

General Specifications

GX20W Paperless Recorder Wireless Model

SMARTDAC+TM

GS 04L51B11-01EN

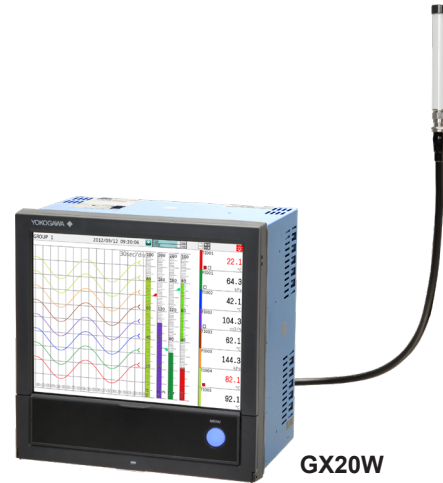
OVERVIEW

The GX20W is a paperless recorder equipped with a gateway function for the ISA100 field wireless network. It can (1) display in real time on its touch screen measurement data from compatible field wireless devices, such as the YTMX580 Multi-input Temperature Transmitter, and I/O modules installed in the GX20W and (2) save the data in an SD card.

- Up to 50 field wireless devices can be connected.
- Up to 500 channels of field wireless device data can be measured.
- The GX20W receives Publish*1 data from field wireless devices and stores it in the Modbus registers. The Modbus client function can be used to read the Modbus registers (which are assigned to communication channels) to display and record the data.

*1 Action to measure the process value at intervals preset in the field wireless device itself and transmit it via wireless communication

- Up to 500 channels*2 can be measured.
*2 Maximum total number of I/O channels.
- The GX20W has the large internal memory (1.2 GB), and prolonged record and preservation are possible.
- As the input signal, a DC voltage, thermocouple, resistance temperature detector, DI (DCV input (TTL), contact signal), mA (DC current), or Pulse input can be set to each channel.
- Analog output is capable of retransmission output of various types of channels and also manual output. It provides current output with channels that are isolated. (Analog output module)
- Input and output have module structure and it can extend them easily. (max. 10)
- A module type is six types, an analog input, a analog output, a digital input, a digital output, a digital input/output, and a pulse input.
- The intuitive operation by flick, pinch in, pinch out, and swipe are possible.
- The past trend under recording can be seamlessly displayed on a trend screen.
- Moreover, the measurement data of the time specified on the calendar screen can be searched and displayed.
- Various functions, such as a freehand message, a PDF/Excel output of a report file, a direct output to a network printer, a scale movement of a trend display, and a buzzer sound, are equipped.
- It can be hooked up to network via Ethernet, which enables to inform by Email and to monitor on Web site as well as to transfer files by using FTP. Also, it can communicate with Modbus/RTU or Modbus/TCP.
- The wireless gateway function can be configured from the accompanying software (Field Wireless Configurator).
- A setup of GX20W can be performed on-line from the web browser on PC. A setup by off-line is also possible. (Using Hardware setting software)



- Universal Viewer software allows a PC to display waveforms on its screen and to print out waveforms.
- The GX20W has actual values that underlies accurate measurements. (Input modules)
The measuring accuracies noted in the general specifications have a margin of error that takes into account the product's components and the equipment used for adjustment and testing. However, the actual values calculated from the accuracy testing data upon shipment of the instrument from the factory are as follows.

Input type		Measuring accuracy*3 (typical value*4)
DCV	20 mV	± (0.01 % of rdg + 5 μV)
	60 mV	± (0.01 % of rdg + 5 μV)
	6V (1-5V)	± (0.01 % of rdg + 2 mV)
TC*5	R, S	± 1.1 °C
	B	± 1.5 °C
	K (-200.0 to 1370.0 °C)	± (0.01 % of rdg + 0.2 °C) for 0.0 to 1370.0 °C; ± (0.15 % of rdg + 0.2 °C) for -200.0 to 0.0 °C
	K (-200.0 to 500.0 °C)	± 0.2 °C for 0.0 to 500.0 °C; ± (0.15 % of rdg + 0.2 °C) for -200.0 to 0.0 °C
	J	± 0.2 °C for 0.0 to 1100.0 °C; ± (0.10 % of rdg + 0.2 °C) for -200.0 to 0.0 °C
	T	± 0.2 °C for 0.0 to 400.0 °C; ± (0.10 % of rdg + 0.2 °C) for -200.0 to 0.0 °C
	N	± (0.01 % of rdg + 0.2 °C) for 0.0 to 1300.0 °C; ± (0.22 % of rdg + 0.2 °C) for -200.0 to 0.0 °C

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Input type		Measuring accuracy*3 (typical value*4)
RTD	Pt100 (-200.0 to 850.0 °C)	± (0.02 % of rdg + 0.2 °C)
	Pt100 (high resolution) (-150.00 to 150.00 °C)	± (0.02 % of rdg + 0.16 °C)

*3 Applies to GX90XA-10-U2, A/D integration time 16.67 ms or more, General operating conditions: 23±2 °C, 55±10% RH, supply voltage 90–132, 180–250 VAC, supply frequency within 50/60 Hz ±1%, warm-up of 30 minutes or more, no vibrations or other hindrances to performance.

*4 For the measuring accuracy (guaranteed), see the module's general specifications (GS04L53B01-01EN).

*5 These values do not include the reference junction compensation accuracy.
rdg: reading value.

FUNCTIONAL SPECIFICATIONS (MAIN UNIT)

Input/Output Specifications

Please see General Specifications for GX90XA/GX90XD/GX90YD/GX90WD/GX90XP/GX90YA I/O Module.

Model	Name	General Specification No.
GX90XA*	Analog input module	GS 04L53B01-01EN
GX90DX	Digital input module	
GX90YD	Digital output module	
GX90WD	Digital input/output module	
GX90XP	Pulse input module	
GX90YA	Analog output module	

* The following types are not supported.
High-speed universal (-H0)
4-wire RTD/resistance (-R1)
High withstand voltage (-V1)

Measuring Functions

- The number of installable modules and I/O channels

Item	Specification
Number of module	Max. 10
Number of input/output module	Max. 500 (or max. 100 for AI only)

Restrictions of module connection:

- A maximum of 10 modules can be installed, as a total for GX90YD digital output modules and GX90WD digital I/O modules.
- A maximum of one GX90WD digital I/O module can be installed in GX20W.
- A maximum of two GX90YA analog output module can be installed in GX20W.
- Expandable I/O connection
The expansion module (GX90EX) and the expandable I/O (GX60) cannot be connected to the GX20W.

Display Functions

Display groups:

Number of groups; 60

Number of channels that can be assigned to each group; 20

Scan interval: 100¹2, 200¹2, 500 ms¹, 1, 2, 5 s

*1 Cannot be specified if an electromagnetic relay scanner type (Type Suffix Code: -T1) analog input module is in use.

*2 Cannot be specified for L-model DCV/TC/DI, scanner type (Type Suffix Code: -L1).

Display color (Trend/Bar graph/Digital display):

Channel: Select from 24 colors

A desired display color can be selected freely using its RGB value.

Background: Select from white or black

Display type:

- Trend display (T-Y)

Display method:

Direction: Horizontal, vertical

Trend interval: 5¹2, 10¹2, 15¹, 30 s/div, 1, 2, 5, 10, 15, 20, 30 min/div, 1, 2, 4, 10 h/div

*1 Cannot be specified if an electromagnetic relay scanner type analog input module is in use.

*2 Cannot be specified for L-model DCV/TC/DI, scanner type (Type Suffix Code: -L1).

