



XP-8038-CE6 **XP-8338-CE6**





XP-8138-CE6 **XP-8738-CE6**

Win-GRAF based XPAC-8000-CE6

Features

- x86 CPU, 1.0 GHz, dual-core
- Windows CE 6.0
- Embedded Win-GRAF SoftLogic (IEC 61131-3)
- Built-in RTC (Real-Time Clock)
- Built-in VGA port
- Multiple Communication Interfaces
- Various Storage Options
- Support Dual Controller Redundancy
- Support eLogger HMI

Introduction

The Win-GRAF XPAC-8000-CE6 series—comprising models XP-8038-CE6, XP-8138-CE6, XP-8338-CE6, and XP-8738-CE6—is a next-generation dual-Ethernet Programmable Automation Controller (PAC) from ICP DAS, featuring the Win-GRAF soft logic platform and running on the Windows CE 6.0 operating system. This series is powered by a 1 GHz dual-core x86 CPU and includes various communication interfaces (VGA, USB, Ethernet, RS-232/485), along with 0, 1, 3, or 7 I/O slots that support high-performance I-8K parallel I/O modules and I-87K serial I/O modules for flexible system expansion.

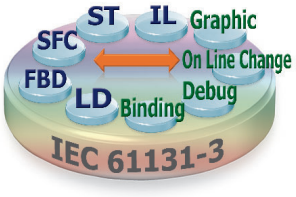
Running on Windows CE 6.0, the XPAC offers hardware-based real-time performance and high-precision control, while also providing a PC-like graphical user interface for enhanced usability. Developers can use Win-GRAF software, compliant with the IEC 61131-3 standard, to create control logic programs. Additionally, Microsoft Visual Studio 2008 (VB.NET or C#) can be used to develop HMI and data management applications. Seamless data exchange between Win-GRAF applications and user-developed programs enables greater flexibility and practicality, streamlining integration and accelerating system development.

Win-GRAF

Win-GRAF is a soft logic programming platform compliant with the IEC 61131-3 standard, designed for developing industrial control and automation solutions. It serves as a framework that allows users to create customized applications for various industrial systems, such as Programmable Logic Controllers (PLCs), Remote Terminal Units (RTUs), and embedded controllers. The Workbench supports all IEC 61131-3 programming languages, including Structured Text (ST), Function Block Diagram (FBD), Ladder Diagram (LD), Instruction List (IL), and Sequential Function Chart (SFC). With diverse libraries and built-in function blocks, it works seamlessly with all ICP DAS Win-GRAF controllers for fast and efficient development.

The features of the Win-GRAF:

- IEC 61131-3 Standard Open PLC Syntax (LD, FBD, SFC, ST, IL)
- Open Architecture: to integrate and customize for specific applications
- Event Triggered Data Binding (Exchange Data between PACs)
- Provide IDE: includes a user-friendly graphical user interface
- On Line Program Modification
- Various Protocols
- Plenty of Functions, Function Blocks, I/O Boards
- Redundancy





