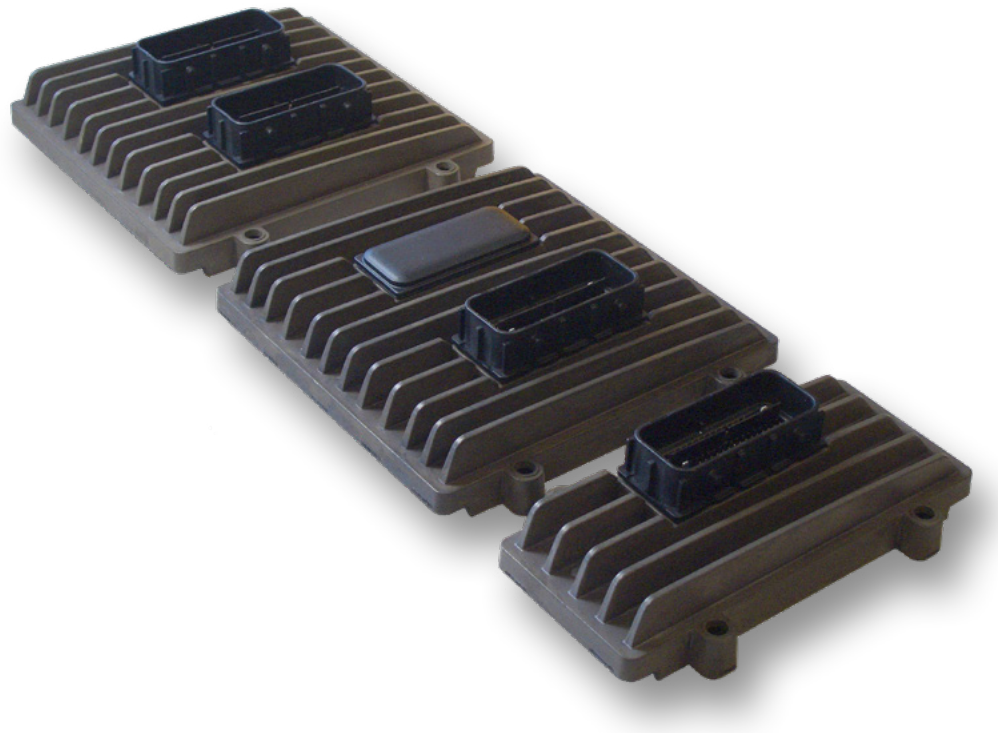
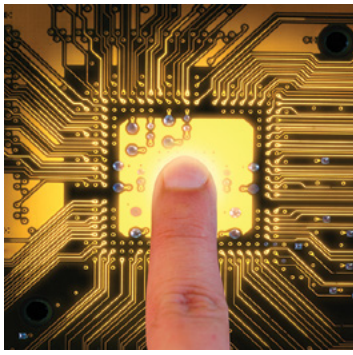


IQAN-XC4
Expansion Module Family

Electronic Control Systems



Parker

ENGINEERING YOUR SUCCESS.

IQAN-XC4

Efficiency in focus – throughout the entire machine life cycle

The IQAN-XC4 is a family of expansion modules in the IQANdesign platform, and used together with the IQAN master modules. There are 4 versions that can be used in different ways to meet the requirements of any system.

- XC41 small-size I/O distribution
- XC42 mid-size I/O distribution
- XC43 large-size I/O distribution
- XC44 large-size I/O distribution configured for on/off control

The XC4 family of expansion modules share the same pinout, making it possible for easy up-/down-scaling of the application.

IQAN-XC41, -XC42 and -XC43 are designed and certified to IEC 61508 SIL2. When controlled via an IQAN-MC4xFS master module, these expansions can be used in safety functions up to EN ISO 13849-1 PLd.

CAN

For connecting to the IQAN master, the XC4 modules use the IQAN proprietary protocol which enables optimal bandwith usage. The XC4 modules can run classic CAN or CAN-FD with speeds up to 500/2000 kbps. All configuration and firmware updates of the XC4 expansions are controlled and done by the IQAN master.

I/O

The XC4 family can support up to 50 inputs and 36 outputs (see the table).

Timer inputs include a mix of inputs with internal pull-up and pull-down, and are also configurable as digital inputs.

0-5 V analog inputs can be used with sensors supplied by the module VREF, as an external reference or configured as DIN.

The XC41, XC42 and XC43 have COUT proportional current outputs with CAM - a Parker Hannifin proprietary solution that uses a combination of high-side and low-side switch with current measurement, enabling fast and accurate closed loop current control.

- No tuning or tweaking CAM regulator circuit guarantees consistent performance on mobile valves
- Precision control with a resolution down to 1 mA, a must when there is a need for controlling precise crane movements
- Zero drift control provides the lowest possible output offset current and drift

Parker Hannifin's zero drift CAM offers initial offset current of less than 5 mA and almost immeasurable offset current drift over time, temperature and load change.

