JC-340

Version Update

from V. 1.18 to V. 1.22



Version Update

Jetter

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1 Introduction

Introduction

This chapter shows the history of OS versions.

OS update - Why?

An OS update lets you enhance the functionality of your device by

- adding new functions
- fixing software bugs
- installing an OS of a specific version after its release

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Operating system update

OS file for an operating system update

For an OS update, you will need the following file:

OS file	Description
JC-340_1.22.0.00.os	OS file for JC-340 with version 1.22

OS file download

Jetter AG make OS files available for download from their **homepage http://www.jetter.de**. OS files can be found in the support area and on the page of the JC-340 controller via quicklink.

OS update by means of JetSym

To update the OS, proceed as follows:

Step	Action
1	Download the OS file from www.jetter.de.
2	Establish a connection between PC and controller.
3	In JetSym: Select menu item "Build -> Update OS" or Click on the button "OS Update" in the CPU window of the Hardware Manager.
4	Select the OS file.
5	Start the OS update by clicking OK.
6	**Result:** Following Power OFF/Power ON the new OS is launched.

Minimum requirements

For programming a JC-340 with version 1.22, JetSym 5.0.0 or higher is required.

JC-340 Version update - Overview

V. 1.04

The following table gives an overview of newly added features and fixed software bugs in OS version 1.04:

Description	New	Fixed
JX2 system bus:		
Register overlaying for digital inputs/outputs	✓	
Support of JX-SIO modules and third-party CANopen® devices	✓	
JX3 system bus:		
Register overlaying for digital inputs/outputs	✓	
System bus special registers for status and control	✓	
OS update:		
Via FTP: On completion notification the OS has actually been stored.		✓
Updating a JX2 slave module while registers are being accessed blocks communication.		✓
Application program:		
Task switch could fail to happen		✓
Error signal in case of invalid file "\App\start.ini"		✓
Display commands:		
Redirection to JX2-SER1 works only if JX2-PRN1 has been configured, too.		✓

V. 1.05

The following table gives an overview of newly added features and fixed software bugs in OS version 1.05:

Description	New	Fixed
JX2 system bus: V. 1.05.0.00		
AS interface gateway BWU1821 is supported.	✓	
Frequency inverter 8200 vector is supported.	✓	
JetMove 1xx is not detected during boot process.		✓
Automatic baud rate recognition does not work reliably for some of the baud rates and configurations of IP67 modules.		✓
Repetition counter does not work when polling I/O modules.		✓
AutoCopy function:		
Copying controller data automatically	✓	
Application program:		
Pending cyclic tasks are started immediately after Taskunlock.	✓	
For function pow(x,y) a floating point number can be entered as exponent.	✓	
Cyclic tasks can be debugged.	✓	

Description	New	Fixed
Length of project and program names > 39 characters.		✓
Restart of an elapsed timer		✓
The value returned by DateTimeDecode() was always 1 day short of the actual day.		✓
DateTimeEncode and -IsValid might return the value TRUE irrespective of an invalid date.		✓
Application registers:		
The register type can be set up without having to start the application program.	✓	
Displays and HMIs:		
A floating point value can be used as default for UserInput.	✓	
The default value for UserInput is not displayed correctly.		✓
It is not possible to enter LED register numbers.		✓

V. 1.08

The following table gives an overview of newly added features and fixed software bugs in OS version 1.08:

Description	New	Fixed
System configuration:		
System rights for configuration file	✓	
JX2 system bus: V. 1.11.0.00		
Timeout after CAN-PRIM message		✓
Registers of LJX7-CSL modules		✓
Write access to analog outputs of CANopen® modules		✓
State of digital inputs when the controller is powered on		✓
Digital outputs on JX-SIO or CANopen® modules		✓
Input/output 64 on JX-SIO or CANopen® modules		✓
User-programmable CAN interface		✓
Application program:		
NetCopyList functions	✓	
StrCopy()		✓
Crash in the case of "invalid" application program		✓
NetCopyVarFromReg()		✓
JX3 system bus:		
Module registers for digital I/Os	✓	
Displays and HMIs:		
UserInput()		✓

