

C2194x MAIN FIRMWARE RELEASE NOTES

Ishida IP-Ai-P Printer

Procedure to Install New IP-Ai-P Firmware

Refer to the *IP-Ai Service Manual* for additional information.

1. Copy the firmware folder "Soft" onto an empty USB memory stick.
 - The "Soft" folder itself must not be zipped even if some files in the folder are.
 - The "Soft" folder must be the only data on the USB memory stick.
2. Power up the machine.
3. Press the green **ENTER** button at the Date/Time confirm screen.
4. Remove the plastic cover on the upper left.
5. Insert the USB memory stick into any of the four USB ports.
 - No other USB devices should be connected.
 - **DO NOT REMOVE** the USB memory stick during the firmware update procedure.
6. Press the **↑** (Return Arrow) key (upper right) to enter the Main menu.
7. Enter **495344** and press the **PLU** key to access the hidden menu steps.
8. Press the **ADJUST** menu button.
9. Select **DOWNLOAD**.
10. Select the firmware version to be installed. It will be highlighted in yellow.
11. Press **EXEC** to confirm the selection.

Note: If message *15036-0000 Database Version Is Different* is displayed a memory clear will be required after installing the firmware. Press **STOP** and make a USB backup (Setup menu > File Save/Load) if necessary, otherwise press **EXEC** to continue.
12. Press **EXEC** to begin the firmware download.
13. The screen will show the firmware download progress. The download will take several minutes to complete.
14. When Re-Boot Check message 15029 is displayed, the firmware download is complete.
15. The printer will automatically reboot.
16. Press the green **ENTER** button at the Date/Time confirm screen.
17. If prompted enter the Adjust menu and perform a Master Data memory clear. Then enter the Setup menu and load the backup from step 11.
18. Press the **↑** (Return Arrow) key (upper right) to enter the Main menu.
19. Enter **495344** and press the **PLU** key to access the hidden menu steps.
20. Press the **ADJUST** menu button, then select **DOWNLOAD**.
21. Press the **SUB APP.** tab.
22. Select the program to be installed. It will be highlighted in yellow. Select only one Sub App program at a time.
23. Press **EXEC** to confirm the selection. Press **EXEC** to begin the firmware download.
24. The screen will show the firmware download progress. The download may take several minutes to complete.
25. When Re-Boot Check message 15029 is displayed, the firmware download is complete.
26. The printer will automatically reboot.
27. Press the green **ENTER** button at the Date/Time confirm screen.
28. Repeat steps 18 ~ 26 to load any remaining Sub App programs as needed.
29. Remove the USB memory stick.

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Note: Refer to the *2020 Nutrition Details and Conversion Procedure* instructions as needed.
The document is located under "Technical Bulletins" on the [Ishida ScaleLink Pro 5](#) page of the Rice Lake web site

Version C2194J

Release Date: April 6, 2023

Use with SLP-5 **2.40t** or later ([strongly recommended](#) for compatibility)

<u>Related Programs</u>	<i>P-1100B CPU</i>	<i>P-1100D CPU</i>
MAIN:	C2195J	C2195J
OS:	J0829C or later	J1050A or later
BIOS:	J0825	J0825
FPGA App.:	J0820C (J0824)	J0973B (J0972A)
Keyboard:	J0823B	J0823B
Printer App:	C2196 or later (J0827)	C2463A or later (J0974A)

NOTE: After downloading the Main program download the Printer Sub App and FPGA Sub App programs one at a time as needed.



Caution

Memory initialization may be required when upgrading to this firmware version. If upgrading from firmware **C2194D** or an earlier version or from standard IP-Ai firmware, a standard memory clear will be necessary after firmware installation due to significant changes in the memory structure:
Master Data Clear (Adjust menu > Memory Clear) & **System Data Init.** (Setup menu > File Save/Load > Scale Init. tab). [8.6.1921.3]

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The following lists the main changes from the previous version (C2194H)

1. Modified operation so that the Fixed Weight is adjusted when the number of pieces for Fixed Price items is changed.

Examples: PLU 1, Quantity = 3, Fixed Weight = 30 oz

a. Call PLU 1, change quantity to 6 (by X Multiply key): Fixed Weight changes to 60 oz

b. Call PLU 1, change quantity to 1 (by X Multiply key): Fixed Weight changes to 10 oz

Note: When the number of pieces is reduced the weight calculation will round up to the next whole ounce. For example, 6.6 oz prints as 7 oz.

