

FP0H Control Unit Upgrade Tool

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

About FP0H Control Unit Upgrade Tool

FP0H Control Unit Upgrade Tool is the software to update the firmware by connecting a PC and the FP0H Control Unit with a USB cable.

EDS files are stored in this upgrade tool.

This upgrade tool enables the upgrade of the Control Unit to the following version.

- Type without Ethernet function (AFP0HC32T/ AFP0HC32P) : Ver.1.90
- Type with Ethernet function (AFP0HC32ET/ AFP0HC32EP) : Ver.1.90

*Please prepare a USB cable for connecting a PC with the FP0H Control Unit.

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

- AFP0HC32T/ AFP0HC32P
- AFP0HC32ET/ AFP0HC32EP

For using FP0H Control Unit, FPWIN Pro 7.2.3.0 / GR7 Ver.2.26.0 or later should be used.

Software License Agreement

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

Please carefully review the contents of the Software License Agreement included in the installer and proceed with the installation only if you agree to its terms.

System Requirements

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

OS	Windows 10 (32bit / 64bit) / 11
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

1. Decompress the downloaded file.
2. Double-click the file (Fp0h_V0190_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 FP0H CPU unit according to the procedure.

* Do not turn off the power to the FP0H Control Unit or remove the USB cable during the upgrade. It may cause a damage to the FP0H Control Unit.

Preparation for executing the upgrade tool

1. Confirm the product number of the FP0H Control Unit if it can be upgraded with this software.
2. Set the operation mode switch on the FP0H Control Unit to PROG.
3. Connect the target FP0H Control Unit and a PC with a USB cable, and turn on the power.
4. Back up a project of the FP0H Control Unit with FPWIN GR7/Pro7.
5. When FPWIN GR7/Pro7 is active, set it to offline.

FP0H Control Unit Upgrade Tool Detailed Version-Up Information

Version-up Information

Details of revision of Ver.1.90 (January 5, 2022 update)

The following points have been upgraded.

- Fixed a bug that Ethernet Communication Error occurs after changing the number of user connections.(*1)
- Fixed a bug that [Configuration is different] occurs after downloading program to PLC without overwriting the IP address.(*1)
- Fixed a bug with the generation number of LOG files.(*1)
- Improved that it is choosable to read input signal immediately or wait for input time constant after power on.
- Added [String(with 1 word header)][String(with 2 words header)] to data type list by which strings created by F253(SSET) command can be logged.(*1)

*1 : Type with Ethernet function (AFP0HC32ET/ AFP0HC32EP) only.

Details of revision of Ver.1.80 (June 1, 2021 update)

The following points have been upgraded.

- Improved the communication speed of FTP.(*1)
- Added new loading condition for the auto-execute file.
- Added destination code No.EE to F145(SEND), F146(RECV) with MEWTOCOL Master communication.
- Improved the scan time during logging tracing and data transferring by FTP client.
- Added EtherNet/IP message-communication commands (F490(EIPNDST),F495(EIPMSATT),F496(EIPMBODY),F497(EIPMSEND),F498(CIPMSET),F499(CIPMGET)).(*1)
- Improved the version of SSL/TLS with FTP to being choosable.(*1)
- Improved the unprotected accessing time of PLC to being settable.
- Improved the communication speed of MODBUS-RTU.
- Added Ethernet commands (F466(NTPcREQ), F467(NTPcSV), F468(PINGREQ)).(*1)
- Added destination code No.K1 to No.K99 with MEWTOCOL-COM communication by USB port.
- Fixed a bug that some of the received data is stored in wrong place with General communication.

*1 : Type with Ethernet function (AFP0HC32ET/ AFP0HC32EP) only.

Details of revision of Ver.1.70 (February 1, 2021 update)

The following points have been upgraded.

- Added the text creating command F254(PRINT).
- Added the connection time-out setting (1s to 10s) to EIP basic settings. (*1)
- Improved the communication speed with TCP. (*1)
- Improved that different axis information can be set for each axis in Linear Interpolation Control of positioning function.
- Fixed a bug that PLC responds data of wrong device No. when it's read by bit with MC-protocol. (*1)

- Fixed a bug that writing error occurs even if there is still available space in SD card.
- Fixed a bug that the output of sign in axis Y keeps ON after positioning done in Linear Interpolation Control.
- Fixed a bug that limit signal is misdetected when positioning starts in Linear Interpolation Control.