V. 1.09

The following table gives an overview of newly added features and fixed software bugs in OS version 1.09:

Description	New	Fixed
System:		
System command register	✓	
JX2 system bus: V. 1.13.0.00		
Status change of inputs on JX2-ID8		✓
Status change of fast inputs		✓
Application program:		
FTP client	✓	
Axis instructions		✓
Taskrestart in the case of Delay()		✓
Crash in the case of missing library		✓
Floating-point number registers in data files		✓
NetCopyVarToReg with floating-point number registers		✓
JX3 system bus:		
Dummy modules	✓	
AutoCopy:		
FTP commands	✓	
Serial interface:		
Initialization after booting		✓

V. 1.10

The following table gives an overview of newly added features and fixed software bugs in OS version 1.10:

Description	New	Fixed
System:		
LED registers		✓
SD memory card		✓
JX2 system bus: V. 1.17.0.00		
Further modules	✓	
CAN-PRIM	✓	
Application program:		
Task instructions using variable parameters	✓	
UserInput()		✓
NetCopyListSend()		✓
Task status register		✓

Description	New	Fixed
Real-time clock:		
Additional register for milliseconds	✓	
User-programmable IP interface:		
More connections	✓	

V. 1.12

The following table gives an overview of newly added features and fixed software bugs in OS version 1.12:

Description	New	Fixed
System:		
System command register	✓	
JX2 system bus: V. 1.21.0.00		
Initialization		✓
CAN-PRIM		✓
CANopen® SYNC interval		✓
CANopen® application registers		✓
CANopen® type "String"		✓
Write access to CANopen® output		✓
CANopen® version number		✓
WAGO 750		✓
JX3 system bus:		
Register accesses		✓
Application program:		
Program Control	✓	✓
Assigning structures	✓	
Sorting data	✓	
Displaying variables in JetSym		✓
HTTP server:		
New file type	✓	
Serial interface:		
Error detection		✓

V. 1.14

The following table gives an overview of newly added features and fixed software bugs in OS version 1.14:

Description	New	Fixed
JX2 system bus: V. 1.22.0.00		
OS update		✓
Application program:		
New instructions	✓	

V. 1.16

The following table gives an overview of newly added features and fixed software bugs in OS version 1.16:

Description	New	Fixed
JX2 system bus: V. 1.23.0.00		
CANopen® registers		✓
Application program:		
New data types	✓	
New functions	✓	
Memory protection	✓	
Cyclic tasks		✓
NetCopyVarToReg		✓
Cycle time register		✓

V. 1.18

The following table gives an overview of newly added features and fixed software bugs in OS version 1.18:

Description	New	Fixed
Application program:		
Debugging	✓	
Memory protection	✓	✓
Partial download		✓
StrFormat()		✓
Exceptions		✓
Ethernet system bus:		
Enhanced diagnostic functions	✓	
Module support		✓
JX3 system bus:		
Register	✓	
Initialization		✓
OS update		✓

Description	New	Fixed
STX debug server:		
TCP connection management	✓	

V. 1.22

The following table gives an overview of newly added features and fixed software bugs in OS version 1.22:

Description	New	Fixed
Application program:		
Debugging	✓	
New functions	✓	
Tasklock	✓	
Initializing of variables	✓	
Partial download		✓
Exceptions		✓
Ethernet system bus:		
IP address setting	✓	
JetSync blockage	✓	
JX2 system bus:		
Error counter/error bits	✓	
CAN-PRIM	✓	
Error indication		✓
Register for overlaying of outputs		✓
DNS client		
IP address of DNS server	✓	
Diagnostic functions	✓	

2 Enhancements

Introduction

Jetter AG are continuously striving to add new features and functions to the controller JC-340. By updating your OS you are given the possibility to enhance the functionality of your controller. To do so, you need the following:

- an OS file
- the software tool JetSym
- a connection between PC and controller

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2.1 Various new features and modifications

Introduction

This chapter covers the new features and modifications

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Debugging registers for STX variables

Obsolete function

For remote access to controller variables, JetSym had to be applied so far. The project going with the running program had to be active. Only then access in setup or monitor mode would be successful.

