

# Upgrading the MICREX-SX Series Programming Support Tool

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## 1. Applicable model

IEC 61131-3-compliant programming support tool: SX-Programmer

Type	Name	Newest version	Date of upgrade
NP4H-SWN	Standard	V3.0.2.6	August 2010

## 2. Upgrade service details

This new service gives registered users of Standard direct access to the latest version of the software through the upgrade feature on the Fuji Electric FA website. Users can download the most recent version of the software from the website at their convenience.

Name of the upgrade file for SX-Programmer: StandardUpdateV3026.exe

## 3. Main changes in the latest version: V3.0.2.6 (August 2010)

- (1) Supports SPH2000 redundant CPU module (NP1PM-256H)  
Support for redundant CPU module of SPH2000 series (NP1PM-256H)

## 4. History of main version upgrades

### (1) V3.0.1.5 (April 2010)

#### 1) Improved upgrading

Improved the upgrading to addition install the V3 system without deleting the V2 system, when you upgrade from Standard V2.

#### 2) Problem correction of V3.0.0.160.

The following problems were corrected.

- In the ladder editor, when you copy & paste the unit of the differentiation contact and the differentiation coil, This instruction does not operate normally because the instance number overlaps.
- In the monitor, the monitor value of the contact of global timer might be different from operation.
- In the uploading from PLC, timer device [T] might be changed to standard memory device [M].
- In the convert of the MICREX-F program, the timer number of the timer instruction (0.1s time base) is not correctly converted.
- In the simulation, when the TBIT/SBIT/SHL/SHR/DT instruction is used with 32 bit data, it does not operate correctly.
- In the simulation, when the program of the event task is executed, the simulator might be downed.

### (2) V3.0.0.160 (September 2009)

#### 1) Revolutionary improvements in operating methods

- Intuitive operation for simple operation without being dependent on manuals
- Many instruction input methods
- Simplified programming with keyboard operations
- Consolidated PLC operation with panels and buttons

#### 2) Improved engineering efficiency

- Complete search functions (global searches, cross-references, and circuit filters)
- Device Editor with operating status displays
- Detailed displays of comparison results

#### 3) Runs on Windows Vista

V3.0.0.160 runs on the Windows Vista operating system.

### (3) V2.3.5.1 (May 2008)

1) Expansion of SPH2000-compliant functions.

Added support for the SPH2000 CSV interface function block, general-purpose communications settings by users, and parallel interface connection with a Programmable Operation Display (POD).

2) Added support for @E.Integrator.

3) Improved Conversion Error Log for MICREX-F series PLC.

Added a function to display the circuit number for the conversion source program to the error log of the MICREX-F program conversion function for file loading.

4) Problem correction of V2.3.5.0.

When the system definition is up-loaded from NP1PM-48CR(@E.Terminal), the I/O group setting of the built-in application is cleared. This problem was corrected.

**(4) V2.3.4.0 (November 2007)**

1) Enabled to install Standard exclusively designed for a monitor.

2) Expansion of SPH200-compliant function

Adding the function that enables to select latency mode to check configuration from "configuration correspondence/set time" in the SPH200 system properties.

3) Improved conversion function with MICREX-F series PLC

Improved with "tag text file reading" function so that an address is allocated simultaneously with the address bit inversion setting when converting MICREX-F program.

**(5)V2.3.3.0 (August 2007)**

1) Addition of SX control utility

"SX control utility" has been added in "Auxiliary function" menu.

2) Expansion of board controller-compliant function

- A function enabling a user to select rising-edge or falling-edge in the logic system of the signal to the high-speed input connector has been added to the board controller's CPU parameters.
- A function to externally set a link station address has been added to the simplified CPU link function of the board controller's CPU parameter.
- The day of the week data and the calendar write request have been added to the board controller's calendar information.

3) Improved failure diagnostic function

A "Failure analysis" function to automatically analyze and display the failed state has been added to the SPH300 failure diagnostic function.

\* To use the "Failure analysis" function, the installation of Microsoft [.NET Framework 2.0] is required.

Please see Item **6. Upgrading procedure** in this notice.

**(6) V2.3.2.0 (May 2007)**

1) Adding system definition functions

Adding such functions as the naming change of power supply and base board, gateway setting of Ethernet module, and the naming change of battery error detection.

2) Expansion of password functions

The password length used for program protection has been extended from 8 characters to 20 characters.

3) Uploading Ethernet setting

An upload function of Ethernet setting file that had been downloaded to module has been installed.