*1 : Type with Ethernet function (AFP0HC32T/ AFP0HC32P) only.

Details of revision of Ver.1.60 (December 1, 2020 update)

The following points have been upgraded.

- Fixed a bug that sometimes the execution of interrupt program is delayed.
- Fixed a bug that the date & time can not be correctly recorded when F422(LOGSMPL) command is run by interrupt program.
- Fixed a bug that occurs in checking the device upper limit for operand D of F439(CFREEK) command.
- Fixed a bug that the (date_time_POW).csv file not being created if the power is restarted during logging.
- Fixed a bug that the IP address is changed to 192.168.1.100 before it is confirmed. (*1)
- Fixed a bug that no error occurs when set negative constant out of range to an operand.
- Improved the waiting time before timeout when response is lost by disconnection in FTP client functions. (*1)
- Fixed a bug that file can be renamed to a path that does not exist in FTP server functions. (*1)
- Fixed a bug that sometimes R917F(power off during accessing SD Card) is not turned to ON.
- Fixed a bug that no error occurs when set the third digit of operand S1 as neither by bit nor by word of F146(RECV) command.
- Fixed a bug that sometimes even if the input time constant setting from X8 to XF of main unit is not [nothing], it runs as [nothing].
- Fixed a bug that when set [EtherNet/IP] as [to use] and run F460(IPv4SET) command, Ethernet connection fails. (*1)

*1 : Type with Ethernet function (AFP0HC32T/ AFP0HC32P) only.

Details of revision of Ver.1.50 (January 16, 2020 update)

The following points have been upgraded.

- Fixed a bug that there is no ACK response to SYN packet in TCP/IP communication when PLC works as slave. (*1)
- Fixed a bug that the transmission with FTP communication slows down in machine with TCP delayed acknowledgment (Windows PC, etc.). (*1)
- To correspond Modbus-TCP communication to area code FF in F145(SEND), F146(RECV) command. (*1)

*1 : Type with Ethernet function (AFP0HC32ET/ AFP0HC32EP) only.

Details of revision of Ver.1.40 (July 29, 2019 update)

The following points have been upgraded.

- Improved to be able to get version updated under password protection.
- Improved operations of positioning control (E-point control/Operation mode:Absolute). (*1)
- Improved the reconnecting time of EtherNet/IP scanner.(*1)
- Improved the response time of TCP/IP communication in low-speed communication environment.(*1)

- Fixed a bug that outliers appear in the record data if F422(LOGSMPL) command is run by interrupt program during the logging function confirming files. (*1)
- Fixed a bug that self-diagnostic error (E46:Network Error) occurs if the connection breaks off in some specific situations when EtherNet/IP adapter is working. (*1)

*1 : Type with Ethernet function (AFP0HC32ET/ AFP0HC32EP) only.

Details of revision of Ver.1.30 (February 4, 2019 update)

The following points have been upgraded.

- Added FTPS(TLS1.1 / 1.2) function. (*1)
You can register SSL / TLS server certificate (RSA / ECDSA). (*1)
- Added automatic transfer function of "Create auto-run file" using SD memory card. (*1)
- Added "Not open automatically" setting to "Open Method" of Ethernet setting. (*1)
- Compatible with sending to broadcast address using UDP. (*1)
- Changed the specification in F165 (CAM0) command.(Improvement of reading timing of current value of positioning function) (*1)
- The judgment voltage of backup battery error was improved.
- Fixed a bug that UDP connection can not be opened at the same time for more than 6 connections. (*1)
- Fixed a bug that a self-diagnostic error (E20: Network error) occurs when communication is performed continuously in UDP communication with short reception interval. (*1)
- Fixed a problem that a self-diagnostic error (E46: Network error) occurs when PLC is started by downloading a project with many network functions set. (*1)
- Improved to be able to transmit data of 4 Gbyte or more consecutively using TCP communication. (*1)
- Improved connection at scanner operation with EtherNet / IP in Environment with low communication speed. (*1)
- Fixed a bug in F165 (CAM0) command.(Self-diagnostic error (E20: Watchdog timeout) occurred)
- Added "Error code: 12 (Delete directory not empty)" in F430 (CRMDIR) command. (*1)
- Fixed a bug in F463 (CLOSE) command.(Close connected connection) (*1)
- Fixed a bug in F464 (RDET) command.(Reading value of connection number during FTP server connection is incorrect) (*1)
- Fixed a bug that the SD card project copy is impossible when "Offline → Online" switching is done during it. (*1)
- Fixed a bug that stops when near home or limit signal enters after starting home return when DOG method 1 to 3 of positioning home return with the same startup speed and home return target speed are specified. (*1)
- Fixed a bug where the operation status when self-diagnostic error (E 63 / E 64 / E 70 ~ 75) occurred was incorrect.
- Fixed a bug that a self-diagnostic error (E50: Battery error) does not occur when removing the backup battery during power-on.
- Fixed a bug that a error (1: Function code error) occurs when MODBUS command is received during password protection.
- Fixed a bug when the interrupt program was executed during execution of the MC or MCE command.(Output of OT command is OFF)