New function

By means of two registers and an appropriate application program, certain controller variables can be accessed.

Reason for this change

The main purpose of applying these registers is supporting plant diagnostics, if there is neither any PC with JetSym available, nor is there any remote maintenance possible.

R 210091

Variable address

This register is for setting the address of a variable. The address of a variable can be determined by the map file of the project or within the JetSym editor.

Register properties	
Values	0 ... end of the variable range
Value after reset	0

R 210093

Memory address

This register is for displaying the absolute memory address of the variable.

Register properties	
Values	0 ... 4,294,967,296
Value after reset	Base address

Example

```
Var
    nDebugVar1:Int;
    pnData: Pointer To Int;
    nValue: Int;
End_Var;

Const
    cVar1Addr = &nDebugVar1;
End_Const;

Task tMain Autorun
    ...
    pnData := Regs[210093];
    nValue := @pnData;
    ...
End_Task
```

Determining the memory address in the JetSym editor

Step	Action
1	In the source code, assign constants to the variable addresses.
2	Compile the program
3	Place the mouse cursor on the constant.

Result: JetSym lets you read out the value of the constant. Enter the value into register 210091.

Retrieving the memory address from the map file

The map file is assigned the name, the address, and the length of the variable:

```
Memory:
nDebugVar1;12;4
```

Enter the variable address taken from the map file (here: 12) into register 210091.

Accessing the variable value

Step	Action
1	Enter the variable address into R 210091.
2	Read the memory address out of R 210093 and assign it to a pointer variable.
3	Read out the variable value via pointer variable.

New functions NetBitSetReg() and NetBitClearReg()

Introduction	This is the first OS version of the controller JC-340 that supports the STX functions `NetBitSetReg()` and `NetBitClearReg()`.
Prerequisites	JetSym programming environment version 5.2 or higher must be installed to be able to use these functions.
Declaration	`Function NetBitSetReg(IPAddr,DestRegNumber,BitMask,Ref NewVal, Interf,IPPort:=DEFAULTIPPORT,Res:=0);` `Function NetBitClearReg(IPAddr,DestRegNumber,BitMask,Ref NewVal, Interf,IPPort:=DEFAULTIPPORT,Res:=0);`
Reference:	For more information on these functions refer to JetSym online help.

New function: FileCopy()

Introduction	This is the first OS version of the controller JC-340 that supports the STX function `FileCopy()`.
Prerequisites	JetSym programming environment version 5.2 or higher must be installed to be able to use these functions.
Declaration	`Function FileCopy(Const Ref strSrcName:String, Const Ref strDstName:String):Int`
Reference:	For a detailed description of this command and its application refer to JetSym online help.

Debugging of properties in the setup pane

Introduction	As of this OS version, debugging of properties in the setup pane is supported by JetSym.
Prerequisites	To display properties in the setup pane, JetSym programming environment version 5.2 or higher must be installed.
Reference:	For a detailed description of object properties and their application, refer to the JetSym online help.

Nested tasklocks

Obsolete function	If an application program had issued the `Tasklock` command to block task switch, issuing the `Taskunlock` command once would enable task switch again.
New function	If an application program has issued the `Tasklock` command more than once to block task switch, task switch is not enabled before issuing the `Taskunlock` command as often as having issued the `Tasklock` command.

Setting a variable type when writing

Obsolete function	If initialization values of non-volatile variables (%VL) were transmitted, JetSym would only write the value.
New function	If initialization values of non-volatile variables (%VL) are transmitted, JetSym sets the variable type in the controller and then writes the value.
Reason for this change	This may prevent wrong setting of the initialization values at the first program download.
Reference:	For a detailed description of initializing non-volatile variables, refer to JetSym online help.

