

# ET-LAN additional functions

## Description

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### [ NOTE ]

**This is a description of the functions newly added to FP2 ET-LAN unit.**

**These additional functions are unpublicized, and they are not mentioned in  
“FP2 ET-LAN Unit Manual” (ARCT1F322-1).**

**Please note that when you make an offer to users.**

## 1. Overview of additional functions

The functions added to ET-LAN unit are as follows.

### - Connection timeout notification function

- After connection has been established, if no data is transferred within the specified connection timeout period, using this function this result will be notified.

<Compliant version>

Ver. 2.6 or later

### - ET-LAN reset function

- Using this function resets (initializes) ET-LAN unit. This function is available only for ET-LAN unit. If this function is used, other units such as a CPU unit will not be initialized.

<Compliant version>

Ver. 2.66 or later

## 2. Change in the user interface

The followings are the user interface (in the shared memory) that has been changed due to the addition of the new functions.

### << User system area (Shared memory) >>

#### ■ Initial information setting area (Bank 0)

Address	Name	Default	Set value / Description
200H   203H			No change. For the details, refer to "FP2 ET-LAN Unit Manual" (ARCT1F322-1).
204H	Reset request flag 1	0000H	Resets ET-LAN unit. Write 55AAH for the reset operation.
205H	Reset request flag 2	0000H	Resets ET-LAN unit. Write 55AAH for the reset operation.
206H	Reset completion notice	0000H	When ET-LAN unit has been reset, 90FFH is set in this area.
207H	Reserved		Used by the system. When any value is written, it should be 0000H.
208H	Connection timeout type	0000H	Sets the standard time for the connection timeout detection timer value. 0000H : × 2 minutes Other than 0000H : × 6 seconds
209H	Connection timeout detection timer value	0000H	Setting time = [Set value (1~FFFFH)] × [Standard time] • Sets the time to detect the state with no data communication after connection has been established. • The set value in the above 208H is used as the standard time. • If the set value is larger than 0064H, the value is as follows: In case of ×2 minutes : 200 minutes In case of ×6 seconds : 10 minutes
20AH   20EH			No change. For the details, refer to "FP2 ET-LAN Unit Manual" (ARCT1F322-1).
20FH	Timer value for remote programming	0000H	Setting time = [Set value (1~FFFFH)] × 2sec • Sets the timeout period for data transmission with a CPU unit. After time out, if the communication with the CPU unit has not completed, 8032H error occurs. • If the set value is the default, the setting time is 200 msec.

### << Handshake area >>

#### ■ Expanded complete signal area 2

Address	BIT	Signal description
366H	bit0   bit7	No change. For the details, refer to "FP2 ET-LAN Unit Manual" (ARCT1F322-1).
	Bit8	Connection timeout signal (Connection 1)
	Bit9	Connection timeout signal (Connection 2)
	bitA	Connection timeout signal (Connection 3)
	bitB	Connection timeout signal (Connection 4)
	bitC	Connection timeout signal (Connection 5)
	bitD	Connection timeout signal (Connection 6)
	bitE	Connection timeout signal (Connection 7)
	bitF	Connection timeout signal (Connection 8)

### 3. Details of functions

#### 1. Connection timeout function

- After connection has been established, if no data is transferred within the specified connection timeout period, using this function this result will be notified.
- Compliant version: Ver.2.6 or later
- This function is to notify the state with no data communication. Even after the connection timeout flag turned on, communication can be continued.
- The connection timeout signal turns off when connection has been established and after communication started.
- This function does not activate when the auto connection function is being used. (Not available with Configurator ET.)

#### 《 How to use 》

- Write a value in the following address in the initial information setting area (shared memory, bank 0), and perform the initial process.

Specify the unit of time in 208H to detect the state with no data communication.

0 : In units of 2 minutes (Default)

Other than 0 : In units of 6 seconds

Specify the connection timeout detection time in 209H.

0 : Not detect the connection timeout. (Default)

1 to 64H : When timeout type (208H)=0 ⇒ Setting time=Set value x 2min.  
When timeout type (208H)≠0 ⇒ Setting time=Set value x 6 sec.

65 to FFFFH : When timeout type (208H)=0 ⇒ 200 min. (Fixed)  
When timeout type (208H)≠0 ⇒ 10 min. (Fixed)

- If no data transmission has been performed within the specified timeout value, the flag of a respective bit for each connection at the following addresses in the handshake area (shared memory, bank 0) turns on.

366H : (Expanded complete signal area)

Bit8 Connection timeout signal (Connection 1)

Bit9 Connection timeout signal (Connection 2)

BitA Connection timeout signal (Connection 3)

BitB Connection timeout signal (Connection 4)

BitC Connection timeout signal (Connection 5)

BitD Connection timeout signal (Connection 6)

BitE Connection timeout signal (Connection 7)

BitF Connection timeout signal (Connection 8)

### 3.2 ET-LAN reset function

- Using this function resets (initializes) ET-LAN unit.
- Compliant version : Ver. 2.62 or later
- This function is available only for ET-LAN unit. If this function is used, other units such as a CPU unit will not be initialized.
- Note the followings when using the rest function.
  - 1) Do not execute the reset function during data communication.
  - 2) Confirm that ET-LAN unit has been terminated (all request signals are off) when executing the reset function.

#### 《 How to use 》

- Write a value in the following address in the initial information setting area (shared memory bank 0), and perform the initial process.
  - Set 55AAH in 204H.
  - Set 55AAH in 205H.
- ET-LAN unit confirms that 55AAH has been set in the above address, and then starts the reset operation.
- Either one of the above addresses is not 55AAH, the unit cannot be reset.
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- A maximum of about 2 seconds is necessary to start the reset operation as checking the reset function is performed at a constant frequency.
- After ET-LAN unit was rebooted, “90FFH” is set in the area “Reset completion notice (shared memory 206H (Bank0)). (Write from ET-LAN unit)
- The reset completion notice is used to confirm if ET-LAN unit has been reset. This flag is not cleared automatically, it should be cleared separately.