

VRV LON Gateway (DMS504B51) Product Specifications

Revision History

Version	Contents	Remarks
First		

P r e l i m i n a r y

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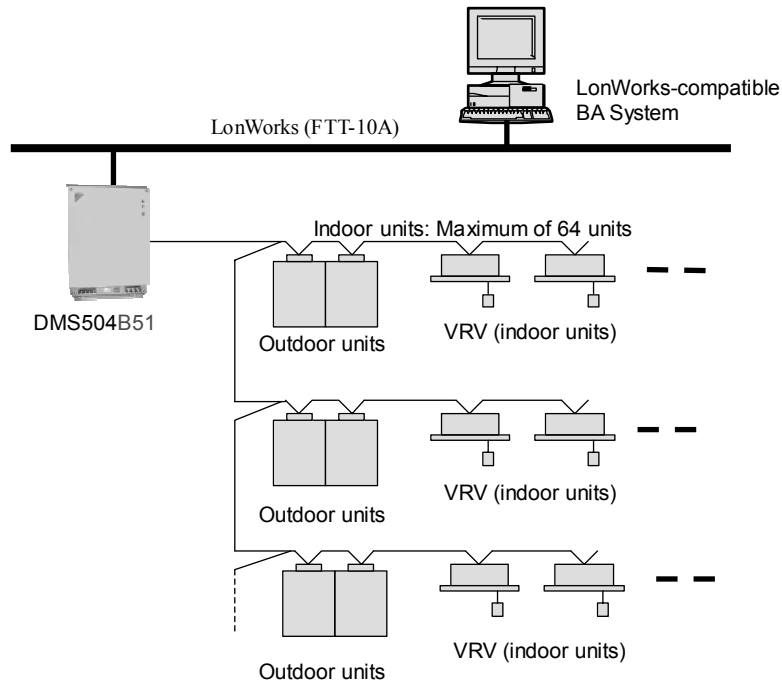
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1. Introduction

This publication represents the specifications relating to the LonWorks Network functions and specifications used when Daikin's VRV or DIII-NET compatible A/C is hooked up to a LonWorks® Network.

2. System Configuration

This LON Gateway can be connected (hooked up) to a maximum of 64 indoor units in a group.



Note: The LON Gateway functions as the interface for a building monitoring system and cannot be co-installed on the DIII-NET along with the following equipment/devices that have similar functions.

- Master Station II (BACnet Gateway for overseas markets)
- DDS
- BIPS Station (i-Manager for overseas markets)
- Adapter for remote control
- Parallel interface

3. Overview of Functions

	Function	Description
Controlling items	ON/OFF Command	Starts/stops air conditioner operation.
	Operation Mode Setting	Sets operation mode (heating/cooling/ventilation/auto).
	Temperature Setting	Sets room temperature.
	Airflow Rate Setting	Sets airflow rate.
	Filter Sign Reset	Resets filter sign.
	Forced Thermostat OFF Setting	Sets forced thermostat OFF.
	Remote ON/OFF Control Rejection	Sets whether permit/prohibit ON/OFF control rejection of the air conditioner with a hand-held remote controller.
	Remote Operation Mode Control Rejection	Sets whether permit/prohibit operation mode control rejection of the air conditioner with a hand-held remote controller.
	Remote Temperature Setting Control Rejection	Sets whether permit/prohibit room temperature setting control rejection of the air conditioner with a hand-held remote controller.
	System Forced OFF Setting	Forcibly stops the air conditioner connected to the DIII-NET /Resets the Forced OFF setting.
	Sub Group Address Control Rejection Setting	Permits/prohibits controlling of the centralized device connected to the DIII-NET.
Monitoring items	ON/OFF Status Report	Monitors ON/OFF status of the air conditioner.
	Operation Mode Status Report	Monitors operation mode status (heating/cooling/ventilation) of the air conditioner.
	Temperature Setting Report	Monitors the set room temperature.
	Room Temperature Report	Monitors the room temperature.
	Airflow Rate Setting Report	Monitors the set airflow rate.
	Filter Sign Report	Checks limits of filter use and monitors if it has reached the limit.
	Error Status Report	Monitors error status of the air conditioners.
	Error Code Report	Displays the manufacturer-specified error codes if any errors occur.
	Thermostat Status Report	Monitors whether the air conditioner's thermostat is working.
	Forced Thermostat OFF Setting Status Report	Monitors the forced thermostat OFF status.
	Remote ON/OFF Operation Rejection Report	Monitors the status if the air conditioner is permitting/prohibiting remote ON/OFF control with a hand-held controller.
	Remote Control Operation Mode Setting Rejection Report	Monitors the status if the air conditioner is permitting/prohibiting remote control operation mode with a hand-held controller.
	Remote Control Temperature Setting Operation Rejection Report	Monitors the status if the air conditioner is permitting/prohibiting remote control temperature setting with a hand-held controller.
	System Forced OFF Setting Report	Monitors the status of the forced OFF setting of the air conditioner connected to the DIII-NET.
	Sub Group Address Control Operation Rejection Setting Report	Monitors the status if the air conditioner is permitting/prohibiting control of a centralized device connected to the DIII-NET.
A/C Communication Status Report	Monitors the communication status (No Occupancy/ Communication normal/ Communication error) of the air conditioner.	

