1. Purpose of "Fixed Baudrate Setting Function "

QJ71E71-100(hereinafter called the Ethernet module) in setting the baudrate is only for auto-negotiation function to automatic setting, it was not offering settings by user. By using " Fixed Baudrate Setting Function ", the Ethernet module can change itself to a half-duplex communication, and is possible to change the baudrate to operate at a slower baudrate.

The corresponding model of " Fixed Baudrate Setting Function " is as follows table (table.1).

Table.1 List of the Ethernet module

Model	Outline	Compliant version
QJ71E71-100	Ethernet interface unit for 100BASE-TX/10BASE-T.	Later whose first 5 digits of the serial No. are 11012 and the function version D or later.

2. Outline of operation

The following baudrate and the duplex can be selected, and the Ethernet module can be the fixed transmission settings.

- Automatically set, Auto-negotiation
- Fixed setting, 100Mbps Full duplex
- Fixed setting, 100Mbps Half duplex
- Fixed setting, 10Mbps Full duplex
- Fixed setting, 10Mbps Half duplex

Moreover the Ethernet module of actual transmission status, using user can check "Hub Connection Status Monitor Function".

[Reference]

Figure.1 shows the bit composition of buffer memory address: 201(C9h).

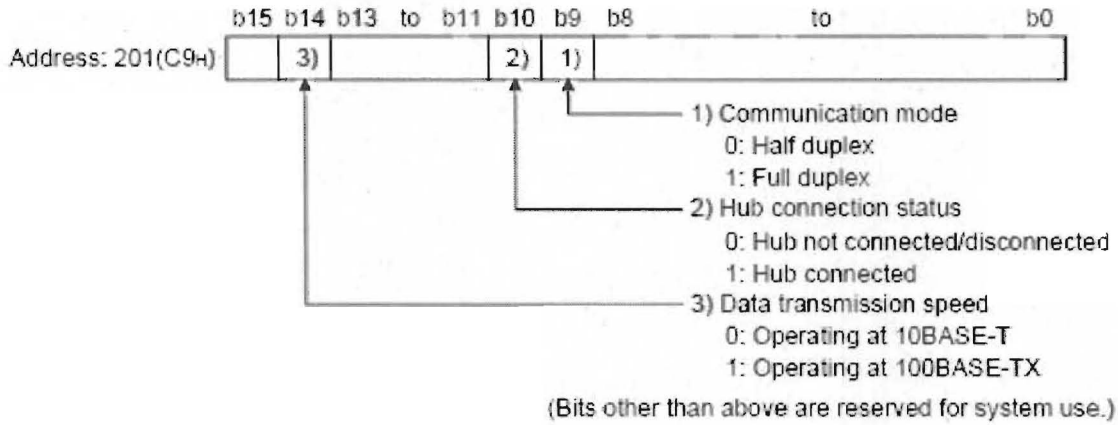


Figure.1 Buffer memory composition(201(C9h))

3. Setting method

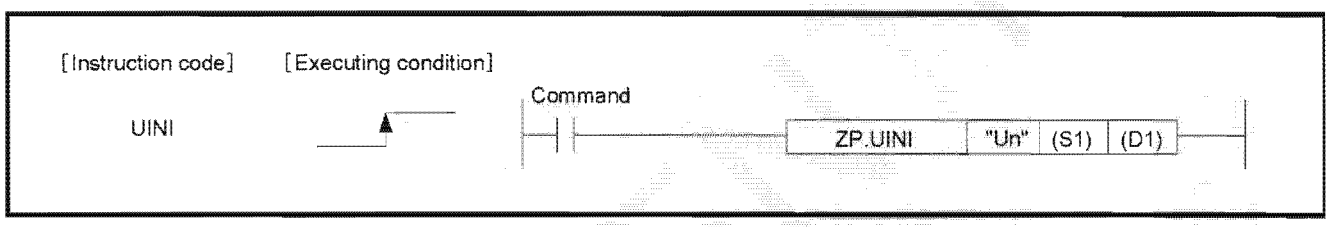
UINI instruction (instruction for reinitializes the Ethernet module) use, can be available for selection to the baudrate and the duplex. (Change with the added function of this part of Control Data.)

3.1. Instruction specification

Detail of UINI instruction is as follows.

(The net multiplication part: Along with added this function, it is a changed part.)

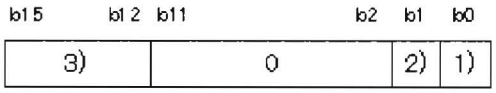
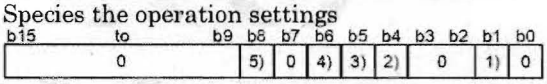
Setting Data	Applicable device								
	Internal device (System, user)		File register	Link direct device J□¥□		Intelligent function module device U□¥G□	Index register Zn	Constant		Others
	Bit	Word		Bit	Word			K,H	$	
(S1)	—	○		—				—	—	—
(D1)	○	○		—				—	—	—



Setting data

Setting data	Description	Set by	Data type
"Un"/Un	Start input/output signal of the Ethernet module (00 to FEH:The two most significant digits of the 3-digit input/output signal)	User	Binary 16 bits
(S1)	Head number of the device that stores control data	User, system	Binary 16 bits
(D1)	Head number of the local station bit device that turns on for one scan upon completion of instruction. (D1) + 1 also turns on if the instruction execution ends abnormally.	System	Bit