System start without DNS

Introduction

When specifying IP addresses of target systems, you can also use names. Then the controller translates these names into IP addresses. Configuring the e-mail client may serve as an example for this. Making an entry in a configuration file or the Domain Name System is used to assign names to their corresponding IP address.

Obsolete function

During the boot process the controller reads the IP address of the DNS server out of the configuration memory. This means that the IP address of the DNS server must be known and must not be changed at that moment.

New function

The controller resolves the name each time an e-mail is sent. The IP address of the DNS server can be changed during runtime via register.

Reason for this change

The IP address of the DNS server is to be changeable during runtime.

R 104534

IP address of the DNS server during runtime

This register contains the IP address of the DNS server being valid during runtime of the controller. The value written to this register cannot be stored to a remanent memory.

Register properties	
Values	Valid IP address

IP address in the GNN operating mode

Introduction

In GNN (Global Network Number) mode, the JC-340 controller functions as a network node within a greater controller network. It enters its IP address at booting out of the config.ini file. The next step is that the main controller enters its IP configuration. Set the GNN using the lower seven positions of the DIP switch.

The "config.ini" file

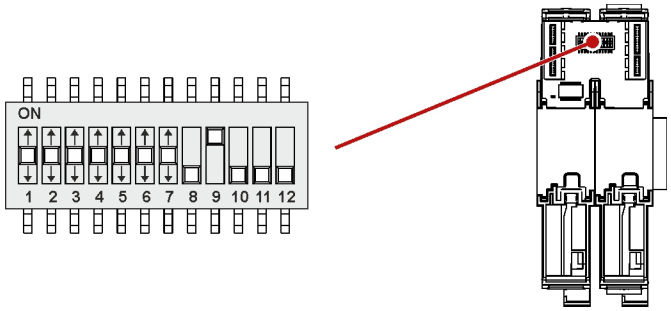
Integrate the IP address via the config.ini file.

```
[IP]
Address     = aaa.bbb.ccc.ddd
...
```

Element	Description
`Address`	Line for entering the IP address
`aaa`	First byte of IP address
`bbb`	Second byte of IP address
`ccc`	Third byte of IP address
`ddd`	Fourth byte of IP address

DIP switch settings

The following DIP switch settings cause the controller JC-340 to read out the IP address from the file "config.ini" and the DIP switches:



Valid values for the GNN: 1 ... 64.

The DIP switches are binary-coded.

DIP switch sliders								GNN
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	
OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	Invalid
ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	1
OFF	**ON**	OFF	OFF	OFF	OFF	OFF	OFF	2
ON	**ON**	OFF	OFF	OFF	OFF	OFF	OFF	3
...								
OFF	OFF	OFF	OFF	OFF	OFF	**ON**	OFF	64
...								Invalid

DIP switch sliders								GNN
X	**X**	**X**	**X**	**X**	**X**	**X**	**ON**	Invalid

Error counter of the JX2 system bus

Register for error counters

The following registers function as counters of various CAN errors that might occur on the JX2 system bus.

Prerequisites

Detailed knowledge of the Controller Area Network (CAN bus) is required.

Register overview

Communication and networks

Register	Description
200002821	Write 1 to set the CAN error counters to 0
200002824	Counter for stuff errors
200002825	Counter for CRC errors
200002826	Counter for formal errors
200002827	Counter for acknowledge errors
200002828	Counter for bit errors

JX2 system bus: New error bits 12 and 15

CANopen® error

In diagnostics register 200002008 of the JX2 system bus, the controller JC-340 as of this OS version sets two new bits each time an error message has been sent by CANopen® devices.

R 200002008

The register value shows the diagnostic bits of the JX2 system bus.

Meaning of the individual bits		
Bit 12	**Object length has not been set**	
	1 =	In case of write access to the CANopen® application registers, the object length has not been set.
Bit 15	**SDO abort**	
	1 =	At SDO access, the CANopen® device has reported an SDO abort.

CAN-PRIM interface

Obsolete function	In case of mixed operation of directly supported modules (e.g. JX2 modules, JX2 slaves) and any CAN modules addressed via CAN-PRIM interface, the user had to take the following constraint into account: The connected CAN modules were not allowed to send CAN messages during the boot process.
New function	The module ID has been improved so the constraint is obsolete.

