The new Parker Automation Controller PAC120 is a PLC with integrated, programmable software and EtherCAT master function. It was developed for the automation of fast and precise hydraulic processes. Together with the control module PACHC, it controls the position and force/pressure of up to 40 hydraulic axes. In combination with PACIO modules it can take over complete machine control.

Due to its extremely compact dimensions and its modular design, the PAC120 can be used in many different applications. Data exchange with other systems is firstly possible via the on-board Industrial Ethernet and OPC UA interfaces. In addition, further communication links can be realized by use of interface and bus modules. This also facilitates system integration in existing control architectures. With the on-board fieldbus options Profinet Slave, EtherCAT Slave or EtherNet/IP Adapter, the PAC120 can communicate with the machine or cell control. External EtherCAT slaves can be connected to the PAC120 by using an PACIO extender module.
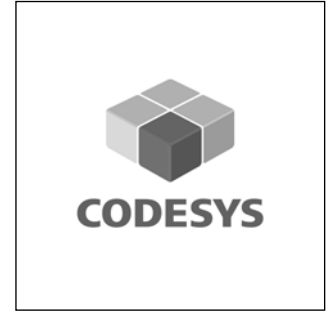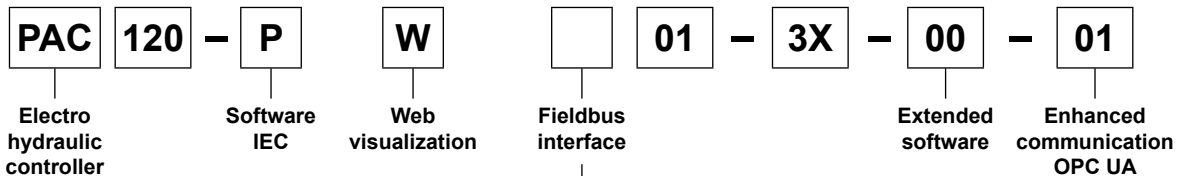
Technical features

- Fanless ARM processor technology
- CODESYS V3.5
- Connectors for Ethernet and EtherCAT
- Fieldbus options: Profinet IO/IRT Slave, EtherCAT Slave or EtherNet/IP Adapter
- OPC UA
- SD card slot and USB interface
- Digital interrupt input
- CODESYS WebVisu
- Expandable by Parker PACHC and PACIO modules

Ordering Code

| PAC | 120 | – | P | W | | 01 | – | 3X | – | 00 | – | 01 |

- **PAC**: Electro hydraulic controller
- **P**: Software IEC
- **W**: Web visualization
- Fieldbus interface
- **00**: Extended software
- **01**: Enhanced communication OPC UA

Code	Fieldbus interface
P	Profinet IO/IRT
T	EtherCAT Slave
E	EtherNet/IP Adapter

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PAC120 UK.indd 08.10.21

Technical Data

General	
Function	Mini-IPC with integrated CODESYS SPS and EtherCAT master function for I/O modules systems PACHC and PACIO
Housing / protection class	Aluminium strap, plastic, IP20
Mounting	35 mm DIN rail
Mounting position	Vertical, stackable
Operation temperature	0 °C...+55 °C
$MTTF_D$ value	33.6 a
Weight	0.2 kg
Electrical	
CPU	i.MX6 SoloX Freescale 1 GHz
RAM / remanent memory	256 MB / buffering in flash
Drives	256 MB internal flash memory, SD (HC) card slot
Operating system	Linux RT
Software	Application: CODESYS V3 Soft SPS with web visualization
Network	1 x Ethernet 10/100 MBit - RJ45, OPC UA
Field bus interfaces	Master: EtherCAT internal via E-Bus interface, external via extender module; 1 x CAN galvanic isolated Slave: ProfiNet IO and IRT (PAC120-*P), EtherCAT Slave (PAC120-*T), EtherNet/IP Adapter (PAC120-*E)
Integrated I/Os	1x DI 1 ms
Clock	Real-time clock with battery buffering
Power supply	24 V DC (19.2… 28.8)
E-bus current supply	3 A
Output	Ca. 3.5 W (@ 24 V DC)
Potential separation	Modules are potential separated against each other and bus
CE conformity	2004/108/EC
Insulation requirements	Protection class III according to EN 601131-2 Power circuits class 2 according to EN 601131-2 Contact protection according to EN 601131-2 (IEC 60529) Overvoltage category zone 3 according to EN601131-2 Degree of contamination 2 according to EN 50178
EMC	2014/30/EU
Noise stability	Zone B according to EN61131-2, Mounting on grounded rail in grounded control cabinet
Environmental conditions	Relative humidity 5 % … 95 % w/o dew
Storage temperature	-25 °C...+70 °C
UL certification	Certified: E-File-No. E506274

