

JC-24x

Version Update

from V 3.25 to V 3.26



Revision 1.01

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1 Introduction

Introduction

This chapter shows the history of OS versions for the controller JC-24x.

Operating System Update - Why?

An OS update for the controller JC-24x allows you to:

- add new functions to your controller
 - fix software bugs
 - make sure your controller is working with a definite OS version, for example, if a definite OS version has been released for a certain customer
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Operating System Update

OS File for Updating the Operating System

For updating the OS the following file is needed:

OS File	Description
JC-24x_3.26.0.0.os	OS file for JC-24x with version 3.26

Downloading the OS File

Jetter AG make operating system files available for download from their homepage at www.jetter.de. OS files can be found in the support area or on the page of the JC-24x controller via quicklink.

Operating System Update by means of JetSym

To update your 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, activate menu item "Build -> Update OS"
4	Select the OS File
5	Initiate the OS update by clicking OK
6	Result: Following Power OFF / Power ON the new OS is launched.

Minimum Requirements

For programming a JC-24x with version 3.26 JetSym 2.3.1 or higher is required.

Overview of Version Updates

V 3.26

The following table gives an overview of newly added features and fixed software bugs in OS version 3.26:

Feature	New	Bug
Festo CPX Terminal:		
Support for CPX-CPI interface	✓	
N_COPY_TO/FROM(2)		
More than 64 registers in copy mode 2		✓
BWU1821:		
Communication via command interface		✓
Read and write access to analog IOs		✓
LioN-S:		
Commissioning		✓
Register access		✓

2 New Features

Introduction

Jetter AG are continuously striving to add new features and functions to the controller JC-24x. 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 Festo CPX-CP Interface

Introduction

The CPX-CP interface is an expansion module for the CPX terminal of the Festo AG & Co. KG. The CPX-CP interface serves to connect the fitting CPI modules by Festo (CP valve terminals and CPI-I/O modules).

- 192 digital inputs and 192 digital outputs can be directly connected to a CPX-FB14
- Further, up to 4 analog inputs and outputs can be connected

Documentation published by Festo AG & Co. KG

The individual modules of the CPX and CPI system have been specifically described in the documentation published by Festo AG & Co. KG. Giving heed to the safety regulations listed there, as well as only using the modules for their intended purpose are imperative.

Required Hardware and Operating System Versions

The following hardware and operating system versions are required for applying the CPX-CPI interfaces to Jetter AG controllers:

Module	Comment	As of Software Release
JC-24x	Controller	V 3.26
JX6-SB / JX6-SB-I	JX6 submodule	V 2.21
CPX-CP-4-FB	Festo: CPX-CP interface	
CPX-FB14	Festo: CANopen field bus node	

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Restrictions at Using the CAN System Bus

Restrictions at Using the CPX-CP Interface

The usage of the CPX-CP interface at the CPX-FB14 is subject to the following restrictions:

- The required hardware and operating system versions have to be kept to.
- The CPX-FB14 supports one CPX-CP interface as a maximum.
- In the system bus, the CPX-FB14 occupies up to three I/O module numbers. These I/O module numbers are not available in other modules.
- The number of the analog I/Os at the CPX-FB14 is reduced.

Restrictions at Connecting Analog I/Os

At applying the CPX-CPI interface, the number of the analog inputs and outputs to be connected is reduced.

If at the CP string 1 or 2 ...	Then the number of ...
CP / CPI output modules are connected,	the analog outputs is reduced to 8
CP valve terminals are connected,	the analog outputs is reduced to 8
CP / CPI input modules are connected,	the analog inputs is reduced to 8

If at the CP string 3 or 4 ...	Then the number of ...
CP / CPI output modules are connected,	the analog outputs is reduced to 4
CP valve terminals are connected,	the analog outputs is reduced to 4
CP / CPI input modules are connected,	the analog inputs is reduced to 4