4. Applicable Models

Function	Air Conditioners					
	VRV	Hi Sky Multi	Sky Air (Adapter for Sky Air)	Facility A/C (Centralized control adapter)	HRV	RA (General purpose adapter)
ON/OFF Operation and Monitoring	☑	☑	☑	☑	☑	☑
A/C Error Report	☑	☑	☑	☑	☑	☑
Room Temperature Monitoring	☑	☑	☑	☑	☐	☐
Temperature Setting and Monitoring	☑	☑	☑	☑	☐	☐
Operation Mode Setting and Monitoring (Note 3)	☑	☑	☑	☑	☐	☐
Remote Control Mode Setting and Monitoring	☑	☑	☑	☑	☑	☐
Filter Sign Monitoring and Reset	☑	☑	☑	☐	☑	☐
Thermostat Status Monitoring	☑	☑	☑	☐	☐	☐
Airflow Rate Setting and Monitoring	☑	☑	☑	☐	☐ ρOnly monitoring (Note 1)	☐
Forced Thermostat OFF Setting and Monitoring	☑ (Note 1)	☑	☑	☐	☐	☐

Note 1: When this is set from a remote controller, it is not reported to the upper system and, therefore, this setting cannot be monitored by the upper system.

Note 2: The triangle mark denotes a function that is only available for some models.

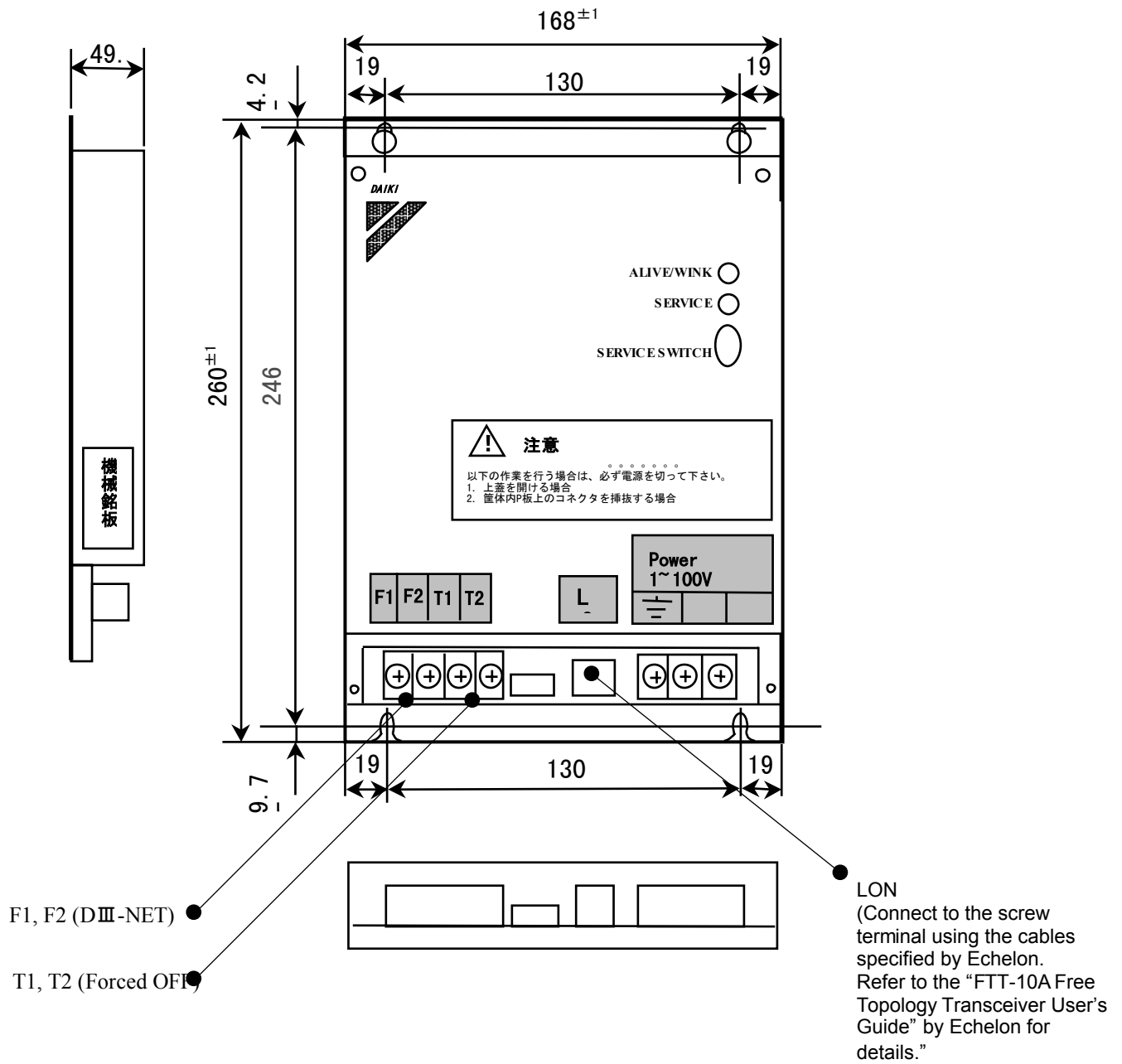
Note 3: Operation mode can be changed only on indoor units that allow a selection between heating and cooling.

