

Application Scenario

How Equipment Connectivity Works in the Factory

Pain Points of Global Manufacturers

Less Usability from Past Projects

Complex automation projects always require long development times and efficiency is highly related to profit. At the same time, end users have to maintain several individual PLC or HMI development tools for applications instead of a single integrated interface. And because traditional development tools do not allow similar application parts to be inherited as modules from former projects, costs can quickly spiral.

Legacy Devices and New Expansion

It is difficult for manufacturers to replace legacy fieldbus devices which perform solidly but are limited by Ethernet-based upgrades, which need time to integrate properly. However, during transition they also suffer from compliance between legacy devices and new add-ons since the system contains a mix of fieldbus protocols.

Infeasible for Analysis

Advanced data analysis is always done by IT systems with powerful computing capabilities. Nevertheless, open communications such as Modbus/ OPC are required for bridging devices at the OT level and system analysis at the IT level.



Ordering Configuration Table

SRP-FEC210 Programmable Real-time Machine Control		
Package Offering		
Application Software : CODESYS V3.5 SoftMotion & Visualization (Target & Web) x1 <i>Preinstalled CODESYS V3.5 SoftMotion & Visualization (Target & Web) Runtime</i>	System Computing : UNO-1372G-E3AE x1 <i>Intel® Atom™ DIN-rail Automation Computer, 128G SSD, MRAM, CANopen</i>	OS : Microsoft® Windows Embedded 7 Pro x1 <i>Preinstalled Microsoft® Windows Embedded 7 Pro</i>
Optional Configuration		
Option 100 WISE-PaaS/SaaS Software [101] WebAccess/SCADA Dongle Key V8.2 Pro. 1500 tags (WA-P82-U15HE) <input type="checkbox"/> Qty: ____ [102] WebAccess/SCADA Dongle Key V8.2 Pro. 5000 tags (WA-P82-U50HE) <input type="checkbox"/> Qty: ____	Option 300 I/O & Peripherals [301] EtherCAT Distributed Digital I/O (AMAX-4830-AE) <input type="checkbox"/> Qty: ____ [302] EtherCAT Distributed Digital Output (AMAX-4834-AE) <input type="checkbox"/> Qty: ____	
Option 200 System Computing [201] 12.1" XGA Ind. Monitor w/ Resistive TS (FPM-7121T-R3AE) <input type="checkbox"/> Qty: ____	Option 400 Add-on Accessories [401] Power Adaptor (PWR-247-CE) <input type="checkbox"/> Qty: ____	
Remark		

Order in 3 Easy Steps

Go Online Store



1. Step 1: Login

Add to Cart

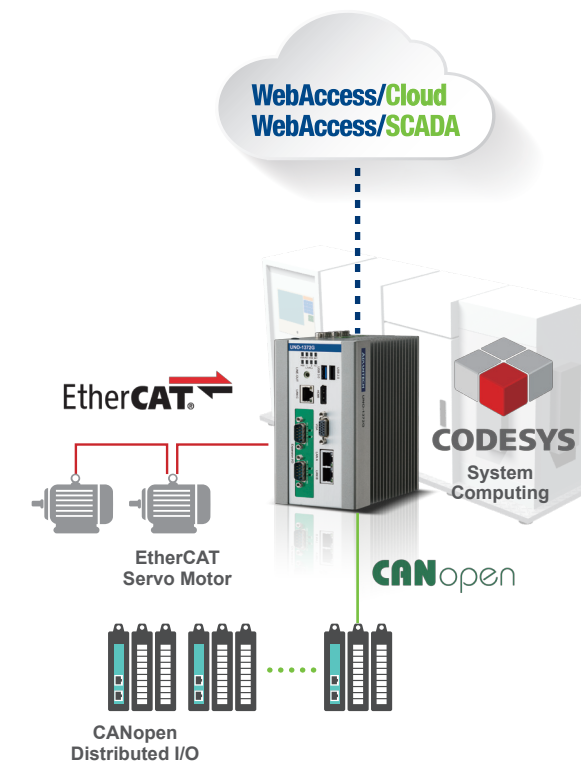


2. Step 2: Configuration

Confirm Order



3. Step 3: Check & Submit



See what will happen...