Trend line width: Thick, normal, thin

Scale; Max. 10

Current value bar graph, color scale band, and alarm point marks can be displayed on the scale.

Moving scale; Scale can be moved on any waveform.

A bitmap image scale can be attached.

Others; Grid (Auto, 4 to 12), Trip line, Message, Zone display, Partial expanded display

- Historical trend display (T-Y display)

Redisplays the display data or event data in the internal memory or external storage medium
Time axis operation: The time axis can be reduced or expanded.

Data search: Waveforms from the internal memory can be displayed through the specification of a date and time, calendar, each summary

Moving scale; A bitmap image scale can be attached.

All historical trends can be displayed in one screen.

- Bar graph display

Direction: Vertical or horizontal

Scale: Display a scale for each channel

Color scale band, and alarm point marks can be displayed on the scale.

- Digital display

Displays measured values numerically

A DI input state can be displayed as an arbitrary character string (0=Off/1=On, etc.)

Update rate: 0.5 s

- Overview display

Display format: All channels, each groups

Displays the measured values of all channels and the alarm statuses

- Alarm summary display

Displays a log of up to 1000 alarms

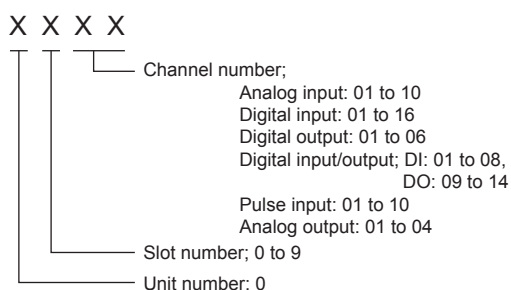
Specify an alarm with the cursor and jump to the corresponding section on the historical trend display.

- Message summary display
Time and content of up to 500 messages (including 50 add messages)
Specify a message with the cursor and jump to the corresponding section on the historical trend display.
- Memory summary display
Displays the information (up to 500) of the data in the memory
Specify a file with the cursor and jump to the corresponding section on the historical trend display.
- Report display
Displays the report data residing in the internal memory
For more details, see "MATHEMATICAL FUNCTIONS WITH REPORT FUNCTION (/MT)."
- Log display
Displays the event log, error log, communication log, FTP log, Web log, e-mail log, SNMP log, DHCP log, and Modbus log.
- Multi-panel display
Divides the screen into two to six sections and displays some different display formats.
- Internal switch/relay state display
Displays the internal switch and ON/OFF state of DO
Operates the internal switch and ON/OFF state
- Other displays
Network information display
System information display
System configuration display

Auto scroll ON/OFF:

The displayed groups can be automatically switched at a specified interval.
The display switches in ascending group order.

Names of channels:



Tags:

- Tag and Tag numbers can be displayed.
- Tag number; Number of characters: Up to 16
Displayable characters: Alphanumeric characters
Tag numbers can be enabled or disabled.
- Tag; Number of characters: Up to 32
Displayable characters: Alphanumeric characters

Message:

- Write messages to the trend display.
- Number of messages: 100
- Number of characters: Up to 32
- Write method: Write a preset message or write an arbitrary message on the spot.
- Write destination: Select only the displayed group or all groups.
- Auto message: Write a message when the GX20W recovers from a power failure while memory sampling is in progress.
Write a message when the trend interval is switched during memory sampling.

Add message:

- Write messages to the past data positions.
- Message: The same as the "Message" item above
Number of writable messages per file: 50 messages (including 10 freehand messages)

Freehand message:

- Can be written by dedicated pen.
Number of writable messages per file: 50 messages (including 10 Add messages)

Data Saving Functions

Internal memory:

- Temporarily saves various types of data.
- Medium: Flash memory
- File storage capacity; 1.2 GB

External storage medium:

- Medium: SD card (SD/SDHC) (up to 32 GB)
- Format: FAT32 or FAT16

Data type:

- Display data, Event data, Alarm summary data, Manual sampled data, Screen image data, Setup data, and Report data

Display data:

- Target: Measurement (input/output module)/math/communication channels, alarm summary, message summary
Description: Maximum or minimum value per recording interval
- Recording intervals: Determined by the trend interval, recording data type (display data/display data + event data)

Trend interval (div)	Number of channels	
	Display data	Display data + Event data
5 s	200	100
10 s	500	200
15 s	1000	500
30 s or longer	1000	1000

- Data size;
Analog input data: 12 bytes/ch.
Analog output data: 12 bytes/ch.
Digital I/O data: 4 bytes/ch.
Math channel data: 12 bytes/ch.
Communication channel data: 12 bytes/ch.
- File size: Up to 18 MB
- Number of files: Up to 1000 (including event data)
Operation in the internal memory: FIFO (First In First Out)

- Data format: Binary or text
- Recording: Records data at all times.
- Display data file sample time
Measurement channel = 30. Math Channel = 0

Internal Memory	1.2 GB
Trend interval (minute/div)	30 minutes
Recording interval (s)	60 s
Total sample time	Approx. 6 years

Event data:

- Target: Measurement (input/output module)/ math/communication channels, alarm summary, message summary, operation log
Description: Instantaneous value per recording interval
- Recording intervals: Determined by the sample rate, recording data type (display data/display data + event data)

Trend interval (div)	Number of channels	
	Display data	Display data + Event data
100 ms	500	100
200 ms	500	200
500 ms	1000	500
1 s or longer	1000	1000

- Data size;
Analog input data: 6 bytes/ch.
Analog output data: 6 bytes/ch.
Digital I/O data: 2 bytes/ch.
Math channel data: 6 bytes/ch.
Communication channel data: 6 bytes/ch.
- File size: Up to 18 MB
- Number of files: Up to 1000 (including display data)
- Operation in the internal memory: FIFO (First In First Out)
- Data format: Binary or text
- Mode; Free: Records data at all times.
Trigger: Starts recording data when a certain event occurs and records for the specified interval.
Repetition trigger: Repeat Trigger mode
- Event data file sample time
Measurement channel = 30. Math Channel = 0

Internal Memory	1.2 GB
Recording interval (s)	1 s
Total sample time	Approx. 2.4 month

Alarm Functions

- Number of alarms: Up to four alarms (level) for each measurement channels
- Alarm type: High limit, low limit, difference high limit, difference low limit, high limit on rate-of-change alarm, low limit on rate-of-change alarm, delay high limit, and delay low limit
- Alarm delay time: 1 s to 24 hours (for each channel)
- Rate-of-change calculation interval of rate-of-change alarms: 1 to 32 times the scan interval (common to all channels)

- Hysteresis: 0.0 to 5.0 % of the span (for each alarm (level))
- Alarm output: Output to the internal switch
Internal switch operation: AND/OR operation selectable
- Display: Displays the status on the respective operation screen and an alarm icon on the status display section when an alarm occurs.
Display operation: Hold or not hold the display until the alarm acknowledge operation
- Alarm hide function (alarm no logging function)
Not display alarms nor record to the alarm summary (for each channel)
- Alarm information: Displays a log of alarm occurrences on the alarm summary
- Reflash: The duration for which the reflash relays are deactivated can be set to 500 ms, 1 s, or 2 s.
- Individual alarm ACK function:
Alarm display and relay output can be cancelled on individual alarms

Event Action Functions

- Event action: Execute a specified operation when a given event occurs.
- Number of settings: 50
Events: Remote control input, etc.
Timer; Number of timers: 12
Match time timer; Number of timers: 12
Action: Specify memory start/stop, alarm ACK, etc.

