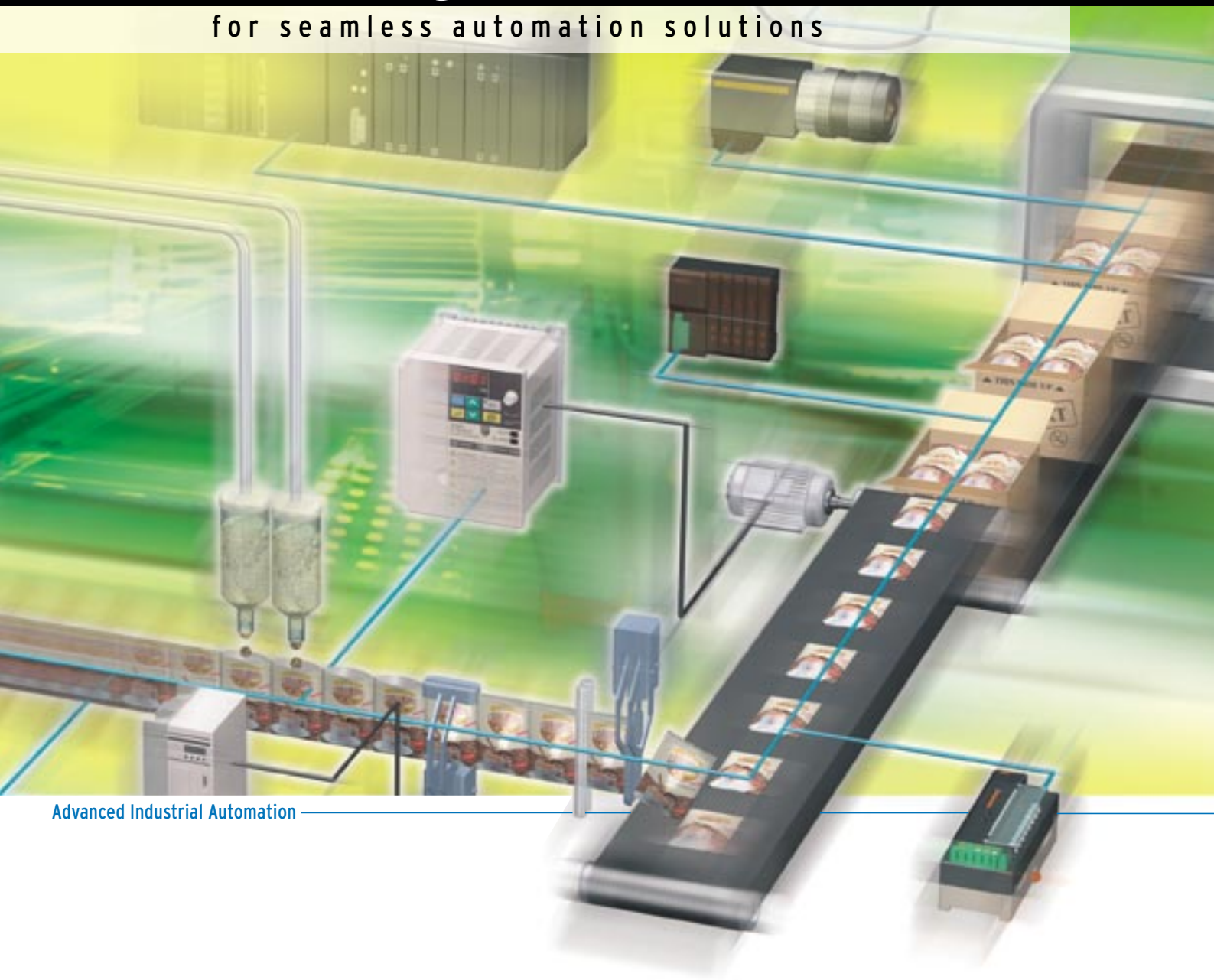
Optimising industrial networking

DEVICENET

for seamless automation solutions



Advanced Industrial Automation

OMRON

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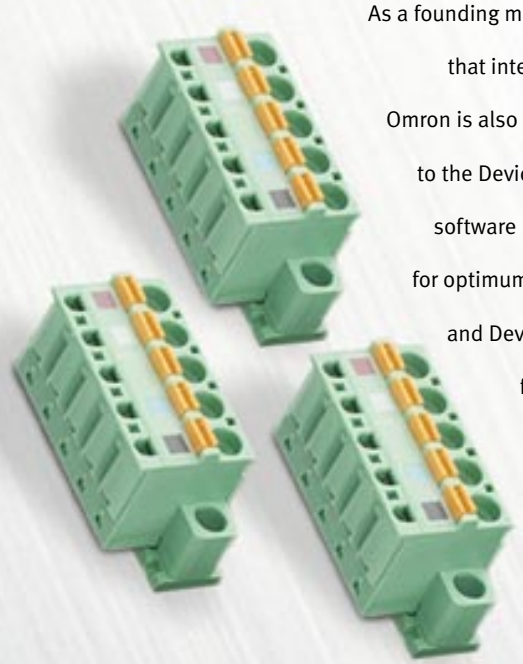
DeviceNet is an innovative industrial network system that enables a wide range of devices to be easily networked and managed remotely. Everything - from PLCs and remote I/O, to fibre optic sensors, vision systems controllers, servos and inverters - can be seamlessly integrated into DeviceNet, making it one of the best industrial field busses around. And the trend is for DeviceNet to become even more popular with end-users and OEMs who look for a simple yet effective solution to controlling their automation processes, no matter how complex.

Industrial network for total solutions



