

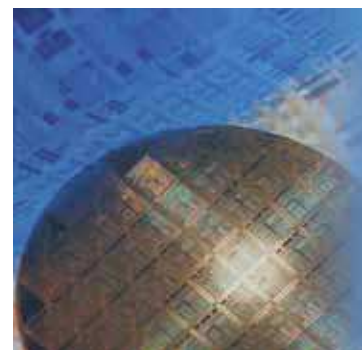


aerospace
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IQAN-XT2 I/O Modules

Electronic Control Systems



ENGINEERING YOUR SUCCESS.

Application

IQAN-XT2 is one of the "rugged generation" IQAN expansion modules. Key improvements for this generation of modules are flexibility, weather resistance and safety.

All IQAN expansion modules communicate with a master over a CAN-BUS serial link. The IQAN-XT2 has an additional CAN hub designed to interface with J1939 diesel engines on mobile machinery and has a dedicated output for electronic throttle control.

Properties

Flexibility

The IQAN-XT2 module has a flexible I/O interface which gives system designers increased options. The same physical pin can be used for different types of inputs or outputs. New types of I/O such as E-gas and PWM outputs increase the flexibility of the module. Digital outputs now have features such as softstart and peak & hold. The J1939 CAN hub allows the IQAN-XT2 to communicate directly with an electronic engine control bus.

Weather resistance

The enclosure is aluminum to make the module rugged but light. The module has a membrane to prevent condensation from forming inside the enclosure. The IQAN-XT2 is designed for a wide temperature range in an outdoor environment.

Safety

The IQAN-XT2 executes a self-test during start up and cyclic operation. Detected errors are sent to the master. An internal watch dog checks for software errors and will interrupt outputs if errors are detected. All inputs are protected against EMI and voltage transients. Automotive connectors are used that fulfil mechanical and electrical demands.

System diagnostics: If an error is detected a LED on the rear of the module flashes in sequence to indicate the nature of the error.

General

Weight	0.7 Kg
Operating temperature	-40 - +70 °C
Protection	outdoor use
Voltage supply	9 - 34 Vdc
Current consumption (idle)	180 mA (28 Vdc) 170 mA (14 Vdc)
Data interface	Parker ICP (IQAN CAN Protocol)
Additional CAN hub	J1939 or other byte-aligned CAN protocol

Outputs

Proportional current outputs

Number	2 double
Signal range	60 - 1800 mA
Dither frequency	25 - 150 Hz
Dither amplitude	0 - 500 mA
Resolution	0.7 mA

Digital/ PWM (no current feedback) outputs ¹⁾

Number	6 / 3 double
Type	high side switch
Max load	3 A
PWM frequency	25 - 2000 Hz

E-gas/Servo motor output (PWM H-bridge)

Number	1
Signal Range	0-100% rated power
Max load	2,5A

Inputs

Voltage/Frequency ²⁾

Number	10/3
Signal range	0 - 5 Vdc
Resolution	5 mV
Frequency range	1-10 000 Hz

1) The Digital and PWM outputs share the same physical pin.

Pin configuration for either Digital or PWM output is carried out with IQANdevelop.

2) The voltage and frequency inputs share the same physical pins.

Pin configuration for either Voltage or Frequency input is carried out with IQANdevelop.

Ordering part number

IQAN-XT2	5010018
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Environmental protection

EMI

ISO 14982:1998, Radiated emission
EN 55025:2003, Conducted emission
ISO 11452-2:1995, Radiated susceptibility
ISO 11452-4:2001, Conducted susceptibility
ISO 7637-2:2004, Conducted transient on power
ISO 7637-3:1995, Conducted transient on signal
EN 61000-4-8:1993, Magnetic field

ESD

ISO 10605:2001, ESD

Mechanical environment

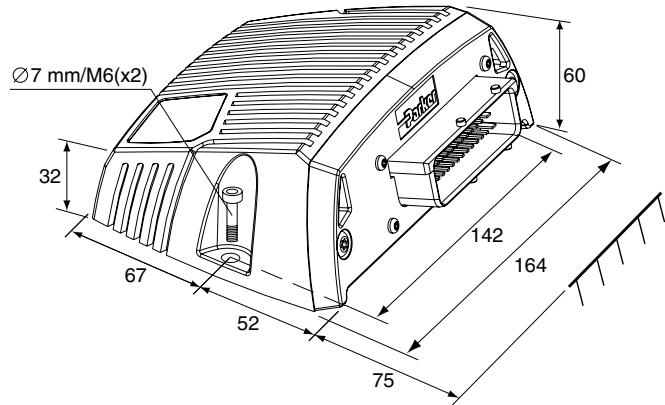
IEC 60068-2-64:1993 Fh, Random vibration
IEC 60068-2-29:1987 Eb, Bump

Climate environment

IEC 60529:2001, IP66 (dust, water)
DIN 40050 Part 9:1993, IP6K9K (steam jet cleaning)
IEC 60068-2-30:1985 Db, Damp heat cyclic
IEC 60068-2-78:2001, Damp heat, steady state
IEC 60068-2-14:1984 Nb, Change of temperature