Security Functions

- Operation lock function: Limitations to touch operation, access to the external storage medium, and various operations
- Login function: Only registered users can operate the GX20W.
It can be set to each of touch operation and communication access.
System administrators and Users: 50 (totally)
Number of Authority of user: 10 level

Manual Sampled Data

- Item: Instantaneous value at an arbitrary time
- Target: Measurement (input/output module)/ math/communication channels
- Number of recording channels; Max. 100
- Maximum number of data values that the internal memory can store: 400
- Data format: Text

Report Data

- Item: Report at each scheduled time of report
- Target: Measurement (input/output module)/ math/communication channels
- Maximum number of reports that the internal memory can store: 800
- Data format: Text

Snapshot Data

- Item: Displayed screen image data
- Data format: PNG
- Output destination: External medium or communication output

Setup Data

- Item: GX20W setup data
- Data format: Text
- Output/read destination (for saving/loading): External medium

Clock Functions

- Clock: With a calendar function
- Accuracy: ± 5 ppm (0 to 50 °C), excluding a delay (of 1 second, maximum) caused each time the power is turned on.
- Time setting: Using touch operation, communication command, event action function, or SNTP client function
- Time adjustment method:
Limit in which the time is gradually adjusted:
Select from the available settings between 5 s and 15 s.
Whether to change an out-of-limit operation immediately or report it as an error can be selected.
While memory sampling: Corrects the time by 1 ms for each second.
While memory is stopped: Immediately change the time.
- DST: The date/time for switching between standard time and DST can be specified.
- Time zone: Sets the time difference from GMT.
- Date format: Select "YYYY/MM/DD", "MM/DD/YYYY", "DD/MM/YYYY" or "DD.MM.YYYY".
MM expression can be selected from the numeric character or ellipsis. Ex. January: 01 or Jan
The delimiter can be selected from "/", ".", "-".

Ethernet Communication Functions

- Electrical specifications: Conforms to IEEE 802.3
- Connection: Ethernet (10BASE-T/100BASE-TX)
- Max. segment length: 100 m
- Max. connecting configuration: Cascade Max. 4 level (10BASE-T), Max. 2 level (100BASE-TX)
- Connector: RJ-45
- Protocols: TCP, UDP, IP, ICMP, ARP, DHCP, HTTP, FTP, SMTP, SNTP, Modbus, and dedicated protocols
- E-mail client: Automatically send e-mail at specified times.
E-mail is sent by events as below.
 - Alarm occurring/alarm canceling (Max. 50ch)
 - Recover from power failure
 - Report data generating
 - Storage medium error, FTP client function error
 - Specified time period
 POP before SMTP and SMTP authentication (PLAIN and CRAM-MD5) is available.
- FTP client: Automatically transfer data files to the FTP server.
Applicable files: Display data, event data, screen image data, report data, etc.
- FTP Server: Transfer files, delete files, manipulate directories, and output file lists of the GX20W.
Number of the simultaneous connection: Max. 4

- Web server: GX20W real-time monitoring and setting changes/operations can be performed with the Web browser.
The screen layout can be determined independently of the screen of the GX20W main unit.
Number of the simultaneous connection: Max. 4
- SNTP client: Inquires the time to the SNTP server and sets the GX20W.
- SNTP server: Outputs the GX20W time.
Time resolution: 5 ms
- DHCP client: Automatically obtain the network address settings from the DHCP server.
- Modbus client: Reads data from another device and writes to the registers.
Number of connectable sever; Max. 32
- Modbus server: Loads measurement and math channel data.
Loads and writes communication channel data. Some control commands such as memory start. Modbus client register access limitations.
Number of the simultaneous connection: Max. 4
- Setting/Measurement server: Operate, set, and output data of the GX20W using a dedicated protocol.
Number of the simultaneous connection: Max. 4
- DARWIN compatible communication server: Supports some DARWIN commands.
Communication with GX20W is possible using DARWIN communication commands.
- Output-related commands: Output measurement (IO) channel data, Output calculation channel data, Output relay status, Output the position of the decimal point for the measurement (IO) channel, Output the position of the decimal point for the calculation channel, Output the information on system configuration
- Setup-related commands: Range, Scale unit, Alarm, Time, Moving average
- Operation-related commands: Reset alarm, Reset timer, Start MATH calculation, Rebuild system, Initialize, Input communication, Output communication DO, Write message

Communication Channel Functions

- Number of communication channels; 500 (C001 to C500)
The Modbus client function is used to read the Modbus registers and assign them to communication channels.

Batch Function

- Function: Data management using batch names. Enter text fields and batch comments in the data file.
- Batch name: Added to the file name of the display data and event data.
Structure: Batch number (up to 32 characters) + lot number (up to 8 digits)
Use/not use selectable for lot number, on/off selectable for auto increment function.
- Text field: Adds text to the display data and event data.
There are 24 available text fields.
Up to 20 title characters and 30 other characters can be entered per field.
- Batch comment: Adds text to the display data and event data.
3 comments (max. 50 characters) are available.

Printer Output Function

- Snapshot Data can be printed out with any LAN-connected printer supporting the HP PCL5c language and the port 9100.

SSL Communication Functions

Communication that sends and receives information encrypted by the SSL (Secure Socket Layer) protocol is possible.

- Server function:
Supported servers: HTTP server and FTP server (Port number: 443 when encryption is used)
Private key: Created in GX20W and saved in the internal memory
Server certificate: Server certificates created by users can be saved in the internal memory.
Self-signed certificates can be created in GX20W.
- Client function:
Supported clients: FTP client and SMTP client (Port number: 443 when encryption is used)
Trusted certificate: Trusted certificates (a total of up to 100 KB) can be saved in the internal memory.

Electronic Signature Function

Electronic signatures can be added to report files created in PDF format using the PDF form creation function. An electronic signature is provided each time a report file is created.

- Certificate for electronic signature: Certificates for electronic signatures created by users can be saved in the internal memory.

Other Functions

- Buzzer: GX20W makes a buzzer sound at touch screen operation, or when alarm occurs.
- Backlight saver function: Dim or turn off the LCD backlight if there is no key operation for a specified time.
- Favorite display: Register frequently used displays to the Favorite and show them through simple operation.
- The main alarm is indicated using the MENU key LED.
No alarm: Blue (same condition as power-on)
Alarm condition: Red.
- User function feature: A button (user function key) to which the user can assign a desired function is provided. It can be assigned to an event triggered by the event action function.
- Firmware update function: The Web application or the IO module firmware can be updated by operating GX20W.

■ Wireless Communication Specifications

Communication protocol: Compliant with ISA100.11a (IEEE802.15.4)
Frequency: 2.400 - 2.4835 GHz license free ISM band
RF Transmitter power: Max. 11.6 dBm (fixed)
Data rate: 250 kbps
Antenna: External antenna, +2 dBi Omni directional type
Radio security: AES 128 bit codified
Number of field wireless device connections: Up to 50

■ Functions Not Available on the GX20W (firmware version number 4.06)

Function	GX20W-2 specifications (firmware version number 4.06)	GX20-2 specifications (firmware version number 4.06)
High withstand voltage AI module (GX90XA-10-V1)	Cannot be used	Supported
High-speed AI module (GX90XA-04-H0)	Cannot be used	Supported
4-wire RTD/ resistance module (GX90XA-06-R1)	Cannot be used	Supported
PID control module (GX90UT)	Cannot be used	Supported
Measurement mode	Measurement mode cannot be used.	Select from Normal, High speed, Dual interval.
Custom display (/CG option) components	Control components cannot be used.	Controller, control alarm indicator, components were added.
Initialize function	Initialize function cannot be used.	Control settings, individual settings (display group settings, recording channel settings) are available.
Control function	Control function cannot be used.	<ul style="list-style-type: none"> • Control settings • Prpgram pattern settings • Control display (control group, tuning, program select, program operation, control over view, control alarm summary, control summary) were added • program pattern load/ save
Event action	Event action function cannot be used.	<ul style="list-style-type: none"> • Group select of event trigger (dual interval measurement) • Load pattern file