*1 : Type with Ethernet function (AFP0HC32T/ AFP0HC32P) only.

Details of revision of Ver.1.20 (June 4, 2018 update)

The following points have been upgraded.

- Added FTP server / client function. (*1)
- SD card access command was added.(*1)
- We added a multi connection server function.(*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.
- Compatible with COM port slow baud rate.
- The specified keywords (CONNECT1, CONNECT2) of F465 (ETSTAT) instruction were added.(*1)
- The specified address (MODBUS) of the F 145 (SEND) / F 146 (RECV) instruction has been extended.
- We have strengthened the upper limit exceeding check of the device.(*1)
- The refresh function of EtherNet / IP was improved.(*1)
- Fixed a bug that program contents differed when online editing and turning on power again after erasing the program.
- Fixed a bug that a self-diagnostic error (E20) occurs when the interrupt program is activated during execution of the floating-point real data operation instruction.
- Fixed a bug in F461 (CONSET) command.(Behavior when invalid parameter is specified)(*1)
- Fixed a bug in F465 (ETSTAT) command.(Reflect timing when user connection is changed by CONSET instruction)(*1)
- Fixed a bug that the periodical program is not executed depending on the timing of the input interrupt.
- Fixed a self-diagnosis error (E20) which is caused by CS control during data communication by COM1 cassette (RS-232C, 5 wire type).
- Fixed a bug in which retry might occur at TCP / IP disconnection from the other terminal.(*1)
- Fixed a bug that logging stops right after switching to RUN mode when SD card with slow access speed is used.(*1)
- Fixed a bug that special relay "communication error flag" does not turn ON when Ethernet setting "Reception buffer start address" is abnormal.(*1)
- Fixed a communication failure with the scanner which occurs when the order of the scan list of EtherNet / IP settings is changed.(*1)
- Fixed a bug that cyclic data to other scanners is not be updated when one scanner disconnects in EtherNet / IP cyclic communication with multiple scanners.(*1)
- Fixed a bug that can't be reconnected for about 4 minutes when the line disconnection is made from the partner terminal during scanner operation on EtherNet / IP.(*1)
- Fixed a bug that data update timing may be delayed when multiple scanners are connected with different RPI during adapter operation with EtherNet / IP.(*1)
- Fixed a bug that the "transmission data delay time" of EtherNet / IP cyclic communication might be delayed more than the specified time.(*1)
- Fixed a bug that the RUN / IDLE bit in EtherNet / IP cyclic data might not be set.(*1)

*1 : Type with Ethernet function (AFP0HC32T/ AFP0HC32P) only.

Details of revision of Ver.1.10 (November 1, 2017 update)

The following points have been upgraded.

- The compatibility is improved in conversion from FP Sigma to FP0H.
- Changed the criterion of clock data used in the Logging / Trace Function from 2000 to 2001. (*1)
- "Special Relays / Special Data Registers" can be specified for operand of the ethernet instruction. (*1)
- "The number of characters + The character string" can be specified with F253(SSET) instruction. (*1)
- "Open method(AUTO only)" can be specified with F461(CONSET) instruction. (*1)

- COM port number can be specified by combination of F469(UNITSEL) instruction and F145(SEND)/F146(RECV)/F159(MTRN) instructions. (*1)
- Fixed a bug that "No SD card free space" occurs with high speed logging. (*1)
- Fixed a bug that ethernet communication stops when it repeat connection / disconnection by ethernet communication. (*1)

*1 : Type with Ethernet function (AFP0HC32T/ AFP0HC32P) only.