General Specifications

Model NT303AJ
Test Package

STARDOM
VDS

GS 34P02M01-01E

■ GENERAL

The optional Test Package consists of the following three sets of functions to facilitate debugging of Versatile Data Server Software (VDS) system:

• Device monitor
• Object trace management
• Simulation

■ SYSTEM REQUIREMENTS

The system requirements follow those required for VDS specified in VDS Versatile Database Server Software, GS 34P02A02-01E.

■ FUNCTION SPECIFICATIONS

● Device Monitor

Displays the values of devices acquired from controllers, such as PLCs, connected to the master station. In detail, Device Monitor displays the statuses of the CPU modules in the connected controllers and allows the user to view and modify the device values. Device Monitor can run regardless of the operation mode of the system; however, it supports neither an FCN nor FCJ autonomous controller.

General Specifications
CPU status display:
 I/O controllers that can be handled: 32
 Display items: I/O object names, controller types, CPU statuses
 CPU status indications: "R" (stands for Running). Rectangle symbols represent the individual CPU statuses by color where gray/red/yellow/green correspond to heavy failure/medium failure/light failure/normal.
Device data view allowing changes by user:
 Number of windows that can be open simultaneously: Up to 4
 Number of display data per window: 64 (32 for two-word data)
 Display update intervals: Approximately 2 seconds
 Display items : Names and values of devices
 Data display format:
  Relays: Rectangle symbols represent the individual device values by color where green/white/gray correspond to on/off/unavailable.
  Timers and counters: Settings and current readings
  Registers: Decimal and hexadecimal integers (two-word data values can also be displayed).

Applicable Controllers

The table below shows driver types used to link controllers Test Package can handle. For details, see the respective documentation.

I/O Driver Type	Details	Remarks
FA-M3-Ethernet	Applicable CPU modules (multiple CPUs can be linked up): SPxx, BP20, BP30, FP36, SPVx	For an FA-M3R controller, any CPU module other than listed on the left cannot be installed.
FA-M3-RS-232-C		Any CPU module other than listed on the left cannot be installed.
FA-M3-AT		
MELSEC-Ethernet		
MELSEC-RS-232-C		
EZSocket		Test Package can handle Q and QnA Series controllers to the extent of the specifications and functionality of the A Series.
SYSMAC	Applicable CPUs: C, CV, and CSI Series	

Note : For a connection of a MELSEC controller via the MELSEC-Ethernet driver, a Ladder program for communication needs to be created and run in advance.

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Devices That Can Be Handled (for FA-M3)

Device Type			Read	Write
Bit devices	Input relays	X	X	
	Output relays	Y	X	X
	Internal relays	I	X	X
	Shared relays	E	X	X
	Link relays	L	X	X
	Special relays	M	X	X
	Time-up relays	T	X	X
	Count-up relays	C	X	X
Word devices	Timer settings	T	X	
	Current timer readings	T	X	X
	Counter settings	C	X	
	Current counter readings	C	X	X
	Data registers	D	X	X
	Shared registers	R	X	X
	Index registers	V	X	X
	File registers	B	X	X
	Link registers	W	X	X
	Special registers	Z	X	X

Blank: Disabled
*1:   Write-enabled while running wireless debugging.

Devices That Can Be Handled (for MELSEC)

Device Type			Read	Write
Bit devices	Input relays	X	X	
	Output relays	Y	X	X
	Internal relays	M	X	X
	Latch relays	L	X	X
	Step relays	S	X	X
	Link relays	B	X	X
	Annunciators	F	X	X
	Special relays	M	X	X
	Timer contacts	T	X	X
	Timer coils	T	X	X
	Counter contacts	C	X	X
	Counter coils	C	X	X
Word devices	Current timer readings	T	X	X
	Current counter readings	C	X	X
	Data registers	D	X	X
	File registers	R	X	X
	Link registers	W	X	X
	Special registers	D	X	X

Blank: Disabled

Devices That Can Be Handled (for SYSMAC C Series)

Device Type			Read	Write
Bit devices	Devices in contact area (*1)		X	X
	Link relays	LR	X	X
	Lock-up relays	HR	X	X
	Auxiliary memory relays	AR	X	X
	Timers	TIM	X	X
	Counters	CNT	X	X
Word devices	Timers	TIM	X	X
	Counters	CNT	X	X
	Data memory	DM	X	X
	Extended data memory	EM	X	X

*1:   Devices in contact area include input/output relays, auxiliary internal relays, and special auxiliary relays.