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Function	GX20W-2 specifications (firmware version number 4.06)	GX20-2 specifications (firmware version number 4.06)
Control event action	Control event action cannot be used.	Control event function was added.
Operation lock/user property	Control operation cannot be used.	Control operation are available.
DARWIN compatible communication command	<p>The following commands cannot be used.</p> <ul style="list-style-type: none"> Handling depending on the high-speed AI, 4-wire RTD/resistance module Command (EX, PS, MS) that runs when the measurement mode is set to dual Interval PID module output by CF command Handling depending on the Measurement Mode 	<ul style="list-style-type: none"> Handling depending on the high-speed AI, 4-wire RTD/resistance module Command that runs when the measurement mode is set to dual Interval Support DR command (SZ, SC, PT) are added Handling of Settings Available on the GX/GP but Not on DARWIN Handling depending on the Measurement Mode
Program control (/PG)	Not supported	Supported

■ HARDWARE SPECIFICATIONS (MAIN UNIT)

Display

Display unit*:

12.1-inch TFT color LCD (800 × 600 dots)

* A small number of missing or steady-on LCD pixels and minor variations in brightness uniformity is a normal display characteristic and not a malfunction.

Touch screen:

4 wire resistive touch screen

Wireless antenna

Antenna connector type: N type jack
attached antenna impedance: 50 Ω

Construction

- Mounting: Flush panel mounting (on a vertical plane)
- Mounting angle: Inclined backward up to 30 degrees from a horizontal plane. Left and right horizontal
- Panel thickness: 2 to 26 mm
- Material;
Case: Metal plate
Bezel and display cover: Polycarbonate
- Color;
Case: Smoke blue
Bezel: Charcoal grey light
- Front panel: Water and dust proof: Complies with IEC529-IP65 and NEMA No.250 TYPE 4 (except External Icing Test), except for side-by-side mounting
- External dimensions:
When installing modules
288(W) × 288(H) × 220(D) mm
When uninstalling modules
288(W) × 288(H) × 169(D) mm
(D: depth from the panel mounting plane)
- Weight:
Approx. 6.4 kg
(excluding modules, antenna, antenna cable)

Power Supply

- Rated supply voltage: 100 to 240 VAC
- Allowable power supply voltage range: 90 to 132, 180 to 264 VAC
- Rated power supply frequency: 50/60 Hz
- Power consumption:

Supply voltage	LCD backlight off	Normal operation	Maximum
100 VAC	38 VA	47 VA	90 VA
240 VAC	50 VA	59 VA	110 VA

* The following combinations are assumed for LCD backlight off and normal operation.

- 5 AI modules, 4 DO modules, 1 DI module
- Module power supply voltage: The total allowable power consumption of respective modules is up to 20 W.
- Allowable interruption time: Less than 1 cycle of the power supply frequency

Isolation

- Insulation resistance: Between the Ethernet, RS-422/485, and each insulation terminals and earth: 20 MΩ or greater at 500 VDC
- Withstand voltage:
 - Between the power terminal and earth: 3000 V AC at 50/60 Hz for one minute
 - Between the contact output terminal and earth: 3000 V AC at 50/60 Hz for one minute
 - Between the input/output modules and earth: Depends on the specification of I/O module.
- Grounding: Be sure to set a low grounding resistance.
- Isolation:

Power terminal	FAIL output terminal	Internal circuit
	Ethernet port	
	RS-422/485 terminal	
	Input and output module terminal	
	Input and output module internal circuit	
	Earth (PE) terminal	
	RS-232 terminal SD card slot USB port	


The circuits divided by lines are insulated mutually.

Compliant Standards

GX20W contains the wireless module.

Please confirm that a installation region fulfills a standards, require additional regulatory information and approvals, contact to Yokogawa Electric Corporation.

GX20W satisfies the following standards:

- CSA: CSA22.2 No.61010-1, Overvoltage category II^{*1}, pollution degree 2^{*2}, and CSA-C22.2 NO. 61010-2-030-12
- UL: UL61010-1, UL 61010-2-030 (CSA NRTL/C)
- CE marking  (Only the models with /CE option):
 - Radio equipment directive (RE)
 - Radio Spectrum: EN 300 328
 - EMC:
 - EN 301 489-1, EN301 489-17, EN61326-1
 - Class A Table 2 (For use in industrial locations), EN 61000-3-2, EN 61000-3-3
 - Safety:
 - EN 61010-1, EN 61010-2-030, Overvoltage category II^{*1} Pollution degree 2^{*2} Measurement category^{*3}
 - EN 62331
- EMC and Radio communication compliance in Australia and New Zealand (RCM):
 - AS/NZS 4268, AS/NZS 2772.2, EN 61326-1, Class A
- FCC: FCC Part 15 Subpart B Class A
 - GX20W contains transmitter module FCC ID: SGJWFC001. (Part15 Subpart C)
- IC: ICES-003 Class A
 - GX20W contains transmitter module IC :8999A-WIC001 (RSS-Gen, RSS-210)
- Compliant with ISA100.11a (IEEE802.15.4)

- *1 Overvoltage category II:
 - Describes a number which defines a transient overvoltage condition.
 - Implies the regulation for impulse withstand voltage.
 - "II" applies to electrical equipment which is supplied from the fixed installation like a distribution board.
- *2 Pollution degree 2:
 - Describes the degree to which a solid, liquid, or gas which deteriorates dielectric strength or surface resistivity is adhering.
 - "2" applies to normal indoor atmosphere.
 - Normally, only non-conductive pollution occurs.
- *3 Measurement category: Depends on the specification of each modules

Category	Measurement category	Description	Remarks
II	CAT II	Available in the testing and measuring circuits directly connected to a usage location (receptacle or the like) of a low-voltage main power supply facility.	Appliances, portable equipment, etc.
III	CAT III	Available in the testing and measuring circuits connected to a power distribution portion of a low-voltage main power supply facility.	Distribution board, circuit breaker, etc.
IV	CAT IV	Available in the testing and measuring circuits connected to a power source of a low-voltage main power supply facility.	verhead wire, cable systems, etc.