- Shorten Project Development Time:** Meet schedules by leveraging functional modules from past projects
- Full Integration of Legacy and Successor:** Efficiency improvements with cost-effective CANopen Fieldbus and the latest Ethernet Fieldbus.

ADVANTECH
Enabling an Intelligent Planet

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 Australia: 1300-308-531
 Thailand: 66-2-248-3140
 Indonesia: +62-21-7511939
 Mexico: 1-800-467-2415



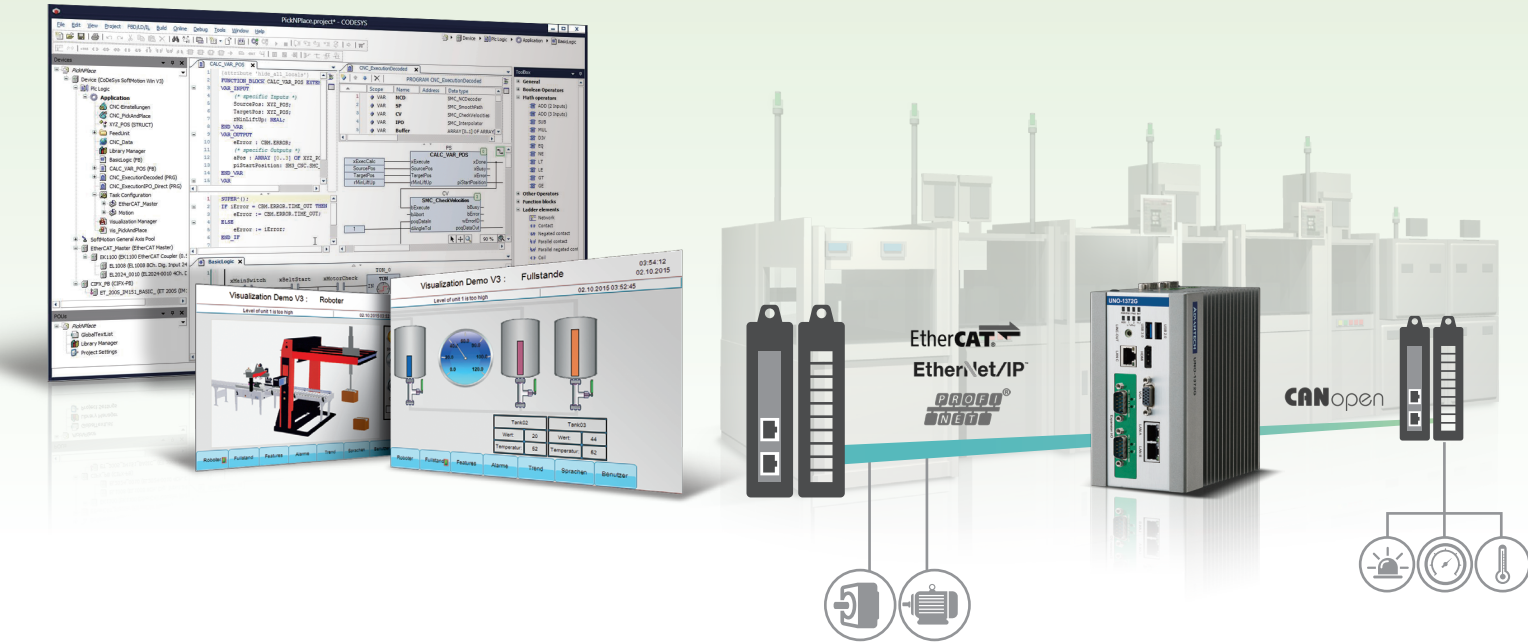
iFactory

Solution Ready Platform

Equipment Connectivity Solution

Easy Programing for Real-time Machine Control

SRP-FEC210



- Shorten Development Time
- Real-time Data Acquisition & Visualization
- Real-time Soft Motion Control

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ADVANTECH
WISE-PaaS
IoT Software Platform



