

3-1-5 Errors in the EtherCAT Master Function Module

Built-in EtherCAT Master in CPU Unit

Event code	Event name	Meaning	Assumed cause	Level					Reference
				Maj	Prt	Min	Obs	Info	
04400000 hex	Communications Controller Failure	An error was detected in the hardware test at startup.	<ul style="list-style-type: none"> The CPU Unit has failed. 		S				NJ-series CPU Unit Built-in EtherCAT Port User's Manual (Cat. No. W505)
14400000 hex	MAC Address Error	The MAC address is incorrect.	<ul style="list-style-type: none"> The CPU Unit has failed. 		S				Same as above.
44010000 hex	EtherCAT Fault	A fatal error was detected in the EtherCAT Master Function Module.	<ul style="list-style-type: none"> Software is corrupted. 		S				Same as above.
84200000 hex	Link OFF Error	A Link OFF state occurred.	<ul style="list-style-type: none"> The Ethernet cable is broken between the master and slaves. The Ethernet cable connector is disconnected. The Ethernet cable is not connected. 		S				Same as above.
24200000 hex	Slave Node Address Duplicated	The same slave address is used for two nodes.	<ul style="list-style-type: none"> The same node address is set for more than one slave. 			S			Same as above.
34400000 hex	Network Configuration Information Error	There is an error in the network configuration information.	<ul style="list-style-type: none"> The power supply to the Controller was interrupted or communications with the Sysmac Studio were disconnected while downloading the network configuration information. 			S			Same as above.
50010000 hex (Ver. 1.02)	Controller Insufficient Memory Warning	The amount of data for the EtherCAT slave configuration, network-published information, or other data exceeds the value that is specified for the CPU Unit. You may not be able to perform online editing or other operations.	<ul style="list-style-type: none"> The amount of data for the EtherCAT slave configuration, network-published information, or other data exceeds the value that is specified for the CPU Unit. 			S			Same as above.
84210000 hex	Network Configuration Error	The EtherCAT network configuration is incorrect.	<ul style="list-style-type: none"> Slave output ports are connected to each other. The master and slave are connected with the slave output port. The number of connected slaves exceeded the maximum number of slaves, 192 nodes, for the EtherCAT master. 			S			Same as above.

Event code	Event name	Meaning	Assumed cause	Level					Reference
				Maj	Prt	Min	Obs	Info	
84220000 hex	Network Configuration Verification Error	A slave that is in the network configuration information is not connected. Or, a slave that is not in the network configuration information is connected.	<ul style="list-style-type: none"> A slave that is in the network configuration information is not connected. There is a node address mismatch. A different slave from the one that is specified in the network configuration information is connected. A slave that is not in the network configuration information is connected. The hardware switches for the slave node address were changed to a value other than 0 after the <i>Write Slave Node Address</i> operation was performed from the Sysmac Studio. The Ethernet physical layer is broken between two slaves. 			S			NJ-series CPU Unit Built-in EtherCAT Port User's Manual (Cat. No. W505)
84230000 hex	Slave Initialization Error	Slave initialization failed.	<ul style="list-style-type: none"> An error occurred in EtherCAT master processing. An initialization error occurred in the EtherCAT slave. An initialization error occurred in the EtherCAT Coupler Unit. A major fault level Controller error occurred. The Ethernet cable is broken or the specified cable is not being used. A connector on the Ethernet cable is disconnected, the contact is faulty, or parts are faulty. A general-purpose Ethernet hub is connected. The master failed. The slave failed. Noise. 			S			Same as above.
84280000 hex	Slave Application Error	An error occurred in the slave application.	<ul style="list-style-type: none"> An error was detected in the slave's application layer status register. 			S			Same as above.
84290000 hex	Process Data Transmission Error	Sending process data failed.	<ul style="list-style-type: none"> It was not possible to send the EtherCAT frame during the EtherCAT communications period. The frame transmission jitter exceeded the limit. 			S			Same as above.

Event code	Event name	Meaning	Assumed cause	Level					Reference
				Maj	Prt	Min	Obs	Info	
842B0000 hex	Process Data Reception Timeout	Process data reception timed out.	<ul style="list-style-type: none"> The Ethernet cable is broken or the specified cable is not being used. A connector on the Ethernet cable is disconnected, the contact is faulty, or parts are faulty. A general-purpose Ethernet hub is connected. The master failed. The slave failed. The Ethernet cable is too long. The CPU Unit task period is too short. Noise 			S			NJ-series CPU Unit Built-in EtherCAT Port User's Manual (Cat. No. W505)
842C0000 hex	Process Data Communications Error	An error occurred in process data communications.	<ul style="list-style-type: none"> A slave left the network even though the disconnection operation was not performed. The Ethernet cable is broken or the specified cable is not being used. A connector on the Ethernet cable is disconnected, the contact is faulty, or parts are faulty. The slave failed. 			S			Same as above.
102F0000 hex (Ver. 1.03)	EtherCAT Slave Backup Failed	The backup operation for an EtherCAT slave ended in an error.	<ul style="list-style-type: none"> There is no connection between the EtherCAT master and the slave (Link OFF). An error caused an incorrect EtherCAT master status. The EtherCAT network configuration information does not agree with the physical network configuration. The request to the EtherCAT slave failed. The EtherCAT master was temporarily unable to perform the processing because it was executing other processing. Initialization of the EtherCAT slave failed. It was not possible to read the backup parameters from the EtherCAT slave. Communications with an OMRON Communications Coupler Unit or NX Unit failed. 				S		Same as above.

