one can still be used to connect the PC/HMI.
User-defined Protocol	COM1, 2, 3 and COM5 to 16 (*)
	Custom protocols can be applied at COM by using Serial communication functions or function blocks.
DCON Remote I/O	A max. of 14 RS-485 ports: COM1, 2, 3 and COM5 to 16 (*)
	Each port can connect max. 50 nos I-7000 series modules or 50 nos I-87xxW I/O modules in expansion units (I-87K4, I-87K8, I-87K9, RU-87P8, RU-87P4). Recommend connecting no more than 32 modules in each port for better scan rate.
Local I/O Modules	Supports only high profile I/O modules. Slot 0~2 supports I-8xxxW parallel I/O modules and I-87xxxW serial I/O modules.
App Protection	Using the unique 64-bit (8 bytes) PAC serial number to generate a protection password by your own algorithm to protect your Win-GRAF application. Then, if someone intend to copy your application in the PAC to another new PAC with the same PAC model, this application will not work properly in that new PAC.
Data Binding	Exchange data between ICP DAS Win-GRAF PAC via Ethernet port (LAN1). The data transmission is event triggered. It is much efficient than polling way.
On Line Change	For application field that not allowed to stop the Win-GRAF program and wish to run a new program modified a little from the original program.
Modbus RTU I/O	When software enables Modbus RTU Master function, the PAC can connect ICP DAS M-7000 and tM series and LC series I/O modules which support Modbus RTU protocol.
Modbus TCP I/O	When software enable Modbus TCP Master function, the PAC can connect ET-7000, I-8KE4/8-MTCP and tPET/tET series I/O modules of ICP DAS which support Modbus TCP protocol.
Schedule Control	Supports the "Schedule-Control Utility" (free) to implement schedule control. Each PAC can control max. 10 Targets (devices) with different schedule settings in each day / holiday / special day / season / year.
Retain Variables	Built-in the fast retain memory that can retain up to 12,000 Win-GRAF variables.
File Access & Data Log	The Win-GRAF supports file operation functions to read/write files in the PAC's micro_SD or flash memory to do data log or file access.
eLogger HMI	Support to run HMI program (developed by the eLogger) together with the Win-GRAF logic-control program in the same PAC.
<p><b>* Note: The COM5 ~ COM16 ports are located in the expansion boards if they are installed in slot 0 ~ 2 of PAC. VP-1238-CE7 has no COM1 and VP-4238-CE7/VP-6238-CE7 has no COM3.</b></p>	

## Dimensions

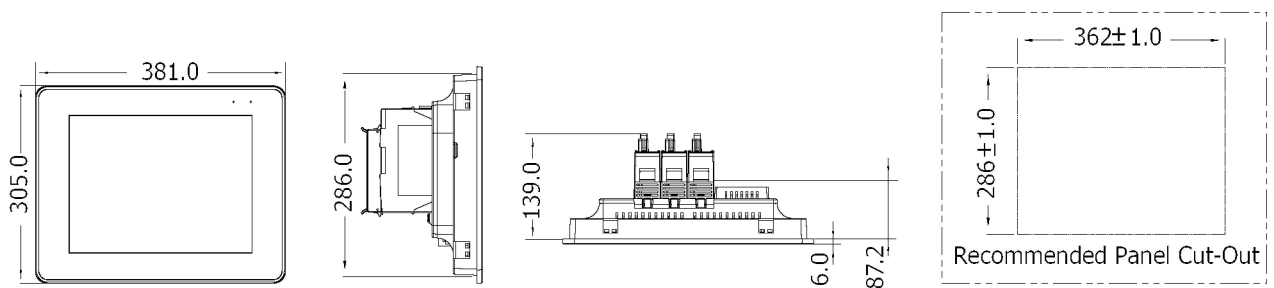
### VP-1238-CE7



### VP-4238-CE7

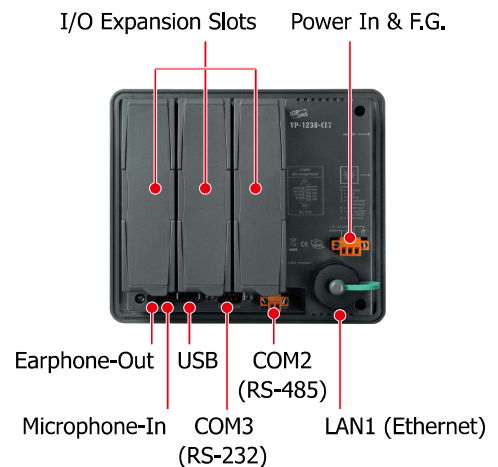
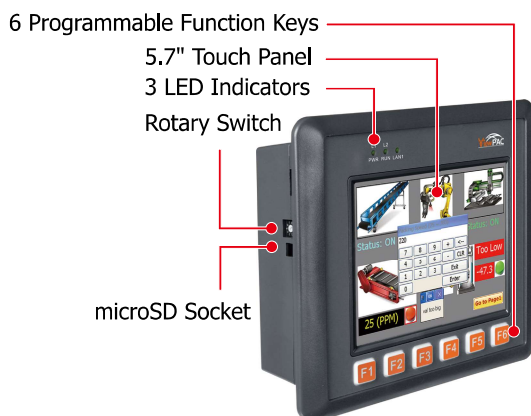