Normal Operating Conditions

- Power supply voltage: 100 to 240 V AC ±10 %
- Power supply frequency: 50/60 Hz ±2 %
- Ambient temperature: 0 to 50 °C
- Ambient humidity: 20 to 80 %RH (at 5 to 40°C) (no condensation)
- Magnetic field: 400 A/m or less (DC and 50/60 Hz)
- Vibration:
 - 5 ≤ f < 8.4 Hz amplitude 3.5 mm (peak)
 - 8.4 ≤ f ≤ 160 Hz acceleration 9.8 m/s²
- Shock:
 - Non-energization, 500 m/s² or less, approximate 10 ms, 6 directions (±X, ±Y, ±Z), 3 times in each direction
- Mounting position: Can be inclined up to 30 degrees backward. Left and right horizontal when installing the panel mount and wall mount.
- Altitude: 2000 m or less
- Installation location: Indoors
- Warm-up time: At least 30 minutes after power on

Other Specifications

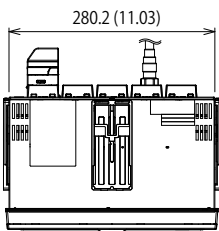
- Memory backup: A built-in lithium battery backs up the settings and runs the clock
- Recommended replacement periods of Battery: Approximately 10 years (at room temperature)

Transport and Storage Conditions

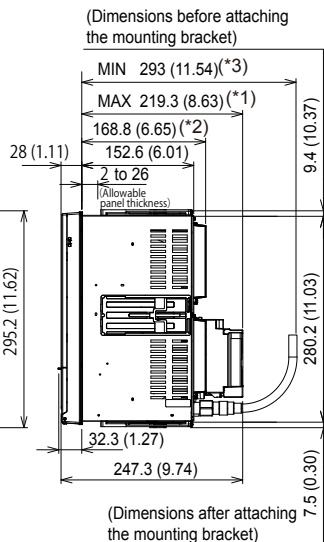
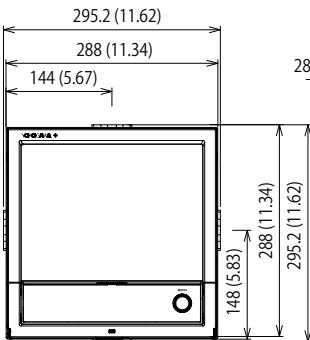
- Ambient temperature: -25 to 60 °C
- Ambient humidity: 5 to 95 %RH (no condensation)
- Vibration: 10 to 60 Hz, 4.9 m/s² maximum
- Shock: 490 m/s² maximum (in packaged condition)

EXTERNAL DIMENSIONS AND PANEL CUTOUT DIMENSIONS

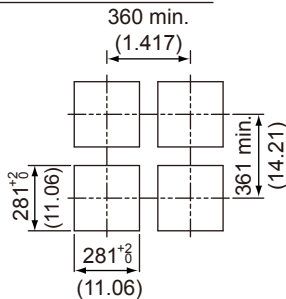
GX20W



Unit: mm (approx. inch)
 Unless otherwise specified, tolerance is ±3% (however, tolerance is ±0.3 mm when below 10 mm).

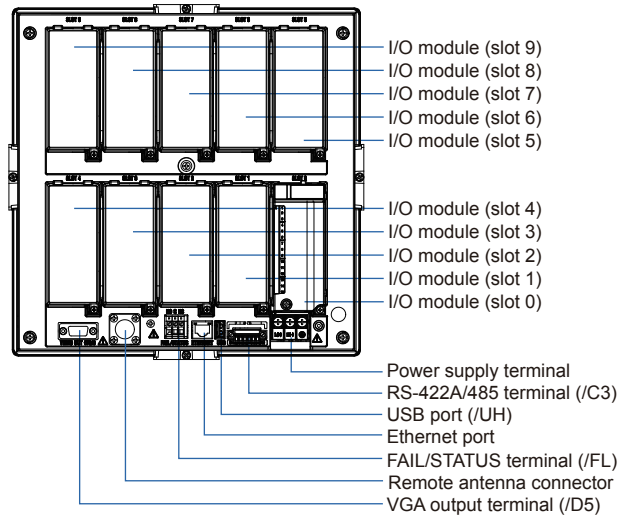


Panel cut dimensions



- *1: With module
- *2: Without module
- *3: When fixing cable

Rear view



Precautions to Be Taken While Wiring

With a screw terminal, we recommend that you use a crimp-on lug with an insulation sleeve (M4 for power supply wiring, M3 for signal wiring).

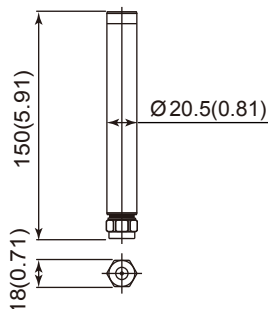
Recommended signal wiring crimp-on lug
 N1.25-MS3 (JST Mfg. Co., Ltd.)

Remote Antenna

□ Remote antenna

Antenna

- Non-direction antenna
- Gain : +2 dBi
- Part number: F9193DH

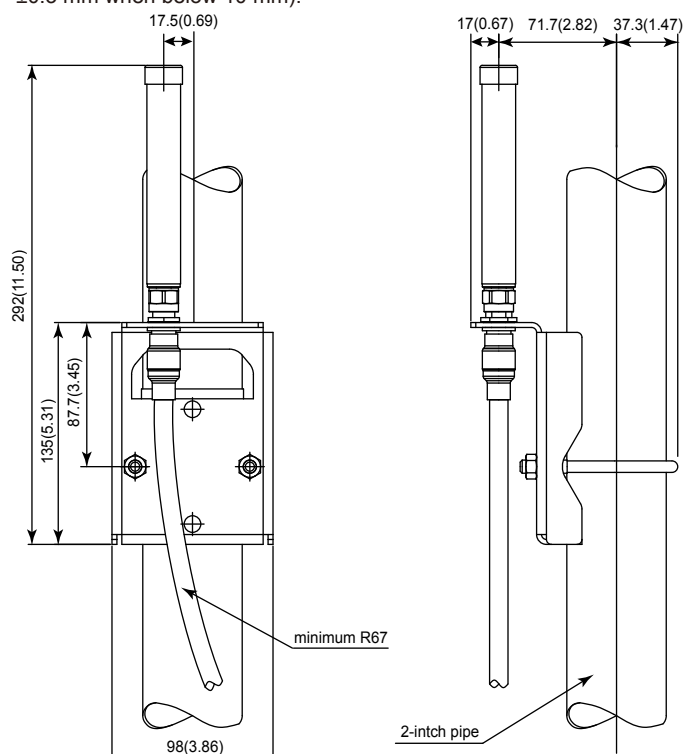


Unit: mm (approx. inch)
Unless otherwise specified,
tolerance is $\pm 3\%$ (however,
tolerance is ± 0.3 mm when
below 10 mm).

Remote Antenna Bracket

Unit: mm (approx. inch)

Unless otherwise specified, tolerance is $\pm 3\%$ (however, tolerance is ± 0.3 mm when below 10 mm).



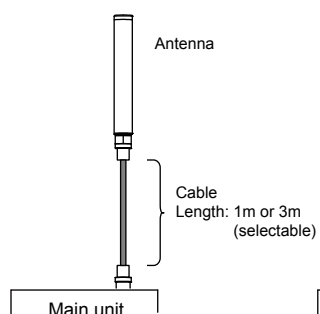
Remote Antenna Cable

□ Antenna cable

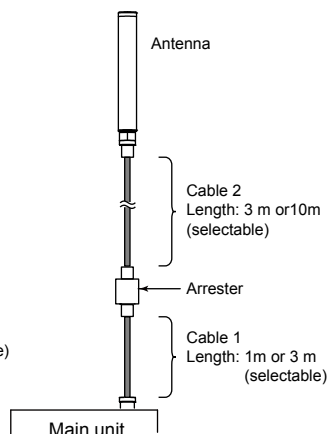
High-frequency coaxial cable

- Sheath dia : 11.11mm

<Without arrester>



<With arrester>



Attach the arrester in the middle of the antenna extension cable. Ground the arrester ground terminal. Connect the grounding wire to the GX20W's protective ground terminal.