More on SRP-FEC210 website

Entering a New Era of Smart Manufacturing

Introducing SRP-FEC210 Solution for Programmable Real-time Machine Control

This Solution Ready Platform allows users to reduce development time by supporting object-oriented programming (OOP) that is fully compliant with IEC 61131-3 standard and Program Organization Units (POU) inheritance from similar applications. The HMI is applied to the same IEC 61131-3 development environment. SRP-FEC210 guarantees real-time dual fieldbus data acquisition of PROFINET, EtherCAT, EtherNet/IP and CANopen communications. Users can collect data from Ethernet fieldbus and CANopen simultaneously. Moreover, it achieves real-time EtherCAT soft motion control for single or multi-axis movements of electronic CAMs/ gears on CiA DSP 402 controllers and virtual axes by certified PLCopen motion POU's.

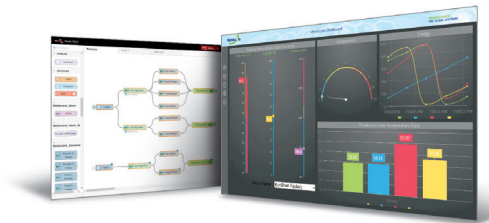
System Block Diagram

WebAccess/APP

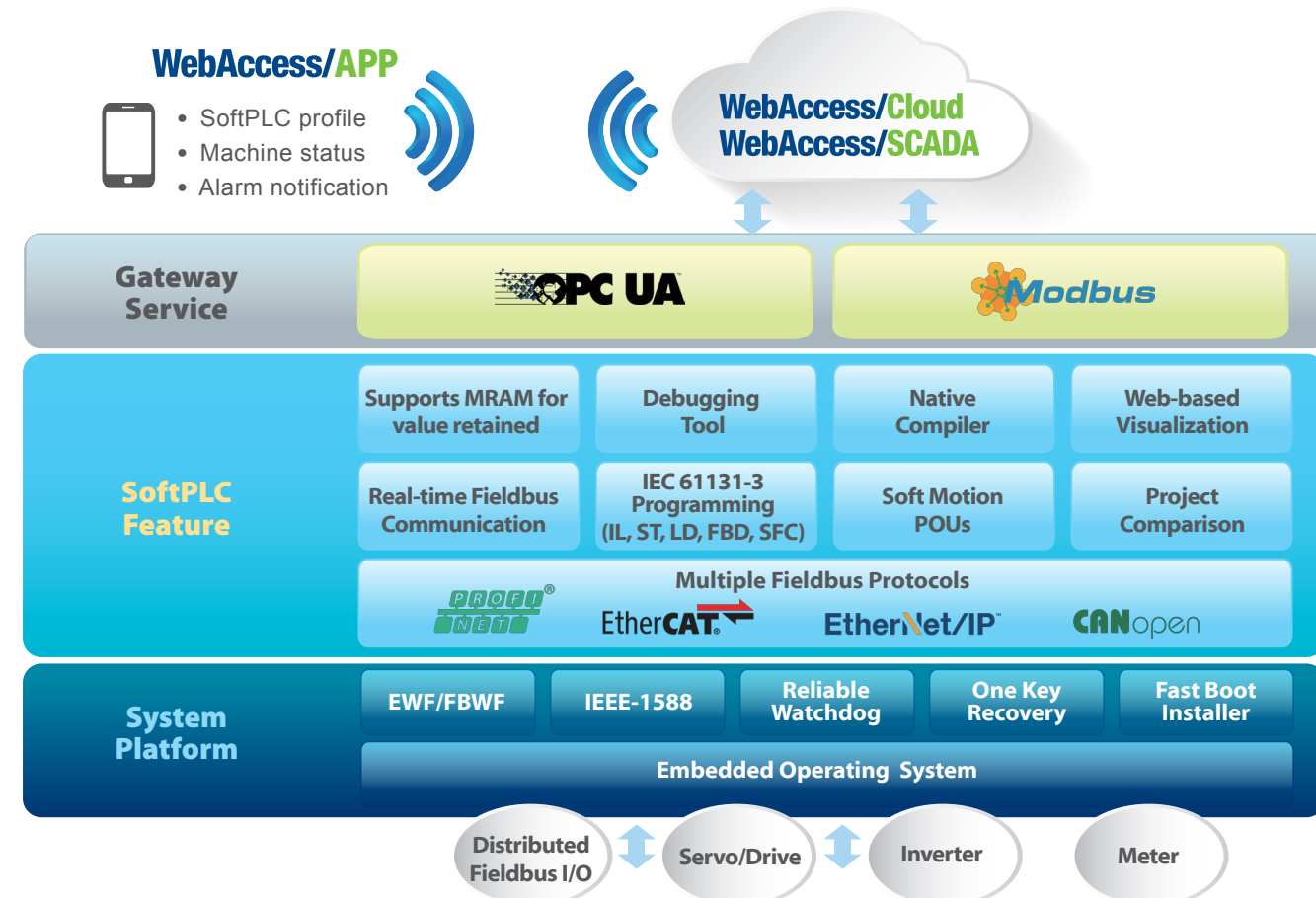
- SoftPLC profile
- Machine status
- Alarm notification