Event code	Event name	Meaning	Assumed cause	Level					Reference
				Maj	Prt	Min	Obs	Info	
10300000 hex (Ver. 1.03)	EtherCAT Slave Restore Operation Failed	The restore operation for an EtherCAT slave ended in an error.	<ul style="list-style-type: none"> There is no connection between the EtherCAT master and the slave (Link OFF). An error caused an incorrect EtherCAT master status. The EtherCAT network configuration information does not agree with the physical network configuration. The request to the EtherCAT slave failed. The EtherCAT master was temporarily unable to perform the processing because it was executing other processing. Initialization of the EtherCAT slave failed. It was not possible to write the backup parameters to the MX2/RX Series Inverter. It was not possible to write the backup parameters to the EtherCAT slave. Incorrect backup data was detected. The EtherCAT network configuration in the backup data does not agree with the physical network configuration. An error occurred at an OMRON Communications Coupler Unit. The following causes are possible. <ul style="list-style-type: none"> Reading a backup file failed at the Communications Coupler Unit (when attached information 4 is 1). Communications with the Communications Coupler Unit or NX Unit failed (when attached information 4 is 2). The Unit Configuration of the NX Units in the Communications Coupler Unit when data was backed up did not agree with the actual configuration of NX Units (when attached information 4 is 3). 				S		NJ-series CPU Unit Built-in EtherCAT Port User's Manual (Cat. No. W505)
64200000 hex	Emergency Message Detected	An emergency message was detected.	<ul style="list-style-type: none"> An emergency message was received from a slave. 				S		Same as above.
842D0000 hex	EtherCAT Message Error	An error occurred in a message communications with the slave.	<ul style="list-style-type: none"> Refer to the attached information to check the error. 				S		Same as above.
94400000 hex	Slave Disconnected	A slave was disconnected for a disconnection command.	<ul style="list-style-type: none"> An operation to disconnect the slave was executed from the Sysmac Studio. The EC_DisconnectSlave instruction was executed. 					S	Same as above.

Event code	Event name	Meaning	Assumed cause	Level					Reference
				Maj	Prt	Min	Obs	Info	
94410000 hex	Slave Connected	A slave was reconnected for a reconnection command.	<ul style="list-style-type: none"> An operation to reconnect the slave was executed from the Sysmac Studio. The EC_ConnectSlave instruction was executed. 					S	NJ-series CPU Unit Built-in EtherCAT Port User's Manual (Cat. No. W505)
94430000 hex	Errors Reset	A command was received to reset errors.	<ul style="list-style-type: none"> An error reset operation was performed from the Sysmac Studio. The ResetECError instruction was executed. 					S	Same as above.
94440000 hex (Ver. 1.04)	Slave Disabled	The EtherCAT Slave was disabled.	<ul style="list-style-type: none"> The EC_ChangeEnableSetting instruction was executed. 					S	Same as above.
94450000 hex (Ver. 1.04)	Slave Enabled	The EtherCAT Slave was enabled.	<ul style="list-style-type: none"> The EC_ChangeEnableSetting instruction was executed. 					S	Same as above.

3-1-6 Errors in the DB Connection Service Function

The section provides tables of the errors (events) that can occur in the DB connection service or DB connection instructions.

You can use the DB connection service and DB connection instructions with an NJ501-1□20 CPU Unit.

The errors are divided into the following functional groups.

- DB connection service
- DB connection instructions

Errors Related to DB Connection Service

Event code	Event name	Meaning	Assumed cause	Level					Reference
				Maj	Prt	Min	Obs	Info	
14D00000 hex (Ver. 1.05)	Spool Memory Corrupted	The Spool memory is corrupted.	<ul style="list-style-type: none"> The user application made an invalid writing to the Spool memory. 			S			NJ-series Database Connection CPU Units User's Manual (Cat. No. W527)
14D20000 hex (Ver. 1.05)	Execution Log Save Failed	Failed to save the Execution Log to the SD Memory Card.	<ul style="list-style-type: none"> An SD Memory Card is not inserted. The SD Memory Card is not the correct type of card. The format of the SD Memory Card is not correct. The SD Memory Card is write-protected. The capacity of the SD Memory Card is insufficient. The SD Memory Card is damaged. 			S	U		Same as above.