2. Fixed a bug where PLUs set as Fixed Price & Weigh (Fixed UPR) did not accept a fixed weight greater than "999" when sent from ScaleLink Pro 5 or other scale management software. Fixed weight values are now accepted up to "30000" or 30.000 lb. The maximum weight for a Fixed Price PLU remains "999" or 999 ounces.

Version C2194H

Release Date: March 11, 2023

Use with SLP-5 **2.40t** or later ([strongly recommended](#) for compatibility)

<u>Related Programs</u>	<i>P-1100B CPU</i>	<i>P-1100D CPU</i>
MAIN:	C2195H	C2195H
OS:	J0829C or later	J1050A or later
BIOS:	J0825	J0825
FPGA App.:	J0820C (J0824)	J0973B (J0972A)
Keyboard:	J0823B	J0823B
Printer App:	C2196 or later (J0827)	C2463A or later (J0974A)

NOTE: After downloading the Main program download the Printer Sub App and FPGA Sub App programs one at a time as needed.



Caution

Memory initialization may be required when upgrading to this firmware version. If upgrading from firmware **C2194D** or an earlier version or from standard IP-Ai firmware, a standard memory clear will be necessary after firmware installation due to significant changes in the memory structure: **Master Data Clear** (Adjust menu > Memory Clear) & **System Data Init.** (Setup menu > File Save/Load > Scale Init. tab). [8.6.1921.3]

The following lists the main changes from the previous version (C2194G)

1. Optimize the file input/output and master send/receive with SLP-5 for P-1100D board.

Version C2194G

Release Date: April 15, 2022

Use with SLP-5 **2.40t** or later ([strongly recommended](#) for compatibility)

<u>Related programs</u>	
MAIN:	C2195G
OS:	J0829C or later
BIOS:	J0825
FPGA App.:	J0820C (J0824)

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Keyboard: J0823B

Printer App: C2196 or later (J0827)

NOTE: After downloading the Main program download the Printer Sub App and FPGA Sub App programs one at a time as needed.



Caution

Memory initialization may be required when upgrading to this firmware version. If upgrading from firmware **C2194D** or an earlier version or from standard IP-Ai firmware, a standard memory clear will be necessary after firmware installation due to significant changes in the memory structure: **Master Data Clear** (Adjust menu > Memory Clear) & **System Data Init.** (Setup menu > File Save/Load > Scale Init. tab). [8.6.1921.3]

The following lists the main changes from the previous version (C2194F)

1. Added support for the Silex SX-590 wireless card in addition to the Lantronix WiPort.
 - a. The "DEVICE" setting was added to the WiFi setting screen (Setup menu > Machine No.). The options are "WiPort" (default) and "SX".
 - b. The SX-590 card supports the following encryption. Unsupported encryption types are shaded out on the WiFi screen.
 - WEP128
 - WPA PSK (personal) TKIP
 - WPA2 PSK (personal) CCMP
 - c. The Uni-9 will automatically reboot after entering the settings for the SX-590 card and exiting.
 - d. The SX-590 supports both the 2.4 GHZ and 5 GHZ frequency band, unlike the WiPort that supports only 2.4 GHZ.
 - e. The SX-590 supports 802.11a/b/g/n/ac (1x1) compared to the WiPort that only works with 802.11 b/g.
 - f. For identification purposes, scales with the Silex SX-590 installed from the factory use a white antenna.
2. Added support for the new "D" revision of the P-1100 CPU board. This board uses different sub-app firmware as noted in the "Related Programs" section above due to different components on the board. Only the sub-apps supported by each CPU board version are listed to avoid confusion and to prevent loading incompatible firmware.
3. Fixed a bug where only the first event listed in the Scheduler would execute.
4. Fixed a bug where the Top Seller function did not recognize and accumulate a PLU transaction if the Department number in the PLU was set to a value other than zero.