WebAccess/Cloud WebAccess/SCADA

- Open interface for cloud dashboard monitoring & big data analysis
- Precaution alarm for equipment preventive maintenance
- Monitor all fieldbus-connected motion device states



Software Architecture and Key Design Features



SoftPLC Design Feature

- ### IEC 61131-3 Programming
1. IL (Instruction List)
 2. ST (Structured Text)
 3. LD (Ladder Programming)
 4. FBD (Function Chart Programming)
 5. SFC (Sequential Function Chart)

- ### CODESYS Soft Motion Module
1. Single-Axis Function Block
 - MOVE ABSOLUTE • MOVE RELATIVE
 - HOME • STOP • POWER
 2. Multi-Axis Function Block
 - CAMIN • CAMOUT • GEARIN
 - GEAROUT

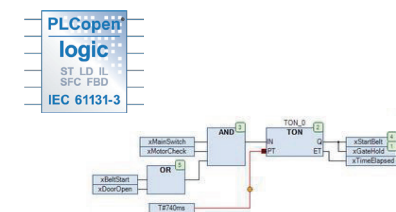
- ### Visualization
1. Controller/ Input Options
 2. Table/ Chart
 3. Graphical /Animation Options
 4. Support WebVisualization for remote control

- ### Compliant to 3rd party Fieldbus Device
- Supports GSD/ EDS/ XML file import

Key Advantages/ Features

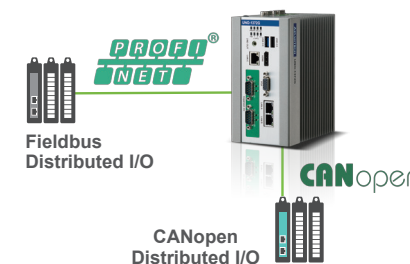
Shorten Development Times IEC 61131-3 Compliant

Supports real object-oriented programming fully compliant with the IEC 61131-3 standard to inherit existing POU's to reduce development time and errors.



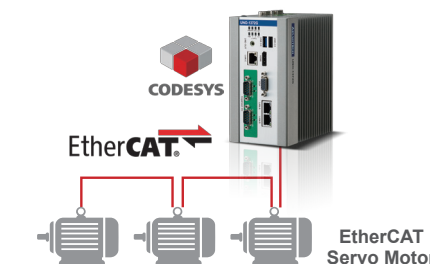
Real-time Dual Fieldbus Data Acquisition

Supports real-time fieldbus protocols. Users can collect data from more than one Ethernet fieldbus and CANopen port simultaneously.



Real-time EtherCAT Soft Motion Control

Supports CODESYS certified PLCopen motion POU's for single or multi-axis movements of electronic CAMs/ gears on CiA DSP 402 controllers and virtual axes etc.



Solution-Ready-Platform Package

CODESYS Runtime Software
Preinstalled CODESYS SoftMotion & Visualization (Target & Web) Runtime



UNO-1372G-E3AE
Intel® Atom™ Quad-Core
DIN-Rail PC, 4GB RAM, 128G SSD, MRAM, CANopen, Micro-soft® Windows Embedded 7 Pro.



CODESYS Fieldbus Library
Integrated Fieldbus Support in the IEC 61131-3 Tool, from CANopen to real-time Ethernet, including the Protocol Stacks.