2.2 DNS client

Introduction

This chapter describes the registers of the DNS client and the DNS cache.

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Register overview

Introduction

You can access the data of the DNS client via the following register that have been written into.

Register overview

Register	Description
101x03	IP address of the DNS server taken from the IP configuration
104534	IP address of the DNS server during runtime
510000	Status
510001	Command
510002	IP address of DNS server
510003	Error code
510009	Number of entries in the DNS cache
510010	Timeout
510011	IP address
510012 ... 510029	Name

Register description

R 101x03 **IP address of the DNS server taken from the IP configuration**

For a description of these registers, refer to the chapter on IP configuration.

R 104534 **IP address of the DNS server during runtime**

This register contains the IP address of the DNS server being valid during runtime of the controller. The value written to this register cannot be stored to a remanent memory.

Register properties	
Values	Valid IP address

R 510000 **Status**

In this register, the controller signals a summary of status messages in bit-coded mode.

Meaning of the individual bits		
Bit 0	**File /etc/hosts**	
	0 =	File not read / The file does not exist
	1 =	The file has been read and the entries have been stored in the cache
Bit 1	**Access to the DNS server**	
	0 =	No access
	1 =	Access has taken place
Bit 2	**Running state**	
	0 =	Access to the DNS server is not running
	1 =	Access to the DNS server is running
Bit 3	**Error**	
	0 =	No error while accessing a DNS server
	1 =	Error while accessing a DNS server

Register properties	
Access	Read

R 510001 **Command**

Controls the access to the DNS cache.

Register properties		
Values	1	Pick the first entry in the cache
	2	Pick the next entry in the cache
	3	Clear the entry from the cache

R 510002 **IP address of DNS server**

Displays the current IP address of the DNS server.

Register properties	
Values	Valid IP address
Type of access	Read access

R 510003 **Error code**

If bit 3 of register 510000 is set, this register specifies the error code.

Register properties		
Values	-1	Error at accessing the DNS server, e.g. no reply
	-2	Invalid reply of the DNS server
	-3	No IP address could be retrieved from the response
Type of access	Read access	

R 510009 **Number of entries in the DNS cache**

It specifies the number of entries in the cache of the DNS clients.

Register properties		
Values	0 ...	The amount of entries is limited by the available memory.
Type of access	Read access	

R 510010

Timeout

Displays the time-out of the cache entry picked by command 1 or 2.

Register properties		
Values	0	The entry is never cleared automatically.
Type of access	Read access	

R 510011

IP address

Display the IP address of the cache entry picked by command 1 or 2.

Register properties	
Values	Valid IP address
Type of access	Read access

R 510012 ... R 510029

Name

Displays the name of the cache entry picked by command 1 or 2 in the register string format.

Register properties	
Values	String of 31 characters max.
Type of access	Read access

2.3 System command register

Introduction

The system command register can be used to influence the OS performance of the JC-340 controller.

Procedure

To issue a system command proceed as follows:

Step	Action
1	Enter the correct value into the system password register.
2	Enter the required command value into the system command register.
3	Check the corresponding bits in the system status register, where applicable.
⇨	**Result:** The controller sets the system password register and the system command register to 0.

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Description of system command registers with JetSync blockage

Register overview

The following registers are described in this manual:

Register	Description
R 202960	System password register
R 202961	System command register
R 202962	System status register

R 202960

System password register

Enter system password 1112502132 (0x424F6F74) into this register. Then enter the required command value into the system command register. Now, the controller sets the value of this register to 0.

Register properties	
Value	1112502132 (0x424F6F74)

R 202961

System command register

Enter the system commands into this register. Then the controller executes the command. Then, it sets the value of this register to 0.