Version C2194F

Release Date: November 11, 2020

Use with SLP-5 **2.40t** or later (**strongly recommended** for compatibility)

Related programs

MAIN: C2195F

OS: J0829C or later

BIOS: J0825

FPGA App.: J0820C (J0824)

Keyboard: J0823B

Printer App: C2196 or later (J0827)

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NOTE: After downloading the Main program download the Printer Sub App and FPGA Sub App programs one at a time as needed.



Caution

Memory initialization may be required when upgrading to this firmware version. If upgrading from firmware **C2194D** or an earlier version or from standard IP-Ai firmware, a standard memory clear will be necessary after firmware installation due to significant changes in the memory structure: **Master Data Clear** (Adjust menu > Memory Clear) & **System Data Init.** (Setup menu > File Save/Load > Scale Init. tab). [8.6.1921.3]

The following lists the main changes from the previous version (C2194E)

1. Eliminated case sensitive searches. This is only available when the configuration is set to search "ALL" text. [Setup menu > Operation Settings > Call1 tab > Find PLU = ALL]
2. Fixed a bug where the fixed weight entry screen did not display when a PLU was changed to Fix UPR (Case Weight) mode. The **Fix UPR Pop Up** setting is in the Setup menu > Operation Settings > Prod. tab.
3. Added support for VNC+SSH secure remote connection. The setting is in the Setup menu > Machine No. > Global Sv. tab.
 - a. The printer must be powered off after setting Remote Operation as ENABLE VNC+SSH to recognize the change.
 - b. An operating system patch must be Z1760A must be installed to support the secure connection.
 - c. Two Windows software programs are used to configure the connection and then connect to the machine: *Tera Term* and *UltraVNC*.
 - d. Refer to the **TB_Remote_VNC_Connection_With_SSH_TB20201207** technical bulletin for complete details.

Version C2194E

Release Date: September 20, 2019

Use with SLP-5 **2.40t** or later (strongly recommended for compatibility)

Related programs

MAIN: C2195E
OS: J0829C or later
BIOS: J0825
FPGA App.: J0820C (J0824)
Keyboard: J0823B
Printer App: C2196 or later (J0827)

NOTE: After downloading the Main program download the Printer Sub App and FPGA Sub App programs one at a time as needed.



Caution

Memory initialization is required when upgrading to this firmware version. If upgrading from firmware **C2194D** or an earlier version or from standard IP-Ai firmware, a standard memory clear will be necessary after firmware installation due to significant changes in the memory structure: **Master Data Clear** (Adjust menu > Memory Clear) & **System Data Init.** (Setup menu > File Save/Load > Scale Init. tab). [8.6.1921.3]

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The following lists the main changes from the previous version (C2194D)