5. Specifications of Devices

Item	Specifications
Model	DMS504A1
Demensions	168 (W) x 260 (H) x 50 (D) mm
Weight	1.5 kg
Power souce	Single phase AC100V 50/60Hz
Power consumption	Max. 5W
Operable temperature range	-10 to 50 °C
Storage temperature range	-20 to 60 °C
Humidity	Up to 95% (No condensation)
Installation	Mounted to indoor distribution board
LonWorks	FTT-10A (Free topology 78Kbps)
Contact input	Forced OFF x 1 (A/Cs en bloc)

6. Hardware

6-1. Physical Appearance and Branch Connection



6-2. Definition of LED and Switch

(1) LED

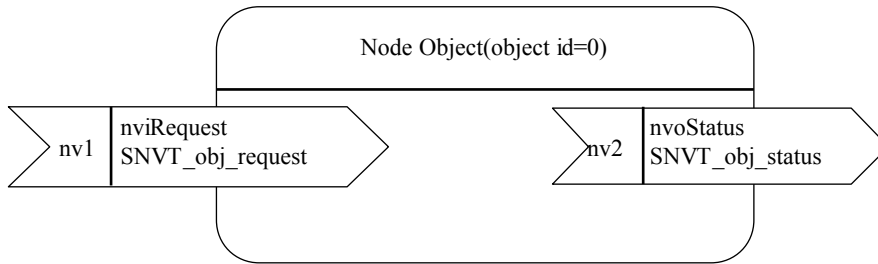
ALIVE/WINK	CPU normal monitor	Green	Normal	Blinking every 0.4 sec.
		Red	WINK command reception	Blinking every 0.2 sec.
SERVICE	LON status	Yellow	Normal	Light off
			Unconfigure state	Blinking every 0.5 sec.
			SERVICE SW on	Light on
			Error	Blinking/ flashing every 0.84 sec.

(2) Switch

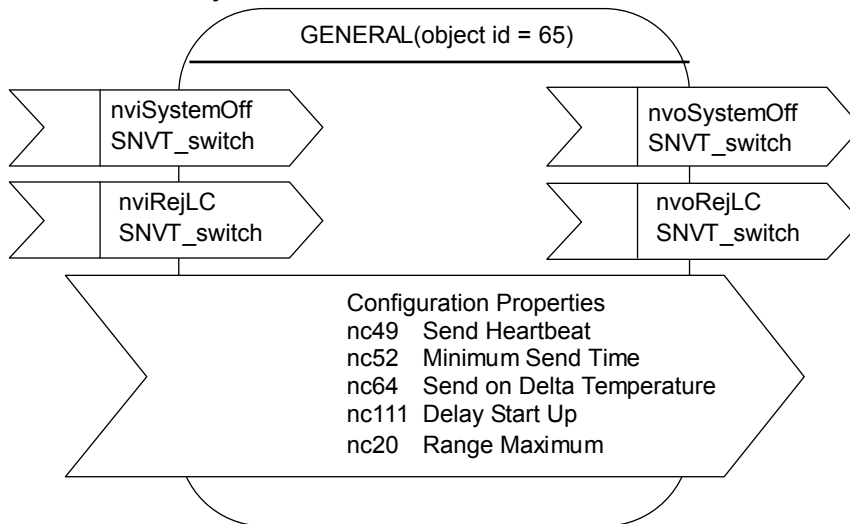
SERVICE SW Neuron ID is sent upon pushing this switch.

7. Object Details

7-1. Node Objects



7-2. DIII-NET Common Objects

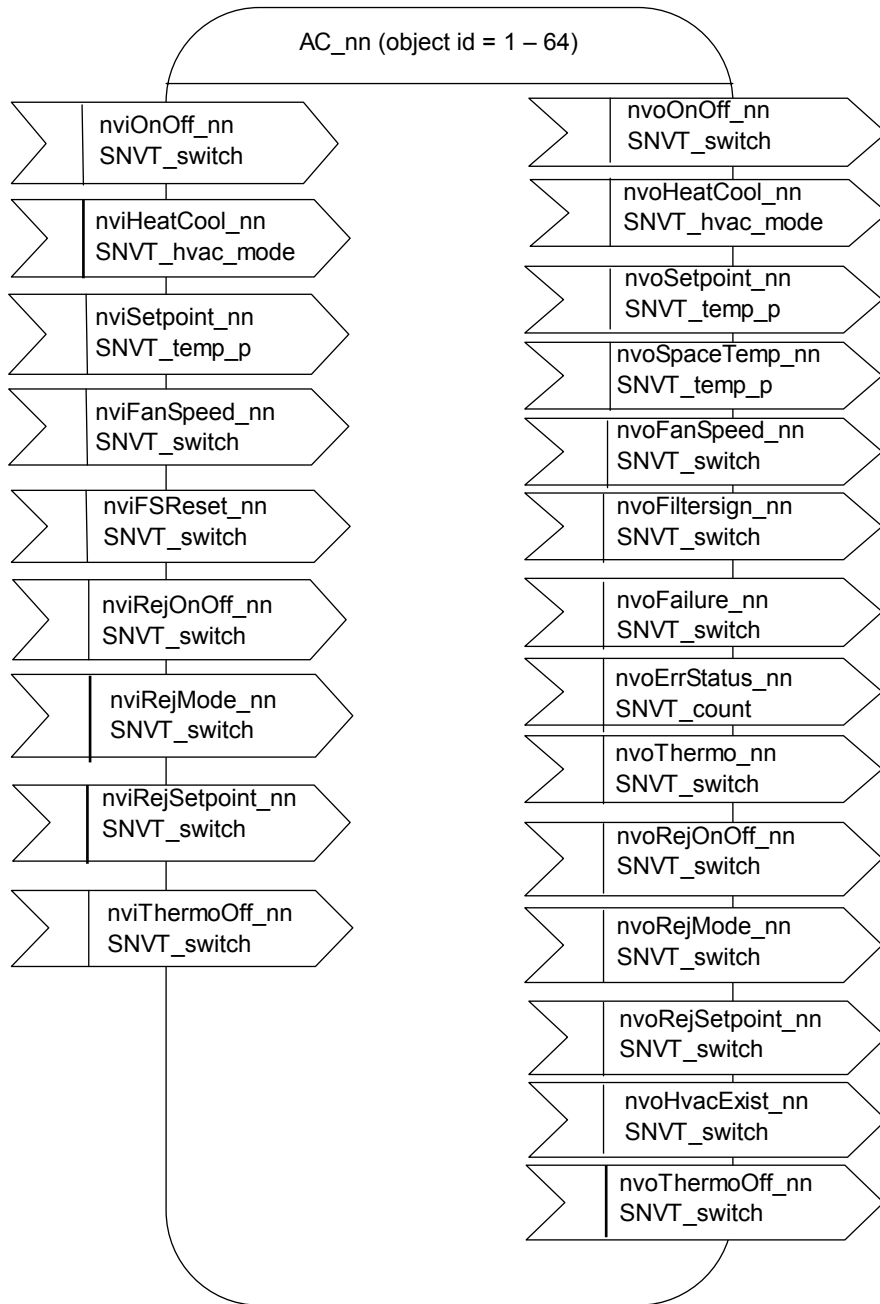


7-3. Air Conditioner Objects

It features objects for a group of 64 indoor units.

