

FP7 CPU unit Upgrade Tool

Information you need to know before using the software (Essential reading)

About FP7 CPU unit Upgrade Tool

FP7 CPU unit Upgrade Tool is the software to update the firmware by connecting a PC and the FP7 CPU unit with a USB cable.

EDS files are stored in this upgrade tool.

This upgrade tool enables the upgrade of the CPU unit to the following version.

- Standard model (Excluding AFP7CPS21 / AFP7CPS2R) : Ver.4.60 (The unit that the upgrade is not supported will be upgraded to the latest version of Ver.3.)
- Low cost type (AFP7CPS21 / AFP7CPS2R) : Ver.1.60

*Please prepare a USB cable for connecting a PC with the FP7 CPU unit.

Confirm the product number of the FP7 CPU unit if it can be upgraded with this software.

The product numbers of PLCs that can be upgraded with this upgrade tool are as follows.

- AFP7CPS41E
- AFP7CPS31E
- AFP7CPS31
- AFP7CPS41ES
- AFP7CPS31ES
- AFP7CPS31S
- AFP7CPS21
- AFP7CPS4RE
- AFP7CPS3RE
- AFP7CPS3R
- AFP7CPS4RES
- AFP7CPS3RES
- AFP7CPS3RS
- AFP7CPS2R

Unfortunately, the PLCs of the following model numbers cannot be upgraded.

- AFP7CPS3
- AFP7CPS3E
- AFP7CPS4E

For using FP7 CPU-Ver.3.20 or later, FPWIN GR7 Ver.2.5 or later should be used.

Using a version older than Ver.2.5 affects the display of the system monitor area. (Standard model only)

Software License Agreement

Please note that acceptance of the Software License Agreement is a condition for using this software.

[The original text of this Agreement is written in Japanese, and this translation does not have any effect, whether de jure or de facto.]

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license statements included in the Software installation package for those programs. If there is any conflict between the license statements in the open-source software program licenses and those in this Agreement, the wording of the open-source software program licenses will prevail.

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2. If you are in breach of any of the provisions of this Agreement, we may immediately terminate this Agreement.
3. Within four weeks after this Agreement is terminated, you will return to us, or erase or destroy all of the Software and its copies at your expense.

Article 5. Compliance with export laws

You must comply with the export control laws, regulations, etc., of all countries that have jurisdiction over the parties hereto (including the Foreign Exchange and Foreign Trade Act of Japan, and export control regulations based on United Nations Security Council resolutions). If qualifications or appropriate approval by governmental agencies are required, it is prohibited to export the Software directly or indirectly to any countries without such approval. It is also prohibited to use or sell the Software directly or indirectly for military purposes.

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Article 7. Upgrading

It is within our discretion whether or not to offer Software upgrades or updates at any point in the future. If an upgrade or update is offered, a fee may be charged.

2. If a Software upgrade or update is offered, whether on a chargeable or non-chargeable basis, this Agreement will apply as part of the Software unless otherwise specified by us when the offer is made.

Article 8. Limitation of liability

In no event will our liability associated with this Agreement or the Software exceed 10,000 yen.

Article 9. Modifications

We may modify this Agreement at any time at our discretion if

(1) the modifications to this Agreement are in conformity with your interest in general; or

(2) the modifications to this Agreement are not incompatible with the purpose of this Agreement, and are rational in light of the need for and reasonableness of the modifications, and other circumstances related to the modifications.

2. If we modify this Agreement pursuant to the preceding paragraph, we will announce our plan to modify this Agreement, the content of the modified version of this Agreement, and the date on which the modifications will come into effect on our website no later than two weeks before the effective date of the modified version of this Agreement. However, we may effect modifications without notice to you if they are of a minor nature or are not detrimental to you. This Agreement will be modified on the date that the modifications come into effect.

Article 10. Governing law and jurisdiction

This Agreement is governed by the laws of Japan.

2. If any dispute arises in connection with this Agreement, the Osaka District Court will have exclusive jurisdiction over such dispute.

[1st Apr. 2024] Version

System Requirements

Make sure that the computer on which you intend to run the software meets the minimum specifications listed below.

Item	Specifications
OS	Windows 10 (32bit/64bit), Windows 11 (64bit)
Available hard disk space	100MB or more
Recommended CPU	Pentium4 1GHz or more
Recommended system RAM	1 GB or more
Recommended display resolution	1280 x 800 px or more
Recommended color depth	High Color (32bit) or more

*1 Microsoft Windows, Windows 10 and 11 are registered trademarks of Microsoft Corporation in the United States and/or other countries.