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### Development Environment CODESYS V3.5

CODESYS V3.5 is a device-independent system for programming control units designed to handle many tasks of industrial autometion technology. It conforms to standard IEC 61131-3 and supports all standardized IEC programming languages and object-orientated programming.

In conjunction with runtime system CODESYS Control Win V3 it also allows the use "multi-device" and "multi-application" programs. Owing to its component-based architecture, it supports customer-specific configurations of and extensions to the user interface.

Applications can be optimized by using industry standard PLCopen Motion Control components for motion control programming, deploying to the powerful simulation run-time for faster development and using online variable watch and trending for logic analysis.

Dimensions
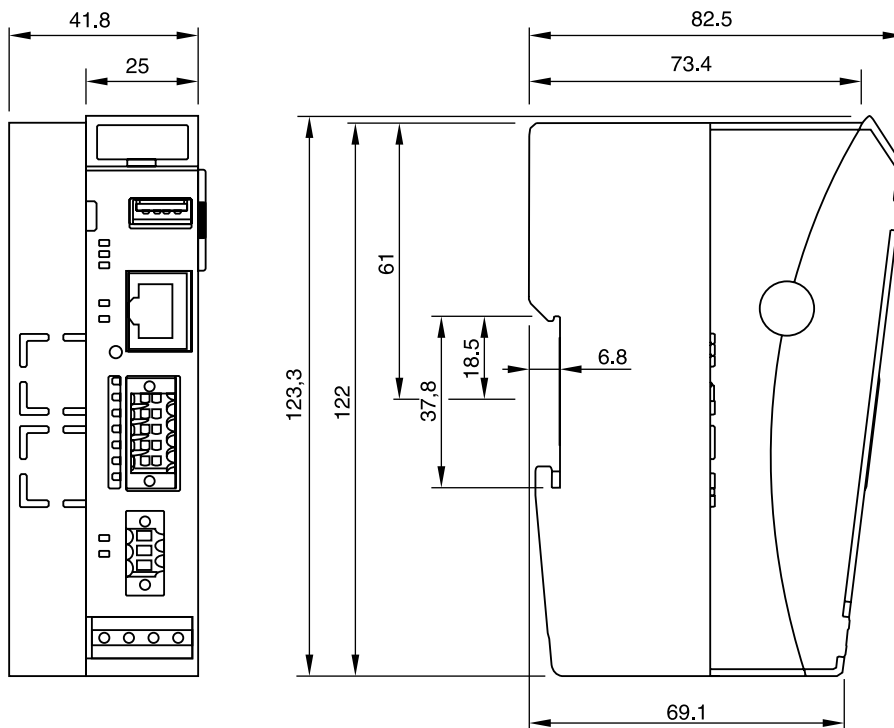
Accessories

Parker Control Module PACHC

The PACHC ist a control module for high-dynamic and precise control of 1-2 hydraulic axes. It was developed for operation at the Parker Automation Controller PAC120. The device is an EtherCAT slave and is operated at the Parker E-Bus. In conjunction with the bus coupler PACIO-400-00 it can be used in a standard EtherCAT network. The PACHC is connected to local analog sensors like pressure and force sensors and digital position feedback systems for recording actual values. Hydraulic valves are controlled via the analog outputs.

For further information see separate catalogue file for the PACHC.

Parker Remote I/O System PACIO

The PACIO System comprises a variety of modules for digital, analog and temperature signals as well as communication interfaces. The modules connect directly to the controller via the built-in EtherCAT bus for local architectures and are extended to remote locations via the extender and bus coupler modules, thus supporting both local and distributed I/O architectures. PACIO communicates natively on the EtherCAT bus, therefore it provides the full functionality and throughput of high-speed EtherCAT to meet the most demanding real-time requirements.

For further information see Parker catalogue file for the PACIOs.