General

Operating temperature	-40 to 85°C
Storage temperature	-40 to 105°C
Voltage supply	9 to 32 V

To meet the environment found in mobile machines the XC4 family uses the Molex MX123 high reliability connector system, which is made for harsh environment for high vibration applications.

The enclosure is rated IP65 + IP69K and is a rugged mechanical design, sealed for outdoor use.

Ordering PN	Description
20085181	IQAN-XC41[1]
20085182	IQAN-XC42[1]
20085183	IQAN-XC43[1]
20085184	IQAN-XC44

1) SIL2 certified according to IEC 61508, when controlled by IQAN-MC4xFS. Requires IQANdesign 6.07 or newer.

Capabilities	XC41	XC42	XC43	XC44
Inputs total	**18**	**18**	**50**	**50**
Voltage inputs: 12-bit, 0 – 5 V	8	8	20	20
Voltage inputs: 12-bit, 0 – 32 V	2	2	2	2
Current-loop inputs: 13-bit, 0 – 20 mA	2	2	4	4
Timer inputs (Freq., PWM, Pulse): 0 – 50 KHz	6	6	6	6
Digital inputs	6	6	18	18
Outputs total	**8**	**16**	**36**	**36**
COUT (HS)[1]: 100 – 2500 mA high-side	2 x 2	6 x 2	10 x 2	-
PWM outputs: 4 A high-side	4	4	8	8
COUT/Digital output (LS)[1]: 2.5 A low-side	4	12	20	20[2]
Digital ouputs: 4 A high-side	-	-	-	5
Digital outputs: 200 mA low-side	-	-	8	8
Network				
CAN	1	1	1	1

1) Denotes pins that are always used in combination with another pin.
2) Only digital outputs

Environmental protection

EMC harmonized standards

XC4x	ISO 14982:2009, ISO 13766-1:2018
XC41, XC42, XC43	ISO 13766-2:2018

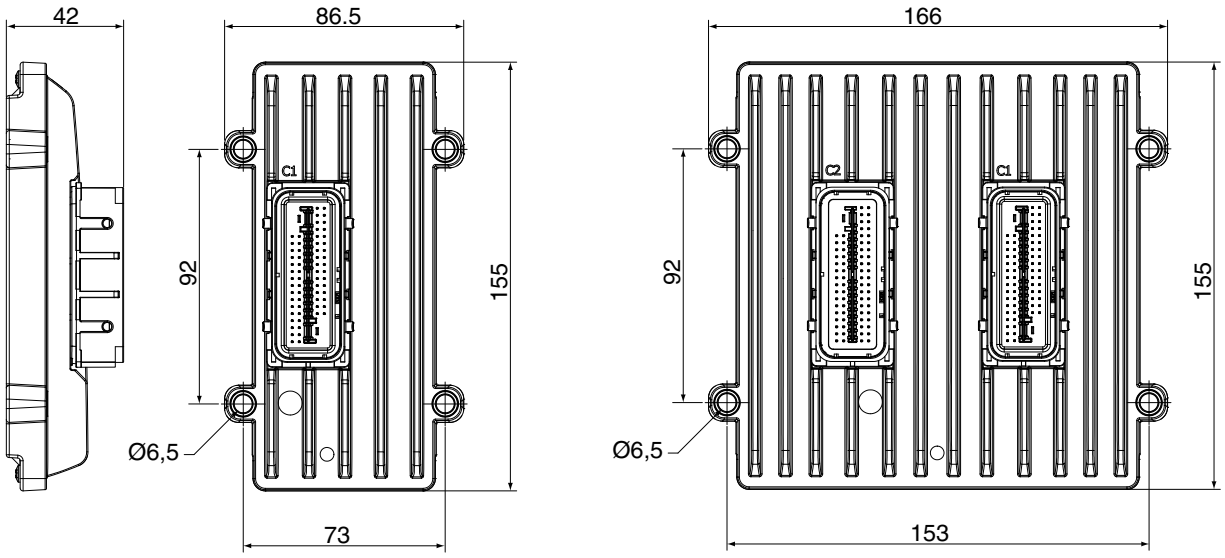
Climate environment

IEC 60529:2001 IP65 (dust, water)
DIN 40050 Part 9:1993 IP6K9K (steam jet cleaning)
IEC 60068-2-30:2005 Db (damp heat, cyclic)
IEC 60068-2-78:2001 Cab (damp heat, steady state)
IEC 60068-2-2:2007 Bb (heat)
IEC 60068-2-1:1993 Ab (cold)
IEC 60068-2-14:1984 Nb (change of temperature)
IEC 60068-2-52:1996 Kb (salt mist, cyclic)

Mechanical environment

IEC 60068-2-64:2008 Fh (random)
IEC 60068-2-27:2008 Ea (bump)

See the IQAN-MC4x, -XC4x instruction book for further information.



XC41 **XC42 / XC43 / XC44**

⚠ WARNING - USER RESPONSIBILITY

FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE.

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Please contact your Parker representation for a detailed "Offer of Sale".

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This product can expose you to chemicals including CARBON BLACK (AIRBORNE, UNBOUND PARTICLES OF RESPIRABLE SIZE) which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov

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