

Code Reader Setting Software  
Configurator LP-ABR  
**Operation Manual**

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**LP-ABR10 series**

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# Preface

Thank you for purchasing our product.

For full use of this product safely and properly, please read this manual carefully.

This product has been strictly checked and tested prior to its delivery. However, please make sure that this product operates properly before using it. In case that the product becomes damaged or does not operate as specified in this manual, contact the dealer you purchased from or our sales office.

## ■ General terms and conditions of this manual

1. Before using this product, or before every starting operation, please confirm the correct functioning and performance of this product.
2. Contents of this manual could be changed without notice.
3. This manual must not be partially or totally copied or revised.
4. All efforts have been made to ensure the accuracy of all information in this manual. If there are any questions, mistakes, or comments in this manual, please notify us.
5. Please remind that we assume no liability for any results arising out of operations regardless of the above clauses.

## ■ Disclaimer

The applications described in this manual are all intended for examples only. The purchase of our products described in this manual shall not be regarded as granting of a license to use our products in the described applications. We do NOT warrant that we have obtained some intellectual properties, such as patent rights, with respect to such applications, or that the described application may not infringe any intellectual property rights, such as patent rights, of a third party.

## ■ Trademark

- Windows is a registered trademark or trademark of Microsoft Corporation in the United States and/or other countries.
- All other product names and companies provided in this manual are trademarks or registered trademarks of their respective companies.

## Table of Contents

Before Using Configurator LP-ABR.....	4
i. Glossary.....	4
ii. Functions and Features.....	4
iii. Caution .....	5
Licensing of Software .....	6
1 Install Configurator .....	6
2 Basic Use of Configurator .....	6
2.1 Start Configurator.....	7
2.2 Exit Configurator .....	8
3 Easy setting Mode.....	8
3.1 Connection Dialog.....	9
3.2 Easy setting Tool .....	11
3.3 Procedure of Auto-Tuning .....	11
4 Advanced Setting Mode .....	15
4.1 Registration of the reader to be configured .....	15
4.2 Connection with Code Reader .....	18
4.3 Disconnect from Code Reader .....	19
4.4 Load Configuration.....	20
4.5 Write Configuration Data.....	20
4.6 Save Configuration of Code Reader.....	21
4.7 Configuration of Symbol Reading and Confirmation Method .....	22
4.8 Change the Setting of LAN .....	24
4.9 Confirm Reading in Table Mode .....	26
4.10 Easy setting Tool .....	29
4.11 Advanced Setting.....	39
4.11.1 Menu .....	40
4.11.2 Tool Bar.....	44
4.11.3 Main Configuration Menu .....	46
4.11.4 Setting Sub-screen .....	70
4.11.5 Read Result .....	81
4.11.6 Symbol Print Quality .....	84
4.11.7 Image Viewer .....	85
4.11.8 Table List.....	87
5 Firmware Update.....	89
5.1 Firmware Update Menu .....	89

## Before Using Configurator LP-ABR

Configurator LP-ABR (Configurator) is for the verification of the various settings and reading operation of our product (LP-ABR series). This document describes the method of operation of the Configurator.

### i. Glossary

- Read parameters (Table Information)
  - The multiple configuration items (such as Imaging Range, Illumination Brightness, Shutter Speed, etc.) are called Read parameter. 8 sets of Table Modes can be registered and they are called Table Information.
- Configuration Parameters
  - Configuration Parameters (Table Information, Configuration of Reading Symbols) are the configuration items related to the operation of the Code Reader.
- Soft Trigger
  - Soft Trigger is the reading command by RS-232C/LAN.
- Hard Trigger
  - Hard Trigger is the reading command from the digital input (SYNC input) / membrane key (Read button).