Control data

Device	Item	Setting data	Setting Range	Set by
(S1)+0	System area			
(S1)+1	Completion status	• Stores the status at completion. 0000H: Normal completion Other than 0000H : Abnormal completion (error code)		System
(S1)+2	Specification of target of change	Specifies the parameters to be changed.  1) Specification of weather or not to change the IP address of the local station. 0:Do not change 1:Change 2) Specification of whether or not to change the operation settings. 0:Do not change 1:Change 3) Specification of whether or not to change the transmission setting 0000:Do not change 0001:Auto-negotiation 0010:100Mbps Full duplex 0011:100Mbps Half duplex 0100:10Mbps Full duplex 0101:10Mbps Half duplex	(See the description to the left.)	User
(S1)+3 (S1)+4	Local station IP address	Specifies the IP address of the local station.	00000001H ~ FFFFFFFEH	User
(S1)+5	Operation settings	Species the operation settings  1) Communication data code setting 0:Communication in binary code 1:Communication in ASCII code 2) TCP Existence confirmation setting 0:Use the Ping 1:Use the KeepAlive 3) Send frame setting 0:Ethernet frame 1:IEEE802.3 frame 4) Setting of write enable/disable at RUN time 0:Disable 1:Enable 5) Initial timing setting 0:Do not wait for Open (communication impossible at STOP time) 1:Always wait for OPEN (communication possible at STOP time)	(See the description to the left.)	User

SQ-T-14438

3.2. Functions

(1) Perform the re-initial processing of the Ethernet module specified in Un.

(2) Whether or not the UINI instruction has been completed can be checked by the complete bit devices (D1) + 0 and (D1) + 1.

(3) The ZP.UINI is executed when the open instruction switches from off to on.

(4) By doing the change specification of the transmission setting, the baudrate and the duplex can be possible to specify. (QJ71E71-100 only)

POINT
Please keep the following points in mind when reinitializing Ethernet module. (Failure to do so may cause errors in the data communication with the external devices.) (1) Be sure to end all current data communication with external devices and close all connections before performing a re-initial processing. (2) Do not mix a re-initial processing done by writing directly into buffer memory, for instance by using a TO instruction, with a re-initial processing via UINI instruction. Also, do not request another re-initial processing while a re-initial processing is already being performed. (3) Be sure to reset external devices if the IP address of the Ethernet module has been changed. (If an external device maintains the Ethernet address of a device with which it communicates, the communication may not be continued after the IP address of the Ethernet module has been changed.) (4) In a redundant system, do not change the IP address and operation setting with the UINI instruction. If they are changed, normal communication cannot be made. Use GX Developer to change the IP address and operation setting. (5) Do not change the transmission setting and the other setting (the IP address, operation setting) at the same time. If they are changed, the Ethernet module will be not change the transmission setting.

SA-T-14438

4. Program example

The following figure (figure.2) shows a sample program that performs a change the transmission setting at the startup. When I/O signals of the Ethernet module are X/Y00 to X/Y1F.
(Example when changing to the fixed transmission setting 10Mbps Half duplex)

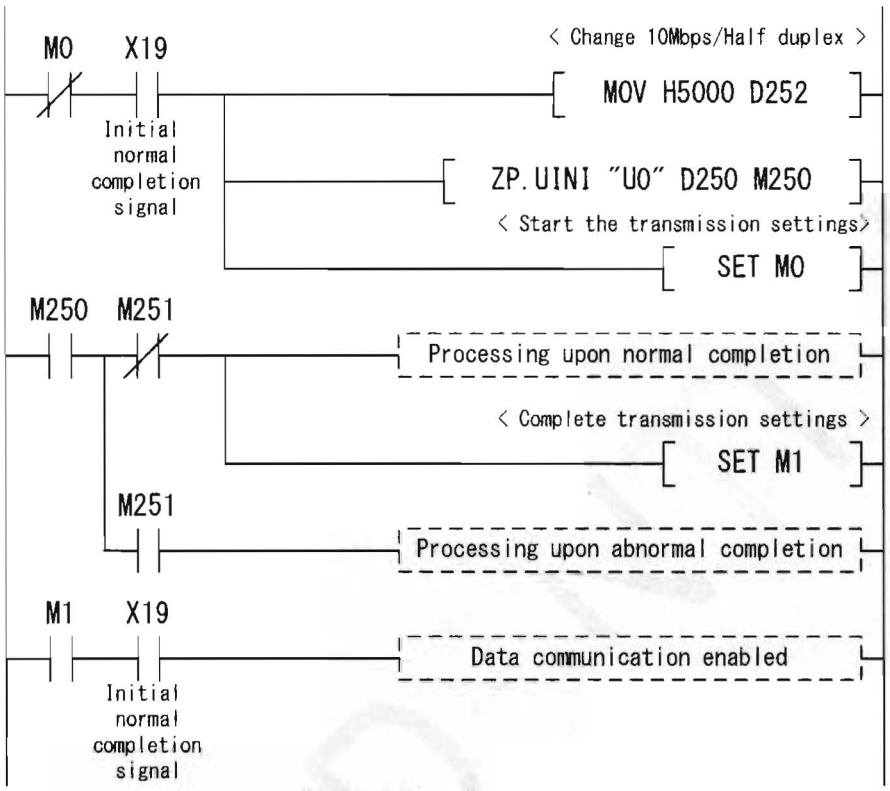


Figure.2 Sample program