Commands	
102	**Restart the controller**
104	**Reset remanent parameters**
122	**Wait for communication - OFF**
123	**Wait for communication - ON**
160	**Task switch on I/O access - OFF**
161	**Task switch on I/O access - ON**
310	**Load configuration files**

Commands	
311	**Load module configuration**
312	**Load process data configuration for Ethernet system bus**
313	**Stop process data communication for Ethernet system bus**
330	**Disable JetIPScan client**
331	**Enable JetIPScan client**
410	**Disable JetSync blockage**
411	**Enable JetSync blockage for all ports**
412	**Enable JetSync blockage for port X15**

Register properties	
Access	System password register contains the correct password

R 202962

System status register

The system status register lets you evaluate the system conditions.

Meaning of the individual bits		
Bit 0	**Task switch on I/O access**	
	0 =	No task switching in the application program on I/O access
	1 =	Task switching is carried out in the application program on I/O access
Bit 1	**Wait for communication**	
	0 =	The controller waits for communication requests for a short time
	1 =	The controller does not wait for communication requests
Bit 2	**JetIPScan client**	
	0 =	JetIPScan client not active
	1 =	JetIPScan client active
Bit 8	**JetSync blockage**	
	0 =	JetSync blockage is not active
	1 =	JetSync blockage is active

Register properties	
Access	Read

Description of system commands with JetSync blockage

System command 102

Restart the controller

Effect:

The controller is restarting. The effect is the same as when you switch the power supply off and on again.

Purpose:

Use this command, for example, if you have made changes to system registers or system files which will become active only when the controller is rebooted.

System command 104

Reset remanent parameters

Effect:

The controller will reset remanent parameters to their default values (factory settings).

Register number	Description	Factory settings
100002023	JX3 system bus: I/O dummy modules	65535
100002034	JX3 system bus: Number of retries	1
200002023	JX2 system bus: I/O dummy modules	-1
200002024	JX2 system bus: Slave dummy modules	255
200002029	JX2 system bus: Baud rate	7
200002032	JX2 system bus: ON delay	60
200002077	Special functions	0

Purpose:

Use this command, if you want to undo changes to remanent parameters.

System command 122

Wait for communication - OFF

Effect:

Not before there are definite requests, the controller will communicate with external communication partners.

Advantage:

The controller executes the application program faster.

Disadvantage:

On average, external communication partners have to wait longer for a response from the controller.

System command 123 **Wait for communication - ON**

Effect:

The controller cyclically checks for communication requests from external partners for 1 to 2 ms.

Advantage:

External communication partners get a faster reply from the controller.

Disadvantage:

Application program processing takes slightly longer.

System command 160 **Task switch on I/O access - OFF**

Effect:

While the controller is accessing modules on the JX2 or JX3 system bus, other tasks of the application program are not processed.

Advantage:

The controller executes I/O accesses as fast as possible.

Disadvantage:

As certain I/O accesses are significantly slower than access to internal variables, response time of other tasks may increase.

System command 161 **Task switch on I/O access - ON**

Effect:

While the controller is accessing modules on the JX2 or JX3 system bus, it processes the other tasks of the application program.

Advantage:

The execution time of certain I/O accesses which may be relatively long does not affect the response time of other tasks.

Disadvantage:

The run time of the other tasks influences the execution time of several I/O accesses.

System command 310 **Load configuration files**

Effect:

The controller loads the module configuration file (ModConfig.da) and the configuration files for process data communication on the Jetter Ethernet system bus (Publisher.pub, Subscriber.sub) from the file system. This corresponds to a combination of commands 311 and 312.

Purpose:

Once the transfer of these files into the controller's file system is completed, system command 310 enables their contents.

System command 311 — **Load module configuration**

Effect:

The controller loads the module configuration file (ModConfig.da) from the file system.

Purpose:

Once the transfer of this file into the controller's file system is completed, system command 311 enables its contents.

System command 312 — **Load process data configuration for Ethernet system bus**

Effect:

The controller loads the configuration files for process data communication on the Jetter Ethernet system bus (Publisher.pub, Subscriber.sub) from the file system.

Purpose:

Once the transfer of these files into the controller's file system is completed, system command 312 enables their contents.

