

# General Specifications

GS 33J20C70-01EN

Models VP6B1570, VP6B1670  
IEC 61850 IED  
Communication Package  
(for UGS/UGS2)



[Release 6]

## ■ GENERAL

This package provides Unified Gateway Station (UGS/UGS2) with a function to communicate with Intelligent Electronic Devices (IEDs) (\*1) which are the IEC 61850 (\*2) protocol controllers.

- \*1: The Intelligent Electronic Device (IED) is a term to describe an electronic device mainly used for protection and control of the electrical equipment.
- \*2: The IEC 61850 is an international standard for communication networks and systems for power utility automation.

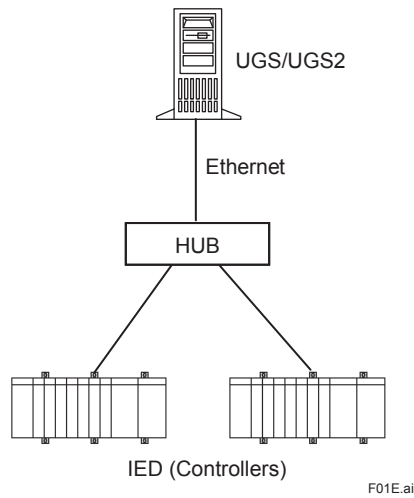


Figure System configuration

## FUNCTIONAL SPECIFICATIONS

### ● Communication with subsystem controllers

Subsystem controller data is assigned to the UGS/UGS2 function blocks via the IEC 61850 communication and those data can be referred to or set from HIS and FCS. The HIS and FCS also monitors connection status among the UGS/UGS2 and IEDs.

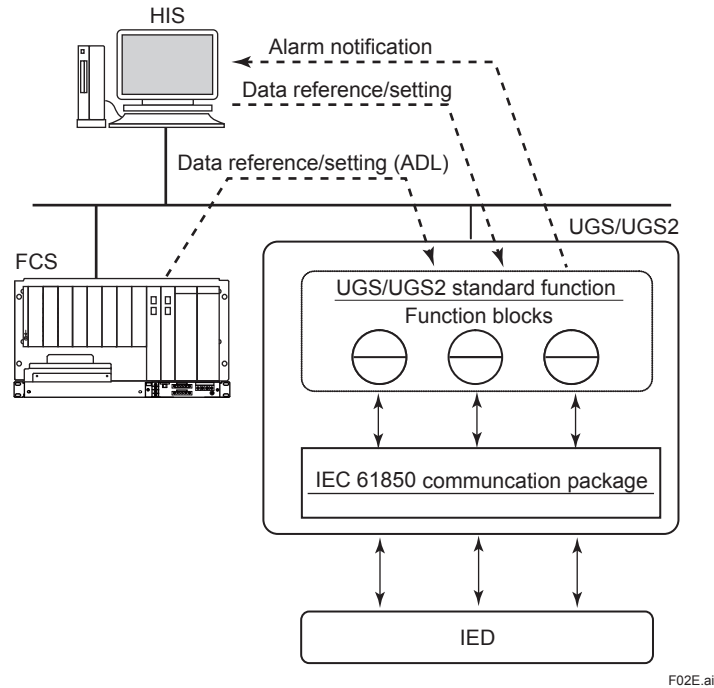


Figure Communication with subsystem controllers

### ● Services for MMS and IEC 61850

Manufacturing Message Specification (MMS) is a communication protocol for control and monitoring among industrial automation devices and systems. The MMS is adopted as one of the protocols for communications among the IEC 61850 IEDs. The UGS/UGS2 communicates the IEDs using the MMS service protocol.

Category	MMS Services	IEC 61850 Services
Data Accessing	Read	GetDataValues
	Write	SetDataValues
Browsing	GetNameList	GetDataDirector
	GetVariableAccess-Attribute	GetDataDefinition
Control	Read/Write	Select
	Read/Write	SelectWithValue
	Write	Operate

● **Application capacity**

- Number of controllers: Max. 256
- Number of data items that can be defined:
  - Max. 2,000,000 data (for a single UGS configuration) (\*1)
  - Max. 1,000,000 data (for a dual-redundant UGS configuration) (\*1) (\*2)
  - Max. 600,000 data (for UGS2) (\*1) (\*2)
- Number of data items for communication with controllers:
  - Max. 750,000 data (for UGS) (\*1) (\*2) (\*3)
  - Max. 450,000 data (for UGS2) (\*1) (\*2) (\*3)
  - (The sum of the data items of subsystem controllers)
- Data update period: 100 ms to 1 hour.
- Data acquisition: Max. 6,400 data sec (\*1) (\*2) (Number of data acquired from subsystem controllers)
- Data setting: Max. 640 data sec (\*1) (\*2) (Number of data set on UGS/UGS2 from HIS and FCS)
- Protocol: Compliant with IEC 61850 (MMS)
- Date type: INT8, INT16, INT24, INT32, INT8U, INT24U, INT32U, FLOAT32, FLOAT64, BOOLEAN, ENUMERATED, CODED ENUM, STRING (\*4)

- \*1: The number of data includes those from other UGS/UGS2's communication packages
- \*2: The max. numbers of data depends on the application conditions.
- \*3: The UGS/UGS2 access the controllers' data by assigning each of the controller's data into the data items in the UGS/UGS2's function block(s). Among all the definable data items, those which do not communicate with controllers can be used as a data buffer for the data which are set by other sources such as FCS. See below formula for a quick glance.  
 Number of definable data items  
 = Number of data items for communication with controllers + Number of data items used as a data buffer
- \*4: The UGS/UGS2 supports STRING types such as OCTET STRING (character strings of 8-bit unsigned integer) and VISIBLE STRING (textual character strings including ASCII codes); but does not support UNICODE STRING (textual character strings including UNICODE characters).

■ **OPERATING ENVIRONMENT**

For VP6B1570, hardware and software requirements comply with VP6B1500 Unified Gateway Station (UGS) Standard Function.

For VP6B1670, hardware and software requirements comply with VP6B1600 Unified Gateway Station (UGS2) Standard Function.

■ **MODEL AND SUFFIX CODES**

**IEC 61850 IED Communication Package (for UGS)**

		Description
<b>Model</b>	VP6B1570	IEC 61850 IED Communication Package (for UGS)
<b>Suffix Codes</b>	-V	Software license
	1	Always 1
	1	English version

Note: When using the UGS in a dual-redundant configuration, order two licenses of the VP6B1570 package.

**IEC 61850 IED Communication Package (for UGS2)**

		Description
<b>Model</b>	VP6B1670	IEC 61850 IED Communication Package (for UGS2)
<b>Suffix Codes</b>	-V	Software license
	1	Always 1
	1	English version

Note: Even when using the UGS2 in a dual-redundant configuration, only one license of the VP6B1670 package is required.

■ **ORDERING INFORMATION**

Specify model and suffix codes.

■ **TRADEMARKS**

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