

Gree BACnet Gateway

(GC201611)

ER CONDITIONERS GREE MAKING BETTER CONDITIONERS GREE MAKING BETTER CONDITIONERS GREE MAKING BETTER CONDITIONERS



ER CONDITIONERS GREE MAKING BETTER CONDITIONERS GREE MAKING BETTER CONDITIONERS GREE MAKING BETTER CONDITIONERS

CONTENTS

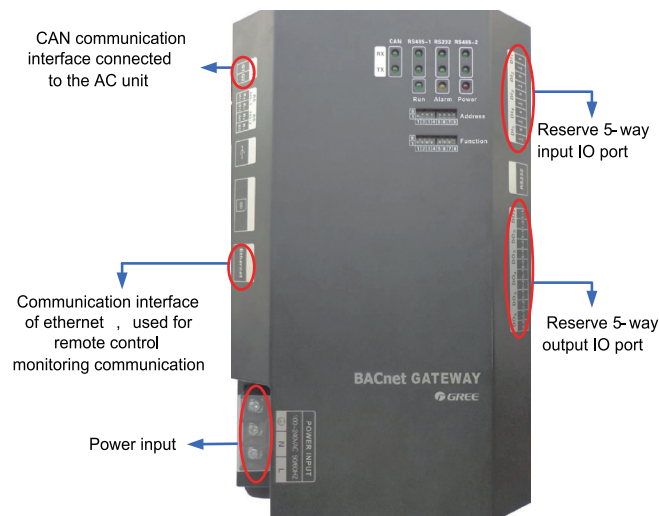
- 1 Overview of BACnet Gateway 1
- 2 BACnet Gateway Topology 3
- 3 Dimension Diagram 4
- 4 Model Selection Procedures 4

1 Overview of BACnet Gateway

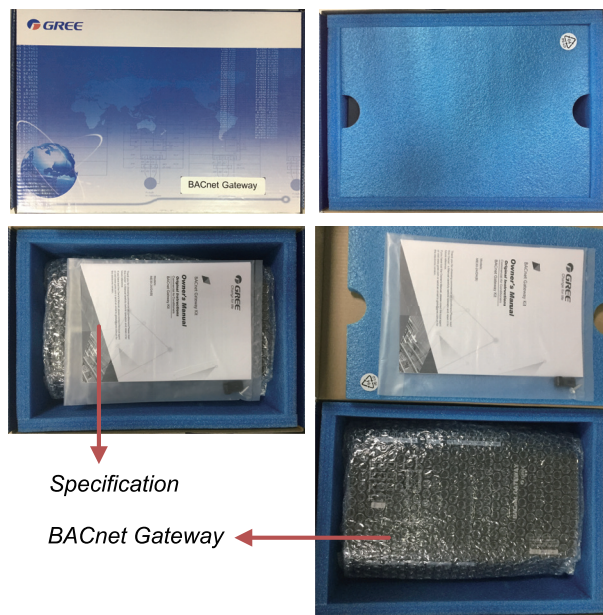
➤ 1.1 Function Introduction

GMV BACnet gateway kit ME30-24/D4(B) is intended to realize the data exchange between the air conditioning unit and BAS system, and providing standard BACnet/IP building interface and 10 I/Os (five inputs are DI1, DI2, DI3, DI4, DI5 and five outputs are DO1, DO2, DO3, DO4, DO5). DI1 is the fire alarm interface. The status of other I/Os are mapped to the specific objects of the BACnet/IP bus and are defined by the user. This gateway applies to the GMV using CAN protocol.

➤ 1.2 Product Appearance



➤ 1.3 Assembly



GMV gateway ME30-24/D4(B) includes the following components:

BACnet gateway	1 set
Specification	1 set

➔ 1.4 Interface and Indicator

Power supply interface		Power input is 100VAC~240VAC, 50/60Hz
Communication interface	CAN communication interface	It is connected to air conditioner through two-core connection wire, to realize communication between BACnet gateway and air conditioner.
LED display	CAN	RX When the data from the equipment (e.g. air conditioner) connected with BACnet gateway is received, it will blink.
		TX When the data is transferred to the equipment (e.g. air conditioner) connected with BACnet gateway, it will blink.
Power supply LED		When power supply of BACnet gateway is normal, it will be always on.
Operation LED		When BACnet gateway works normally, it will blink.
DI/DO	DI1	Input of fire alarm signal
	DI2~5	Digital inputs, applicable for those with power supply,
	DO1~5	Relay output, normally-open contact

NOTE:

For detailed introductions of above functions, please refer to the owner's manual.

