

# **Data Flow Controller DX1-series**

## **Reference values for data collection performance**

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# Reference Values for Data Collection Performance

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**Reference values for data collection and output performance are provided below.**

The configurations shown are based on conditions where the **component operating rate and CPU utilization are kept at 60% or lower.**

If the system load increases, delays in data collection or data output may occur.

The reference measurements are based on a 60% utilization guideline to ensure sufficient performance headroom.

The **unit of data is 2 bytes (1 WORD)**. In this configuration, all collected data is processed by a single serializer and output to files on a **USB flash drive**.

The serializer settings are as follows:

- File switching interval: **1 second**
- Aggregation: **Disabled**

Actual performance may vary depending on the operating environment, system configuration, and settings.

Please treat these values as **reference values only**.

# PLC / Modbus TCP Collector Performance Metrics (Reference Values)

[For a Single PLC Collector]

Cycle (ms)	Bulk Read	Maximum Number of Data Points
10	✓	150
		1
50	✓	500
		5
100	✓	2,000
		20
1,000	✓	10,000
		150

[Number of Connected PLCs]

Cycle (ms)	Number of Data Points	Bulk Read	Output Format	Maximum Number of Connections
10	100	✓	JSON	3
			CSV	6
50	100	✓	JSON	8
			CSV	12
100	100	✓	JSON	10
			CSV	20
1,000	100	✓	JSON	20
			CSV	25
	1,000	✓	JSON	6
			CSV	10

# EIP Collector Performance Metrics (Reference Values)

[For a Single PLC Collector]

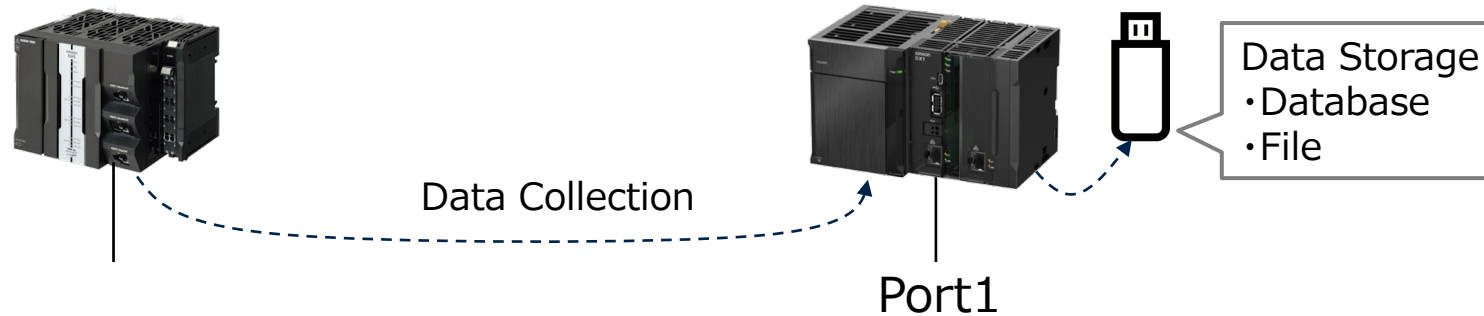
Cycle (ms)	Bulk Read	Maximum Number of Data Points
10	✓	20
		2
50	✓	200
		10
100	✓	400
		25
1,000	✓	4,000
		250

[Number of Connected PLCs]

Cycle (ms)	Number of Data Points	Bulk Read	Output Format	Maximum Number of Connections
10	10	✓	JSON	2
			CSV	2
500	100	✓	JSON	15
			CSV	15
1,000	100	✓	JSON	20
			CSV	25
	1,000	✓	JSON	3
			CSV	4

“Bulk Read” is performed by acquiring data as a structure (Int16 × 200).

# Measurement Configuration



## NX5

- Communication Specifications
  - Configure register values or variables via FINS or EtherNet/IP.
  - Set a 5-digit value to an Int16 variable (register).
  - Define a structure to enable bulk data acquisition over EtherNet/IP (the structure consists of 200 Int16 members).

## DX1

- USB Flash Drive (Used as Data Storage)
  - FAT32, cluster size 32,768 bytes