How to Install

Please read the "Software License Agreement"

1. Decompress the downloaded file.
 2. Double-click the file (Fp7Cpu_V4xx_VupTool.exe) in the decompressed folder to activate the upgrade tool.
The following "Preparation for executing the upgrade tool" is required before the upgrade.
The screen of the upgrade tool will appear. Upgrade the FP7 CPU unit according to the procedure.
- * Do not turn off the power to the FP7 CPU unit or remove the USB cable during the upgrade.
It may damage the FP7 CPU unit.

Version-Up Information

Details of revision of Standard model(Ver4.60), Low-cost model(Ver1.60)(Oct 15, 2025 update)

[AFP7CPS41E(S), AFP7CPS31E(S), AFP7CPS4RE(S), AFP7CPS3RE(S)]

- Changed encryption protocol support to TLS 1.2 only, and ended support for SSL 3.0 and TLS 1.0.
- Added support for restricting access to the web server by IP address.
- Fixed vulnerabilities CVE-2020-27337 and CVE-2020-27338.

[AFP7CPS41E(S), AFP7CPS31E(S), AFP7CPS31(S), AFP7CPS4RE(S), AFP7CPS3RE(S), AFP7CPS3R(S)]

- Fixed an issue where no operation error occurred when setting U12 or U13 as the write format for the CWT instruction.

[AFP7CPS41E(S), AFP7CPS31E(S), AFP7CPS31(S), AFP7CPS21, AFP7CPS4RE(S), AFP7CPS3RE(S), AFP7CPS3R(S), AFP7CPS2R]

- Fixed an issue where no operation error occurred when setting U12 or U13 as the write format for the CWT instruction.
- Fixed an issue where operation stops may not occur even when selected for self-diagnosis errors (Error Codes: 80–106).
- Fixed an issue where a WDT error may occur when switching the operation mode from PROG. to RUN.
- Fixed an issue where FP7 units connected via PLC Link would occasionally switch to PROG. mode.

*1 : Standard model Ver.3.70 also supports.

Details of revision of Standard model(Ver4.58), Low-cost model(Ver1.58)(Jun 3, 2024 update)

[AFP7CPS4RE(S), AFP7CPS3RE(S), AFP7CPS3R(S), AFP7CPS2R, AFP7CPS41E(S), AFP7CPS31E(S), AFP7CPS31(S), AFP7CPS21]

- Fixed the problem that SR16 and SR17 may not operate correctly.

[AFP7CPS4RE(S), AFP7CPS3RE(S), AFP7CPS3R(S), AFP7CPS41E(S), AFP7CPS31E(S), AFP7CPS31(S)]

- Fixed the problem that could cause the logging function to stop in Ver4.57. It does not occur in Ver4.56 or earlier.

*1 : Standard model Ver3.68 also fixed an above bug.

Details of revision of Standard model(Ver4.57), Low-cost model(Ver1.57)(Jan 9, 2024 update)

[AFP7CPS4RE(S), AFP7CPS3RE(S), AFP7CPS3R(S), AFP7CPS2R, AFP7CPS41E(S), AFP7CPS31E(S), AFP7CPS31(S), AFP7CPS21]

- Fixed the problem that power supply unit(AFP7PSA2) service lifetime could not be saved correctly due to the influence of noise.
- Fixed the problem that power supply unit(AFP7PSA2) service lifetime was not calculated correctly.
- Fixed the problem that an operation error occurred when setting the operation unit to DF in the SORT instruction.
- Fixed the problem that data may not be sent correctly when SEND or RECV instruction is executed to the same port while replying response.
- Fixed the problem that PMSET instruction result is executed normal end, even if communication parameters could not be changed while the modem was being initialized.
- Fixed the problem that transmission error flag acquired by PMGET instruction was not working correctly.
- Fixed the problem that the ALARM LED would light up when operand was specified with index modifier in ST↑, ST↓, AN↑, AN↓, OR↑ and OR↓ instruction.
- Fixed the problem that the operation result was not calculated correctly when the value of operand S2 of the ATAN2 instruction was specified as 0.0.
- Fixed the problem that the last word data was not correct value when data is read under certain conditions using MEWTOCOL-COM communication.

[AFP7CPS4RE(S), AFP7CPS3RE(S), AFP7CPS3R(S), AFP7CPS41E(S), AFP7CPS31E(S), AFP7CPS31(S)]

- Fixed the problem that the logging function could create corrupted clusters on the SD card or prevent files from being created correctly.