As shown below, the object name and the last “_nn” in the “nv Name” correspond with the DIII-NET location setting address.

Indoor Unit Location Setting Address	A/C Object	nv Name (Example)
1-00 – 1-15	AC 01 – AC 16	nviOnOff_01 – nviOnOff_16
2-00 – 2-15	AC 17 – AC 32	nviOnOff_17 – nviOnOff_32
3-00 – 3-15	AC 33 – AC 48	nviOnOff_33 – nviOnOff_48
4-00 – 4-15	AC_49 – AC_64	NviOnOff_49 – nviOnOff_64



8. Details of Network Variables

8-1. Node Objects

(1) Object Request Input (Node Request)

network input SNVT_obj_request nviRequest;

Valid Range

object_id :	0 – 65	0 = Node object, 1 – 64 = AC_01 – AC_64, 65 = GENERAL
	Other than above	Invalid

object_request :	RQ_NOEMAL RQ_UPDATE_STATUS RQ_REPORT_MASK Other than above	Returns the object to the normal condition Request for information regarding the object status Request for a report status bit mask Invalid
------------------	---	--

Default Value

object_id = 0, object_request = RQ_NORMAL

(2) Object Status Output (Object Status)

network output SNVT_obj_status nvoStatus;

Valid Range

object_id :	0 – 65	Returns Object IDs requested.
	Other than above	Invalid

invalid_id :	0	Represents that it is a valid ID.
	1	Represents that it is an invalid ID.

invalid_request :	0	Request for an object that is supported
	1	Request for an object that is not supported

report_mask :	0	It is not an RQ_REPORT_MASK request.
	1	Replies Support Bits in response to an RQ_REPORT_MASK request

Transmission Timing

It is output when an Object Request is input.

Default Service Type

acknowledged

8-2. DIII-NET Common Objects

(1) System Forced OFF Setting Input (System OFF)

network input SNVT_switch nviSystemOff;

This input network variable is used to forcibly stop/reset all indoor units connected to the LON Gateway. This forced OFF status differs from the normal OFF state in that the units cannot be started up via a remote controller or any other centralized device. Moreover, even when the forced OFF setting is reset, the A/C system does not return to the operation status prior to the OFF setting, but remains in the OFF status.

This function cannot be used when a forced OFF sign is input to the LON Gateway's contact points (T1 and T2) that are used for forced OFF.

Valid Range

Value	State	Indoor unit operation
Any (0 – 255)	0	Reset
0	1	Reset
1 – 255	1	Forced OFF

Default Value

After turning the LON adapter ON, the value remains at “0” until the communication with air conditioners is established.

(2) Sub Group Address Control Operation Rejection Setting Input (Reject LC)

network input SNVT_swicth nviRejLC;

This input network variable is used to permit/prohibit the operation of centralized devices on the DIII-NET.

Valid Range

Value	State	Indoor unit operation
Any (0 – 255)	0	Permitted
0	1	Permitted
1 – 255	1	Prohibited

Default Value

After turning the LON adapter ON, the value remains at “0” until updated.

(3) System Forced OFF Status Output (System Forced OFF State)

network output SNVT_switch nvoSystemOff;

This output network variable indicates whether the system on the DIII-NET for the LON Gateway is in a System Forced OFF state.

Valid Range

Value	State	Indoor unit operation
0	0	Normal state
200	1	Forced OFF state

Transmission Timing

It is output when there is a change in the System Forced OFF status.

Update Interval

There is no function to regularly transmit the output variable.

Default Service Type

unacknowledged

(4) Sub Group Address Control Operation Rejection Setting Output (Reject LC State)

network output SNVT_switch nvoRejLC;

This output network variable indicates whether the operation of centralized devices on the DIII-NE for the LON Gateway is permitted/prohibited.

Valid Range

Value	State	Indoor unit operation
0	0	Permitted
200	1	Prohibited

Transmission Timing

It is output when there is a change in the Sub Group Address Control Operation Rejection status.

Update Interval

There is no function to regularly transmit the output variable.

Default Service Type

unacknowledged

8-3. A/C Objects (AC_01 to AC_64)

(1) ON/OFF Command Input (Start/Stop)

network input SNVT_switch nviOnOff_mn;

This input network variable is used to start/stop indoor units.

Value	State	Indoor unit operation
Any (0 – 255)	0	OFF
0	1	OFF
1 – 255	1	ON

Default Value

After turning the LON Gateway ON, the value and state remain at “0” until the communication with air conditioners is established.

(2) Operation Mode Setting Input (Operating Mode)

network input SNVT_hvac_mode nviHeatCool_mn;

This input network variable is used to set the operation mode of the indoor unit(s).

The operation mode is valid only for indoor units that allow a selection between cooling and heating modes.

Valid Range

HVAC_AUTO : 0 = Auto
 HVAC_HEAT : 1 = Heating
 HVAC_COOL : 3 = Cooling
 HVAC_FAN_ONLY : 9 = Ventilation

Default Value

After turning the LON adapter ON, the value remains at “0” until the communication with air conditioners is established.