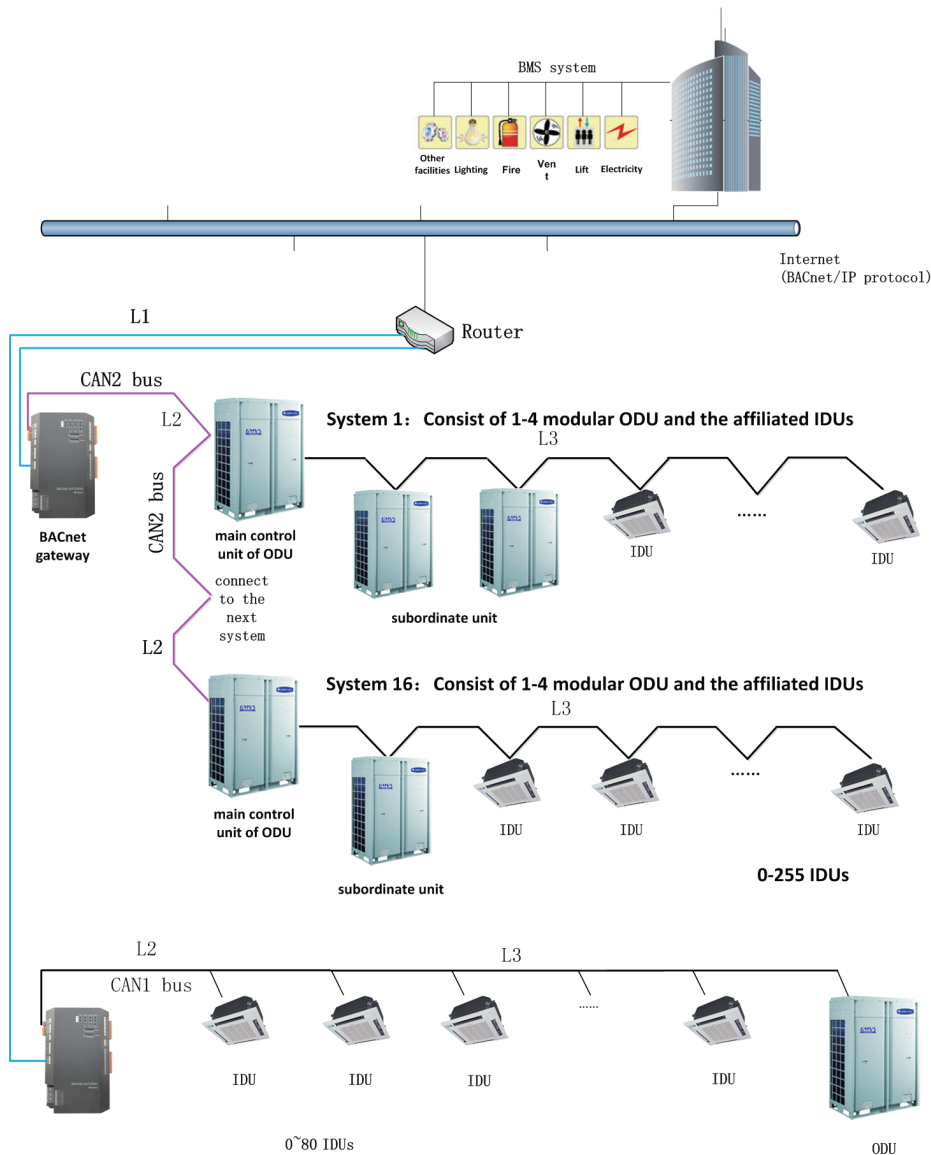
2 BACnet Gateway Topology

Internet topological graph specification:

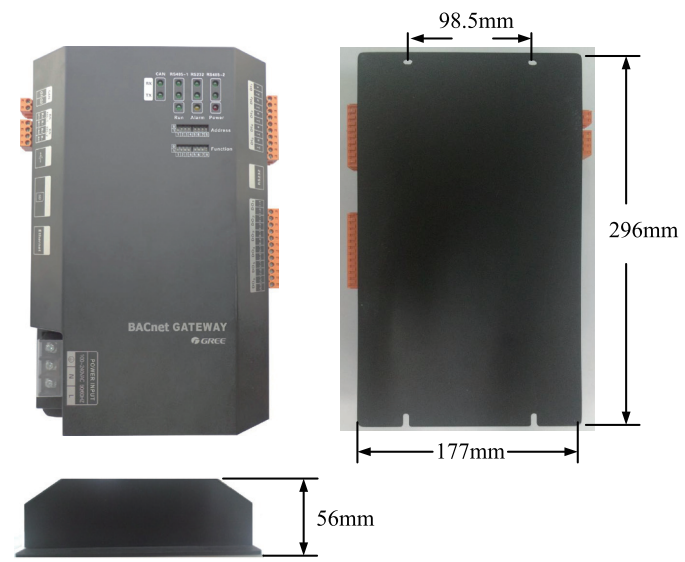
- (1) CAN2 bus internet: the red wire is CAN2 bus, which is consist of BACnet gateway and main control ODU of the system. One CAN2 internet can be connected to maximum 16 systems and 255 IDUs.
- (2) CAN1 bus internet: the black wire is CAN1 bus, which is consist of BACnet gateway and all IDUs and ODUs of the system. One CAN1 internet can be connected to maximum 80 IDUs.
- (3) System: one system is consisting of a set of ODU (a set of ODU is a module which is consist of 1-4 modules, namely 1-4 ODUs) and the affiliated IDUs.
- (4) The admissible unit quantity for BACnet gateway: one BACnet gateway can be connected to maximum 16 systems and 255 IDUs.