### ii. Functions and Features

- You can operate the auto-tuning function of read parameter and configure the setting of symbol reading easily by Simple Setting.
  - You can load the setting parameter of the Code Reader, display it on the main screen and change the setting by a mouse operation, etc.  
You can save the configuration parameters as a file (text format of extension s) on your computer.
- You can see the captured images with the Code Reader.
  - You can display the captured images with the Code Reader.
  - The displayed images can be saved as a file (BMP format) on your computer.
- You can view the Reading Data of Code Reader
  - You can view the captured symbol data with the Code Reader with the live-view screen and terminal.
  - You can confirm the detailed data (decoding time, etc) adding the diagnosing information.
- You can output the evaluation parameters of ISO15415 or AIM DPM-1-2006

by using the Symbol Check function. (Printing Check Function is not installed in some models of the Code Readers)

■ Supported Models

- LP-ABR Series      Version V1.0a or later

The size of available images, the number of configurable illuminations and functions depend on the model. Configurator can operate only the items of the function that support the connected models. The calculation area of the contrast, capturing area and the upper value of the decoding area depend on the image size.

■ Supported Computers

1. with RS-232C Port or Wired LAN Port
2. with Recommended Monitor Resolution 1024×768 or more

■ Tested OS

- Microsoft® Windows 10                      32bit/64bit
- Microsoft® Windows 8.1                      32bit/64bit
- Microsoft® Windows 7                        32bit/64bit

When ".Net Framework 3.5 SP1" isn't installed, please install ".Net Framework 3.5 SP1".

iii. Caution

The normal operation on the supported OS is confirmed in our company. However this does not guarantee a normal operation in your environment. Note that Configurator may not operate properly depending on the environment even on the supported OS configurator.

A firewall or monitoring function may block the communication on a computer with an anti-virus software installed. As a result, Configurator may not operate properly. At the use of Configurator, refer to the instruction manual of your anti-virus software to daglock the communication block.

Software to establish a server communication is required to view the reading data/captured image through the TCP client communication of the Code Reader.

## Licensing of Software

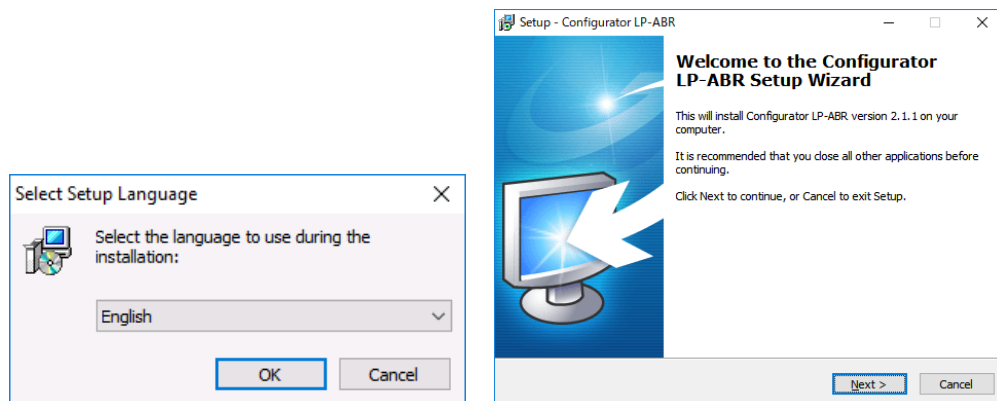
Agreement to the following Conditions is required for the use of this software.

- This software is a tool for functional settings and check the operation of our products and is not intended for actual operation. Operation verification of the product features that are set using the tool is assumed to be the responsibility of the user. Even if any problems such as a failure or damage occurs at an actual operation by the use of this software, we shall not undertake any obligation.
- We shall have no obligation of this software support.
- The copyright of this software and this operation manual shall belong to Mars Tohken Solution.
- The contents of this software and this operation manual may be changed without notice.

## 1 Install Configurator

Run the installer (ConfiguratorLPABR-v\*\*\*.exe) on the computer you want to install the software.

After the start of the installer, select a language and install the software following the messages on the screen.