[AFP7CPS4RE(S), AFP7CPS3RE(S), AFP7CPS41E(S), AFP7CPS31E(S)]

- In the EtherNet/IP monitor function on the system web, the vendor name at the time of a communication error has been changed to the vendor ID, and the status code at the time of a communication error has been added.
- Fixed the problem that some Ethernet communication instruction (CONSET, FTPcSV, FTPcSET, HTTPcSV, SMTPcADD, SMTPcSET) could not execute properly when a long character string was specified for the operand.
- Fixed the problem that DHCP setting information was not displayed correctly when searching with ConfiguratorWD.
- Fixed the problem that ET-LAN port could not operate normally when the operating mode was MEWTOCOL and a command (layer 1 or higher) that required relay processing used by FP2SH was received.
- Fixed the problem that EIPSTART instruction would fail to start if the instruction was executed again without connection after startup was completed.
- Fixed the problem that operation error may not be reported when ERR instruction (clear error by specifying 0) is executed in the unit warning state (ethernet not connected).
- Fixed the problem that ethernet communication could not operated properly due to received packet.

*1 : Standard model Ver3.67 also fixed an above bug.

Details of revision of Standard model(Ver4.56)(Dec 21, 2022 update)

[AFP7CPS41E(S), AFP7CPS31E(S), AFP7CPS31(S), AFP7CPS4RE(S), AFP7CPS3RE(S), AFP7CPS3R(S)]

- Fixed the problem that when the power is turned on with an SD card inserted, an alarm state may occur and PLC may not start normally in Ver4.55.
It does not occur in Ver4.53 or earlier.

*1 : Standard model Ver3.66 also fixed an above bug.

Details of revision of Standard model(Ver4.55), Low-cost model(Ver1.55)(Nov 1, 2022 update)

[AFP7CPS41E(S), AFP7CPS31E(S), AFP7CPS31(S), AFP7CPS21, AFP7CPS4RE(S), AFP7CPS3RE(S), AFP7CPS3R(S), AFP7CPS2R]

- Add String with header to the the device data types of the Logging and Trace functions.

[AFP7CPS41E(S), AFP7CPS31E(S), AFP7CPS31(S), AFP7CPS4RE(S), AFP7CPS3RE(S), AFP7CPS3R(S)]

- Fixed the problem that the SD memory card could be operated regardless of the project status in the PLC.
- Fixed the problem that Logging may not start automatically when the power is turned off with an empty SD memory card slot.

[AFP7CPS41E(S), AFP7CPS31E(S), AFP7CPS4RE(S), AFP7CPS3RE(S)]

- Fixed the problem that an operation error occurred when all parameters of the NTPcSV instruction were omitted.
- Fixed the problem that customer may not be able to login to the System Web when symbols are set in the password.
- Fixed TCP SEQ numbers to be random.
- Add the new product number to the System Web.

*1 : Standard model Ver. 3.65 also supports all the above revisions.

Details of revision of Standard model(Ver.4.53)(April 1, 2021 update)

[AFP7CPS41E(S), AFP7CPS31E(S)]

- Changed the connection port number for EtherNet / IP cyclic communication so that other than 2222 can be connected.
- Fixed the problem that the IP address could not be established with DHCP IPv6. *1
- Fixed the problem that 128 could not be set for the IPv6 prefix length. *1

[AFP7CPS41E(S), AFP7CPS31E(S), AFP7CPS31(S)]

- A conversion format (ASCII (including NULL characters)) has been added to the CRD instruction. *1
- Fixed the problem that the free space check of the SD card may not work properly. *1

*1 : Standard model Ver.3.63 also supports

Details of revision of Standard model(Ver.4.52), Low-cost model(Ver.1.52)(May 7, 2020 update)

[AFP7CPS41E(S), AFP7CPS31E(S)]

- Supported EtherNet/IP message communication function.
- Enable/disable of TCP delay of user connection can be switched by CONFIG instruction. *1
- Fixed the problem that communication was not established when routing was set. *1

- When six or more operation history groups were created and all 3000 records were assigned, an operation history buffer error (132) occurred when the power was turned on next time. *1

[AFP7CPS41E(S)、AFP7CPS31E(S)、AFP7CPS31(S)、AFP7CPS21]

- The MODBUS-TCP/RTU station number that can be specified with the SEND / RECV instruction has been extended. *1
- Modified to not check index modification of ST instruction when execution condition of MC instruction is OFF. *1
- PC link parameter can be changed by PMSET instruction. *1

[AFP7CPS41E(S)、AFP7CPS31E(S)、AFP7CPS31(S)]

- Improved the CREN instruction. *1

*1 : Standard model Ver.3.62 also supports

Details of revision of Standard model(Ver.4.51)(Dec 10, 2019 update)

[AFP7CPS41E(S)、AFP7CPS31E(S)]

- Fixed the problem that Ethernet communication error occurred when FTP client transfer was executed with Ver.4.50.(*1)
- Fixed the problem that last received data is sent when POST command download is executed continuously using HTTP client function.(*1)

*1 : Standard model Ver.3.61 also supports

Details of revision of Standard model(Ver.4.50), Low-cost model(Ver.1.50)(Oct 1, 2019 update)

