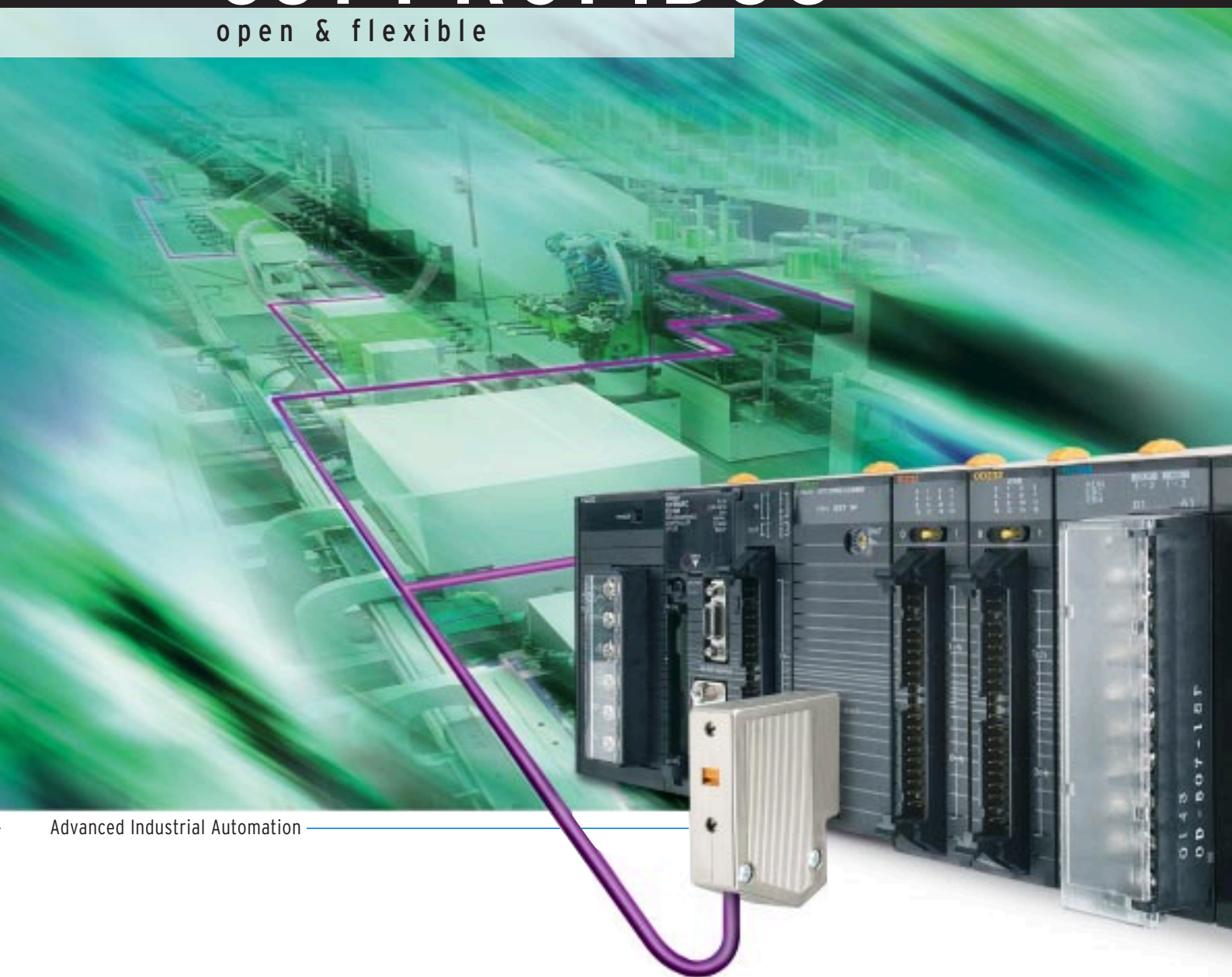Connection to smart devices

CJ1 PROFIBUS

open & flexible

Advanced Industrial Automation

OMRON

Omron offers a wide range of field bus compatible products for machine automation: HMI, remote I/O, control systems, inverters, servos, vision systems, sensors, temperature controllers, and power supplies. All products are an integral part of the Smart & Seamless technology that Omron offers. In that, Omron focuses on ease of use and a high degree of integration between devices, so that our customers are able to build their machines almost on a program-less manner.

