



The World's Finest

i3

Intelligent Control Station



Think **inside** the box

i3 Intelligent Control Station



Think inside the box!

Intelligence raised by the power of three.

- 3 Screen options
- 3 In-built I/O options
- 3 Communication options

Advantages of an Integrated Solution

As microprocessor technology moves forward, it is a logical step to rationalise hardware and condense many traditional control components down into a single, compact unit. This gives the benefits of reducing manufacturing costs, reducing overall power consumption of the control solutions and reducing application development time. It also allows customers to standardise to a single controller to fit most of their applications, and allow greater flexibility for future developments. The iCube has been successfully implemented in the following areas:

- Custom OEM products
- Packaging Machinery
- Food Processing
- Motion Control
- Water/Waste Treatment
- Custodial Vehicle Management
- Pump Control
- Dedicated Alarm Systems
- HVAC and Environmental Control
- Building Management
- Process Control
- Communications Hub

Reliability

The iCube has a dedicated, real-time operating system – **NOT** a Windows® operating system. So there's no need to worry about losing control due to avoidable operating system malfunctions.



Micro SD Card



Once the SanDisk™ card is inserted, create MS Excel compatible files, backup/restore user programs and change recipe templates. Access the data remotely using IMO FXP software. Copy, paste and delete files through Serial, Ethernet, or GSM connections. Automate the file transfer process through powerful scripting.

Features

The in-built I/O of the i3 controller have up to 40 Digital I/O and up to 4 Analogue I/O, also supporting direct PT100, Thermocouple, mV, Voltage and Current inputs.

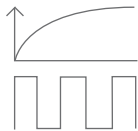
- Powerful 32-bit processor
- 2 Communication Ports RS232/RS485
- Expansion I/O
- 4 High Speed Inputs (10kHz Max)
- 2 PWM outputs (65kHz Max)
- Programmable function Keys
- Real Time Clock
- 20+ Protocols (Modbus, AB DF1, Mitsubishi, Etc)
- 256KB RAM (Ladder), 1MB Graphical (5MB I3C)
- IP65 (NEMA4) CE, cUL, UL, E-Marked
- 10-30VDC Supply

3 Communication options:

- Embedded Ethernet (i3C only) with Web Server, Modbus TCP Client, Remote programming
- Expansion Ethernet (All Models) Modbus TCP Server, Remote programming
- GSM Modem (All Models) SMS messages, GPRS Data service or GSM dial-up data service

Inputs & Outputs

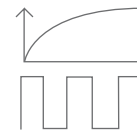
Up to 4 analogue inputs; mA, V, Thermocouple, PT100



4 high speed pulse inputs (up to 10kHz)



Up to 24 digital inputs; PNP NPN



Option for 2 analogue outputs; mA, V



Option for 2 pulse outputs (up to 65kHz)

Option for 6 relay outputs or up to 16 transistor outputs

Remote Access & SMS

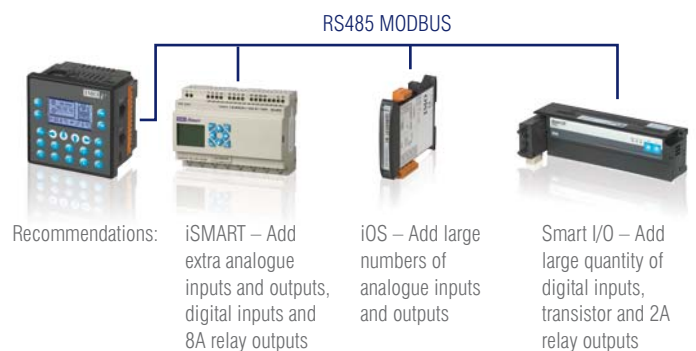
Connect remotely via Ethernet, GPRS or a GSM dial-up connection. Send and receive up to 32 pre-defined messages. Insert variables into the messages to display, or change live data, and activate coils in the ladder program as required.

Engineer's mobile phone



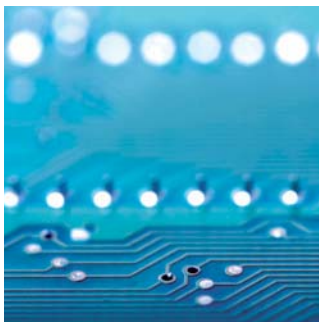
Expansion

If the in built I/O is not enough, add extra by using one of many options.