### VP-6238-CE7

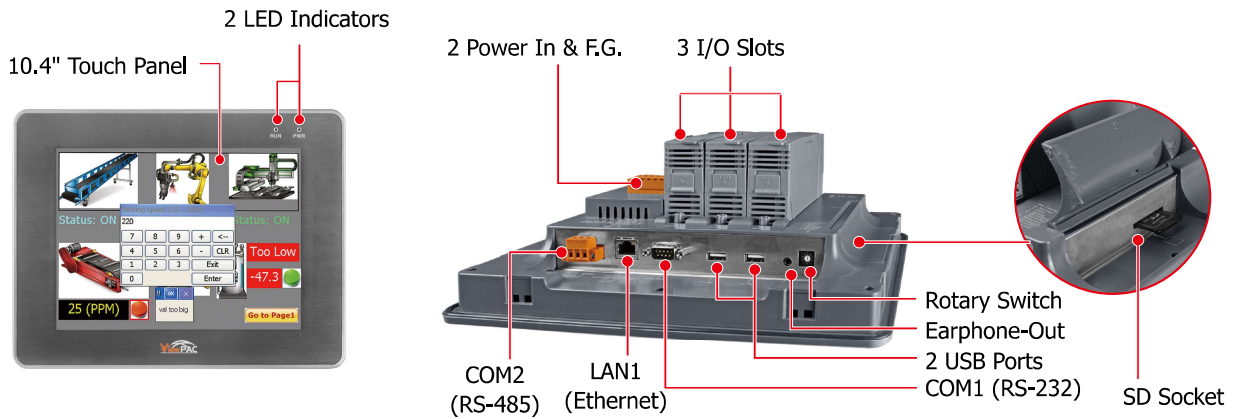


## Appearance

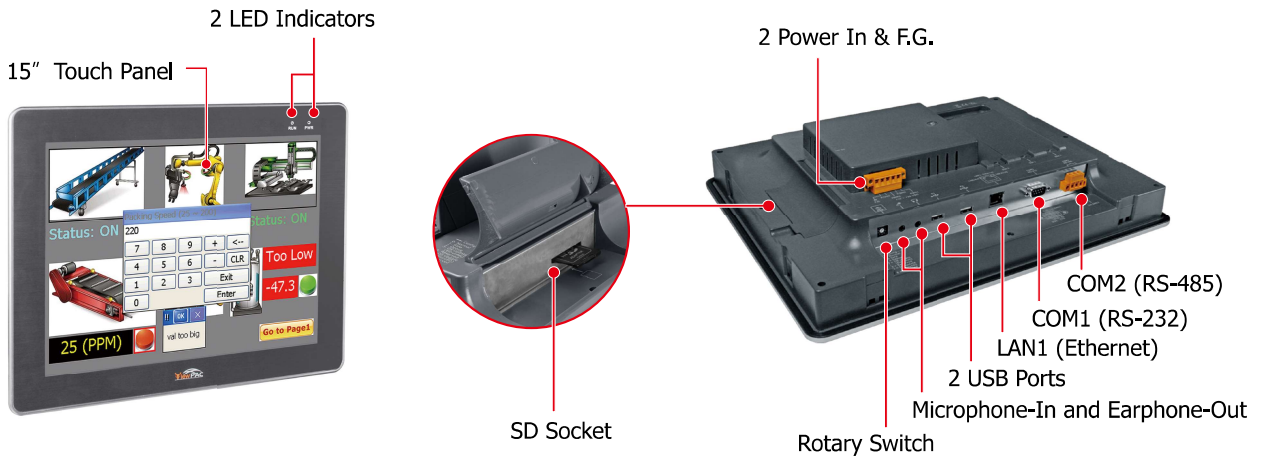
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### VP-4238-CE7

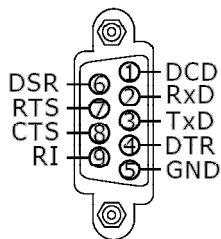


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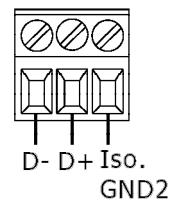


### Pin Assignment

COM1/COM3: RS-232



COM2: RS-485



### Ordering Information

<b>VP-1238-CE7 CR</b>	Win-GRAF based ViewPAC with 5.7" LCD and 3 I/O slots (RoHS)
<b>VP-4238-CE7 CR</b>	Win-GRAF based ViewPAC with 10.4" LCD and 3 I/O slots (RoHS)
<b>VP-6238-CE7 CR</b>	Win-GRAF based ViewPAC with 15" LCD and 3 I/O slots (RoHS)

### Related Products

Win-GRAF Development Software	
<b>Win-GRAF Workbench</b>	Win-GRAF Workbench Software (Large I/O Tags) with one USB Dongle