Chemical environment

IEC 60068-2-52:1996 Kb, Salt mist



unit=mm

WARNING

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

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Tel: +971 4 8127100
parker.me@parker.com

AT – Austria, Wiener Neustadt

Tel: +43 (0)2622 23501-0
parker.austria@parker.com

AT – Eastern Europe, Wiener
Neustadt

Tel: +43 (0)2622 23501 900
parker.easteurope@parker.com

AZ – Azerbaijan, Baku

Tel: +994 50 2233 458
parker.azerbaijan@parker.com

BE/LU – Belgium, Nivelles

Tel: +32 (0)67 280 900
parker.belgium@parker.com

BY – Belarus, Minsk

Tel: +375 17 209 9399
parker.belarus@parker.com

CH – Switzerland, Etoy

Tel: +41 (0)21 821 87 00
parker.switzerland@parker.com

CZ – Czech Republic, Klecany

Tel: +420 284 083 111
parker.czechrepublic@parker.com

DE – Germany, Kaarst

Tel: +49 (0)2131 4016 0
parker.germany@parker.com

DK – Denmark, Ballerup

Tel: +45 43 56 04 00
parker.denmark@parker.com

ES – Spain, Madrid

Tel: +34 902 330 001
parker.spain@parker.com

FI – Finland, Vantaa

Tel: +358 (0)20 753 2500
parker.finland@parker.com

FR – France, Contamine s/Arve

Tel: +33 (0)4 50 25 80 25
parker.france@parker.com

GR – Greece, Athens

Tel: +30 210 933 6450
parker.greece@parker.com

HU – Hungary, Budapest

Tel: +36 1 220 4155
parker.hungary@parker.com

IE – Ireland, Dublin

Tel: +353 (0)1 466 6370
parker.ireland@parker.com

IT – Italy, Corsico (MI)

Tel: +39 02 45 19 21
parker.italy@parker.com

KZ – Kazakhstan, Almaty

Tel: +7 7272 505 800
parker.easteurope@parker.com

NL – The Netherlands, Oldenzaal

Tel: +31 (0)541 585 000
parker.nl@parker.com

NO – Norway, Asker

Tel: +47 66 75 34 00
parker.norway@parker.com

PL – Poland, Warsaw

Tel: +48 (0)22 573 24 00
parker.poland@parker.com

PT – Portugal, Leca da Palmeira

Tel: +351 22 999 7360
parker.portugal@parker.com

RO – Romania, Bucharest

Tel: +40 21 252 1382
parker.romania@parker.com

RU – Russia, Moscow

Tel: +7 495 645-2156
parker.russia@parker.com

SE – Sweden, Spånga

Tel: +46 (0)8 59 79 50 00
parker.sweden@parker.com

SK – Slovakia, Banská Bystrica

Tel: +421 484 162 252
parker.slovakia@parker.com

SL – Slovenia, Novo Mesto

Tel: +386 7 337 6650
parker.slovenia@parker.com

TR – Turkey, Istanbul

Tel: +90 216 4997081
parker.turkey@parker.com

UA – Ukraine, Kiev

Tel: +380 44 494 2731
parker.ukraine@parker.com

UK – United Kingdom, Warwick

Tel: +44 (0)1926 317 878
parker.uk@parker.com

ZA – South Africa, Kempton Park

Tel: +27 (0)11 961 0700
parker.southafrica@parker.com

North America

CA – Canada, Milton, Ontario

Tel: +1 905 693 3000

US – USA, Cleveland

(industrial)
Tel: +1 216 896 3000

US – USA, Elk Grove Village

(mobile)
Tel: +1 847 258 6200

Asia Pacific

AU – Australia, Castle Hill

Tel: +61 (0)2-9634 7777

CN – China, Shanghai

Tel: +86 21 2899 5000

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Tel: +852 2428 8008

IN – India, Mumbai

Tel: +91 22 6513 7081-85

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Tel: +81 (0)4 6635 3050

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Tel: +82 2 559 0400

MY – Malaysia, Shah Alam

Tel: +60 3 7849 0800

NZ – New Zealand, Mt Wellington

Tel: +64 9 574 1744

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Tel: +65 6887 6300

TH – Thailand, Bangkok

Tel: +662 717 8140

TW – Taiwan, Taipei

Tel: +886 2 2298 8987

South America

AR – Argentina, Buenos Aires

Tel: +54 3327 44 4129

BR – Brazil, Sao Jose dos

Campos
Tel: +55 12 4009 3500

CL – Chile, Santiago

Tel: +56 2 623 1216

MX – Mexico, Apodaca

Tel: +52 81 8156 6000

VE – Venezuela, Caracas

Tel: +58 212 238 5422

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EMEA Product Information Centre

Free phone: 00 800 27 27 5374

(from AT, BE, CH, CZ, DE, DK, EE, ES, FI, FR, IE, IL,
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