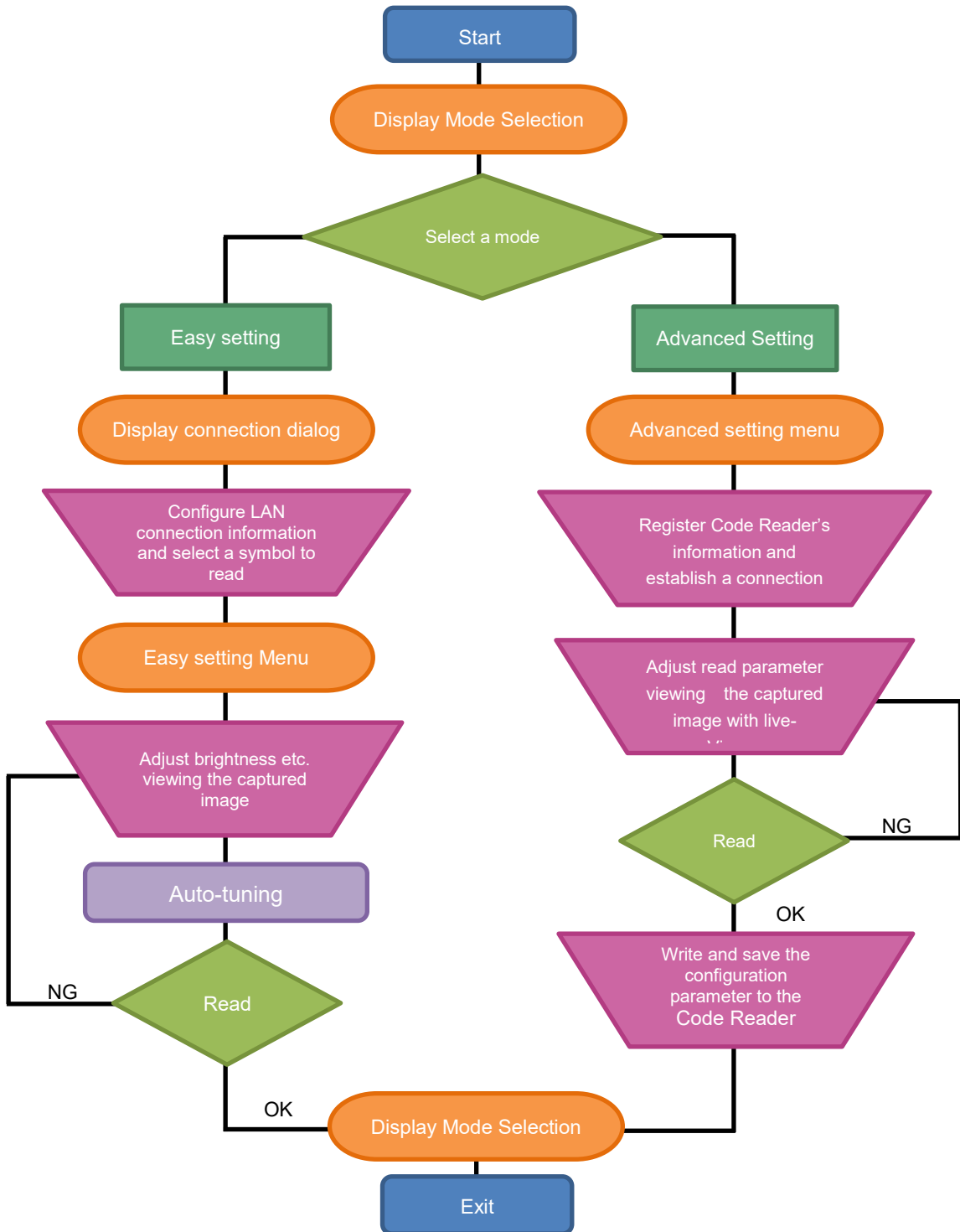
### Reference

Uninstall the currently installed Configurator before upgrade it.