Devices That Can Be Handled (for SYSMAC CV Series)

Device Type			Read	Write
Bit devices	Devices in relay area (*1)		X	X
	CPU bus link relays	G	X	X
	Auxiliary special relays	A	X	X
	Timers	T	X	X
	Counters	C	X	X
Word devices	Timers	T	X	X
	Counters	C	X	X
	Data memory	D	X	X
	Extended data memory	E	X	X

*1:   Devices in relay area include input/output relays, auxiliary internal relays, SYSMAC BUS/2 remote I/O relays, data link relays, data link relays, lock-up relays, devices in CPU's advanced unit area, and SYSMAC remote I/O relays.

Devices That Can Be Handled (for SYSMAC CS1 Series)

Device Type			Read	Write
Bit devices	Channel I/O		X	X
	Auxiliary internal relays	W	X	X
	Lock-up relays	H	X	X
	Auxiliary special relays	A	X	X
	Timers	T	X	X
	Counters	C	X	X
Word devices	Timers	T	X	X
	Counters	C	X	X
	Data memory	D	X	X
	Extended data memory	E	X	X

● **Trace Management**

Data Server and Historical Data Acquisition have a tracing functionality to trace a sequence of past actions. The Test Package provides Trace Manager with the ability to start and stop this object tracing functionality.

Recording Format
Comma-separated value (CSV) text file

Programs That Have Object Tracing Functionality
　　Data Server: Control objects
　　Historical Data Acquisition: Overall

● **Simulation**

The simulation functionality of the Test Package can simulate changes in data inside a controller by generating simulated inputs and outputs for the user-specified properties of control objects when the corresponding controller is not connected to the master station. Simulation can be performed for device objects and process tag objects, but not for PAS POU objects. There are three ways to input simulated data:

　　Standard pattern: Simulated input data is automatically generated according to a standard pattern such as a sine wave.

　　User-defined pattern: Simulated input data is automatically generated according to a pattern defined by the user, who can also start changing the input according to the pattern at an arbitrary time.

　　Manual change: The user writes a simulated value to selected data (real data). The user can modify a single property of a single control project at one time anytime he/she likes.

General Specifications

How to Modify	Item	Specification		Remarks
Initial value setting	Data type	Analog		A constant
	Data range	Range of data type of property the user specifies		
	Start	Automatic (manual start unavailable)		
Standard pattern	Number of patterns	Standard patterns	Digital: 3	Continuous on, continuous off, pulse train
			Analog: 8	Constant level, constant-rate change, sine wave, etc.
		Extended patterns	Digital: 16	Pulse train with modified initial value, on-time, and off-time
			Analog: 16	Eight standard analog patterns with modified initial value, rate of change, and upper and lower limits
	Data refresh intervals	1 second		
	Data range	Digital	On or off	On = 1; off = 0
		Analog	-100 to 200%	Corresponding to the internal data normalized to a 0–100% value
	Start/stop	Automatic (manual start unavailable)		Repetitive execution during runtime
User-defined pattern	Number of patterns	32 (*1)		
	Number of values defined	Max. 600 values per pattern		
	Data refresh intervals	1 to 3,600 seconds		To be set in seconds.
	Start/stop	Started manually and ended automatically when the pattern finishes.		Repetitive execution can be specified.
Manual change	Unit of items that can be changed	A single property at each time		
Common specification	Change of settings for operation	Possible		Which items to be simulated can be specified for each property of a control object.

　*1:　Specify a pattern for each property of a control object (the same pattern can be specified for two or more properties). For a pattern which is used for an array property, different values can be set for individual array elements. However, the simulated signals that can be generated are limited to 256 in total of all patterns.

■ MODEL AND SUFFIX CODES

Model	Suffix Code	Description
NT303AJ	-LW11A	Fulltime Test Package
NT303RJ	-LW11A	Runtime Test Package

■ ORDERING INFORMATION

Specify the model and suffix codes.

■ RELATED DOCUMENTS

- VDS, GS 34P02A02-01E
- MELSEC Driver, GS 34P02G01-01E
- SYSMAC Driver, GS 34P02G06-01E

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