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PAC Specifications

Models		XP-8038-CE6	XP-8138-CE6	XP-8338-CE6	XP-8738-CE6
System Software					
OS		Windows CE 6.0			
.Net Compact Framework		3.5			
Embedded Service		FTP Server, ASP (support Java Script, VB Script), SQL Compact Edition 3.5			
SDK Provided		Dll for Visual Studio .Net 2005/2008			
Multilanguage Support		English, German, French, Spanish, Portuguese, Russian, Italian, Japanese, Simplified Chinese, Traditional Chinese			
Development Software					
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 for complex or large program			
Non-Win-GRAF		Options: VS.NET 2008 (VB.NET, C#.NET, C)			
CPU Module					
CPU		x86 CPU, 1.0 GHz, dual-core			
System Memory		2 GB DDR3			
Non-volatile Memory, MRAM		512 KB (retain memory without battery support)			
Flash		32 GB			
EEPROM		16 KB (Data Retention: 40 years; 1,000,000 erase/write cycles)			
CF Card		8 GB (support up to 32 GB)			
RTC (Real Time Clock)		Provides seconds, minutes, hours, date, day of the week, month, year			
Programmable LED Indicator		2			
64-bit Hardware Serial Number		Yes, for Software Copy Protection			
Watchdog Timer		Yes			
Rotary Switch		1 x 10 Position (0 ~ 9)			
DIP Switch		-	Yes (8 bits)		
VGA & Communication Ports					
VGA		Yes (Resolution: 1024 x 768, 800 x 600, 640 x 480)			
Ethernet		RJ-45 x 2, 10/100/1000 Base-T (Auto-negotiating, Auto MDI/MDI-X, LED indicators)			
USB 2.0		4			
COM 1		RS-232 (RxD, TxD, GND); non-isolated	Internal communication with the high profile I-87K series modules in slots		
COM 2		RS-232 (RxD, TxD, GND); non-isolated			
COM 3		RS-485 (D2+, D2-) self-tuner ASIC inside; 3000 VDC Isolation			
COM 4		RS-232/RS-485 (RS-232: RxD, TxD, CTS, RTS, GND; RS-485: Data+, Data-); non-isolated			
COM 5		RS-232 (RxD, TxD, CTS, RTS, DSR, DTR, CD, RI, GND); non-isolated			
I/O Expansion Slot					
Slot Number		0	1	3	7
		Note: For High Profile I-8K and I-87K Modules Only			
Mechanical					
Dimensions (W x L x H)		137 x 132 x 125 (mm)	169 x 132 x 125 (mm)	231 x 132 x 125 (mm)	355 x 132 x 125 (mm)
Installation		DIN-Rail or Wall Mounting			
Environmental					
Operating Temperature		-25 ~ +75° C			
Storage Temperature		-30 ~ +80° C			
Ambient Relative Humidity		10 ~ 90% RH (non-condensing)			
Power					
Input Range		+10 ~ +30 VDC			
Isolation		1 kV			
Redundant Power Inputs		Yes, with one power relay (1 A @ 24 VDC) for alarm			
Capacity		20 W	20 W	35 W	35 W
Consumption		12 W (0.5 A @ 24 VDC)	16.6 W (0.69 A @ 24 VDC)	16.8 W (0.7 A @ 24 VDC)	18 W (0.75 A @ 24 VDC)

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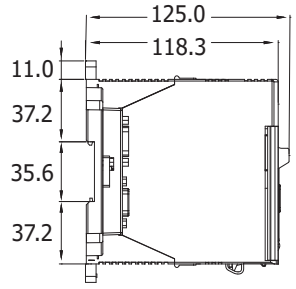
Win-GRAF Specifications

Models	XP-8x38-CE6
Protocols (Note that certain protocols require optional devices)	
OPC UA Server	The OPC UA Server is an application that provides data and information, serving as the core of OPC UA technology. It is responsible for managing, collecting, storing, and distributing data. Acting as a central controller, the OPC UA Server connects with various clients to facilitate data access and exchange.
Modbus TCP/IP Master	Supports connection of up to 128 IP devices
Modbus TCP/IP Slave	Supported. Up to 64 connections supported via two Ethernet ports (LAN1 & LAN2).
Modbus RTU/ASCII Master	Supported. Up to 16(*) communication ports.
Modbus RTU Slave	Supported. Up to 16(*) communication ports.
User-defined Protocol	Supported. Up to 16(*) communication ports.
Functions	
eLogger HMI	Supports eLogger.
Dual Controller Redundancy	Two XP-8x38-CE6 units can form a redundant system.
Password Protection	Equipped with a built-in 64-bit (8-byte) hardware serial number and a proprietary algorithm that generates authentication codes to effectively protect the security of Win-GRAF programs.
Data Binding	Supported. Enables data exchange between Win-GRAF Runtime devices.
Online Program Modification	Supports the On-line Change function.
Retain Variables	Supported. Up to 128K bytes of non-volatile memory for data retain after power loss.
File Access & Data Log	Supports file Read/Write.
Additional I/O Module Support	
Local I/O Modules	Supports I-8KW and I-87KW high-profile modules.
Modbus TCP I/O	Supports ET-7000 series, I-8KE4/8-MTCP, and tPET/tET series I/O modules.
Modbus RTU I/O	Supports M-7000 series, tM series, and LC series I/O modules.
DCON Remote I/O	Supports I-7000 series, M-7000 series, and I-87K expansion units.
HART Master	Supports I-87H17W module for communication with other HART devices.
***The number of COM ports depends on the model configuration and the use of expansion communication modules (e.g., I-8144iW, I-8142iW, I-8112iW, I-8114iW…)**	