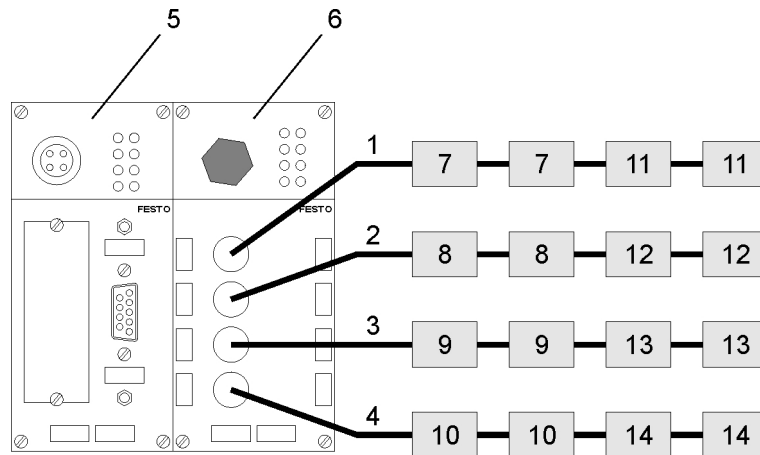
Restrictions at Connecting CANopen Modules

By using the additional I/O module numbers, the maximum number of CANopen modules that can be connected to the CAN system bus is reduced. Each additional I/O module number causes the number of CANopen modules to be reduced by one.

Access to the Modules at the CPX-CP Interface

I/O Assignment of the Modules at the CPX-CP Interface

The digital inputs and outputs of the modules connected to the CPX-CPI interface are mapped by the I/O numbers of the following I/O modules:



Number	Element	I/O Numbers of JC-24x
1 ... 4	CPI string 1 ... 4	-
5	CPX FB14	e.g. I/O module number 70
6	CPX-CP-4-FB	-
7	CP / CPI output modules	OUT 7101 ... 7132
8	CP / CPI output modules	OUT 7133 ... 7164
9	CP / CPI output modules	OUT 7201 ... 7232
10	CP / CPI output modules	OUT 7233 ... 7264
11	CP / CPI input modules	IN 7101 ... 7132
12	CP / CPI input modules	IN 7133 ... 7164
13	CP / CPI input modules	IN 7201 ... 7232
14	CP / CPI input modules	IN 7233 ... 7264

I/O Numbers of JC-647

The I/Os at the JC-647 connected with the JX6-SB(-I) submodule are numbered in analogy with the I/O numbering at the JC-24x. The input and output numbers have just got to be prefixed. The prefix corresponds to the submodule slot number + 1.

Assigning the I/O Module Numbers

A CPX terminal with a CPX-CPI interface occupies up to three I/O module numbers in the CAN system bus. The digital I/Os are represented by the I/O module numbers according to the following rules:

- the three I/O module numbers max. are consecutive
- the local I/Os of the CPX terminal are represented by the first I/O module number
- the I/Os at the CPI strings 1 and 2 are represented by the subsequent I/O module number

- the I/Os at the CPI strings 3 and 4 are represented by the next but one I/O module number

Entries in the Module Array

The numbers of the additionally occupied I/O modules are entered into the module array as a virtual CPX-FB14.

Element	Module Code
CPX-FB14	66
CPX-FB14 virtual	73

3 Fixed Software Bugs

Introduction

This chapter describes the software bugs which have been fixed in the new operating system release.

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N_COPY_TO/FROM(2) with more than 64 registers in mode 2

Effects of this Bug

If ...
<p>more than 64 register values are sent to another controller or retrieved from it using one of the following commands</p> <ul style="list-style-type: none"> ▪ N_COPY_TO ▪ N_COPY_TO2 ▪ N_COPY_FROM ▪ N_COPY_FROM2
and ...
<p>copy mode 2 (decrement register numbers) is used</p>
then ...
<p>the registers on the remote controller are incorrectly addressed.</p>

Affected Revisions

The following revisions are affected by this bug:

OS revision	JC-24x	< 3.26.0.00
	JC-24x STX	< 10.04.0.00
	JM-D203-JC24x	< 1.13.0.00
Hardware revision	not applicable	
Configuration or operating mode	not applicable	

Remedy / Workaround

To send a register block exceeding 64 registers use several commands N_COPY_TO_FROM(2) with a maximum of 64 registers each.

