

savic-net™ FX

SCS (System Core Server)

Model BCY44100M

General

SCS (System Core Server) is a controller that integrates DDC (direct digital controller) and RS (remote station), such as PARAMATRIX™-III and Infilex™ series controllers, into BMS (building management system) *savic-net™ FX*.

SCS is also a B-BC (BACnet® building controller) and thus interoperable with other manufacturers' (third-party) devices.

SCS saves the data, collected by DDC every minute, for 48 hours. (Note that alarm data is excluded.) Regarding ON/OFF data points and status data points, equipment runtime and ON/OFF count are recorded and saved in SCS.

Direct input terminals (fire DI, private generation DI, power feeding information DI) are provided on SCS. SCS, in case of power failure, is reliable to receive and save the data, and the BMS therefore can be recovered.

SCS conforms to all the applicable standards of CE Marking (Class A).



Specifications

Item	Specification
CPU	32-bit CPU
Main storage capacity	128MB SDRAM 128MB CompactFlash® memory
Max. data points	1,000 points
Host system communication	BACnet® IP (Ethernet: 10BASE-T/100BASE-TX), 1 channel
Remote units communication	LC-bus (LonTalk® protocol)
	(LAN cable: compliant with EIA/TIA-568 Category 5 or over (φ0.5 mm × 4 poles)), 78 kbps
	NC-bus (JIS IPEV-S cable (0.9 mm × 1 pole)), 4,800 bps
	Modbus TCP (Ethernet) To communicate with Modbus RTU (RS-485), media converter is required.
	CPL (RS-485) Media converter is required.
Connectable lines	4 lines connectable
Connectable remote units	100 remote units connectable
Time backup	72 hours
Rated input voltage	100 V AC to 240 V AC
Allowable voltage range	90 V AC to 264 V AC
Allowable ambient condition	5 °C 40 °C (in operation) 10 %RH to 85 %RH (non-condensing)
Dimensions (mm)	100 (W) × 106 (D) × 140 (H)
Weight	1.0 kg
Grounding condition	100 Ω or lower ground resistance

Note:

* JIS: Japanese Industrial Standards



Model Numbers

Model number				Description
BCY44100				SCS base model number
	M			100 V AC to 240 V AC power
		0	0	Fixed
			0	NC-bus model: 4 NC-bus lines (Applicable to Infilex controllers for IP)
			1	Redundant NC-bus model: 4 NC-bus lines
			2	LC-bus (LonTalk® protocol) model: 4 LC-bus lines (2 channels: 2 lines per 1 channel)
			6	NC-bus/Modbus/CPL model: 4 lines
			0	DIN rail mount type
			1	Sub panel mount type




Safety Instructions

Please read instructions carefully and use the product as specified in this manual. Be sure to keep this manual near by for ready reference.

Usage Restrictions

This product is targeted for general air conditioning. Do not use this product in a situation where human life may be affected. If this product is used in a clean room or a place where reliability or control accuracy is particularly required, please contact Yamatake's sales representative. Yamatake Corporation will not bear any responsibility for the results produced by the operators.

CAUTION

-  • Installation and wiring must be performed by qualified personnel in accordance with all applicable safety standards.
-  • This product must be installed under the operating conditions (power, temperature, humidity, vibration, shock, installation position, atmospheric condition, etc) specified in this manual to prevent product damages.
-  • This product must be operated within its rated operating ranges specified in this manual. Failure to comply will cause product damages.

Trademark information:

Infilex, Neopanel, PARAMATRIX, and savic-net are trademarks or registered trademarks of Yamatake Corporation in Japan or in other countries.

BACnet is a registered trademark of American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE).

Ethernet is a U.S. registered trademark of Xerox Corporation.

Linux is a trademark of Linus Torvalds.

LonTalk is a trademark of Echelon Corporation registered in the United States and other countries.