1. Added support to print the new 2020 Nutrition data.
 - a. Nutrition editing screens (Program menu > Nutrition) are changed to two forms listing the new nutrition data fields plus a "free" table that can be used for miscellaneous additional values.
 - Form 1 tab – for single column format
 - Form 2 tab – for dual column format
 - Free tab – for miscellaneous fields
 - b. All values are converted to text to support decimals, percent symbols, etc.
 - c. When nutrition data is sent from SLP-5 in the old numeric format, it is converted and stored in the 2020 text format. The appropriate unit is automatically added: g, mg, or %.
 - d. The following nutrition data from the old format that are no longer required in the new 2020 Nutrition format are saved as follows.
 - Calorie From Fat → Nutr.Free1
 - Protein (%) → Nutr.Free2 (%)
 - Sugars (%) → Nutr.Free3 (%)
 - Vitamin A (%) → Nutr.Free4 (%)
 - Vitamin C (%) → Nutr.Free5 (%)
 - Sugar Alcohol → Nutr.Free1 (%)
 - e. After installing C2150R it is not possible to receive nutrition data in the old numeric format in to SLP-5.
 - f. If SLP-5 is configured for the old nutrition format and nutrition data are requested from a wrapper with C2150R installed, no data will be received in to SLP-5. There is no error.
 - g. SLP-5 can be changed between the old and new 2020 Nutrition format as follows: Open SLP-5 Setup Utility > General > General #2 tab > Enable "Nutrition: USA format (2020)"?
 - h. It is not possible to transfer old nutrition data by USB backup to the machine after a firmware update to C2150R. SLP-5 must be used to receive the old nutrition data **before** the update. And then send the nutrition data from SLP-5 after the update. Refer to the following steps.
 - i. Create a full USB backup.
 - ii. Configure SLP-5 for the original nutrition format. See step g. above.
 - iii. Receive all data into SLP-5.
 - iv. Install C2150R or later firmware.
 - v. Clear the printer's memory: Adjust menu > Memory Clear.
 - vi. Reconfigure the printer for USA, etc. as needed.
 - vii. Load the full USB backup. The old style nutrition data will fail to load.
 - viii. Send nutrition data from SLP-5 to the printer.
 - ix. Reconfigure SLP-5 for the 2020 Nutrition format
 - x. Receive the converted nutrition data from the printer. See step g. above.
 - xi. Download updated label formats as needed to print the 2020 Nutrition format.
2. Added 2020 Nutrition Print IDs 2C0 to 2EE (704 to 750 in SLP-5).
3. Converted all original nutrition fields (Print IDs) to text format. This allows the option to print both the original and 2020 Nutrition data and formats during a transition period.
4. Added support for an Ext. Format field in label formats. This field refers to another label format that overlays the main label format when more than the maximum 63 fields are required. There are two methods of overlaying a second "external" format on the original format.
 - a. Create the overlay format large enough for the required data - such as a nutrition panel. Then place the Ext. Format field where needed on the main label format. This is the method Rice Lake plans to use in the updated label library files.

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- b. Create the overlay format the same size as the original format. Then place the Ext. Format field at the top left corner of the main label format. That is, set the X Position as 0.0 and the Y Position as the label format height.

- Notes:**
- i. An Ext. Format button has been added to the Unit Type buttons on the left side of the SLP-5 Maintenance Utility label format editing screen. This is only available when using the default setup file provided with SLP-5 2.40t or later. If the previous setup file is selected when updating SLP-5 the Ext. Format field, as well as the 2020 Nutrition fields, will not be supported.
 - ii. The Ext. Format field can be made any size. Only the X and X coordinates are used to align the overlay label format. It is possible to set the X and X coordinates as zero to avoid confusion or unintentionally moving the field. In that case, the Ext. Format field can be edited by double clicking it in the List Units table. The List Units icon is at the top of the Maintenance Utility screen.

Version C2194D

Release Date: May 15, 2018

Use with SLP-5 **2.20f** or later (**strongly recommended** for compatibility)

Related programs

MAIN: C2195D
OS: J0829C or later
BIOS: J0825
FPGA App.: J0820C (J0824)
Keyboard: J0823B
Printer App: C2196 or later (J0827)

NOTE: After downloading the Main program download the Printer Sub App and FPGA Sub App programs one at a time as needed.



Caution

Memory initialization may be required when upgrading to this firmware version. If upgrading from standard IP-Ai firmware **C2150x** or **C2158x** a standard memory clear will be necessary after firmware installation due to significant changes in the memory structure: **Master Data Clear** (Adjust menu > Memory Clear) & **System Data Init.** (Setup menu > File Save/Load > Scale Init. tab). [8.6.1921.2]

The following lists the main changes from the previous version (C2194C)

1. Fixed a bug that could cause the printer to lockup due to noise on the power line caused by other motorized equipment. Delayed or missed communication between the operator and customer display resulted in non-response at the touchscreen.
2. Fixed a bug where a temporary Pack Date change made when a PLU was set for Rewrap mode did not revert to the clock's internal date after calling the next item.
3. Fixed a bug where the Previous Page key always jumped to page 1 – even when on page 3, 4, or higher. This also affected Group and Page in Preset Key programming.
4. Added a Communication Log feature for troubleshooting (Setup Menu > Error Log > Save tab). Communication data between the Uni-9 and PC are recorded.