Applications

The *i*Cube has been successfully implemented in the following areas



◀ Packaging Machinery

Food Processing ▶

▼ Water/Waste Treatment



▲ Custom OEM products

Motion Control ▶

▼ Pump Control



▲ Custodial Vehicle Management

◀ HVAC and Environmental Control

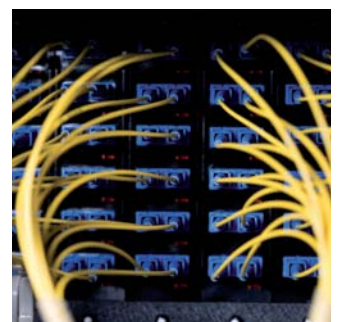
▼ Communications Hub



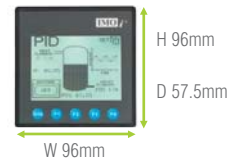
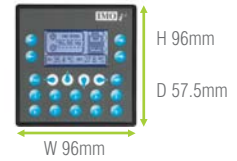
▲ Dedicated Alarm Systems

◀ Building Management

Process Control ▶



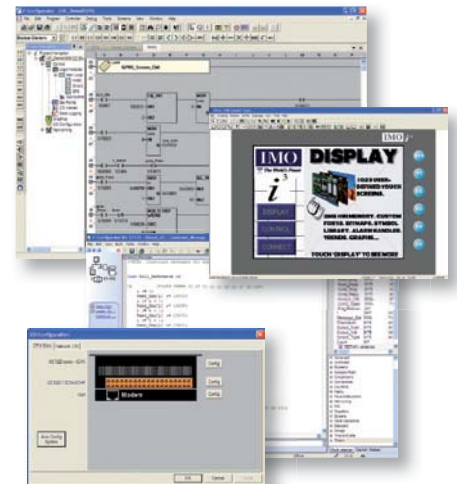
Features & Dimensions



i³ Configurator... a high performance development environment

With a choice of either a simplified IEC-61131 based ladder editor, or a full IEC-61131 package with toolbox of powerful functions, allowing you to easily write and manage projects, configure communication networks, SMS, data logging, I/O and user screens.

- Ladder Logic, ST, SFC, FBD
- Auto Tune PID (32 loops)
- Floating Point Maths
- Serial Port and Modem commands
- Real-Time-Clock functions
- Program and Subroutine blocks
- Alarm / Recipe / Animation / Bitmaps
- Multi-language support and Custom Fonts



Get Connected!

With most iCube models coming with 2 Serial Ports (RS232/RS485) and a CAN port as standard, and with three further communication expansion options available, no other product in its class can offer as much connectivity.

From any single point of connection, be it via RS232, USB, Ethernet, GSM, or GPRS, i3 Configurator can program, monitor and debug up to 253 iCubes on the iCAN Network.



■ Ethernet ■ iCAN Network ■ RS232 ■ GSM/GPRS ■ USB

Product Specification

Part Number	Screen	Base Unit			
		Power	Colour	Keys	MicroSD Card* (up to 2GB)

Entry Level



i3A12X/10A01-S00	128x64 F Key	10-30V DC	2	20	-S00F*
i3A12X/10B04-SCH	128x64 F Key	10-30V DC	2	20	-SCHF*
i3A12X/10D03-SCH	128x64 F Key	10-30V DC	2	20	-SCHF*
i3A12X/20B05-SOH	128x64 F Key	10-30V DC	2	20	-SOHF*
i3A12X/13C14-SOH	128x64 F Key	10-30V DC	2	20	-SOHF*
i3B12Y/10D03-SCHF	160x128 Touch	10-30V DC	2	5	Y
i3B12Y/20B05-SCHF	160x128 Touch	10-30V DC	2	5	Y
i3B12Y/13C14-SCHF	160x128 Touch	10-30V DC	2	5	Y
i3C12Z/10D03-SCHF	320x240 Touch	10-30V DC	32768	6	Y
i3C12Z/20B05-SCHF	320x240 Touch	10-30V DC	32768	6	Y
i3C12Z/13C14-SCHF	320x240 Touch	10-30V DC	32768	6	Y

All models of i³ Controller are available without

Remote I/O (Modbus & iCAN)



iOS/M04IPX-D1		10-30V DC			
iOS/M08ICX-D1		10-30V DC			
iOS/M08IVX-D1		10-30V DC			
iOS/M08ITX-D1		10-30V DC			
iOS/M040XA-D1		10-30V DC			
iOS/M080XV-D2		24V DC			
iOS/M08BDR-D1		10-30V DC			
iOS/M12IDX-D1		10-30V DC			
iOS/M12BDD-D2		24V DC			
GSL-DT4A		24V DC			
GSL-RY2A		24V DC			
GSL-D24A		24V DC			
GCL-A21-A		24V DC			
GCL-AT1-A		24V DC			
GCL-DT4A		24V DC			
GCL-RY2A		24V DC			
GCL-D24A		24V DC			
SMT-CD-R20	16x4 Chars	24V DC	2	4	
SMT-CD-AR20	16x4 Chars	24V DC	2	4	