## 2 Basic Use of Configurator

The method to change the configuration parameter of the Code Reader using

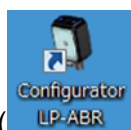
Configurator is as follows:

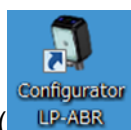


## 2.1 Start Configurator

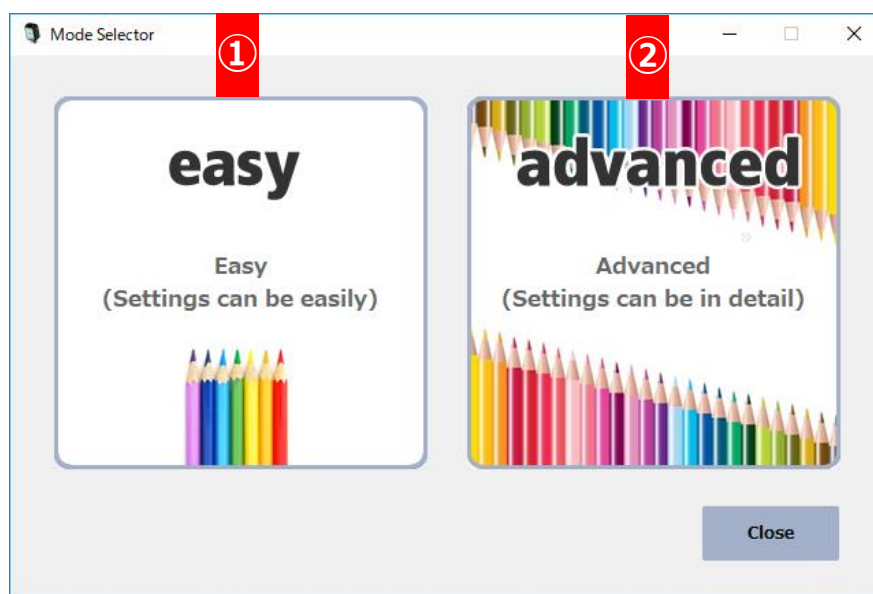
- 1 Connect the Code Reader with the communication port (RS-232C or LAN) of

your computer.



2 Double-click the shortcut (  ) on the desktop or choose in order of [Start] => [All Programs] => [Panasonic-ID SUNX Laser] => [Configurator LP-ABR].

3 The mode selection is displayed on the screen.



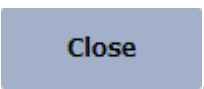
① easy

The mode to adjust the read parameter automatically.

② advanced

The mode to adjust the configuration parameter manually.

## 2.2 Exit Configurator

Click .

## 3 Easy setting Mode

This mode is for adjusting the setting to read the symbols automatically selecting the desired reading symbol. In Easy setting Mode, only the connection through LAN is available.



### 3.1 Connection Dialog

**1 Connect settings with LAN**

Please edit the IP address and port no. or Click **4** Search button

**1** IP Address 192.168.209.10 | **4** Auto Search

**2** Port No(data) 27110

**3** Port No(image) 27110

**2 Choose your target symbols**

Target Symbols

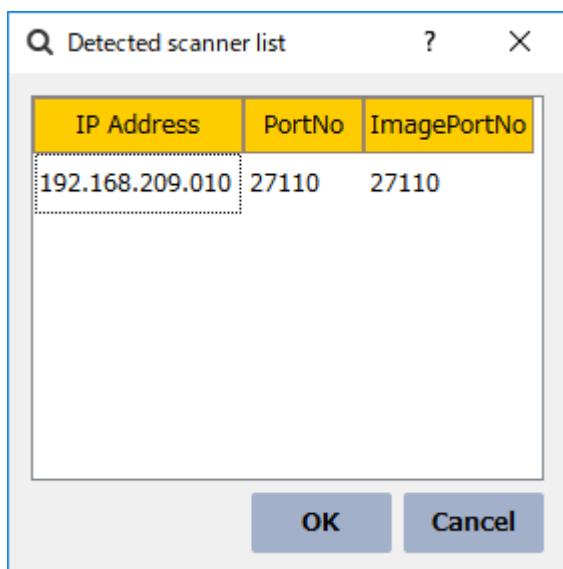
**5**  DataMatrix  QR

**6** Connect

- ① Enter the IP address of the reader which you would like to connect.
- ② Enter the port number which is used for the transmission of reading data and commands.
- ③ Enter the port number for the data receiving.

④ Auto search of IP address and port number

- When you click **Auto Search**, the software searches the LP-ABR series devices connected on the same network domain automatically and displays the result on the screen.



- Double-click the desired device's name from the detected scanner list and click **OK** to select. The selected value is input in the IP address entry field and port entry field of the connection dialog box.