4) Registration of always ON/OFF NO/NC contact

Adding "Always ON normally open contact", "Always OFF normally closed contact", "Always ON normally closed contact", and "Always OFF normally closed contact. to the contact barrette in edit mode.

5) Specifying address/tag color of local devices

Adding the color specifying function to addresses and tags to the device allocated to a local device.

6) Storing the dialog box display position

Adding the function to maintain the position where the dialog box displayed in the editor while the programming support tool is running.

7) Section number search function (Direct jump)

The section number search function has been added to [Search] in the menu.

8) Improved print setting

Adding the device cross-reference I/O batch registration function and number of pages by section in print function.

9) Restriction of initial startup

Adding the function of disabling Initial starting operation at PLC startup

10) Improvement of conversion function with MICREX-F series PLC

Cut and paste function from MICREX-F series PLC Programmer has been improved.

**(7) V2.3.1.0 (November 2006)**

1) Improvement of changed circuit PLC transfer function

Changed circuits can be transferred to PLC even if insertion, import, or pasting has been made to programs.

2) Board controller support — optional card

**(8)V2.3.0.0 (October 2006)**

1) System configuration upgrade

A function was added to restore system configuration information (Module name) during online connection.

2) Output of data text file

A function was added to output data files (stored by save function) that are stored in resource folder to a user specified arbitrary folder, in comma-separated text file format (CSV).

3) Improvement in model-to-model cut and paste function

Cut and paste function from MICREX-F series PLC was improved.

4) Tag support for section instruction

A function to set comments (tags) to section instruction was added.

5) Outputs/reads initial values to/from text file

A function to output the device's initial value set by the initial value setting list function in text file format (CSV) and a function to read the outputted text file were added.

6) Input switching on initial value setting list

Input method switching function (decimal number input/hexadecimal number input) was added to the initial value setting list function.

7) Improved printing with device cross-reference

Simultaneous tag printing function was added in printing with device cross-reference.

8) Text format output of device cross-reference information

A function was added to output device cross-reference information in comma-separated text file format (CSV).

9) Problem correction

A problem that online connection or global memory monitor did not work properly if SPH300 (NP1PS-245R) was used in multi-CPU configuration was corrected.

**(9) V2.2.4.0 (August 2006)**

1) Servo Systems FALDIC ALPHA5 support

2) V2.2.3.0 Problem correction

SPH2000(NP1PM-48E/NP1PM-256E) did not allow correct access of FTP. This problem was corrected.

**(10) V2.2.3.0 (May 2006)**

1) Import of arrangement and structure definitions

A function was added to import arrangement and structure definition data from other projects.

2) Expansion of password functions

A function was added to set restrictions on PLC on-line operation.

By using this function and setting a password for access authentication, PLC operation can be restricted on three levels (i.e., level 1, level 2, and level 3).

The function can also be set restrictions for each access level.

**(11) V2.2.2.2 (March 2006)**

1) Problem correction

Certain slave module configurations did not allow correct access to IO memory when using a remote IO master module in Standard mode. This problem was corrected.

### **(12) V2.2.2.1 (January 2006)**

- 1) Improvement in model-to-model cut and paste function  
An improvement was made in the model-to-model cut and paste function for the MICREX-F and FLEX-PC series.
- 2) Instructions added  
Master control and model conversion instructions were added.
- 3) Global counter/Integrating timer  
A counter and an integrating timer were added, which are globally accessible from all POUs.
- 4) Forced setup through ladder editor  
A function was added to make forced settings through the ladder editor.
- 5) SPH300 firmware support  
I/O area expansion function (V\*\*64)  
System fail-soft startup time minimization function (V\*\*65)  
Continuous operation under forced settings (V\*\*65)

### **(13) V2.2.1.0 (November 2005)**

- 1) Support for arrangements and structures  
Support was added for arrangements and structures using ladder language and ST language.
- 2) System definition guidance function added  
The addition of a guidance function simplifies operation.
- 3) Improved cut-and-paste guidance between MICREX-F types  
Performance was improved by converting the MICREX-F program immediately upon being opened.
- 4) Board controller support  
Support for board controllers was added.

