

Open Network Controllers (DeviceNet) ITNC-EPX01-DRM

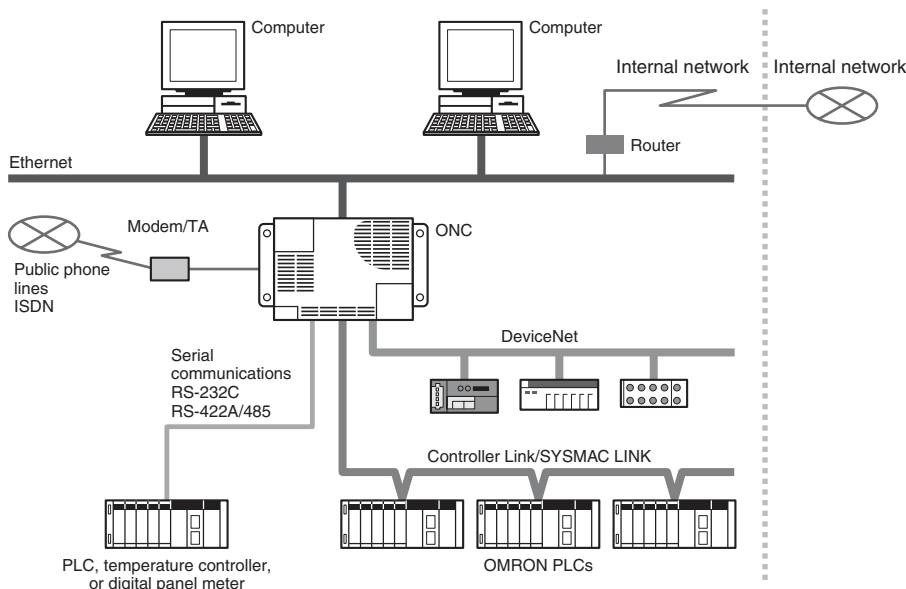
Information Station for Production Lines

OMRON Open Network Controllers (ONCs) are popular as information stations for manufacturing devices and production lines. These are version 2 ONCs that provide high speed, high capacity, and models compatible with a PCI bus.



Basic Function

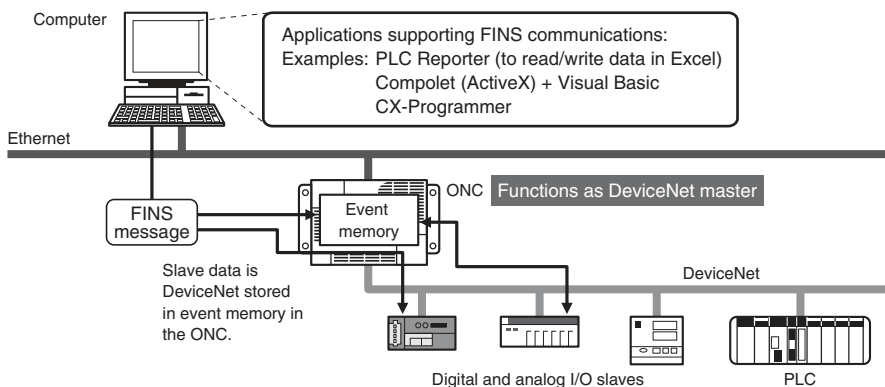
An ONC collects various types of onsite information on manufacturing devices or production lines from PLCs, DeviceNet-compliant devices, temperature controllers, digital panel meters, and other FA components and provides it to the information system using the required protocol on Ethernet, an internal network, or the Internet. This enables implementing an information system for equipment or production facilities without altering the PLC system.



Using an ONC as an Information Gateway

Ethernet and DeviceNet Remote I/O Communications

- Data from DeviceNet slaves is stored in event memory in the ONC. The ONC's event memory is read and written from the computer to effectively read and write slave I/O data.
- DeviceNet slave data can be read and written without going through the PLCs.
- Explicit messages can be sent from the computer through the ONC to DeviceNet slaves.
- The ladder program in the PLCs can be maintained from the CX-Programmer through the DeviceNet.



Refer to the *Open Network Controller Catalog* (Cat. No. V204) for details.

Ordering Information

Product	Specifications	Model
Expansion Model with DeviceNet	Expansion slot, COM port *, and DeviceNet capability	ITNC-EPX01-DRM
NX-Server for DeviceNet ONC Edition Ver. 1.00	--	ITNC-NS1Q-F

Note: The expansion slot is a PCI bus slot into which either a Controller Link Board or a SYSMAC Board can be mounted. Only one slot is provided.