[AFP7CPS41E(S)、AFP7CPS31E(S)]

- Supported operation history function.(Please use WebCreator V3.4.0 or later)(*1)
- Fixed the problem that the behavior becomes unstable when NTPcREQ instruction is executed continuously.(*1)

*1 : Standard model Ver.3.60 also supports

Details of revision of Standard model(Ver.4.48), Low-cost model(Ver.1.48)(Aug 5, 2019 update)

[AFP7CPS41E(S)、AFP7CPS31E(S)]

- Improved the register session timeout of EtherNet/IP communication.
- Improved the behavior of EtherNet/IP timeout.
- Fixed the problem that receive buffer error occurs when disconnection and connection are repeated while connecting many devices with EtherNet/IP.

[AFP7CPS41E(S)、AFP7CPS31E(S)、AFP7CPS31(S)、AFP7CPS21]

- Improved program rewrite operation during RUN.(*1)
- Fixed the problem that error record is recorded when SMPL instruction is used in interrupt PB.(*1)
- Fixed the problem that the PMSET instruction did not complete in continuous execution.(*1)
- Fixed the problem that transmission is not completed if the master communication instruction is continuously executed.(*1)

*1 : Standard model Ver.3.58 also supports

Details of revision of Standard model(Ver.4.47), Low-cost model(Ver.1.47)(Mar 4, 2019 update)

[AFP7CPS41E(S)、AFP7CPS31E(S)]

- Supported SD card logging graph display function.(Please use WebCreator V3.3.0 or later)(*1)

[AFP7CPS41E(S)、AFP7CPS31E(S)、AFP7CPS31(S)、AFP7CPS21]

- Improve processing when receiving invalid station number of MEWTOCOL communication. (*1)

*1 : Standard model Ver.3.57 also supports

Details of revision of Standard model(Ver.4.46), Low-cost model(Ver.1.46)(Dec 5, 2018 update)

[AFP7CPS41E(S)、AFP7CPS31E(S)、AFP7CPS31(S)、AFP7CPS21]

- Supported PLC link monitor via FP2SH. (When multi-wire unit W link is used) (*1)
- Monitor communication commands of MEWTOCOL-COM and MEWTOCOL7-COM for the same communication path can be used. (*1)

*1 : Standard model Ver.3.56 also supports

Details of revision of Standard model(Ver.4.45), Low-cost model(Ver.1.45)(Oct 1, 2018 update)

[AFP7CPS41E(S)、AFP7CPS31E(S)、AFP7CPS31(S)、AFP7CPS21]

- Fixed a problem that relays of SR2A (interrupt enabled) and SR2D (during constant period PB operation) do not operate properly.(*1)
- Fixed a problem that abnormality notice during power off backup does not operate properly.(*1)
- Fixed a problem that the response may be delayed when used in an environment with high communication load.(*1)
- Fixed a problem that grammar error of "double use error" will occur when rewriting PB registered GPB instruction during RUN.(*1)

[AFP7CPS41E(S)、AFP7CPS31E(S)]

- Fix to be able to reflect changes in the number of user connections when changing the operation mode (PROG → RUN).(*1)
- Fixed a problem that sometimes mail was sent by erroneously detecting an error when executing error clearing.(*1)
- Fixed a problem that false detection of exhaustion of internal buffer when Ethernet is initialized.(Standard model Ver.3.xx only)

*1 : Standard model Ver.3.55 also supports

Details of revision of Standard model(Ver.4.44), Low-cost model(Ver.1.44)(May 16, 2018 update)

[AFP7CPS41E(S)、AFP7CPS31E(S)、AFP7CPS31(S)、AFP7CPS21]

- Fixed a bug in memory configuration inconsistency error when executing UM logging specifying a data type other than 16 bits.(*1)

[AFP7CPS41E(S)、AFP7CPS31E(S)、AFP7CPS31(S)]

- Fixed a bug that access to the FTP server during logging execution caused an error with no SD card capacity or CWD / LIST command to fail.(*1)
- It revised the file system for the SD card control.(*1)
- Added 12 (deletion of non-empty directory) to the error code of the CRMDIR instruction.(*1)

[AFP7CPS41E(S)、AFP7CPS31E(S)]

- FTP server function: Improved communication with FTP client with smaller transmission window size.(*1)

*1 : Standard model Ver.3.54 also supports

Details of revision of Standard model(Ver.4.43)(Feb 19, 2018 update)

[AFP7CPS41E(S)、AFP7CPS31E(S)]

- We changed the specification of lockout of FTP server as follows.(*1)
First time : 5 times login failure, locked out for 10 minutes
Second time: 5 times login failure, locked out for 30 minutes
After 3rd : 5 times login failure, locked out for 60 minutes
After turning the power back on or logging in, the lockout time is reset to 10 minutes.
- Improved operation of FTP server function.(*1)
- Fixed a bug that erroneously notifies load factor exceeded when multiple connections are registered in EtherNet / IP IO map setting.