As a founding member of DeviceNet, Omron is one of the few companies that integrates DeviceNet interfaces into its many core products. Omron is also the first company to introduce wireless communications to the DeviceNet system. And Omron has developed a user-friendly software package that helps you configure all DeviceNet products for optimum performance. With such an unrivalled product portfolio and DeviceNet enhancing capability, Omron is the logical choice for anyone wishing to optimise their automation system.

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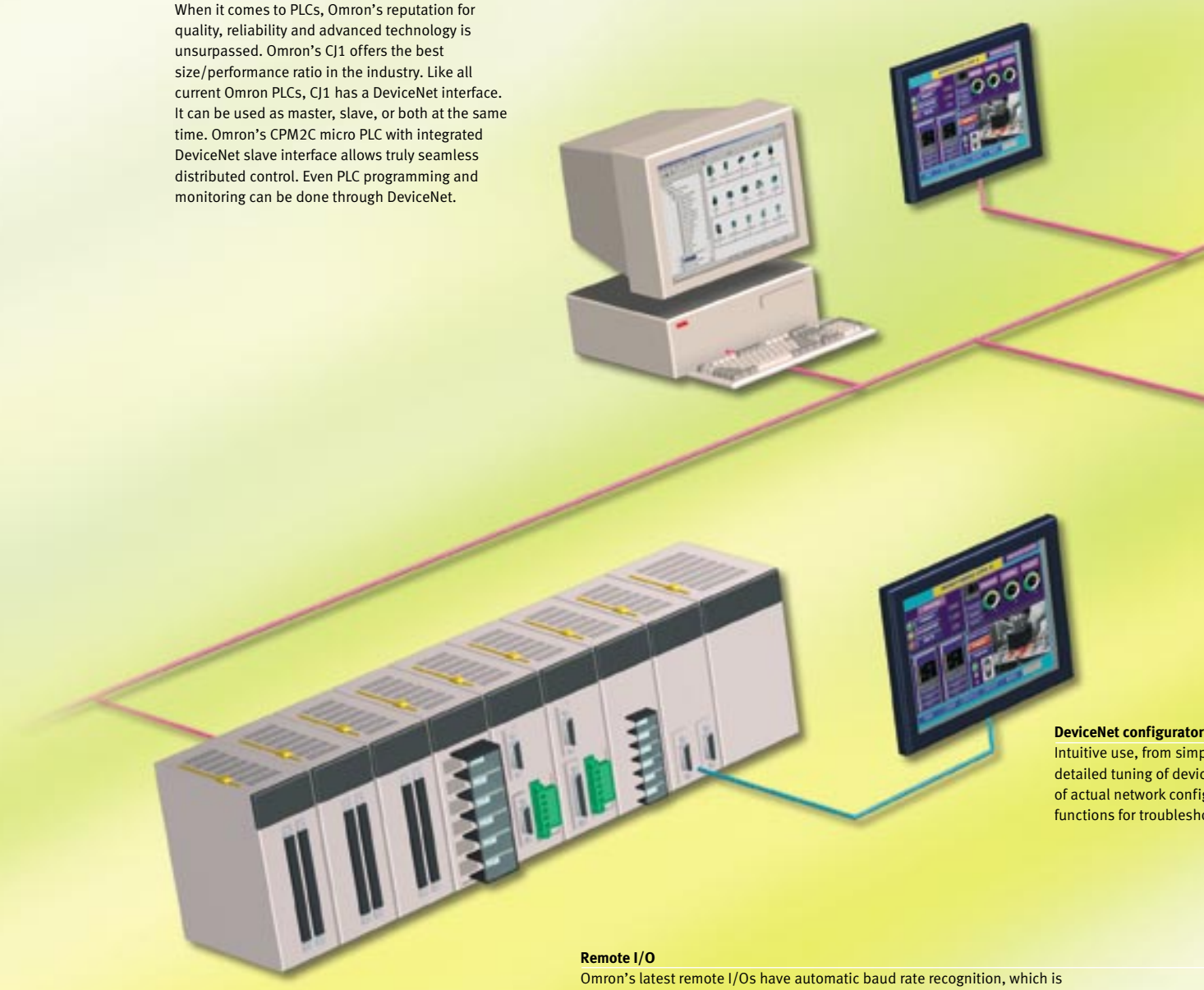
PLC masters and slaves
When it comes to PLCs, Omron's reputation for quality, reliability and advanced technology is unsurpassed. Omron's CJ1 offers the best size/performance ratio in the industry. Like all current Omron PLCs, CJ1 has a DeviceNet interface. It can be used as master, slave, or both at the same time. Omron's CPM2C micro PLC with integrated DeviceNet slave interface allows truly seamless distributed control. Even PLC programming and monitoring can be done through DeviceNet.