System Configurations

savic-net FX BMS configuration

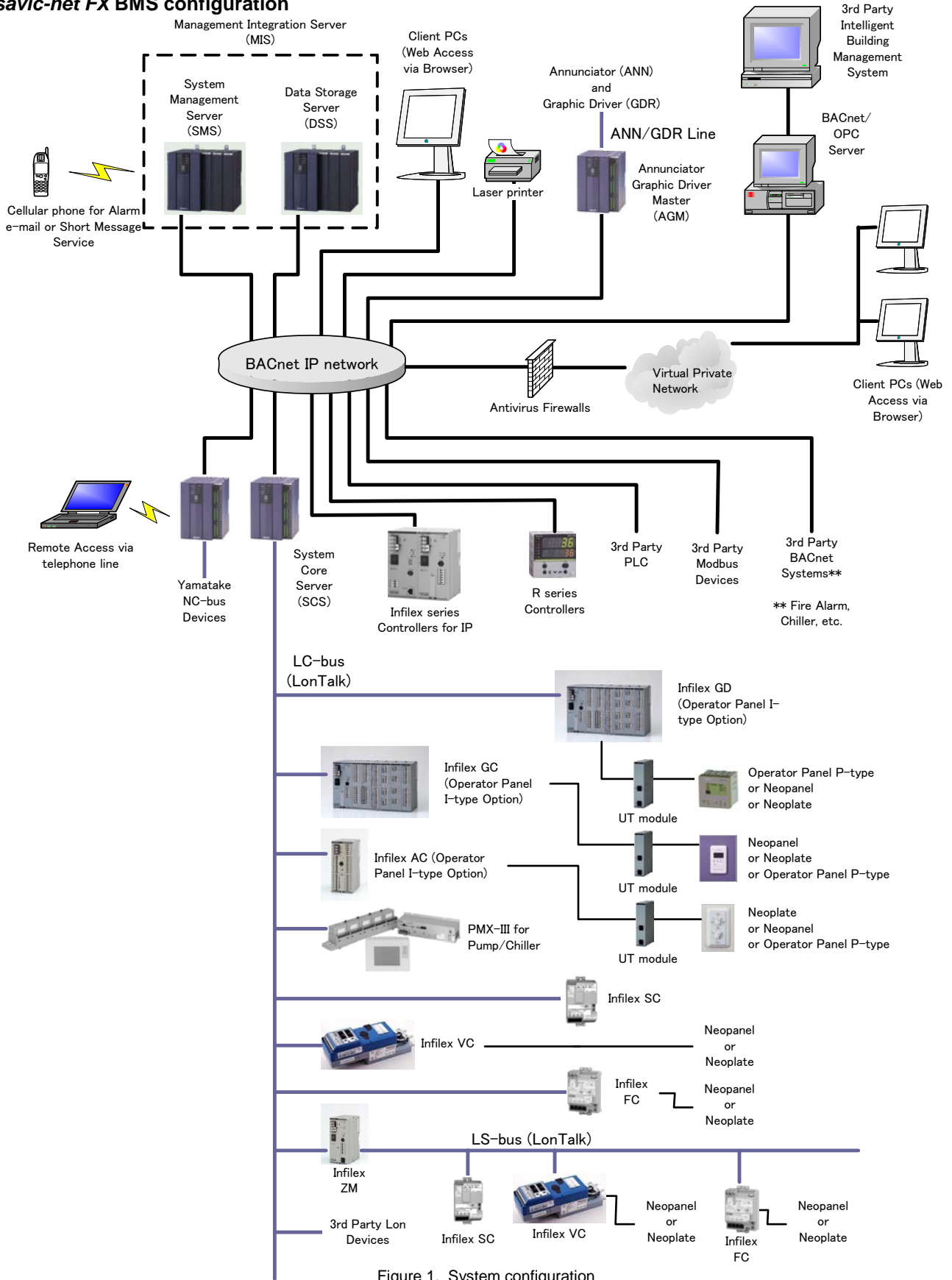


Figure 1. System configuration

Notes:

- * Yamatake's Model R series controllers communicate with CPL (Controller Peripheral Link, developed by Yamatake) over RS-485. Media converter therefore is required to connect to SCS (BACnet IP over Ethernet).
- * Though SCS directly communicates with Modbus TCP over Ethernet, SCS cannot directly communicate with Modbus RTU over RS-485. Media converter therefore is required to connect to Modbus RTU devices.

Items shown in Fig. 1 indicate the devices and protocols configuring the system. See Table 1 for the descriptions.

Table 1. Devices and protocols configuring *savic-net FX* system

Item	Description
AGM	Yamatake's Annunciator/Graphic Driver Master
ANN	Annunciator
BACnet®	Data communication protocol for Building Automation and Control Networks (developed by ASHRAE)
DSS	Yamatake's Data Storage Server
GDR	Graphic Driver
Infilex™ AC	Yamatake's AHU (air handling unit) controller for LonTalk® protocol
Infilex™ FC	Yamatake's FCU (fan coil unit) controller for LonTalk® protocol
Infilex™ GC	Yamatake's multipurpose controller for LonTalk® protocol
Infilex™ GD	Yamatake's multipurpose data gathering panel for LonTalk® protocol
Infilex™ SC	Yamatake's AHU (air handling unit) controller for LonTalk® protocol
Infilex™ VC	Yamatake's VAV (variable air volume) controller with damper actuator for LonTalk® protocol
Infilex™ ZM	Yamatake's zone manager for LonTalk® protocol
IP	Internet Protocol
LC-bus	LonTalk® protocol Controller bus (provided by Yamatake)
LonTalk®	Communication protocol for LONWORKS network
LS-bus	LonTalk® protocol Sub-controller bus (provided by Yamatake)
MIS	Yamatake's Management Integration Server
Modbus	Serial communication protocol for PLC (developed by Modicon)
Modbus RTU	Modbus protocol over RS-485 (RTU: Remote Terminal Unit)
Modbus TCP	Modbus protocol over Ethernet (TCP: Transmission Control Protocol)
Neopanel™	Yamatake's digital user terminal
Neoplate	Yamatake's analog user terminal
Operator Panel (I-type)	Yamatake's Integral type Operator Panel
Operator Panel (P-type)	Yamatake's Panel-mount type Operator Panel
PLC	Programmable Logic Controller
PMX-III	Yamatake's PARAMATRIX™-III DDC controller for LonTalk® protocol
R series controllers	Yamatake's single loop controllers
SCS	Yamatake's System Core Server
SMS	Yamatake's System Management Server
UT module	Yamatake's user terminal interface