Bug Fix

Starting from the following revisions this bug has been fixed:

OS revision	JC-24x	3.26.0.00
	JC-24x STX	10.04.0.00
	JM-D203-JC24x	1.13.0.00
Hardware revision	not applicable	
Configuration or operating mode	not applicable	

Writing Commands to the BWU1821

BWU1821

The BWU1821 is a gateway between AS interface and CANopen of the Bihl+Wiedemann GmbH. It can be directly connected to the Jetter CAN system bus.

Effects of this Bug

Commands of a length greater than 4 bytes cannot be transmitted to the BWU1821. The following functions, for example, are affected by this error:

- Reading parameters of AS interface slaves according to profile 7.4
- Writing parameters to AS interface slaves according to profile 7.4
- Reading input data of AS interface slaves according to profile 7.4
- Writing output data to AS interface slaves according to profile 7.4
- ...

Affected Revisions

The following revisions are affected by this bug:

OS revision	JX6-SB(-I)	< 2.21.0.00
	JC-24x	< 3.26.0.00
	JM-D203-JC24x	< 1.13.0.00
Hardware revision	not relevant	
Configuration or operating mode	not relevant	
Comment	610	

Remedy / Workaround

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

Bug Fix

Starting from the following revisions this bug has been fixed:

OS revision	JX6-SB(-I)	2.21.0.00
	JC-24x	3.26.0.00
	JM-D203-JC24x	1.13.0.00
Hardware revision	not relevant	
Configuration or operating mode	not relevant	

Reading and Writing Analog I/Os at the BWU1821

BWU1821 The BWU1821 is a gateway between AS interface and CANopen of the Bihl+Wiedemann GmbH. It can be directly connected to the Jetter CAN system bus.

Effects of this Bug Reading and writing of AS interface slaves by means of analog inputs and outputs renders wrong results.

Affected Revisions The following revisions are affected by this bug:

OS revision	JX6-SB(-I)	< 2.21.0.00
	JC-24x	< 3.26.0.00
	JM-D203-JC24x	< 1.13.0.00
Hardware revision	not relevant	
Configuration or operating mode	not relevant	
Comment	600	

Remedy / Workaround Carry out the following step for a workaround:

Step	Action
1	Configuring a NODE ID of the BWU1821 on 70

Bug Fix Starting from the following revisions this bug has been fixed:

OS revision	JX6-SB(-I)	2.21.0.00
	JC-24x	3.26.0.00
	JM-D203-JC24x	1.13.0.00
Hardware revision	not relevant	
Configuration or operating mode	not relevant	

Initializing by means of Lion-S Modules

Effects of this Bug In case of CAN system bus configurations consisting of Lion-S and JX2-/JX3 modules, not all connected JX2-/JX3 modules are commissioned.

Affected Revisions The following revisions are affected by this bug:

OS revision	JX6-SB(-I)	< 2.21.0.00
	JC-24x	< 3.26.0.00
	JM-D203-JC24x	< 1.13.0.00
Hardware revision	not relevant	
Configuration or operating mode	not relevant	
Comment	698	

Remedy / Workaround Carry out the following steps for a workaround:

Step	Action
1	Start the CAN system bus
2	Re-start the CAN system bus without de-energizing the expansion modules

Bug Fix Starting from the following revisions this bug has been fixed:

OS revision	JX6-SB(-I)	2.21.0.00
	JC-24x	3.26.0.00
	JM-D203-JC24x	1.13.0.00
Hardware revision	not relevant	
Configuration or operating mode	not relevant	

Register Access to LioN-S Modules

Effects of this Bug Read or write access with LioN-S modules is not possible.

Affected Revisions The following revisions are affected by this bug:

OS revision	JC-24x JM-D203-JC24x	< 3.26.0.00 < 1.13.0.00
Hardware revision	not applicable	
Configuration or operating mode	not applicable	
Note	none	

Remedy / Workaround There is no remedy for affected revisions.

Bug Fix Starting from the following revisions this bug has been fixed:

OS revision	JC-24x JM-D203-JC24x	3.26.0.00 1.13.0.00
Hardware revision	not applicable	
Configuration or operating mode	not applicable	