⑤ Choose target symbols.

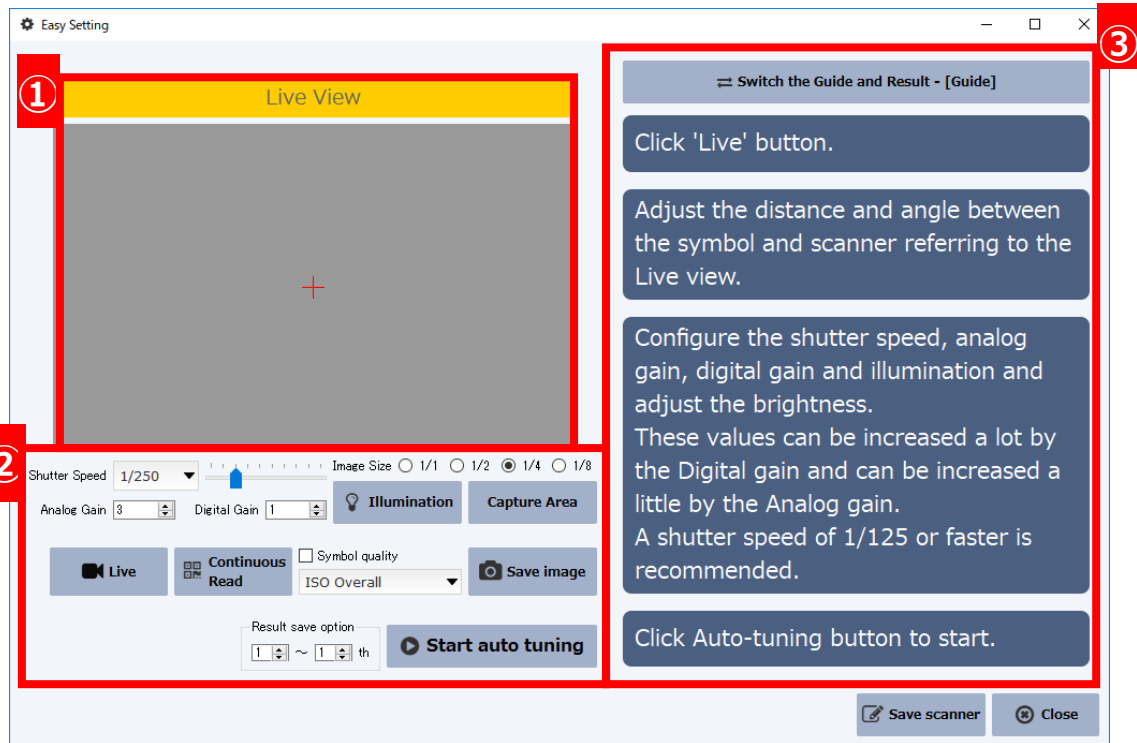
⑥ Establish a connection with the Code Reader.

Click **Connect** to read the configuration parameter with the Code Reader, the Easy setting screen follows.

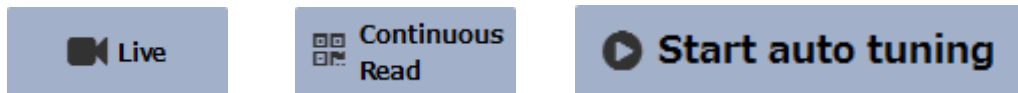
**Reference**

When the UDP broadcast communication is blocked by firewall, etc., you cannot use the automatic search of the destination IP address. Enter the destination IP address manually.

## 3.2 Easy setting Tool



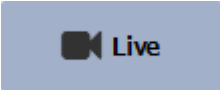
- ① The images which are read with the Code Reader are displayed on the screen only when the following 3 buttons are clicked.




- ② This area is used for the setting of the read parameters and configuration parameters.
- ③ This area is used for the display of the guide and read results for the auto-tuning.

## 3.3 Procedure of Auto-Tuning



Start the Auto-Tuning following the procedure below.