- Notes:**
- a. The Communication Log is selectable: No / Yes (default).
 - b. When the Communication Log is enabled it may slow down the printer in operation mode. If the following features are used disable the log:

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- Frequent Shopper markdowns
 - Playing videos
 - File maintenance upload/download is performed during use
 - c. Communication Log files are deleted after 30 days.
 - d. Operation Log Save is change to always save. The save period is extended to 30 days.
 - e. Contact Rice Lake regarding the details to retrieve the Communication Log.
5. Added an option for a Master printer to send a delete command before performing Data Distribution to the Satellite printers (Setup menu > Operation Settings > Input tab > Distribution Input).
- Notes:**
- a. The Distribution Input is selectable: Add (default) / Delete+Add.
 - b. When Delete+Add is selected only these four files are deleted before sending:
 - PLU File
 - Extra Message 1 File
 - Ingredient File (Extra Message 2)
 - Extra Message 3 File
 - c. Any Satellite printer receiving data Distribution must be updated to the same firmware version to support this new feature and avoid communication errors.
6. Added a Lower Case function key on the PLU Search screen in Self-Serve mode.
7. Fixed a bug in Self-Serve mode where error message 1857 "Please Remove the Product on the Scale" was displayed if a number was entered before the PRINT key was pressed. Operation is changed to not print a label if a number has been entered before the PRINT key is pressed.

Version C2194C

Release Date: April 1, 2017

Use with SLP-5 **2.20f** or later (strongly recommended for compatibility)

Related programs

OS: J0829C or later

BIOS: J0825

FPGA App.: J0820C (J0824)

Keyboard: J0823B

Printer App: C2196 or later (J0827)

NOTE: After downloading the Main program download the Printer Sub App and FPGA Sub App programs one at a time as needed.



Caution

Memory initialization may be required when upgrading to this firmware version. If upgrading from standard IP-Ai firmware **C2150x** or **C2158x** a standard memory clear will be necessary after firmware installation due to significant changes in the memory structure: **Master Data Clear** (Adjust menu > Memory Clear) & **System Data Init.** (Setup menu > File Save/Load > Scale Init. tab). [8.6.1921.2]

The following lists the main changes from the previous version (C2194B)

1. Fixed a bug where the "12" hour was printed as "00" when the Pack Time and Sell By Time were set as 12-hour format with AM/PM.

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Version C2194B

Release Date: February 22, 2017

Use with SLP-5 **2.20f** or later ([strongly recommended](#) for compatibility)

Related programs

OS: J0829C or later

BIOS: J0825

FPGA App.: J0820C (J0824)

Keyboard: J0823B

Printer App: C2196 or later (J0827)

NOTE: After downloading the Main program download the Printer Sub App and FPGA Sub App programs one at a time as needed.



Caution

Memory initialization may be required when upgrading to this firmware version. If upgrading from standard IP-Ai firmware **C2150x** or **C2158x** a standard memory clear will be necessary after firmware installation due to significant changes in the memory structure: **Master Data Clear** (Adjust menu > Memory Clear) & **System Data Init.** (Setup menu > File Save/Load > Scale Init. tab). [8.6.1921.2]

The following lists the main changes from the previous version (C2194A)

1. Corrected the image displayed when the Label Change function key is pressed.
2. Fixed a bug that caused the printer to lockup after it was powered on and left setting unused for a while.
3. Fixed a bug causing a conflict between the Linux OS and printer application regarding DHCP that could cause Master/Satellite or PC communication to fail after the printer was powered on and left setting unused for a while. The printer application now has priority for the DHCP or static IP Address setting.
4. Fixed a bug where the menu screen was called when the border of the price display area was pressed.
5. Fixed a bug that caused the printer to lockup when the upper part of the display was pressed in Self-Serve mode.