*1 : Standard model Ver.3.53 also supports

Details of revision of Standard model(Ver.4.42), Low-cost model(Ver.1.42)(Dec 4, 2017 update)

[AFP7CPS41E(S)、AFP7CPS31E(S)、AFP7CPS31(S)、AFP7CPS21]

- Fixed a problem that unit interrupts were enabled during periodic interrupt PB execution.
- Fixed a problem that erroneously notifies self diagnostic error 129 (memory configuration inconsistency) when W link is used without changing from initial setting.

[AFP7CPS41E(S)、AFP7CPS31E(S)]

- Fixed a problem that communication becomes unstable when FIN and SYN are received at the same connection number at almost the same time.
- Fixed a bug that the HTTP client communication of FP7 became unstable when communicating with a Web server whose authentication method is "Digest or Basic".
- When FEAT command was received, FTP server function was modified to respond only to extended commands.

[AFP7CPS41E(S)、AFP7CPS31E(S)、AFP7CPS31(S)]

- Improved the behavior of the logging trace completion flag.
- Improved operation of SD card instructions (CREN, CRD 1).

* : Standard model Ver. 3.52 also fixed all of the above bugs.

Details of revision of Standard model(Ver.4.40), Low-cost model(Ver.1.40)(Jun 1, 2017 update)

[AFP7CPS41E(S)、AFP7CPS31E(S)、AFP7CPS31(S)、AFP7CPS21]

- It supports FP7 MW unit. (*1)
- More than 16 bits can be specified for the shift bit number of the BTR / BITL instruction. (*1)
- Parity 0 can be specified with PMSET instruction (CPU built-in serial only). (*1)
- The online editing function was improved. (*1)
- Improved upper limit exceeding check of device value of MEWTOCOL-COM slave processing. (*1)

[AFP7CPS41E(S)、AFP7CPS31E(S)]

- The ETSTAT instruction was improved. (*1)
 1. The port number of each connection can be read out.
 2. "CONNECT 1": Read setup information, "CONNECT 2": Read current connection state added.
- The mail sending function was improved. TLS communication on port 587 is supported. (*1)
- Fixed a bug in the IPv4SET command. (Behavior when monitoring with browser) (*1)
- Fixed bug in Ethernet client (FTPc, HTTPc). (When 32-bit device I / TS / TE / CS / CE is specified) (*1)
- Fixed a bug in CONSET command. (Behavior when illegal parameter is specified) (*1)
- Improved communication response of WebServer. (*1)
- Improved EtherNet / IP refresh processing.

[AFP7CPS21]

- I / O number assignment upper limit was changed to 37 words same as other models.

*1 : Standard model Ver.3.50 also supports.

Details of revision of Standard model(Ver.4.32), Low-cost model(Ver.1.32)(Dec 19, 2016 update)

[AFP7CPS41E(S)、AFP7CPS31E(S)、AFP7CPS31(S)、AFP7CPS21]

- Added FP2 communication compatibility function. (Serial communication, Ethernet communication) (*1)
 1. Added function of MEWTOCOL slave communication
FL devices can be specified with MEWTOCOL-COM (RD / WT) or MEWTOCOL-DAT.
For use, setting with the CONFIG command is necessary.
 2. Added function of MEWTOCOL master communication
FL devices can be specified with SEND / RECV command,
Only Bank 0 can be specified with FL.
- The following functions were added to the CRC instruction. (*1)
Initial value (0xFFFF or 0) / Feed direction (right or left) / XOR (0x0000 or 0xFFFF) can be specified.

[AFP7CPS41E(S)、AFP7CPS31E(S)]

- Supports Configurator WD V1.74. IP address etc can be set. (*1)
- EtherNet / IP communication function was improved.
Adapter devices with arbitrary module configuration size are supported.
Please use version of GR7 (V2.15.0) or higher when using.
- We improved the general-purpose communication function of TCP server. (*1)
The function to receive large capacity data was added only for user connection 1.
In use, it must be specified with the CONSET instruction.
- We changed the behavior of MODBUS-TCP server / client communication. (*1)
It was made receivable when the received data was split in the middle of the header.
- We changed the behavior of TCP server during general-purpose communication. (*1)
Changed not to discard data when receiving FIN immediately after receiving data.
- Fixed the problem of the following instructions. (*1)
 1. NTPcSV instruction
Fixed a problem in which operation errors are erroneously notified when keyword is omitted.
 2. CONSET, SMTPcSV instruction
Fixed that lowercase letters can not be specified in character strings.
 3. SEND / RECV instruction
 1. When specifying the destination's lower address with the indexed U (H) constant with the MC protocol, the value was adopted even when the calculation result of the index modification exceeded the 16-bit range, but only the lower 16 bits of the calculation result is used for communication.
 2. Fixed a bug when transferring bits with MEWTOCOL-COM / MEWTOCOL-DAT
An operation error occurs if either the source or the destination is not a bit device.
 3. When MODBUS specifies the destination address with an index-qualified U (H) constant, operation error is reported when the index modification calculation result exceeds the 16-bit range, but only the lower 16 bits of the calculation result is used for communication.