(3) Temperature Setting Input (Setpoint)

This input network variable is used to set the temperature for the indoor unit(s). The range at which temperatures can be set differs with respect to whether it is for cooling operation or heating operation. Therefore, please be sure to confirm the operation mode before setting the temperature.

Valid Range

When cooling 20 to 35°C
 When heating 15 to 30°C

Temperature setting increments: 0.1°C注) The range at which the temperature can be set may differ depending on the model of the indoor and outdoor units.

For details, please refer to the specifications of the air conditioners in use.

Default Value

After turning the LON adapter ON, the value remains at “0” until updated.

(4) Airflow Rate Setting Input (Fan Speed)

network input SNVT_switch nviFanSpeed_nn;

This input network variable is used to set the airflow rate of the fan in the indoor unit(s).

Valid Range

Value	State	Indoor unit operation
1 – 100	1	Weak
101 – 255	1	Strong

Default Value

After turning the LON adapter ON, the value remains at “0” until the communication with air conditioners is established.

(5) Filter Sign Reset Input (Reset Filter Sign)

network input SNVT_swicth nviFSReset_nn;

This input network variable is used to reset the filter sign when the filter sign on the indoor unit is malfunctioning.

Valid Range

Value	State	Indoor unit operation
0, 1	Any (0 – 255)	Reset

Default Value

After turning the LON adapter ON, the value remains at “0” until updated.

(6) Forced Thermostat OFF Setting Input (Forced Thermo OFF)

network input SNVT_swicth nviThermoOff_nn;

This input network variable is used to forcibly set/reset an OFF setting for the indoor unit thermostat operation.

Valid Range

Value	State	Indoor unit operation
Any (0 – 255)	0	Reset
0	1	Reset
1 – 255	1	OFF設定

Default Value

After turning the LON adapter ON, the value remains at “0” until updated.

(7) Remote Control ON/OFF Operation Rejection Input (Reject RM Start/Stop)

network input SNVT_switcn nviRejOnOff_nn;

This input network variable is used to set whether to permit/prohibit the ON/OFF operation of the indoor unit(s) from a remote controller.

Valid Range

Value	State	Indoor unit operation
Any (0 – 255)	0	Permitted
0	1	Permitted
1 – 255	1	Prohibited

Default Value

After turning the LON adapter ON, the value remains at “0” until the communication with air conditioners is established.

(8) Remote Control Operation Mode Setting Rejection Input (Reject RM Mode)

network input SNVT_switcn nviRejMode_nn;

This input network variable is used to permit/prohibit the setting of an indoor unit’s operation mode from a remote controller.

Valid Range

Value	State	Indoor unit operation
Any (0 – 255)	0	Permitted
0	1	Permitted
1 – 255	1	Prohibited

Default Value

After turning the LON adapter ON, the value remains at “0” until updated.

(9) Remote Control Temperature Setting Operation Rejection Input (Reject RM Setpoint)

network input SNVT_switcn nviRejSetpoint_nn;

This input network variable is used to permit/prohibit the setting of an indoor unit’s temperature value from a remote controller.

Valid Range

Value	State	Indoor unit operation
Any (0 – 255)	0	Permitted
0	1	Permitted
1 – 255	1	Prohibited

Default Value

After turning the LON adapter ON, the value remains at “0” until updated.

(10) ON/OFF Status Output (OnOff State)

network output SNVT_switch nvoOnOff_nn;

This output network variable indicates the ON/OFF status of the indoor unit(s) at that time. However, it maintains an ON status if an error occurs in an air conditioner so that the system error reset can be conducted through an OFF command.

Valid Range

Value	State	Indoor unit status
0	0	OFF
200	1	ON

After turning the LON adapter ON, the value and state remain at “0” until the communication with the MACSIV air conditioner is established.

Transmission Timing

It is output when there is a change in the ON/OFF status. It is also output when the ON/OFF status is changed by a remote controller or centralized device on the DIII-NET.

Update Interval

The value set at nciSndHrtBt takes effect.

Default Service Type

unacknowledged

(11) Operation Mode Status Output (Operating Mode State)

network output SNVT_hvac_mode nvoHeatCool_nn;

This output network variable indicates the status of the indoor unit’s operation mode. When operation mode is set to “Auto”, the output network returns the operation mode (either Heating, Cooling or Ventilation) at that time. If operation mode is set to “Dry” by a remote controller, it returns to “Cooling” mode.

Valid Range

HVAC_HEAT : 1 = Heating
 HVAC_COOL : 3 = Cooling
 HVAC_FAN_ONLY : 9 = Ventilation

After turning the LON adapter ON, the value and state remain at “0” until the communication with the MACSIV air conditioner is established.

Transmission Timing

It is output when there is a change in the Operation Mode status. It is also output when the Operation Mode status is changed by a remote controller or centralized device on the DIII-NET.

Update Interval

There is no function to regularly transmit the output variable.

Default Service Type

unacknowledged.

(12) Temperature Setting Status Output (Setpoint State)

network output SNVT_temp_p nvoSetpoint_nn;

This output network variable indicates the status of the temperature setting of the indoor unit(s) at that time.

Valid Range

When cooling 20 to 35°C

When heating 15 to 30°C

Temperature setting increments: 0.1°C

注) The range at which the temperature can be set may differ depending on the model of the indoor and outdoor units.

For details, please refer to the specifications of the air conditioners in use.

Transmission Timing

It is output when there is a change in the room temperature setting status. It is also output when the temperature setting status is changed by a remote controller or centralized device on the DIII-NET.