* RS-232C X 3 and RS-422 (or RS-485) X 1

Application as a Data Collection Station

Collect Data and Send It Using FTP

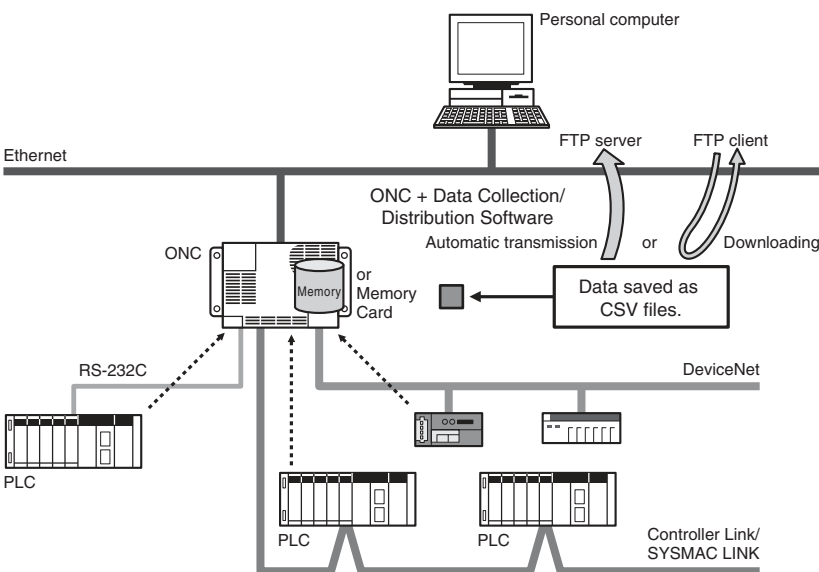
Collect data under the required conditions from PLCs *1 connected via various networks and from DeviceNet slaves *2 and save it in CSV or binary files in the Memory Card in the ONC. Without any changes to the PLC system, the ONC can be used as a collection station for production, error, inspection, and history data.

*1. CIO and DM Area data from the PLC can be collected if it is set for event memory in the ONC or specified for a serial connection.

*2. • Periodic collection: Collection at a specified time interval, such as 500 ms.
• Event collection: Collection when some event occurs, such as a change in I/O status or data contents in the PLC or in DeviceNet devices.

Example: Collecting status information when an error occurs by using the occurrence of an error in processing or inspections on the production line as the event.

• Scheduled collection: Collection at specific times, such as each hour.
Example: Collection every hour on the hour, such as 12:00 noon, 1:00 PM, etc. (minimum setting: every minute)



Example: Data collected using the Data Collection/Distribution Software can be displayed in Excel as shown below. A sample CSV file is shown set to collect data when bit 00 in CIO 0000 turns ON. The date can be added each time data is collected, and field names can be attached.

	A	B	C	D	E	F	G
1	Date	Time	DM_Uch	DM_315ch	Product Counts	Error Counts	
2	2/7/03	19:45:56	0841	da2d	6b44	4b79	
3	2/7/03	19:46:06	5989	fa3c	4720	672c	
4	2/7/03	19:46:31	1e8f	a536	e430	6905	
5	2/7/03	19:47:01	1e85	160a	8813	741f	
6	2/7/03	19:47:21	a64d	3a35	e320	9304	
7							
8							
9							

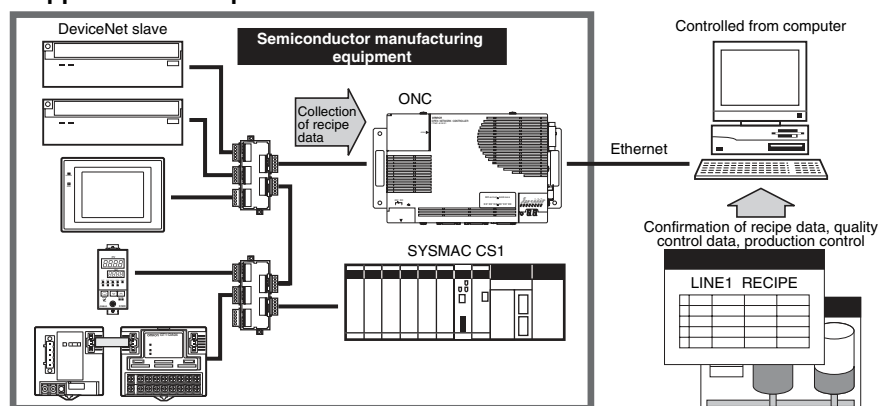
Optional Software

Operating data and production results collected and stored without adding a DeviceNet node and with no influence on DeviceNet traffic.

«NX-Server for DeviceNet ONC Edition»

- NX-Server can collect I/O data for devices on DeviceNet without using any existing DeviceNet resources (MAC IDs).
- NXServer analyzes frames that flow through the network to collect system I/O data for devices without request/response message communications. There is no influence on existing DeviceNet traffic between the devices on the DeviceNet.
- The collected data is automatically allocated to event memory (CIO and DM). By combining this functionality with the Data Collection/Distribution Software, automatic collection is possible for various types of data.

● Application Example



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