Interoperability throughout the portfolio

Network technologies have brought major benefits to all aspects of industrial automation. Many of these technologies are now well established and accepted by end users and OEMs. Omron's CJ1 series of control systems seamlessly offers you these many network capabilities, enabling you to design and create solutions that best fit your application. You have the freedom to select between Ethernet, ControllerLink, DeviceNet, Compobus/S and of course Profibus.

Actual size

Profibus on CJ1

Omron's CJ1 PLC family ranges from very small CPUs that enable you to modularize your machine into logical small sections, to powerful CPU models that offer total machine control. In terms of size and performance the system is unequalled in today's market. At just 90mm x 65mm, the CJ1 family's profile is just slightly larger than that of a credit card! Both a Profibus master and a Profibus slave are available, and are developed and produced at Omron's development and production center in Europe.

Advanced supporting tool

Today's field-bus configuration tools have evolved to support a wide range of functions that include engineering, commissioning, operation, diagnostics and maintenance. Omron's Profibus solution uses FDT/DTM (Field Device Tool and Device Type Manager) technology to solve these tasks. This technology enables control system manufacturers to provide customers with an optimized display of all functions and data. It is implemented in Omron's CX-Profibus software tool.

More about FDT/DTM

FDT/DTM provides a standard for interfaces between an engineering tool such as Omron's CX-Profibus and software components that support the field device. The core of the concept is the DTM, a software component that can be used in all software tools supporting the FDT human interface. The DTM is the configuration and management component for a field device. It contains all configuration information, diagnostics, maintenance information and even graphical user dialogs of the specific device, and is very easy to load into Omron's CX-Profibus.

The Profibus units offer many benefits, including:

- **Compact design**
- **Easy to install**
- **Simple configuration**
- **Comprehensive control and monitoring**
- **Mounting on a standard DIN rail**
- **For the master: reduced CPU load by handling data transfer independently**

Specification data

Function	CJ1W-PRM21	CJ1W-PRT21
Main functions	Basic Profibus-DP master Class 1 Functioning plus: Set_Prm Slave_Diag Chk_Cfg Global_Control DPV1 data types support	Profibus-DP slave to DPM1 + DPM2 masters: Data_Exchange Slave_Diag Set_Prm Chk_Cfg Global_Control (SYNC/FREEZE/CLEAR) To DPM2 master only: RD_Inp RD_Outp Get_Cfg
Applicable network standard	IEC 61 158/EN 50 170, Volume 2	IEC 61 158/EN 50 170, Volume 2
Data transfer rate	9.6 to 12Mbit/s	9.6 to 12Mbit/s
Maximum number of stations supported	125	Not applicable
I/O capacity	7k words I/O and 25 words CIO	180 words I/O
Profibus interface	9-pin female sub-D connector	9-pin female sub-D connector
Settings	Rotary switch: unit number	Special I/O machine number (00-95) By 2 rotary switch Profibus-DP node address (00-99) by 2 rotary switches
Dimensions	90 x 65 x 31 mm	90 x 65 x 31 mm
International standards	CE, cULus, Lloyds	CE, cULus, Lloyds

Authorised Distributor:

Automation and Drives
• Programmable logic controllers • Networking
• Human-machine interfaces • Inverter drives • Motion control

Industrial Components
• Electromechanical relays • Timers • Counters
• Programmable relays • Low voltage switchgear • Power supplies
• Temperature & process controllers • Solid-state relays
• Panel indicators • Level controllers

Sensing and Safety
• Photoelectric sensors • Proximity sensors • Rotary encoders
• Vision systems • RFID systems • Safety switches
• Safety relays • Safety sensors

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