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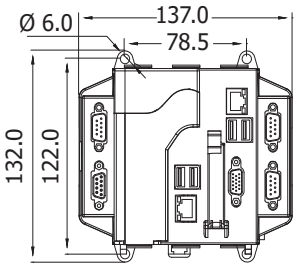
Dimensions

XP-8038-CE6

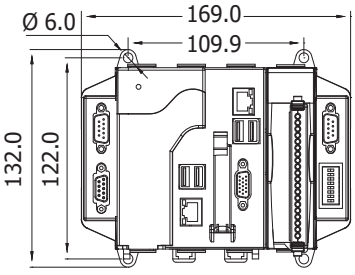


Side View

XP-8038-CE6

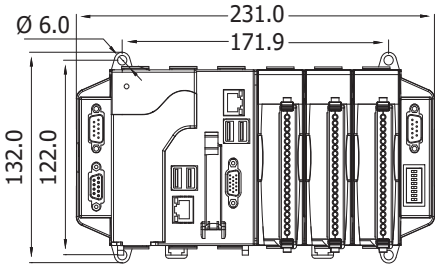


XP-8138-CE6

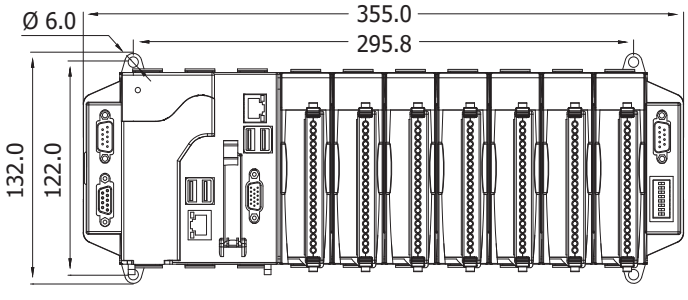


Front View

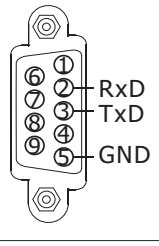
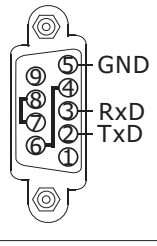
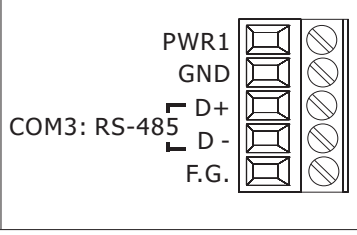
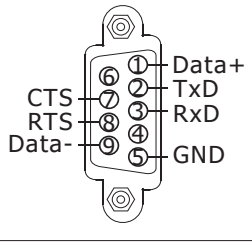
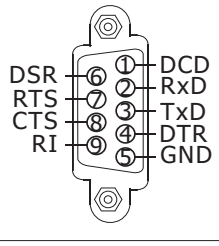
XP-8338-CE6



XP-8738-CE6



Pin Assignment

XP-8038-CE6	XP-8038-CE6/XP-8138-CE6/XP-8338-CE6/XP-8738-CE6			
COM1: RS-232	**COM2: RS-232**	**COM3: RS-485**	**COM4: RS-232/485**	**COM5: RS-232**
				

* Except for XP-8038-CE6, COM1 on other Win-GRAF XPAC is for internal communication with I-87K modules installed in slots only

Ordering Information

XP-8038-CE6 CR	0 I/O slot WinCE 6.0 Based Win-GRAF XPAC (OS: Multi-Language version) (RoHS)
XP-8138-CE6 CR	1 I/O slot WinCE 6.0 Based Win-GRAF XPAC (OS: Multi-Language version) (RoHS)
XP-8338-CE6 CR	3 I/O slots WinCE 6.0 Based Win-GRAF XPAC (OS: Multi-Language version) (RoHS)
XP-8738-CE6 CR	7 I/O slots WinCE 6.0 Based Win-GRAF XPAC (OS: Multi-Language version) (RoHS)
XPCE6-GUP-18000	Upgrade XP-8x31-CE6 to XP-8x38-CE6 to support Win-GRAF

Related Products

Win-GRAF Development Software	
Win-GRAF Workbench	Win-GRAF Workbench Software with one USB Dongle
WGW-S-License	Win-GRAF Workbench Software License

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