Update Interval

There is no function to regularly transmit the output variable.

Default Service Type

unacknowledged

(13) Room Temperature Status Output (Space Temperature State)

network output SNVT_temp_p nvoSpaceTemp_nn;

This output network variable indicates the temperature state of the indoor unit(s). The temperature refers to either suction temperature or discharge temperature depending on the specific air conditioner model.

Valid Range

Output range -10 to +50°C

Temperature setting increments: 0.1°C

In the event of a sensor error, the temperature will be displayed as “327.67°C (Invalid)”.

After turning the LON adapter ON, the value and state remain at “0” until the communication with the indoor units is established.

Transmission Timing

It is output when there is a change in room temperature.

Update Interval

The value set at nciSndHrtBt takes effect.

Default Service Type

unacknowledged

(14) Airflow Rate Setting Status Output (Fan Speed State)

network output SNVT_switch nvoFanSpeed_nn;

This output network variable indicates the status of the airflow rate setting for the indoor unit(s) at that time.

Valid Range

Value	State	Indoor unit status
100	1	Weak
200	1	Strong

注) A/C units with 3 or more speeds (airflow rate) are also roughly classified into either “Strong” or “Weak”.

Transmission Timing

It is output when there is a change in the Airflow Rate Setting status. It is also output when the Airflow Rate Setting status is changed by a remote controller or centralized device on the DIII-NET.

Update Interval

There is no function to regularly transmit the output variable.

Default Service Type

unacknowledged

(15) Filter Sign Status Output (Filter Sign State)

network output SNVT_switch nvoFiltersign_nn;

This output network variable indicates the status of the indoor unit’s filter sign at the time.

Valid Range

Value	State	Indoor unit condition
0	0	No Filter Sign
200	1	Filter Sign

Transmission Timing

It is output when there is a change in the Filter Sign status.

Update Interval

The value set at nciSndHrtBt takes effect.

Default Service Type

unacknowledged

(16) Error Status Output (Trip State)

network output SNVT_switch nvoFailure_nn;

This output network variable indicates the error state of the indoor unit(s) at that time. Even if one of the sub machines connected through a remote control group malfunctions, it is reported as an error in the main machine connected to the DIII-NET. Moreover, when sub machines in a remote control group are connected to the DIII-NET and either of them malfunctions, all of the indoor units within the remote control group are displayed as malfunctioning.

Valid Range

Value	State	Indoor unit condition
0	0	Normal
200	1	Error

Transmission Timing

It is output when there is a change in the error status.

Update Interval

The value set at nciSndHrtBt takes effect.

Default Service Type

unacknowledged

(17) Error Code Output (Malfunction Code)

network output SNVT_counter nvoErrStatus_nn;

This output network variable indicates the details of error codes transmitted when an error occurs in an indoor unit.

Valid Range

0 No Error
1–23114 Error Code

Note: These error codes are shown in a 2-character ASC decimal code specified by Daikin. The details are shown below.

Therefore, in order to understand an error code, after converting the output network variable to a hexadecimal, alter it into an ASCII code and then link the high and low bytes. Confirm the details of error codes obtained with Daikin's service divisions, or refer to the respective A/C service manual.

Transmission Timing

It is also output when there is a change in the error status if the A/C unit(s).

Update Interval

The value set at nciSndHrtBt takes effect.

Default Service Type

unacknowledged

(18) Thermostat Status Output (Thermo State)

network output SNVT_switch nvoThermo_nn;

This output network variable indicates if the indoor unit is regulating the temperature (Thermo ON/OFF status).

Valid Range

Value	State	Indoor unit condition
0	0	Thermo OFF
200	1	Thermo ON

Transmission Timing

It is output when there is a change in the Thermo ON/OFF status.

Update Interval

There is no function to regularly transmit the output variable.

Default Service Type

unacknowledged

(19) Forced Thermostat OFF Setting Status Output (Forced Thermo OFF State)

network output SNVT_swicth nvoThermoOff_nn;

This output network variable indicates whether the Forced Thermo OFF Setting status is set or reset.

Valid Range

Value	State	Indoor unit condition
0	0	Reset
200	1	Set

Transmission Timing

It is output when there is a change in the Thermo ON/OFF Setting status.

Update Interval

There is no function to regularly transmit the output variable.

Default Service Type

unacknowledged

(20) Remote Control ON/OFF Operation Rejection Output (Reject RM ON/OFF State)

network output SNVT_switch nvoRejOnOff_nn;

This output network variable indicates whether the ON/OFF operation of the indoor unit(s) is permitted or prohibited from a remote controller.

Valid Range

Value	State	Indoor unit operation
0	0	Permitted
200	1	Prohibited

Transmission Timing It is output when there is a change in the Remote Control ON/OFF Operation Rejection status.

Update Interval

There is no function to regularly transmit the output variable.

Default Service Type

unacknowledged

(21) Remote Control Operation Mode Setting Rejection Output (Reject RM Mode State)

network output SNVT_swicth nvoRejMode_nn;

This output network variable indicates whether a setting of operation mode of the indoor unit(s) is permitted or prohibited from a remote controller.

Valid Range

Value	State	Indoor unit operation
0	0	Permitted
200	1	Prohibited

Transmission Timing

It is output when there is a change in the Remote Control Operation Mode Setting Rejection status.

Update Interval

There is no function to regularly transmit the output variable.

Default Service Type

unacknowledged

(22) Remote Control Temperature Setting Operation Rejection Output (Reject RM Setpoint State)

network output SNVT_switch nvoRejSetpoint_nn;

This output network variable indicates whether the temperature setting operation for the indoor unit from a remote controller is permitted or prohibited.