■ SPECIFICATIONS OF OPTIONAL FUNCTIONS

SERIAL COMMUNICATION INTERFACE (/C3)

- Connection: EIA RS-422/485
- Protocol: Dedicated protocol or Modbus protocol
- Setting/measurement server function: Operation, setting or output of measurement data are available by dedicated protocol.
- Synchronization: Start-stop synchronization
- Transmission mode (RS-422/485):
RS-422: Four-wire half-duplex multi-drop connection (1:n (n = 1 to 31))
RS485: Two-wire half-duplex multi-drop connection (1:n (n = 1 to 31))
- Baud rate: 1200, 2400, 4800, 9600, 19200, 38400, 57600, or 115200 bps
- Data length 7 or 8 bits
- Start bit: 1 bit
- Stop bit: 1 bit or 2 bit
- Parity: ODD, EVEN, or NONE
- Handshaking Off: Off, XON: XON, XON: RS, and CS: RS
- Communication distance; 1200 m
(Applicable cable: AWG24 to 16)
- Modbus/RTU communication: Reading or writing of measurement data on other instruments is available by Modbus protocol.
- Operation modes: Master or slave
- Execution of a communication command using a bar code: The entered text can be executed as a communication command.

CUSTOM DISPLAY (/CG)

Using DXA170 DAQStudio, screen creation software, a custom screen can be constructed and displayed in which display components (such as trend, digital, and bar graphs) are freely placed. The screen data is transferred from DAQStudio to the internal memory via communication, or loaded from an external medium to the internal memory and displayed.

- Number of screens: 30 (internal memory)
- Display components:
 - Normal components (digital value, bar graph, tag No., tag comment, simple digital value, simple bar graph, alarm mark, unit, alarm indicator, lower-limit span value, upper-limit span value, group name, system icon, memory sample bar, date/time view, batch name, and user name)
 - Trend components (trend group display (with scale board))
 - List components (alarm list view and message list view)
 - Operation components (DO (DO operable), internal switch (internal switch operable), numeric value operations (viewing data of and writing data to communication channels), and button operations (writing numeric values, operating bits, switching screens, and executing communication commands))

- Text components (labels)
- Figure components (line view, rectangle view, and circle view)
- Image components (PNG image data)
- Batch components (Batch number, Lot number, Text field, Batch comment, Batch group number*)
- * Only on GX20W with the Multi batch function (/BT option)

- Configuring screens: Screen creation software Creation using DXA170 DAQStudio (GX20W does not have a creation function)
- Saving/loading screen data: A specified screen or all the screens is/are loaded from an external storage medium to the internal memory, or a specified screen or all the screens in the internal memory is/are saved on an external storage medium.

VGA VIDEO OUTPUT (/D5) (must be selected)

- External display:
Resolution: 800 × 600 dots (VGA)
Connector: 15-pin D-Sub (female)

EtherNet/IP COMMUNICATION (PLC communication protocol) (/E1)

Can be joined to an Ethernet/IP network as an adapter (or a server).

- Loading data from the I/O channel or calculation channel (/MT)
I/O channel: 500
Calculation channel: 200
- Loading and writing data from/to the communication channel
Communication channel: 500
- Maximum number of connections: 20 (up to 10 at the TCP/IP level)

WT COMMUNICATION (/E2)

Collects data by connecting to WT equipment manufactured by Yokogawa Meters & Instruments Corp. via Ethernet communication.

- Supported models: WT1800, WT500, and WT300
- Number of connectable units: 16
- Communication cycle: 500 ms/1 s/2 s/5 s/10 s/15 s/20 s/30 s
- Types of data that can be obtained: Voltage, current, power, power factor, phase, electrical energy, high-frequency wave, etc.
- Number of data allocations: 300

FAIL OUTPUT (/FL) (must be selected)

- Contact: C contact, 1 point
- FAIL output:
The relay contact output on the rear panel indicates the occurrence of CPU failure.
Relay operation: Energized during normal operation and de-energized on CPU failure.
- Status output: The relay contact, which is de-energized in normal output state, is energized upon the occurrence of a memory/media error, measurement error, communication error, recording stop, or alarm.

- Rated power supply voltage: 24 V DC or 250 V AC or less
- Rated load current: 3 A (DC)/3 A (AC), resistance load
- Min. load current: 100 mA
- Recommended replacement periods of contact:
Electrical: 30,000 more ON-OFF operations,
Mechanical: 5,000,000 more ON-OFF operations

Log SCALE (/LG)

A logarithmic voltage that has been converted from a physical value is applied to the GX20W, and then the GX20W's Log scale (logarithmic scale) is used to display and record the physical value.

- Input type: Log input (logarithmic input), Pseudo log input: An input that supports pseudo logs, Log linear input: Input that is linear on a logarithmic scale.
- Range: 20 mV/60 mV/200 mV/1 V/2 V/6 V/20 V/50 V
- Scalable range:
 - Log input:
 - 1.00E-15 to 1.00E+15 (15 decade maximum)
 - Scale_L < Scale_U
 - If the lower limit mantissa is 1.00, the difference between the exponents must be 1 or more.
 - If the lower limit mantissa is a value other than 1.00, the difference between the exponents must be 2 or more.
 - Pseudo Log Input/Log linear input
 - 1.00E-15 to 1.00E+15 (15 decade maximum)
 - The higher limit mantissa is the same as the lower limit mantissa).
 - If the lower limit mantissa is 1.00, the value must be between 1.00E-15 and 1.00E+15, the difference between the exponents must be 1 or more, and the maximum decades is 15.
 - If the lower limit mantissa is a value other than 1.00, the value must be between 1.00E-15 and 9.99E+14, the difference between the exponents must be 1 or more and the maximum decades is 15.
- Alarm type: High limit, low limit, delay high limit, and delay low limit
- Alarm setting range: The range converted into the LOG scale corresponding to -5 % to 105 % of the span width.
- Alarm hysteresis: Fixed to 0
- Green band setting range: The lower limit to the upper limit of the scale. However, the lower limit of the display position must be smaller than the upper limit.
- Position of the decimal point: 1 to 2
- Misc: Nonlinear input is possible by correcting the input value

MATHEMATICAL FUNCTIONS WITH REPORT FUNCTION (/MT)

Mathematical Function:

- Number of math channels; 200
- Operation:
 - General arithmetic operations: Four arithmetic operations (+, -, *, /), square root, absolute, common logarithm, natural logarithm, exponential, and power
 - Relational operations: <, ≤, >, ≥, =, and ≠
 - Logic operations: AND, OR, NOT, and XOR
 - Statistical operations: TLOG or CLOG
 - Special operations: PRE, HOLD, RESET, and CARRY
 - Conditional operation: [a?b:c]
 - Bit operation: BIT
 - Integer extracting operation: INT
 - Remainder extracting operation: MOD
 - Trigonometric functions: SIN, COS
- Computation accuracy: Double-precision floating point
- Data that can be used;
 - Channel data: Measurement channels (0001 to 6516), mathematical channels (A001 to A200), Communication channels (C001 to C500), Communication channels raw data (RC001 to RC500), Constants: 100 (K001 to K100), Variable constant: W001 to W100, Internal switch: 100 (S001 to S100), Flag: 20 (F01 to F20), Recording state (REC01), Integer data: Z000 to Z999

Logic math function:

- A function that outputs calculated results as 0 or 1 to DOs or internal switches
- Number of logic calculations maths: 50
- Expression: Up to 120 characters
- Computation type: Basic arithmetic, relational, logical, conditional, bit
- Data that can be used: All channel data
- Logic math: LM001 to LM050
- Output destination: DO channels, internal switches (only when set to Manual in either case)
- Setting change: Cannot be changed during recording
- Math interval: 100 ms (fastest)

Report function:

- Number of report channels; 60
- Report types: Hourly + daily, daily + weekly, daily + monthly, Batch, Day custom
- Computation types: Average, maximum, minimum, sum, or instantaneous value
- Unit of sum: OFF, /s, /min, /hour, /day
- Report templates: Office Open XML spreadsheet files (which can be displayed with Microsoft Office Excel) or PDF files can be output or printed out with any LAN-connected printer supporting the HP PCL5c language and the port 9100.