DeviceNet configurator
Intuitive use, from simp
detailed tuning of devic
of actual network confi
functions for troublesh

Remote I/O
Omron's latest remote I/Os have automatic baud rate recognition, which is unique in DeviceNet. They can be used as plug & play slaves, or fully configured to suit the application. Omron's DRT2 series feature integrated preventive maintenance functions. These smart slaves monitor and log the power supply, operating time, the number of I/O operations, output-to-input delay times, and can signal when maintenance is due.

DeviceNet and Omron – the benefits

Traditional industrial automation systems require a matrix of multi-core cables, cable supports, junction boxes, control cabinets and data cables. A DeviceNet network simplifies wiring by using just a dual twisted pair cable to provide both power and data. This saves on wiring costs and the time needed for materials installation. What's more, Omron can supply every product you'll ever need on DeviceNet to optimise your industrial automation system.

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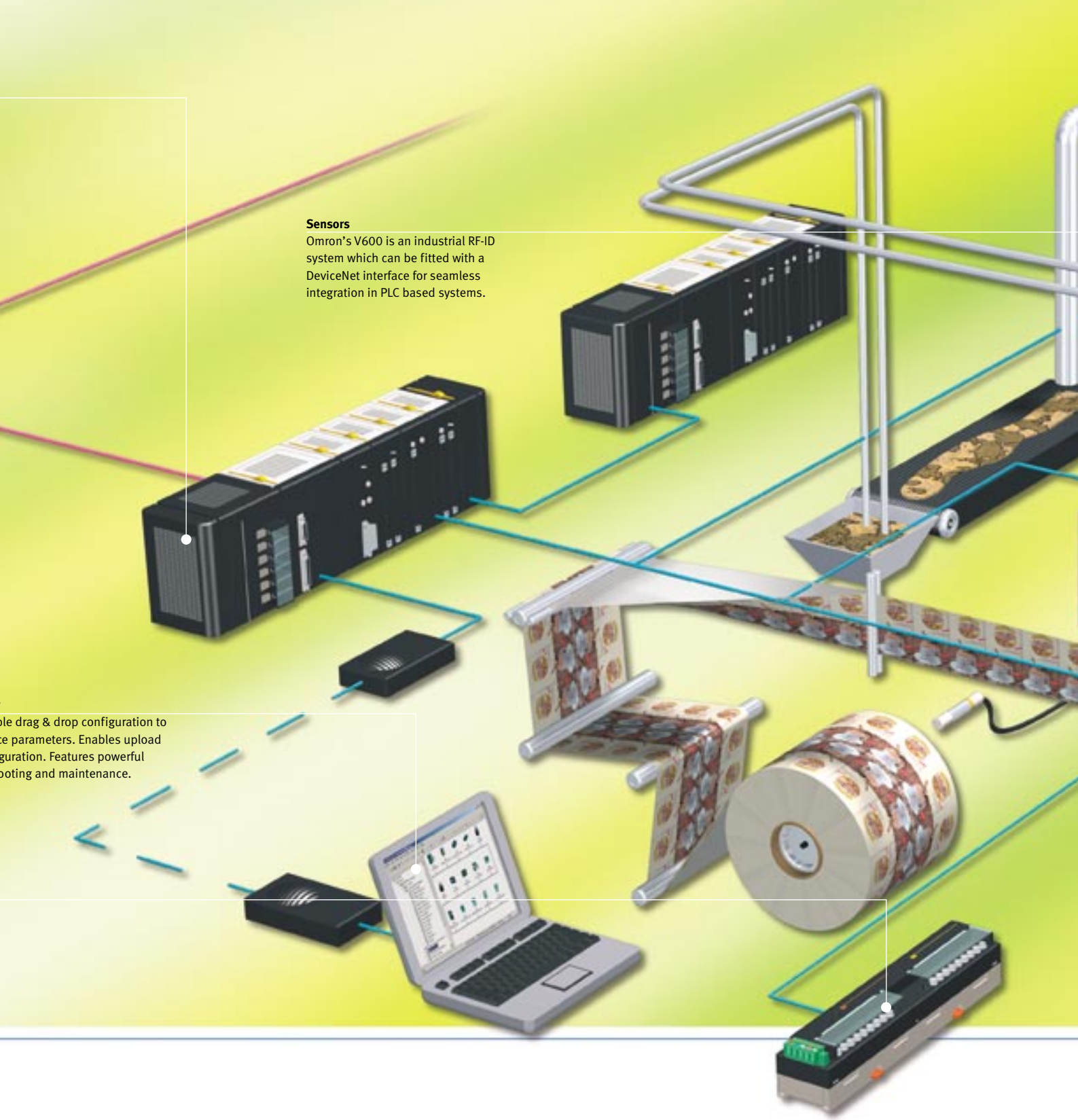

Sensors
Omron's V600 is an industrial RF-ID system which can be fitted with a DeviceNet interface for seamless integration in PLC based systems.

ble drag & drop configuration to
ce parameters. Enables upload
guration. Features powerful
ooting and maintenance.

DeviceNet and Omron – affordable and state-of-the-art