NOTE:

L1 in the fig is the standard network cable, L2 and L3 is the twisted-pair.



3 Dimension Diagram



Length x width x height: 296×177×56(mm)
 Notices for installation and operation

- (1) Make sure the power supply complies with the specifications. Otherwise, BACnet gateway will not work properly or even be damaged.
- (2) Make sure DIP switch of BACnet gateway is correct. Otherwise, communication error will occur.
- (3) Make sure the communication cable is connected to the correct interface. Otherwise, communication error will occur.
- (4) Do not place the BACnet gateway in direct sunlight or high-temperature and moist environment. Place the BACnet gateway in central control cabinet.

4 Model Selection Procedures

4.1 Model Selection Regulation

4.1.1 Supply Range

S=Standard parts; O=Provided by the user; P=Purchased by the user

Content	Model	Note	Remark
BACnet gateway kit	Gateway assy ME30-24/D4(B)	Connectable to BMS. Protocol interface: CAN and BACnet protocol Hardware interface: CAN port, Ethernet port Main accessories: BACnet gateway, owner's manual	S
Power cord	--	0.5mm ² --1mm ²	O
Communication cable	--	2×0.75mm ²	O

4.2 Examples of Model Selection

4.2.1 Example One

Project status: this project has one GMV5 DC Inverter VRF outdoor unit and 70 indoor units, which only requires one CAN1 or CAN2 network. The cable between gateway and router (computer, exchanger, etc.) shall not be longer than 80m.

Model selection: one BACnet gateway can be connected with 16 systems and 255 indoor units in maximum.

This project has one CAN1 or CAN2 network and needs one BACnet gateway. The cable between gateway and router (computer, exchanger, etc.) shall not be longer than 80m.

4.2.2 Example Two

Project status: this project has 8 GMV5 DC Inverter VRF outdoor units (divided into two systems) and 250 indoor units, which only requires one CAN2 network. The cable between gateway and router (computer, exchanger, etc.) shall not be longer than 80m.

Model selection: one BACnet gateway can be connected with 16 systems and 255 indoor units in maximum.

This project has one CAN2 network and needs one BACnet gateway. The cable between gateway and router (computer, exchanger, etc.) shall not be longer than 80m.

4.2.3 Example Three

Project status: this project has 100 GMV5 DC Inverter VRF outdoor units (divided into two systems) and 360 indoor units, which shall be divided into two CAN2 networks. One network has 16 systems and 240 indoor units. The other network has 9 systems and 120 indoor units. The cable between gateway and router (computer, exchanger, etc.) shall not be longer than 80m.

Model selection: one BACnet gateway can be connected with 16 systems and 255 indoor units in maximum.

This project has two CAN2 networks. One network has 16 systems and 240 indoor units, which needs one BACnet gateway. The other network has 9 systems and 120 indoor units, which needs one BACnet gateway. The cable between gateway and router (computer, exchanger, etc.) shall not be longer than 80m.

Gree Electric Appliances, Inc. of Zhuhai, founded in 1991, is the world's largest air conditioner enterprise integrating R&D, manufacturing, marketing and services. Technology Innovation and quality are always our priority. With efforts of thousands of Gree's engineers, we own more than 3500 patents for our products. Nowadays, we have 7 production bases in Zhuhai, Chongqing, Hefei and Zhengzhou(China), as well as Brazil, Pakistan and Vietnam, with annual production capacity of 30 million sets of residential air conditioners and 4 million sets of commercial air conditioners.

With the installation of Gree commercial air conditioners in important projects at home and abroad like Media Village for 2008 Beijing Olympic Games, Stadiums for 2010 World Cup in South Africa, as well as India Telecom base station, Gree commercial air conditioners are ready to develop steadily to every corner in the world, to present a more comfortable and harmonious working environment and family atmosphere.



Add: West Jinji Rd, Qianshan Zhuhai, Guangdong, China 519070

Tel: (+86-756)8614883 Fax: (+86-756)8614998

Http://www.gree.com Email: gree@gree.com.cn

For continuous improvement in the products, Gree reserves the right to modify the product specification and appearance in this manual without notice and without incurring and obligations.

■ SJ00469051