*1 : Standard model Ver.3.48 also supports

Details of revision of Standard model(Ver.4.31), Low-cost model(Ver.1.31)(Aug 8, 2016 update)

[AFP7CPS41E(S)、AFP7CPS31E(S)、AFP7CPS31(S)、AFP7CPS21]

- Fixed a bug that calculation error occurs when you bit index modification of the local device in ST instruction.(*1)
This bug does not occur in other than Ver.4.30.

*1 : Standard model Ver.3.47 also supports

Details of revision of Standard model(Ver.4.30), Low-cost model(Ver.1.30)(Aug 1, 2016 update)

[AFP7CPS41E(S)、AFP7CPS31E(S)、AFP7CPS31(S)、AFP7CPS21]

- Added PB size extensions in the case of rewriting in the RUN mode.(*1)
- The forced output function of PROG mode is now available also in Y specified.(*1)
- Added LENGTH instruction.(*1)
- The subject of the battery abnormality notification setting of the CPU configuration, added a G capacitor abnormal.
If you disable the battery abnormality of the self-diagnostic error notification function, it will not be informed abnormal voltage of G capacitor.(*1)
- Improved IO refresh operation.Units that have not been implemented does not refresh.(*1)
- Modification of the operation instruction(*1)
 - 1:MV S, D instruction
Fixed a bug. Specify the UM to S, occurs If only index modification slot number.
 - 2:SPTM instruction
Also use the hold type of execution condition, it has always been reset operation.
 - 3:ECALL n,PB instruction
Calculation error when you specify the operation memory in PB might have to occur.(EFCALL instruction is the same.)
 - 4:Ladder program that has been placed on or after EDPB was fixed so that it does not work.
 - 5:Fix the instructions that were available beyond the limits of the device area.The subject is the following instruction.
PUSHIX, POPIX, SEGT, UNIT, EVENTC, EVENTT, ETSTAT, CDTWT, CDTRD, CWT, CRD, CMKDIR, CRMDIR, CRMDIRFL, CFDEL,
CPR, CRD1, CCOPY, CMV, CREN, CFLS, PERRD

[AFP7CPS41E(S)、AFP7CPS31E(S)、AFP7CPS31(S)]

- Added CRMDIRFL instruction.(*1)

[AFP7CPS41E(S)、AFP7CPS31E(S)]

- Added NTPcSV instruction.(*1)
- When the TCP server connection used, the operation mode is Fixed an issue that may change in the PROG mode.(*1)
- Modify on the built-in Ethernet unit(*1)
 - 1:The system connection or user connection if you are using as a TCP server, has been improved system stability at the time of disconnection occurrence of FP7 side.
 - 2:The operation stability during IPv4SET instruction execution has been improved.
 - 3:Improved behavior when you specify the SNTP server by name in the SNTP client function.
 - 4:Improved server connection processing of HTTP client.
- It has been upgraded the system web to ver.1.1.1.
Display switches automatically according to the browser language.(*1)

*1 : Standard model Ver.3.46 also supports

Details of revision of Standard model(Ver.4.25), Low-cost model(Ver.1.25)(Jun 13, 2016 update)

[AFP7CPS41E(S), AFP7CPS31E(S), AFP7CPS31(S), AFP7CPS21]

- Fixed a grammar check at the time of program editing in the RUN mode.There was a case of false detection double output.(*1)
- Fixed a ACHK/ATOB instruction.If after the numeric string is a space character, it will detect the calculation error false.(*1)
- In LRSR instruction, Fixed a bug Shift-out data is not output to the CY flag.(*1)

[AFP7CPS41E(S), AFP7CPS31E(S), AFP7CPS31(S)]

- It revised the file system for the SD card control.To optimize the control area, it was speeding up the SD card access processing.(*1)

- Fixed a bug in the Mewtocol7 08MNGO(monitor execution) command.
Part of the reply the contents of the case which was monitored bit data 225 or more and the data one or more will be incorrect.(*1)

[AFP7CPS41E(S), AFP7CPS31E(S)]