All of Omron's products are optimised for seamless integration into a DeviceNet system. You can configure Omron's devices over the network on-the-fly, and add a device or machine to a production line without powering down. DeviceNet is a flexible network, designed to accommodate your growing needs. Omron is a dedicated developer of DeviceNet core technologies, so you'll always have access to state-of-the-art devices. The result is that you get an affordable, state-of-the-art solution for optimising your industrial automation system!

Omron's DeviceNet software - so easy to use

Omron's DeviceNet configuration software is specially developed to take the complexity out of DeviceNet by ensuring that products integrate in a more user-friendly way than in other bus systems. Omron's DeviceNet units have a default mode that enables you to set the addresses, plug the products in and watch everything run. The configuration software allows you to monitor and fine-tune the DeviceNet products in your network for optimum operation. The products are literally plug-and-play, and the software is drag-and-drop. Nothing could be easier.

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Sensors
The F150 is a small yet powerful machine vision system ideally suited for quality inspection applications. Its DeviceNet interface can handle everything from simple 'PASS/FAIL' data exchange to detailed image property data transfer.

Temperature controllers
OMRON's renowned single- and multi-loop temperature controllers can be seamlessly integrated into control systems, providing full access to all control parameters over DeviceNet.

Sensors
Omron's E3X-series fibre-optic sensors can be configured and operated through DeviceNet. Each slave interface can support up to 16 sensor amplifiers.