System command 313 — **Stop process data communication for Ethernet system bus**

Effect:

Process data communication on the Jetter Ethernet system bus stops.

Purpose:

Transfer the configuration files for process data communication on the Jetter Ethernet system bus into the controller's file system. Then, stop process data communication by issueing system command 313. Finally, enable the contents of the new files.

System command 330 — **Disable JetIPScan client**

Effect:

This command lets you disable the JetIPScan client. The server, however, remains enabled.

Purpose:

For testing purposes

System command 331 **Enable JetIPScan client**

Effect:

This command lets you enable the JetIPScan client.

Purpose:

This command lets you enable the JetIPScan client which has been disabled for testing purposes.

System command 410 **Disable JetSync blockage**

Effect:

- The JetSync blockage is disabled for all ports. Bit 8 in R 202962 is reset.
- The Jetter Ethernet system bus multicast frames are transmitted to all ports (X14, X15 and CPU).

Purpose:

The JetSync blockage enabled by system command 411 or 412 is disabled. Forwarding the Jetter Ethernet system bus multicast frames to all ports again corresponds to the on-state of the controller.

System command 411 **Enable JetSync blockage for all ports**

Effect:

- The JetSync blockage is enabled for all ports (X14, X15, and CPU). Bit 8 in R 202962 is set.
- Jetter Ethernet system bus multicast frames which are received on a port are not forwarded to any of the other ports.
- All other Ethernet frames are forwarded as usual.

Purpose:

This command lets you prevent forwarding Jetter Ethernet system bus multicast frames to the CPU and the other ports. This way, networks are split and thus data traffic - e.g. from the machine network to higher-level networks - is reduced.

Address space

Splitting is carried out on Ethernet level via the multicast address range of the Jetter Ethernet system bus.
0x01 00 5E 40 00 00 ... 0x01 00 5E 40 00 FF

System command 412 **Enable JetSync blockage for port X15**

Effect:

- The JetSync blockage is enabled for port X15 only. Bit 8 in R 202962 is set.
- Jetter Ethernet system bus multicast frames of the CPU are forwarded to port X14 only.
- Jetter Ethernet system bus multicast frames of port X14 are forwarded to the CPU only.

- Jetter Ethernet system bus multicast frames of port X15 are forwarded to the CPU and to port X14.
- All other Ethernet frames are forwarded as usual.

Purpose:

This command lets you prevent forwarding Jetter Ethernet system bus multicast frames to port X15. This way, networks are split and thus data traffic - e.g. from the machine network to higher-level networks - is reduced.

Address space

Splitting is carried out on Ethernet level via the multicast address range of the Jetter Ethernet system bus.
0x01 00 5E 40 00 00 ... 0x01 00 5E 40 00 FF

3 Fixed software bugs

Introduction

This chapter describes the software bugs which have been fixed in the new OS version.

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Exceptions get lost

Symptoms

Exceptions, which are thrown out of the application program by the command `ThrowException()` are overwritten and thus get lost.

Affected versions/revisions

The following versions/revisions are affected by this bug:

OS version	JC-340/350 JC-360(MC) JC-940MC	< 1.22.0.00 < 1.22.0.00 < 1.06.0.00
Hardware revision	Not relevant	
Configuration or operating mode	Not relevant	

Remedy/workaround

There is no remedy to be applied to the releases concerned.

Fixed versions/revisions

Starting from the following versions/revisions this bug has been fixed:

OS version	JC-340/350 JC-360(MC) JC-940MC	1.22.0.00 1.22.0.00 1.06.0.00
Hardware revision	Not relevant	
Configuration or operating mode	Not relevant	

No download and debugging at partial download

Symptoms

If you select in JetSym under project properties the option "Partial Download", download with following debugging will not work.

The controller does not stop the program at the predefined breakpoint but will pass it.

Affected versions/revisions

The following versions/revisions are affected by this bug:

OS version	JC-340/350 JC-360(MC) JC-940MC	< 1.22.0.00 < 1.22.0.00 < 1.06.0.00
Hardware revision	Not relevant	
Configuration or operating mode	Not relevant	

Remedy/workaround

There is no remedy to be applied to the releases concerned.