USB INTERFACE (/UH) (must be selected)

- USB port: Complies with USB 2.0 and host function
- Number of ports: 2 (one each on the front panel and rear panel)
- Connectable devices: Only connect the devices listed below to prevent damage to the devices.
 - Keyboard: Complies with HID Class Ver. 1.1 104/89 keyboard (US) and 109/89 keyboard (Japanese)
 - Mouse: Complies with HID Class Ver. 1.1
 - External medium: USB flash memory
 - Does not guarantee the operation of all USB flash memories
 - External medium such as a hard disk, ZIP, MO, and optical discs are not supported.
 - Barcode reader: USB HID Class Ver. 1.1 compatible
 - English (U.S.) standard USB keyboard compatible
- Execution of a communication command using a bar code: The entered text can be executed as a communication command.
- Power supply: 5 V \pm 10 %, 500 mA *1
 - *1: Devices which need more than 500 mA total bus power for 2 ports cannot be connected at the same time.
 - For low powered devices (bus power < 100 mA): 5 V \pm 5 %
 - For high powered devices (bus power < 500 mA): 5 V \pm 10 %

AEROSPACE HEAT TREATMENT (/AH)

- Supports heat treatment application AMS2750/ NADCAP.
- Schedule management for periodically executing calibration correction configuration and the like.
- In correction coefficient mode of calibration correction, two biases can be specified: one based on thermocouple and another based on device
- Number of manageable schedules: 12
 - Calibration correction mode: Off, Linearizer approximation, Linearizer bias, correction factor
 - Number of set points: 2 to 12
 - Notification contents
 - Title, Notification message, Due date
- Notification buzzer can be sounded.

MULTI-BATCH FUNCTION (/BT)

- Recording start/stop and data file creation is possible for each batch.
- Number of multi-batches: max. 12
 - Batch single operation: Memory start/stop, math reset, message writing
 - Batch overview operation: Computation start/stop, report start/stop, manual sampling, setup data save/load
 - Scan interval: 500 ms, 1 s, 2 s, 5 s (common to all batches)
 - Data type: Display or event only Trigger mode not available for event data.
 - Recording interval: Common to all batches
 - Data file: Display or event data file created for each batch

- Number of display groups: 12 max. per batch
 - Number of channels per group: 20
 - Channels assigned to the display group of each batch and those set as recording channels are recorded to data files.
- Batch single settings: Group, trip line, file header, data file name, text field, batch number, lot number

OPC-UA SERVER (/E3)

- Data acquired by the GX20W can be accessed through Ethernet communication from a host system (OPC-UA client).
- Communication
 - Mode: OPC-UA Server
 - Encoding: UA Binary
 - Protocol: OPC UA TCP
 - Maximum number of connections: 3 sessions
 - Profile: Micro Embedded Device Server
 - Security
 - Type: None
 - Encryption: None
 - Login: Anonymous, Username
 - Data acquisition:
 - Measurement value, alarm status, and alarm value
 - Computation value, alarm status, and alarm value
 - Communication value, alarm status, and alarm value
 - Batch information
 - Data writing: Measurement channel (DO channel only), communication channel, alarm value, batch information
 - Other acquired information: Device name, serial number, time, device status
 - Port number: 4840 (changeable: 1 to 65535)
 - Number of items: 300 max. (MonitoredItem/Session)
 - Fastest period: 100 ms
 - Service set:

Discovery	FindServers, GetEndpoints
SecureChannel	OpenSecureChannel, CloseSecureChannel
Session	CreateSession, ActivateSession, CloseSession
View	Browse, BrowseNext, TranslateBrowsePathsToNodeIds
Attribute	Read, Write
MonitoredItem	CreateMonitoredItems, ModifyMonitoredItems, DeleteMonitoredItems, SetMonitoringMode
Subscription	CreateSubscription, ModifySubscription, DeleteSubscriptions, Publish, Republish, SetPublishingMode

SLMP COMMUNICATION (Mitsubishi PLC) (/E4)

Protocol function that enables connection from a GX20W to Mitsubishi Electric PLCs without sequencer programs.

- Number of connection destination servers: 16 max.
- Read cycle: 100 ms/200 ms/500 ms/1 s/2 s/5s/10 s/20 s/30 s/1 min
- Communicable internal data:
Special relay (SM), special register (SD), input (X), output (Y), internal relay (M), latch relay (L), annunciator (F), edge relay (V), link relay (B), data register (D), link register (W), timer contact (TS), timer coil (TC), current timer value (TN), integration timer contact (SS), integration timer coil (SC), current integration timer value (SN), counter contact (CS), counter coil (CC), current counter value (CN), special link relay (SB), special link register (SW), direct access input (DX), direct access output (DY), index register (Z), file register (R, ZR), extended data register (D), extended link register (W)

Device code is indicated in parentheses.

■ ACCOMPANYING SOFTWARE (on DVD)

- Field Wireless Configurator
- Field Wireless Management Tool

FieldMate is required to configure field wireless devices. Parameter configuration via ISA100.11a wireless communication requires version R2.02.01 or later. Parameter configuration via infrared communication requires version R2.03.00 or later. For details on FieldMate, see FieldMate Versatile Device Management Wizard (GS 01R01A01-01E).

System Requirements (Hardware) ¹

Server 2003

Processor: Intel Pentium4 2.8 GHz or more

Memory: 1 GB or more

Hard Disk Drive:

20 GB or more (minimum free space: 15 GB or more)

Display: 1024 x 768 High color, 32 bit

Network port: Ethernet Network port

System Requirements (Software)

OS ²:

Windows 7 Professional Edition (32 bit/64 bit)

Windows Server 2008 Enterprise Service Pack 2 or later (32 bit/64 bit)

Windows Server 2008 Enterprise R2 (64 bit)

- 1 Field Wireless Configurator and Field Wireless Management Tool can be installed in one PC.
- 2 Language: Japanese or English

■ INPUT/OUTPUT MODULE SPECIFICATIONS

ANALOG INPUT MODULE (Model GX90XA)

DIGITAL INPUT MODULE (Model GX90XD)

DIGITAL OUTPUT MODULE (Model GX90YD)

DIGITAL INPUT/OUTPUT MODULE (Model GX90WD)

PULSE INPUT MODULE (Model GX90XP)

ANALOG OUTPUT MODULE (Model GX90YA)

Please see GX90XA/GX90XD/GX90YD/GX90WD/GX90XP/GX90YA Input/Output Module General Specification (GS 04L53B01-01EN).

■ ACCESSORIES

Remote Antenna Cable (optional accessories)
(Only by order of option)

Specification of Cable: 8D-SFA (HDPE)
Outside Diameter of Cable: 11.1 mm
Minimum Bend Radius: 69.6 mm (when fixing)
174 mm (when wiring)

Cable End Treatment: N type connector, one end is male and the other is female.

Operational temperature range: -40 to +85 °C (- 40 to 185 °F)

- * "When fixing" shows the bending radius for fixing (the state is maintained for a long time).
"When wiring" shows the bending radius while checking the wiring position. This bending radius is set larger than that for fixing in order to prevent damage to the cable because the cable is likely to be repeatedly bent when checking the final wiring position.