Drives
Omron's W-series servo drives with DeviceNet slave interface simplify distributed control and information management for servo systems. Most of OMRON's variable frequency drives can also be networked using DeviceNet option boards.

HMI
Monochrome or colour touch-screen terminals with DeviceNet option module. Explicit messaging allows freely configurable access to terminal data.

Omron - the ideal one-stop-shop

Omron has seamlessly integrated DeviceNet interfaces into all of its core products, including PLCs, I/O modules, HMI terminals, wireless data links, temperature controllers, sensors, and drives. With such a comprehensive selection of DeviceNet compatible products available, Omron is a virtual one-stop shop for any customer.

First with wireless interfacing - unique

As a leading global player in developing DeviceNet products, it's no surprise that Omron should be the first company to introduce a wireless interface to this network. Operating on the standard 2.4 GHz frequency band, this unique interface is the ideal wireless solution between two or more DeviceNet bus segments, particularly when using a wired product is difficult.

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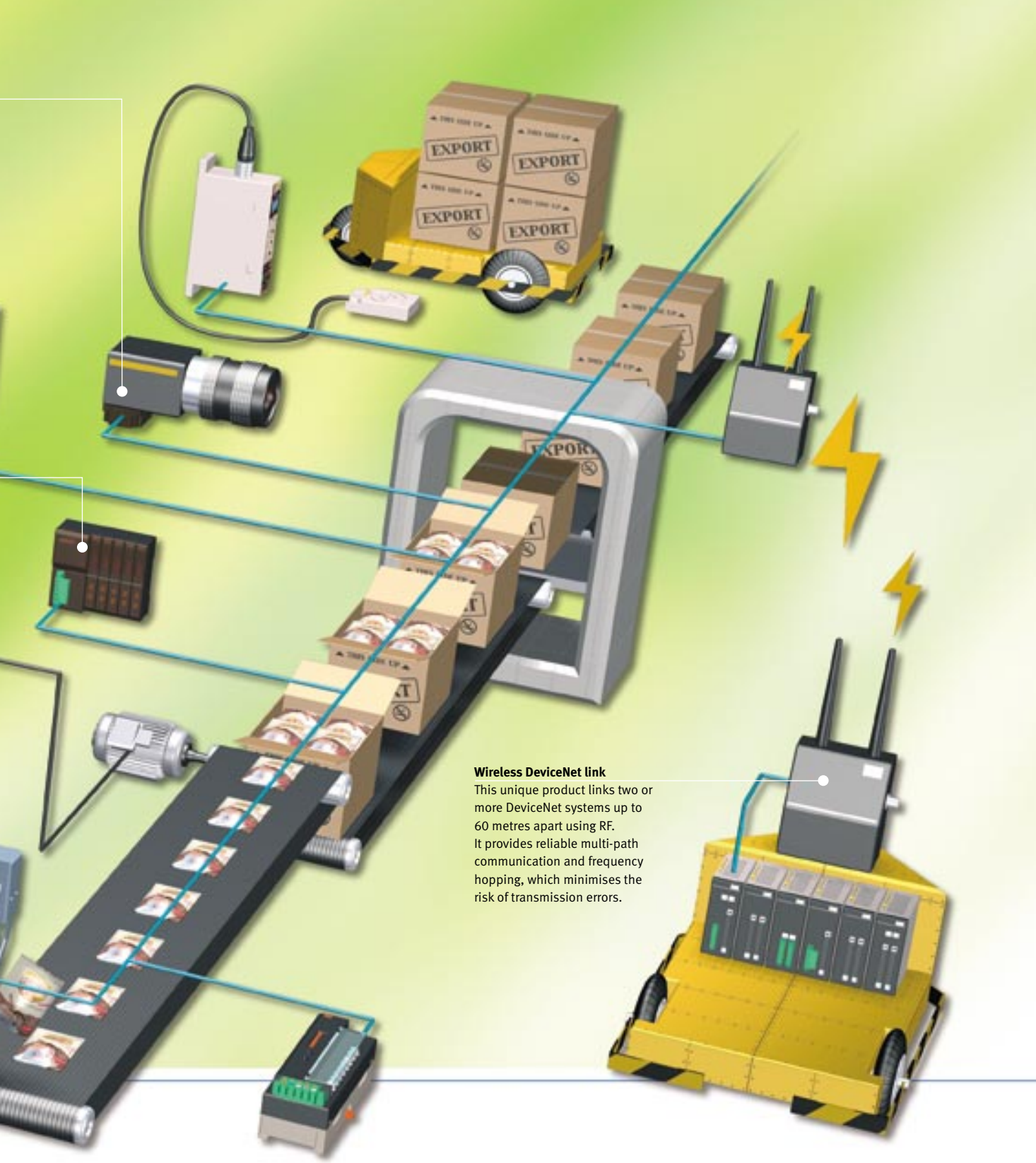