Dimensions

Model BCY44100M000 / BCY44100M002 / BCY44100M006

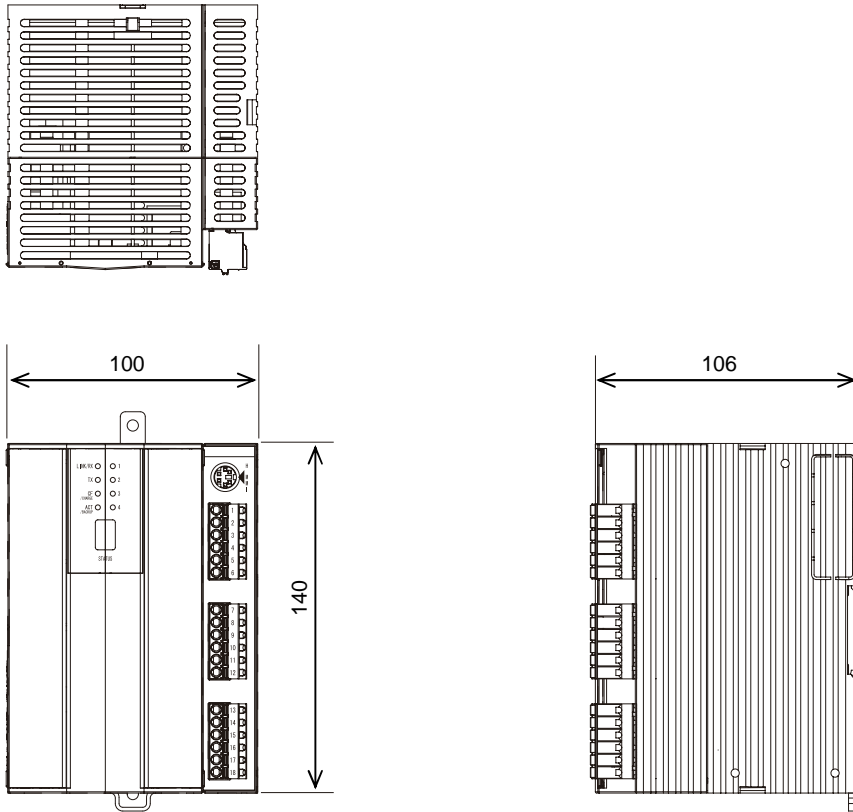


Figure 2. Dimensions (mm): Model BCY44100M000 / BCY44100M002 / BCY44100M006

Model BCY44100M001 (Redundant NC-bus model)

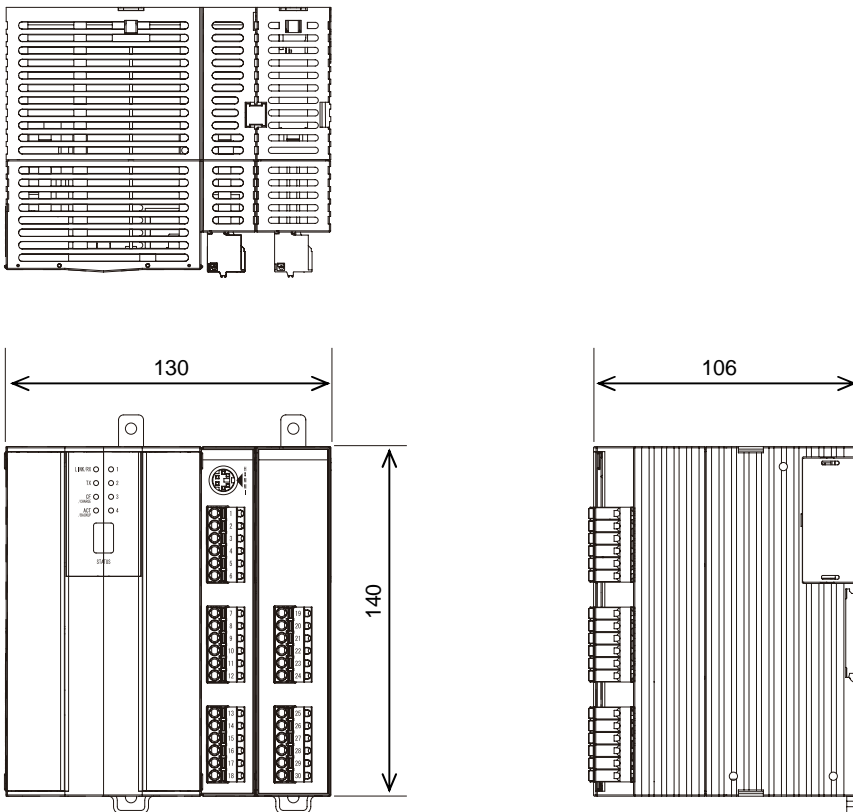


Figure 3. Dimensions (mm): Model BCY44100N001

azbil

Specifications are subject to change without notice.

Yamatake Corporation
Building Systems Company

<http://www.yamatake.com>