■ APPLICATION SOFTWARE

SMARTDAC+ STANDARD

- Universal viewer
- Web application/Hardware configurator

Download the latest version of the software from the following URL;

www.smartdacplus.com/software/en/

Operating environment

OS:

OS	Type
Windows 7	Home Premium SP1 (32-bit and 64-bit Editions)
	Professional SP1 (32-bit and 64-bit Editions)
Windows 8.1	Update
	Pro Update
Windows 10	Home (32-bit and 64-bit Editions)
	Pro (32-bit and 64-bit Editions)
	Enterprise (32-bit and 64-bit editions)

Processor and main memory:

OS	Processor and main memory
Windows 7 Windows 8.1 Windows 10	32-bit edition Intel Pentium 4, 3GHz or faster x64 or x86, 2GB or more
	64-bit edition Intel x64 processor that is equivalent to Intel Pentium 4, 3 GHz or faster, 2 GB or more

Browser:

Browser	Version
Windows Internet Explorer	Internet Explorer 11
Google Chrome	—

Hard disk:

- 100 MB or more of free space

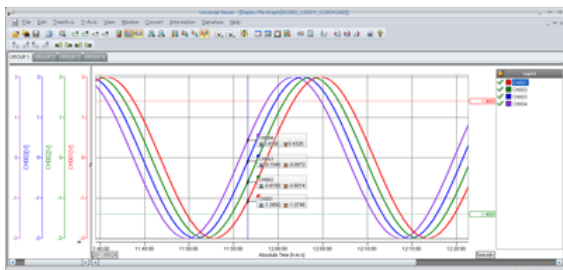
Display:

- A video card that is recommended for the OS and a display that is supported by the OS, has a resolution of 1024 x 768 or higher, and that can show 65,536 colors (16-bit, high color) or more.

Universal Viewer software

The universal viewer can display the following data generated by the recorder on the screen and print it out on the printer.

- Display data file
- Event data file
- Report data file (Including Hour, Day, Week Month)
- Manual sample data file



- Viewer function
Waveform display, digital display, circular display, list display, report display, operation log display etc.
- Data conversion:
File conversion to ASCII or MS-Excel format

Web application/Hardware configurator

- Online setting on Web browser
 - Offline setting on Web browser
- Settings can be made using browsers such as Internet Explorer 11 and Chrome (Excluding Hardware configurator).

CH#	Type	Range	Span Lower	Span Upper	Calculation	R
0001	Yub	2V	-2.0000	2.0000	Off	
0002	Yub	2V	-2.0000	2.0000	Off	
0003	Yub	2V	-2.0000	2.0000	Off	
0004	Yub	2V	-2.0000	2.0000	Off	
0005	Yub	2V	-2.0000	2.0000	Off	
0006	Yub	2V	-2.0000	2.0000	Off	
0007	Yub	2V	-2.0000	2.0000	Off	
0008	Yub	2V	-2.0000	2.0000	Off	
0009	Yub	2V	-2.0000	2.0000	Off	
0010	Yub	2V	-2.0000	2.0000	Off	

■ MODEL AND SUFFIX CODES

Model Code	Optional code	Description
GX20W-2E/BC/D5/FL/UH		Paperless recorder Wireless model (Panel mount type, Large display) ^{*2 *5}
		-2: Large memory Type (Max. measurement channels: 500 ch)
		E: Display language: English, degF, DST (summer/winter time) ^{*3}
		/BC: Black cover ^{*1}
		/D5: VGA output ^{*1}
		/FL: Fail output, 1 point ^{*1}
		/UH: USB interface (Host 2 ports) ^{*1}
Optional features	/AH	Aerospace heat treatment
	/BT	Multi-batch function
	/C3	RS-422/485
	/CE	Conform to CE marking (RE and RoHS Directive) ^{*8}
	/CEN	Not conform to CE marking ^{*8}
	/CG	Custom display ^{*4}
	/E1	EtherNet/IP communication
	/E2	WT communication
	/E3	OPC-UA server
	/E4	SLMP communication (Mitsubishi PLC)
	/LG	Log scale
	/MT	Mathematical function (with report function) ^{*6 *7}

*1 /BC, D5, /FL, and /UH are standard functions on GX20W.

*2 The expandable I/O (GX60) cannot be connected to the GX20W.

*3 The Display language is selectable from English, German, French, Russian, Korean, Chinese, Japanese. (As of Mar., 2013)
To confirm the current available languages, please visit the following website.
URL: <http://www.yokogawa.com/ns/language/>

*4 Creating custom displays requires DXA170 DAQStudio (sold separately). (GX20W does not have a creation function.)

*5 Includes the basic right to use the accompanying software.

*6 Optional code /MT (MATH) required if using the GX90XD's or GX90WD's pulse input.

*7 The /MT option (computation) is required to perform pulse integration on GX90XP pulse input modules.

*8 Either /CE or /CEN option is mandatory to be specified.

Analog input/output module, Digital I/O module (sold separately):

MODEL and SUFFIX Code (GX90XA)

MODEL and SUFFIX Code (GX90XD)

MODEL and SUFFIX Code (GX90YD)

MODEL and SUFFIX Code (GX90WD)

MODEL and SUFFIX Code (GX90XP)

MODEL and SUFFIX Code (GX90YA)

Please see GX90XA/GX90XD/GX90YD/GX90WD/GX90XP/GX90YA Input/Output Module General Specification (GS 04L53B01-01EN.)

■ Standard Accessories

Product	Qty
Mounting bracket	2
SD memory card (1 GB)	1
Stylus pen (touch pen)	1
+2 dBi Remote Antenna	1
Field Wireless Configurator, Field Wireless Management Tool (provided DVD-ROM)	1
Tag sheet	1
Sheet	1
Dummy cover (For empty slots)	10

■ Optional Accessories (Sold Separately)

Product	Part no.	Description
Remote antenna cable*1 (With remote antenna mounting bracket)	F9193UA	1 m
	F9193UB	3 m
	F9193UC	4 m (1 m+3 m) with arrestor
	F9193UD	6 m (3 m+3 m) with arrestor
	F9193UE	13 m (3 m+10 m) with arrestor

Product	Model/part no.
Model SD memory card (1GB)	773001
Mounting bracket	B8740DY
Stylus pen (touch pen)	B8740BZ
Shunt resistor for M3 terminal (250 Ω \pm 0.1 %)	415940
Shunt resistor for M3 terminal (100 Ω \pm 0.1 %)	415941
Shunt resistor for M3 terminal (10 Ω \pm 0.1 %)	415942
Shunt resistor for Clamp terminal (250 Ω \pm 0.1 %)	438920
Shunt resistor for Clamp terminal (100 Ω \pm 0.1 %)	438921
Shunt resistor for Clamp terminal (10 Ω \pm 0.1 %)	438922
Dummy cover	B8740CZ

■ Application Software (Sold Separately)

Model	Description	OS
DXA170	DAQStudio	Windows 7/8/8.1/10
GA10	Data Logging Software	Windows 7/8.1/10 Windows Server 2008/2012

Calibration certificate (sold separately)

For analog input modules, a calibration certificate is provided on an individual module basis.

Test certificate (QIC, sold separately)

For analog input modules and digital I/O modules, a QIC is provided on an individual module basis.

User's Manual

Product user's manuals can be downloaded or viewed at the following URL. To view the user's manual, you need to use Adobe Reader 7 or later by Adobe Systems.

URL: www.smartdacplus.com/manual/en/

Product Purchase Specifications

The GX20W is composed of the main unit, I/O modules.

GX90XA (Some module can not be used), GX90XD, GX90YD, GX90WD, and GX90XP, GX90YA I/O modules can be purchased individually.

Remote antenna cables (with mounting brackets) are sold separately.

The expandable I/O (GX60) cannot be connected to the GX20W.

Trademarks

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