Valid Range

Value	State	Indoor unit condition
0	0	Permitted
200	1	Prohibited

Transmission Timing It is output when there is a change in the Remote Control Temperature Setting Operation Rejection status.

Update Interval

There is no function to regularly transmit the output variable.

Default Service Type

unacknowledged.

(23) A/C Connection Status Output (Communication State)

network output SNVT_swicth nvoHvacExist_nn;

This output network variable indicates whether the connection status of the A/C unit(s).

Valid Range

Value	State	Indoor unit condition
0	1	No connection
1	1	Normal connection
2	1	Communication error

Transmission Timing

It is output when there is a change in the A/C Connection status.

Update Interval

The value set at nciSndHrtBt takes effect.

Default Service Type

unacknowledged

8-4. Configuration Properties

(1) Transmission Interval Setting (Send Heartbeat)

network input config SNVT_time_sec nciSndHrtBt;

These configuration properties are used to set the transmission interval between two consecutive output network variables. This interval is regulated by the value for the transmission limit, nciMaxRng.

Applicable network variables are as follows:

nvoOnOff_nn (ON/OFF Status Output)
 nvoSpaceTemp_nn (Room Temperature Status Output)
 nvoFiltersign_nn (Filter Sign Status Output)
 nvoFailure_nn (Error Status Output)
 nvoErrStatus_nn (Error Code Output)
 nvoHvacExist_nn (A/C Connection Status Output)

Valid Range

0.0–1200.0 seconds

There is no regular transmission function if the value is 0.0 sec. However, communications with A/C units are conducted every 12 seconds so, even if transmission interval is set at less than 12 seconds, the value does not change.

Default Value

0.0 seconds (No regular transmission function)

(2) Minimum Transmission Interval Setting (Minimum Send Time)

network input config SNVT_time_sec nciMinOutTm;

These configuration properties are used to set the minimum transmission interval between two consecutive output network variables.

Applicable network variables are as follows:

nvoOnOff_nn (ON/OFF Status Output)
 nvoHeatCool_nn (Operation Mode Status Output)
 nvoSetpoint_nn (Temperature Setting Status Output)
 nvoSpaceTemp_nn (Room Temperature Status Output)
 nvoFanSpeed_nn (Airflow Rate Setting Status Output)
 nvoFiltersign_nn (Filter Sign Status Output)
 nvoFailure_nn (Error Status Output)
 nvoErrStatus_nn (Error Code Output)
 nvoThermo_nn (Thermostat Status Output)
 nvoThermoOff_nn (Forced Thermostat OFF Status Output)
 nvoRejOnOff_nn (Remote Control ON/OFF Operation Rejection Output)
 nvoRejSetpoint_nn (Remote Control Operation Mode Operation Rejection Output)
 nvoRejSetpoint_nn (Remote Control Temperature Setting Operation Rejection Output)
 nvoSystemOff (System Forced OFF Status Output)
 nvoRejLC (Sub Group Address Control Operation Rejection Status Output)
 nvoHvacExist_nn (A/C Connection Status Output)

Valid Range

0.0–1200.0 seconds

There is no regular transmission function if the value is 0.0 sec.

Default Value

0.0 seconds (No minimum transmission interval control)

(3) Detect Minimum Temperature Change Setting (Send on Delta Temperature)

network input config SNVT_temp_p nciMinDelta;

This configuration property represents an output network variable to be transmitted when there is a change in temperature that is greater than the specified value between two consecutive transmissions.

Applicable network variables are as follows:

nvoSpaceTemp_nn (Room Temperature Status Output)

Valid Range

0.10–10.00°C

Default Value

0.10°C

(4) Transmission Start Delay Time Setting (Delay Start up Time)

network input config SNVT_time_sec nciStartUpDly;

These configuration properties are used to set the time lag between turning on the LON Gateway and starting the LON communications. This setting is useful for avoiding communication congestion when LON nodes on the network simultaneously start up.

Applicable network variables are as follows:

nvoOnOff_nn (ON/OFF Status Output)

nvoHeatCool_nn (Operation Mode Status Output)

nvoSetpoint_nn (Temperature Setting Status Output)

nvoSpaceTemp_nn (Room Temperature Status Output)

nvoFanSpeed_nn (Airflow Rate Setting Status Output)

nvoFiltersign_nn (Filter Sign Status Output)

nvoFailure_nn (Error Status Output)

nvoErrStatus_nn (Error Code Output)

nvoThermo_nn (Thermostat Status Output)

nvoThermoOff_nn (Forced Thermostat OFF Status Output)

nvoRejOnOff_nn (Remote Control ON/OFF Operation Rejection Output)

nvoRejSetpoint_nn (Remote Control Operation Mode Setting Rejection Output)

nvoRejSetpoint_nn (Remote Control Temperature Setting Rejection Output)

nvoSystemOff (System Forced OFF Status Output)

nvoRejLC (Sub Group Address Control Operation Rejection Status Output)

nvoHvacExist_nn (A/C Connection Status Output)

Valid Range

0.0–1200.0 seconds

There is no regular transmission function if the value is 0.0 sec.

Default Value

0.0 seconds (No minimum transmission interval control)

(5) Maximum Transmission Limit Setting (Range Maximum)

network input config SNVT_count nciMaxRng;

These configuration properties represent output network variables and are used to set the number of messages transmitted per minute from the LON Gateway.