- Fixed server log-in process and the response reception processing of HTTP client.(*1)
- Fixed the file reception processing of the FTP client.(*1)
- Fixed a bug that may not be able to upload a server certificate.(*1)
- Fixed a bug that can not upload the server certificate, in SD memorycard operation.(*1)
- Fixed a security force release processing.(*1)

*1 : Standard model Ver.3.45 also supports

Details of revision of Standard model(Ver.4.23), Low-cost model(Ver.1.23)(Mar 3, 2016 update)

[AFP7CPS41E(S), AFP7CPS31E(S), AFP7CPS31(S), AFP7CPS21]

- Improved system stability at the time in the USB communication cable removal.(*1)
- Improved during the RUN mode rewrite function.(*1)

[AFP7CPS41E(S), AFP7CPS31E(S)]

- Fixed bugs in the EtherNet/IP.
 - 1.Fixed a bug in the IGMP query features.
 - 2.Fixed a bug in the time-out occurs in the adapter connection of FP7.
- Improved the stability of Ethernet.(*1)
 - 1.Improved DHCP.
 - 2.Improved SNTP.
 - 3.Improved DNS.
 - 4.Improved PING.
 - 5.Added the anomaly detection function of Ethernet communication processing.

*1 : Standard model Ver.3.44 also supports

Details of revision of Standard model(Ver.4.20), Low-cost model(Ver.1.20)(Jan 7, 2016 update)

[AFP7CPS41E(S), AFP7CPS31E(S), AFP7CPS31(S), AFP7CPS21]

- We added the Compatibility of the FP2.(*1)

<Instruction>

 - 1.TM16 • • • Subtraction timer of 16-bit setting value.
 - 2.CT16 • • • Subtraction preset counter of 16-bit setting value.
 - 3.BKMOV16 • • • Transfers blocks (32-bit data to 16-bit).
 - 4.BKEXT • • • Transfers 16-bit data sign-extended blocks.
 - 5.DIVFP2 • • • Performs division (FP2 compatible).
 - 6.BTS • • • Sets a specified bit of 16-bit data.(FP2 compatible)
 - 7.BTR • • • Resets a specified bit of 16-bit data.(FP2 compatible)

<MEWTOCOL-COM communication commands>

 - 1.RS • • • Reads the timer set value (lower 16 bits of TS).
 - 2.WS • • • Writes to the timer set value (lower 16 bits of TS).
 - 3.RK • • • Reads the timer elapsed value (lower 16 bits of TE).
 - 4.WK • • • Writes to the timer elapsed value (lower 16 bits of TE).
- It was improved error of scan time at the time of constant scan settings.(*1)

[AFP7CPS41E(S), AFP7CPS31E(S)]

- We added a multi connection server function.(*1)
 - 1.Using the multi connection server function, servers with specified port numbers of the connectable number "n" can be configured by making the same server settings for continuous "n" connections using FPWIN GR7.
 - 2.The number of settable multi connection servers are as follows; Max. 16 connections for one group, and 16 groups of servers.
- Fixed a bug in the case of setting the instruction or divide the reception refresh method of EtherNet / IP.
- Fixed the bug when SEND / RECV / CONSET instruction execution for an extended connection.(*1)
- Fixed a bug in the IPV4SET and OPEN and CLOSE instruction.(*1)

*1 : Standard model Ver.3.42 also supports

Details of revision of Standard model(Ver.4.11), Low-cost model(Ver.1.11)(September 29, 2015 update)

[AFP7CPS41E*, AFP7CPS31E*]

- The operation of the RUN/IDLE bit of EtherNet/IP communication changed to be selectable.

[AFP7CPS21]

- We have extended the MEWTOCOL-7 communication function.

Details of revision of Standard model(Ver.4.10), Low-cost model(Ver.1.10)(August 3, 2015 update)

[AFP7CPS41E*, AFP7CPS31E*]

- The following instructions we were newly added.
 - 1.NTPcREQ • • • Time adjustment request command.(*1)
- SMTPcSET instruction extension (extended the number of characters in the text to 4096 characters).(*1)
- Custom content capacity expansion (13.83MB).(*1)

[AFP7CPS41E*, AFP7CPS31E*, AFP7CPS31*, AFP7CPS21]

- The following instructions we were newly added.
 - 1.SUMMER • • • Daylight saving time acquisition instruction.(*1)
 - 2.GPTRNS • • • General-purpose communication transmission instruction.(*1)
 - 3.EPRINT • • • Text creation instruction(With storage area size).(*1)
 - 4.ETIMESTR • • • Converting date and time character strings instruction(With storage area size).(*1)
- We added a specification to PRINT instruction(Add %S conversion form)(*1)

*1 : Standard model Ver.3.40 also supports

Details of revision of Standard model(Ver.4.02)(July 2, 2015 update)

[AFP7CPS41E*, AFP7CPS31E*]

- Improved EtherNet/IP communication.
- Fixed Ethernet time adjustment function.