### **(14) V2.2.0.0 (August 2005)**

- 1) Global timer  
A timer device was achieved that can be globally accessed from all POUs.
- 2) Instruction search  
A search function was added for instructions for all POUs or for user function blocks and user functions.
- 3) Improved device usage status  
Performance was improved by displaying single and double word usage status when the bit device usage status is displayed by the device usage status function for auxiliary functions.
- 4) Improved ladder printing with cross-referencing  
Printing efficiency was improved for cross-reference information comprised of POU types, POU numbers, and circuit numbers
- 5) Improved cut and paste between types  
Support was added for thirteen previously unsupported instructions when pasting programs for the MICREX-F PLC Programmer to Standard using the clipboard.
- 6) System definition: Enhanced non-mounted operation  
Mounted and non-mounted modules can be switched with just one click.
- 7) SPH 2000 support  
Support was added for the new-series CPU module SPH2000.

### **(15) V2.1.1.0 (June 2005)**

- 1) Unrestricted setting of addresses for FB parameters  
Parameter numbers are no longer automatically allocated in setting parameters for user function blocks and user functions. The user can now make the settings using the desired numbers.
- 2) Ladder information output for POD monitoring  
Functions were added to output data to files for performing ladder monitoring using a programmable operation display (POD).
- 3) Output of device data for SX communications middleware  
A function was added to the "device data output" function for "auxiliary" to output data for SX communications middleware (NP4N-MDLW).
- 4) ST language support for debugging: Break points and step-by-step execution

Functions for setting break points and for step-by-step execution were added to the ST language screen.

5) Improved ST editing

Functions were added to search for and display set tags and to search for and input addresses by inputting tags in ST language programs.

6) Improved zoom

A function was added to automatically calculate and save the display magnification as opposed to fixing the initial magnification at 100% when a window is opened (e.g., to open a file or create a new file).

7) Maintaining the dialog box display position

A function was added to maintain the display position when the dialog box for inputting addresses or the dialog box for inputting parameters is opened in the ladder language editor.

8) Improved cut and paste between MICREX-F series

Changes were made so that when cutting and pasting from a MICREX-F program, the file instruction is pasted after being converted to the user function block call instruction format (i.e., USERFB).

**(16) V2.1.0.1 (March 2005)**

1) Function block diagram expression added

A function was added to express the function block caller in the FBD (block) format.

2) Functions added to display and set parameter names on the parameter setting screen

Functions were added to display parameter names and enable the user to set desired names on the parameter setting screen.

3) Enhanced editing

Enhancements were added to return circuits, guidance input dialogs, parameter input dialogs, and switching between schematic and collapsible displays for the function block caller.

4) Revisions to default common tab items for the instruction pallet

Items set on installation using the common tab for the (default setting) instruction pallet were changed.

5) Changing data

A function was added to change data from the ladder screen.

6) SPB: SX mode support

SX mode support was added for programming with compact SPB-series PLCs.

7) Offline fault diagnosis

Fault diagnosis can be used even when a project is open online.

8) More than ten RS-232C port numbers supported

The RS-232C port numbers were increased from 1 to 256.

9) ST language support

Support for ST language programming was added.

10) Maximum processor link module configuration expanded

The maximum number of processor link modules (e.g., P-link, FL-net) for expansion was increased to eight.

11) Start-up without CPU 0 supported

A setting has been added to the system operation definition settings in the system definition to start the system without CPU 0.

12) System fail-soft maintenance prohibit operation and fault status indicator mask supported

An expansion setting was added to the system fail-soft start-up operation definitions in the system properties.

**5. Backward compatibility**

The following table shows the project compatibility for the upgrade.

	Projects created with previous version	Projects created with V3.0.2.6
NP4H-SWN (previous version)	○	△
<b>NP4H-SWN (V3.0.2.6)</b>	○	○

## **6. Upgrading procedure**

- (1) Create a new folder on the computer's hard disk.
- (2) Download the V3.0.2.6 upgrade file (StandardUpdateV3026.exe) to the new folder.
- (3) Extract the downloaded file. (The upgrade is a self-extracting file.)
- (4) The file will be extracted to the same folder.
- (5) Double click the extracted Setup.exe file.
- (6) Follow the prompts from the installer program to upgrade the software.
- (7) Standard will start up when the installation is completed. Check Info from the Help menu to make sure the version number is V3.0.2.6

## **7. Upgrading precautions**

- (1) Make sure that NP4H-SWN/Standard is already installed on the computer prior to upgrading the software.
- (2) Do not begin the installation if the upgrade file is not exactly the same size as the file that was downloaded. If they are not the same size, throw all of them into the trash and download the upgrade file again.
- (3) Be sure to quit all programs that are currently running (e.g., Standard or message manager) prior to the installation.
- (4) If the installation fails due to an error, try to install the software again. If the installation fails again, re-install the previous version of Standard from the setup CD and then try to install the upgrade software again.