Applicable network variables are as follows:

nvoOnOff_nn (ON/OFF Status Output)

nvoHeatCool_nn (Operation Mode Status Output)

nvoSetpoint_nn (Temperature Setting Status Output)

nvoSpaceTemp_nn (Room Temperature Status Output)

nvoFanSpeed_nn (Airflow Rate Setting Status Output)

nvoFiltersign_nn (Filter Sign Status Output)

nvoFailure_nn (Error Status Output)

nvoErrStatus_nn (Error Code Output)

nvoThermo_nn (Thermostat Status Output)

nvoThermoOff_nn (Forced Thermostat OFF Status Output)

nvoRejOnOff_nn (Remote Control ON/OFF Operation Rejection Output)

nvoRejSetpoint_nn (Remote Control Operation Mode Setting Rejection Output)

nvoRejSetpoint_nn (Remote Control Temperature Setting Rejection Output)

nvoSystemOff (System Forced OFF Status Output)

nvoRejLC (Sub Group Address Control Operation Rejection Status Output)

nvoHvacExist_nn (A/C Connection Status Output)

Valid Range

0–6000 messages/sec.

No limitation in cases of 0.

Default Value

0 (No limit)

9. Precautions regarding XIF Files

9-1. File Name

DMS_IF01.XIF

9-2. Limitations with Version 3

Daikin's XIF file is written in the Version 3 format, and the default values for configuration properties (CP) are not written within the XIF file. Therefore, when using a LonMaker to add devices, be sure to conduct the procedures at the CP value of "Current values in device" and not that of "Default values in the XIF file".

9-3. Unused Network Variables

The network variables listed below do exist within our XIF file, but are not explained in these specifications. These are intended strictly for internal use and should not be used. `nvoWattmeter`

```
nviSetTime  
nvi SetNetDB  
nvoSetNetDB
```

10. Notes for when commissioning

10.1. Suspension of Message Transmission when Receiving Set Node Mode Online

The LON Gateway suspends spontaneous message transmission, such as reports of the bound output network variable changes and heartbeat, as well as responding to the Node Object, for one minute after receiving "Set Node Mode Online", a management message. However, it responds to other network management requests such as "poll" and "fetch". This function is a mechanism to prevent time out errors because of transmission of messages spontaneously issued by the LON Gateway when it comes online due to use of an installation tool such as the LonMaker during commissioning.

11. Reference Materials (Error Code Conversion Table)

Error code	Value (Decimal)
A0	16688
A1	16689
A2	16690
A3	16691
A4	16692
A5	16693
A6	16694
A7	16695
A8	16696
A9	16697
AA	16705
AH	16712
AC	16707
AJ	16714
AE	16709
AF	16710

Error code	Value (Decimal)
C0	17200
C1	17201
C2	17202
C3	17203
C4	17204
C5	17205
C6	17206
C7	17207
C8	17208
C9	17209
CA	17217
CH	17224
CC	17219
CJ	17226
CE	17221
CF	17222

Error code	Value (Decimal)
E0	17712
E1	17713
E2	17714
E3	17715
E4	17716
E5	17717
E6	17718
E7	17719
E8	17720
E9	17721
EA	17729
EH	17736
EC	17731
EJ	17738
EE	17733
EF	17734

Error code	Value (Decimal)
H0	18480
H1	18481
H2	18482
H3	18483
H4	18484
H5	18485
H6	18486
H7	18487
H8	18488
H9	18489
HA	18497
HH	18504
HC	18499
HJ	18506
HE	18501
HF	18502

Error code	Value (Decimal)
F0	17968
F1	17969
F2	17970
F3	17971
F4	17972
F5	17973
F6	17974
F7	17975
F8	17976
F9	17977
FA	17985
FH	17992
FC	17987
FJ	17994
FE	17989
FF	17990

Error code	Value (Decimal)
J0	18992
J1	18993
J2	18994
J3	18995
J4	18996
J5	18997
J6	18998
J7	18999
J8	19000
J9	19001
JA	19009
JH	19016
JC	19011
JJ	19018
JE	19013
JF	19014

Error code	Value (Decimal)
L0	19504
L1	19505
L2	19506
L3	19507
L4	19508
L5	19509
L6	19510
L7	19511
L8	19512
L9	19513
LA	19521
LH	19528
LL	19523
LJ	19530
LE	19525
LF	19526

Error code	Value (Decimal)
P0	20528
P1	20529
P2	20530
P3	20531
P4	20532
P5	20533
P6	20534
P7	20535
P8	20536
P9	20537
PA	20545
PH	20552
PP	20547
PJ	20554
PP	20549
PF	20550

Error code	Value (Decimal)
U0	21808
U1	21809
U2	21810
U3	21811
U4	21812
U5	21813
U6	21814
U7	21815
U8	21816
U9	21817
UA	21825
UH	21832
UC	21827
UJ	21834
UE	21829
UF	21830

Error code	Value (Decimal)
M0	19760
M1	19761
M2	19762
M3	19763
M4	19764
M5	19765
M6	19766
M7	19767
M8	19768
M9	19769
MA	19777
MH	19784
MC	19779
MJ	19786
ME	19781
MF	19782

Error code	Value (Decimal)
30	13104
31	13105
32	13106
33	13107
34	13108
35	13109
36	13110
37	13111
38	13112
39	13113
3A	13121
3H	13128
3C	13123
3J	13130
3E	13125
3F	13126

Error code	Value (Decimal)
40	13360
41	13361
42	13362
43	13363
44	13364
45	13365
46	13366
47	13367
48	13368
49	13369
4A	13377
4H	13384
4C	13379
4J	13386
4E	13381
4F	13382

Error code	Value (Decimal)
50	13616
51	13617
52	13618
53	13619
54	13620
55	13621
56	13622
57	13623
58	13624
59	13625
5A	13633
5H	13640
5C	13635
5J	13642
5E	13637
5F	13638

Error code	Value (Decimal)
60	13872
61	13873
62	13874
63	13875
64	13876
65	13877
66	13878
67	13879
68	13880
69	13881
6A	13889
6H	13896
6C	13891
6J	13898
6E	13893
6F	13894