* Replace part number suffix

** Modem and ethernet cards should be ordered separately

I/O Options					Communication Options					
Digital Inputs (10-30VDC)	Digital Outputs (0.5A)	Relay Outputs	Analogue Inputs	Analogue Outputs	Serial Ports	CAN Port	In built Ethernet*	USB	GSM Modem Card**	Ethernet Expansion Card**
12		6 (3A)	1x 10bit (V/mA)		2				i3-MA**	i3-E**
12	12		2 x 10bit (V/mA)		2	1			i3-MA**	i3-E**
12		6 (3A)	4 x 10bit (V/mA)		2	1			i3-MA**	i3-E**
24	16		2 x 10bit (V/mA)		2				i3-MA**	i3-E**
12	12		2x 14bit(TC/RTD/V/mA)	2x12bit V/mA	2				i3-MA**	i3-E**
12		6 (3A)	4 x 10bit (V/mA)		2	1			i3-MA**	i3-E**
24	16		2 x 10bit (V/mA)		2	1			i3-MA**	i3-E**
12	12		2x 14bit(TC/RTD/V/mA)	2x12bit V/mA	2	1			i3-MA**	i3-E**
12		6 (3A)	4 x 10bit (V/mA)		2	1	-SEHF*	Y	i3-MA**	i3-E**
24	16		2 x 10bit (V/mA)		2	1	-SEHF*	Y	i3-MA**	i3-E**
12	12		2x14bit(TC/RTD/V/mA)	2x12bit V/mA	2	1	-SEHF*	Y	i3-MA**	i3-E**

in-built I/O if required, please ask automation@imopc.com

			4x RTD (0.01C)		1					
			8x 16bit mA		1					
			8x 16bit V		1					
			8x TC (0.01C)		1					
				4x 14bit V/mA	1					
				8x 14bit V	1					
4 NPN		4 (2A)			1					
12 NPN					1					
4 NPN	8 NPN				1					
16 (24VDC)	16				1					
		16 (2A)			1					
32 (24VDC)					1					
			12x 14bit V/mA			1				
			8x 14bit V/mA	4x 14bit V/mA		1				
16 (24VDC)	16					1				
		16 (2A)				1				
32 (24VDC)						1				
8 (24VDC)		8 (8A)	4x 10bit V		2					
8 (24VDC)		6 (8A)	4x 12bit V	2x 12bit V	2					

IMO Worldwide Offices

IMO Precision Controls Limited

1000 North Circular Road
Staples Corner
London NW2 7JP
United Kingdom

Tel: 020 8452 6444
Fax: 020 8450 2274
Email: imo@imopc.com
Web: www.imopc.com

IMO Jeambrun Automation SAS

Centre D'Affaires Rocroy
30, Rue de Rocroy
94100 Saint-Maur-Des-Fosses
France

Tel: 0800 912 712 (n° gratuit)
Fax: 0145 134 737
Email: imo-fr@imopc.com
Web: www.imojeambrun.fr

IMO Automazione

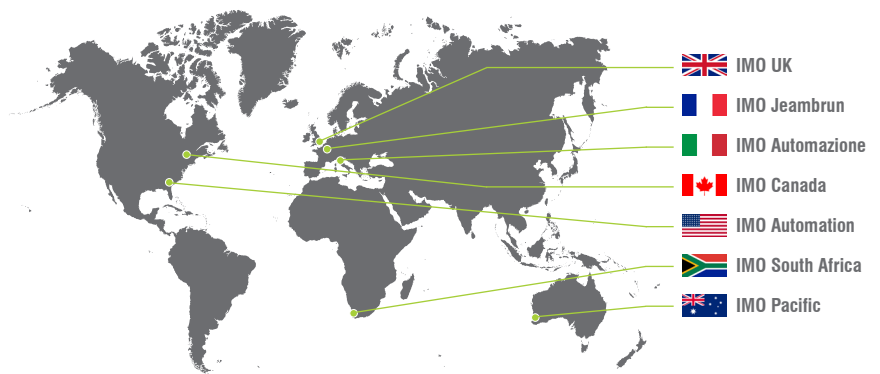
Via Ponte alle Mosse, 61
50144 Firenze (FI)
Italia

Tel: 800 930 872 (toll free)
Fax: 8000 452 6445
Email: imo-it@imopc.com
Web: www.imopc.it

IMO Canada

Unit 32 - B - North
18 Stratheam Avenue, Brampton
Ontario L6T 4Y2
Canada

Tel: 905 799 9237 (local)
Fax: 905 799 0450
Email: imo-ca@imopc.com
Web: www.imopc.com



IMO Automation LLC

101 Colony Park Drive, Suite 300
Cumming
Georgia 30040
USA

Tel: 404 476 8810
Fax: 404 476 8811
Email: imo-usa@imopc.com
Web: www.imoautomation.com

IMO South Africa (Pty) Ltd

G16 Centurion Business Park
Montague Gardens
Cape Town 7441
South Africa

Tel: 021 551 1787
Fax: 021 555 0676
Email: info@imopc.co.za
Web: www.imopc.co.za

IMO Pacific Pty Ltd

1/6 Dillington Pass
Landsdale
Perth WA 6065
Australia

Tel: 08 9302 5246 (local)
Fax: 08 9303 9908
Email: sales@imopacific.com.au
Web: www.imopacific.com.au