Version C2194A

Release Date: January 30, 2017

Use with SLP-5 **2.20f** or later ([strongly recommended](#) for compatibility)

Related programs

OS: J0829C or later

BIOS: J0825

FPGA App.: J0820C (J0824)

Keyboard: J0823B

Printer App: C2196 or later (J0827)

NOTE: After downloading the Main program download the Printer Sub App and FPGA Sub App programs one at a time as needed.

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Caution

Memory initialization may be required when upgrading to this firmware version. If upgrading from standard IP-Ai firmware **C2150x** or **C2158x** a standard memory clear will be necessary after firmware installation due to significant changes in the memory structure: **Master Data Clear** (Adjust menu > Memory Clear) & **System Data Init.** (Setup menu > File Save/Load > Scale Init. tab). [8.6.1921.2]

The following lists the main changes from the previous version (C2194)

1. Modified the on-line status check to use a basic Ping. The printer is judged to be on-line when a reply to the Ping is received. Previously the on-line check expected a reply from host software.

Notes:

- a. The on-line status is automatically checked based on the Com Check Time Out setting (Setup menu > Machine No. > PC Com tab). The printer must be rebooted for a change in the interval to be recognized.
- b. A manual ping check at the printer or from a PC will not change the status indicator.
- c. The status indicator is green when connected and red when not connected.

Version C2194

Release Date: January 4, 2017

Use with SLP-5 **2.20f** or later (**strongly recommended** for compatibility)

Related programs

OS: J0829C or later

BIOS: J0825

FPGA App.: J0820C (J0824)

Keyboard: J0823B

Printer App: C2196 or later (J0827)

NOTE: After downloading the Main program download the Printer Sub App and FPGA Sub App programs one at a time as needed.



Caution

Memory initialization may be required when upgrading to this firmware version. If upgrading from standard IP-Ai firmware **C2150x** or **C2158x** a standard memory clear will be necessary after firmware installation due to significant changes in the memory structure: **Master Data Clear** (Adjust menu > Memory Clear) & **System Data Init.** (Setup menu > File Save/Load > Scale Init. tab). [8.6.1921.2]

The following lists the main changes from the previous version (C1921U).

Note: Refer to the C1921x Release Notes for previous update details.

1. C2194 is the initial release of IP-Ai-P firmware. It is based on Uni-9 firmware and modified to work on the IP-Ai hardware.
2. Configure SLP-5 or other third-party software to communicate with the IP-Ai-P as a Uni-9.
3. IP-Ai-P firmware does not support a scale. If a scale is connected it will not be recognized.
4. Added a preset key to display the date and time of the last PLU file and/or Ingredient file update received by the printer. Preset key ID is 505: MASTER RECEIVE TIME.

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- Notes:**
- a. The date and time status is updated only when the PLU file or Ingredient (Extra Message 2) file is received.
 - b. When no updates have been received the preset key displays "No Receive".
 - c. The date and time format is the same as the current date and time displayed in the upper right of the main display.
 - d. The date and time indicate the end of the transmission.
 - e. The date and time will be updated even when only partial data is successfully received.
5. Added a setting to display a calendar when making a temporary date change. The calendar is called by pressing Pack Date or Sell By Date preset keys. The new Calendar Input setting is in the Setup menu > Operation Setting > Input tab.

- Notes:**
- a. Default setting is No.
 - b. The Pack Date and Sell By Date are set separately.
 - c. Press the OK button to accept the change or the Return Arrow to quit.
 - d. Use the "<" (previous) and ">" (next) buttons to change the month.
 - e. The calendar range is limited to one year from the current date.
 - f. A future Pack Date cannot be selected.