Details of revision of Standard model(Ver.4.01)(June 19, 2015 update)

[AFP7CPS41E*, AFP7CPS31E*]

- Improved EtherNet/IP communication.

Details of revision of Standard model(Ver.4.00), Low-cost model(Ver.1.01)(June 15, 2015 update)

[AFP7CPS41E*, AFP7CPS31E*]

- Addition to EtherNet/IP communication function.
(Only the models that can be upgraded to Ver.4.00 [produced after May 2014])
- It was to stabilize the Ethernet communication function.
- [AFP7CPS41E*, AFP7CPS31E*, AFP7CPS31*]
- Modified to read out the life information of Panasonic SD card of EX / GD series.
- Fixed a bug in the CRD and CRD1 instruction.

[AFP7CPS41E*, AFP7CPS31E*, AFP7CPS31*, AFP7CPS21]

- Modified to be able to reflect the results of the error code in the response SEND / RECV instructions.
- In serial communication, it was fixed events that false alarm the received data error if a long time from the instruction execution of SEND / RECV instruction until the scan top.
- Modification of the malfunction in online editing in RUN mode.
Target instructions are SPTM, SEND, RECV, LCWT and LCRD.
- Specification is added so that an event of "from RUN to PROG mode change by the self-diagnostic error detection" is recorded in the system history.

Details of revision of Ver.3.31 (Changes from Ver.3.30)(March 16, 2015 update)

- Improved Ethernet communication in internet environment or in-company LAN environment.

- Changed the display condition of system history.
When the password setting has been made, it can be browsed only when opening with the administrator password.
When the password setting has been made, it cannot be monitored from the menu [Online]->[Display System History] with FPWIN GR7 V2.6 or older.
Please be careful when upgrading the version.
For details of the display procedure in such a case, refer to the document attached to the upgrade tool.
- Corrected the error that an operation error occurs when executing "+0000.000" by ATOB.SF instruction.
- Corrected the error that an incorrect flag turns OFF on the completion of GPSEND execution.
- Corrected the error that all files within a folder cannot be searched when specifying the wild card for an FTPc transfer file (specifying short string of "*").
- Corrected the error so that all areas can be checked when checking the SDRAM hard drive for models without Ethernet.
- Corrected the error that it is impossible to log in the system WEB with a 16-character password.
- Corrected the error that GR7 stops the upload operation when a project has been initialized by the model without Ethernet.

Details of revision of Ver.3.30 (Changes from Ver.3.23)(February 2, 2015 update)

[Additional functions]

- Web server function can be used.

[Corrected errors]

- Corrected the error that communication may stop when it is steadily performed by means of continuous energization.

Details of revision of Ver.3.23 (Changes from Ver.3.20)(January 15, 2015 update)

- Modified to store the operation error log of the system history correctly.(Occurred in Ver.3.20 only.)

Details of revision of Ver.3.20 (Changes from Ver.3.10) (December 15, 2014 update)

[Additional functions]

- Dedicated function for Panasonic industrial SD cards.
 - Lifetime information of Panasonic industrial SD cards can be read. (PanaSD instruction)
- Expansion of Ethernet function
 1. Expansion of mail text size
 - The maximum size of mail text has been expanded from 256 bytes to 4 kbytes.
 - A maximum of 4096 characters can be sent. However, it is applicable only when setting with instructions.
 2. Enhancement of the mail text creation function (Free format)
 - Mail texts can be created according to the text creation form. (PRINT instruction)
 - Texts created with PRINT instruction or others can be written in mail text. (SMTPcBDY instruction)
 - It is used for using the text creation form stored in mail text with tool software. (SMTPcBRD instruction)
 3. Implementation of PING instructions
 - The operating state of communication partner device can be checked with the instruction. (PINGREQ instruction)
- Enhancement of data processing function
 - Data variance and standard deviation can be calculated. (STDDEV instruction)
 - The total value and moving average value of data can be calculated at high speed. (DEFRBUF instruction and RBUF instruction)
- Implementation of program structuring support instruction
 - Global PB numbers can be set for each PB. (GPB instruction)
 - Local devices in other PBs can be written and read. (LCWT instruction and LCRD instruction)
- Addition of other instructions (such as MLCLIP instruction and BSWAP instruction)

Details of revision of Ver.3.10 (Changes from Ver.3.00) (July 7, 2014 update)

[Additional functions]

- Expansion units can be used.
- MC protocol can be used.
QnA compatible 3E frame, binary
Bulk read and bulk write
Master/Slave communication