Fixed versions/revisions

Starting from the following versions/revisions this bug has been fixed:

OS version	JC-340/350 JC-360(MC) JC-940MC	1.22.0.00 1.22.0.00 1.06.0.00
Hardware revision	Not relevant	
Configuration or operating mode	Not relevant	

Motion commands are slow after program restart

Symptoms

After restart of an application program, e.g. after program download or during setup of JetSym, the controller carries out motion commands just very slowly. Only after a restart of the control system, execution times will be normal again.

Affected versions/revisions

The following versions/revisions are affected by this bug:

OS version	JC-340/350 JC-360 JC-940MC	< 1.22.0.00 < 1.22.0.00 < 1.07.0.00
Hardware revision	Not relevant	
Configuration or operating mode	Not relevant	

Remedy/workaround

By adequate programming make sure your application program does not execute motion commands before program restart or download.

Fixed versions/revisions

Starting from the following versions/revisions this bug has been fixed:

OS version	JC-340/350 JC-360 JC-940MC	1.22.0.00 1.22.0.00 1.07.0.00
Hardware revision	Not relevant	
Configuration or operating mode	Not relevant	

The date of files stored to the SD card is displayed incorrectly

Symptoms

In three out of four cases the date of files stored to the SD card is not displayed correctly. Thus, for example, the date of files concerning years 2012 to 2015 is displayed as 2012.

Affected versions/revisions

The following versions/revisions are affected by this bug:

OS version	JC-340/350 JC-360	< 1.22.0.00 < 1.22.0.00
Hardware revision	Not relevant	
Configuration or operating mode	Option -SD at JC-340	

Remedy/workaround

There is no remedy for the affected versions/revisions.

Fixed versions/revisions

Starting from the following versions/revisions this bug has been fixed:

OS version	JC-340/350 JC-360	1.22.0.00 1.22.0.00
Hardware revision	Not relevant	
Configuration or operating mode	Option -SD at JC-340	

Not all errors occurring in JX2-I/O modules are displayed

Symptoms

If peripheral faults occur on several I/O modules on the JX2 system bus, only the error bit of the module which last reported an error is set in R 200002039.

Affected versions/revisions

The following versions/revisions are affected by this bug:

OS version	JC-340/350 JC-360	< 1.22.0.00 < 1.22.0.00
Hardware revision	Not relevant	
Configuration or operating mode	Not relevant	

Remedy/workaround

There is no remedy/workaround for affected versions/revisions.

Fixed versions/revisions

Starting from the following versions/revisions this bug has been fixed:

OS version	JC-340/350 JC-360	1.22.0.00 1.22.0.00
Hardware revision	Not relevant	
Configuration or operating mode	Not relevant	

Wrong values in CANopen® outputs at register overlaying

Symptoms

Output states are not displayed correctly by registers in which eight outputs of CANopen® modules are combined. This applies to each of registers 200.006.x20 through 200.006.x27.

Affected versions/revisions

The following versions/revisions are affected by this bug:

OS version	JC-340/350 JC-360	< 1.22.0.00 < 1.22.0.00
Hardware revision	Not relevant	
Configuration or operating mode	Not relevant	

Remedy/workaround

Apply those registers in which 16 outputs are integrated.

Fixed versions/revisions

Starting from the following versions/revisions this bug has been fixed:

OS version	JC-340/350 JC-360	1.22.0.00 1.22.0.00
Hardware revision	Not relevant	
Configuration or operating mode	Not relevant	

Improved CAN communication details

Introduction

In order to render CAN communication still more reliable, further minor bugs have been fixed in the latest OS version. Nodeguarding of CANopen® devices or recognition of error states may serve as examples.

Fixed versions/revisions

Starting from the following versions/revisions this bug has been fixed:

OS version	JC-340/350 JC-360(MC)	1.22.0.00 1.22.0.00
Hardware revision	Not relevant	
Configuration or operating mode	Not relevant	