Wireless DeviceNet link
This unique product links two or more DeviceNet systems up to 60 metres apart using RF. It provides reliable multi-path communication and frequency hopping, which minimises the risk of transmission errors.

DeviceNet™

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DeviceNet and Omron –setting the standards

DeviceNet is based on open standards and specifications defined by the Open DeviceNet Vendors Association (ODVA), a consortium whose main task is to promote DeviceNet world-wide. Omron is a founding member of ODVA and a leading player in promoting DeviceNet, and is dedicated to producing and improving products that work with DeviceNet. All Omron products are ODVA certified, making them fully DeviceNet compatible. Thanks to ODVA's strong conformance testing policies, DeviceNet also ensures the interchangeability and interoperability of control devices from hundreds of manufacturers world-wide.

DeviceNet and Omron... benefits at a glance!

Features

Benefits to you:

- **An open communication standard**
  - *Assures multi-vendor device interoperability*
- **All products ODVA certified**
  - *Omron can supply every product you need for your DeviceNet application*
- **Fast, easy installation**
  - *Saves on space and time*
- **Future-ready for easy additions as your needs change**
  - *DeviceNet is designed for easy network additions of Omron products*
- **On-the-fly configuration and additions without powering down**
  - *DeviceNet doesn't stop, even when you're adding to it*
- **Dedicated developer of DeviceNet core technology**
  - *You'll always be up-to-date with state-of-the-art products*
- **DeviceNet compatible software**
  - *Omron's DeviceNet drag-and-drop configuration software ensures user-friendly operation*

I/O modules of Omron

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OMRON EUROPE B.V. Wegalaan 67-69, NL-2132 JD, Hoofddorp, The Netherlands. Tel: +31 (0) 23 568 13 00 Fax: +31 (0) 23 568 13 88 www.eu.omron.com

UNITED KINGDOM
Omron Electronics Ltd
1 Apsley Way, Staples Corner, London, NW2 7HF, UK
Tel: +44 (0) 870 752 0861
Fax: +44 (0) 870 752 0862
www.omron.co.uk

Austria
Tel: +43 (0) 1 80 19 00
www.omron.at

Belgium
Tel: +32 (0) 2 466 24 80
www.omron.be

Czech Republic
Tel: +420 (0) 267 31 12 54
www.omron.cz

Denmark
Tel: +45 43 44 00 11
www.omron.dk

Finland
Tel: +358 (0) 9 549 58 00
www.omron.fi

France
Tel: +33 (0) 1 49 74 70 00
www.omron.fr

Germany
Tel: +49 (0) 2173 680 00
www.omron.de

Hungary
Tel: +36 (0) 1 399 30 50
www.omron.hu

Italy
Tel: +39 02 32 681
www.omron.it

Netherlands
Tel: +31 (0) 23 568 11 00
www.omron.nl

Norway
Tel: +47 (0) 22 65 75 00
www.omron.no

Poland
Tel: +48 (0) 22 645 78 60
www.omron.com.pl

Portugal
Tel: +351 21 942 94 00
www.omron.pt

Russia
Tel: +7 095 745 26 64
www.russia.omron.com

Spain
Tel: +34 913 777 900
www.omron.es

Sweden
Tel: +46 (0) 8 632 35 00
www.omron.se

Switzerland
Tel: +41 (0) 41 748 13 13
www.omron.ch

Turkey
Tel: +90 (0) 216 326 29 80
www.omron.com.tr

For the Middle East, Africa and other countries in Eastern Europe,
Tel: +31 (0) 23 568 13 22 www.eu.omron.com

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• Panel indicators • Level controllers

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• Vision systems • RFID systems • Safety switches
• Safety relays • Safety sensors

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