- ① Click .
- The captured image is displayed on the live view screen in real time.
  - if the display speed is slow, it may be improved by reducing the image size.
- ② Adjust the distance and angle of the Code Reader to move the symbol to the center of the angle of view seeing the live view.

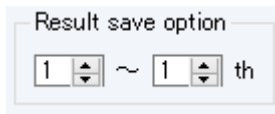
- ③ Adjust the brightness seeing the live view.
- Set the symbol to the visible position changing the value of shutter speed, analog gain and illumination setup.

- ④ Click  to configure the capturing areas necessary.
- The reading performance may be improved by limiting the capture area.


- ⑤ When you finish all the settings, click  to stop the live view.

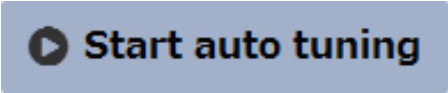
- ⑥ Check this box  When you check this box  , the read parameter of the best read result is displayed in the Table 1. The second and third best results are displayed in the Table 2-3 in good order.

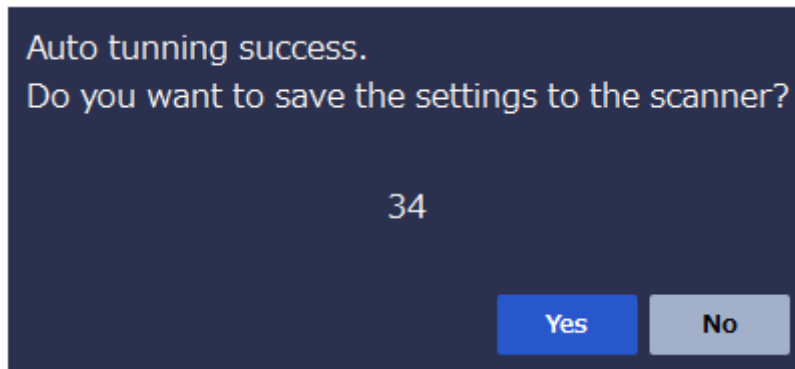
※In case of after a while(Ver.M001f)



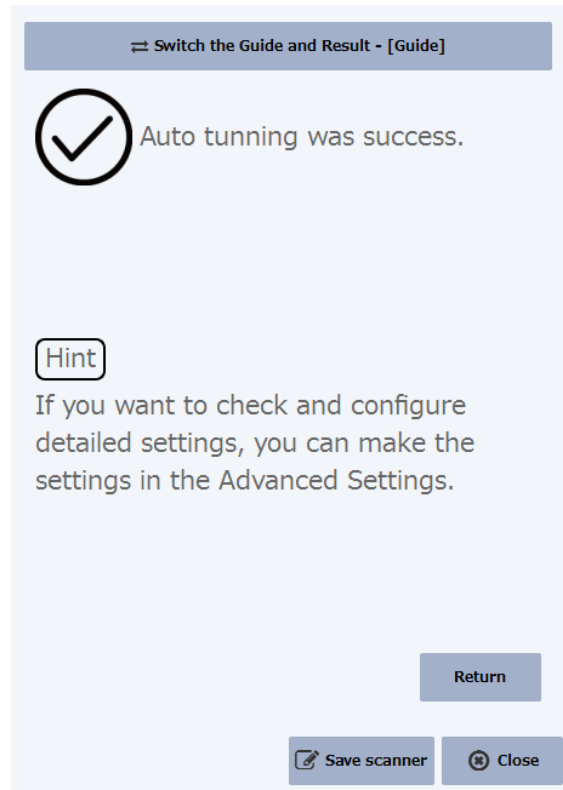
the reading parameter for which a reading result was best enters "the designated table number". When designating it more than 2 tables, only a remaining number is preserved by the table number next to it in turn from the parameter to which a result was preferred in the next. (It can be preserved to at most 3 tables.)

 **Start auto tuning**

- ⑦ Click  to start the auto-tuning.
- ⑧ When the auto tuning is succeeded, a confirmation dialog box below will be displayed.



- When you click **Yes**, a message that the save of configured value by the auto tuning is success will be displayed in the guide area.



- Click **Return** to go back to the guide.
- Click **No** to exit without saving.

#### ⬇ Reference

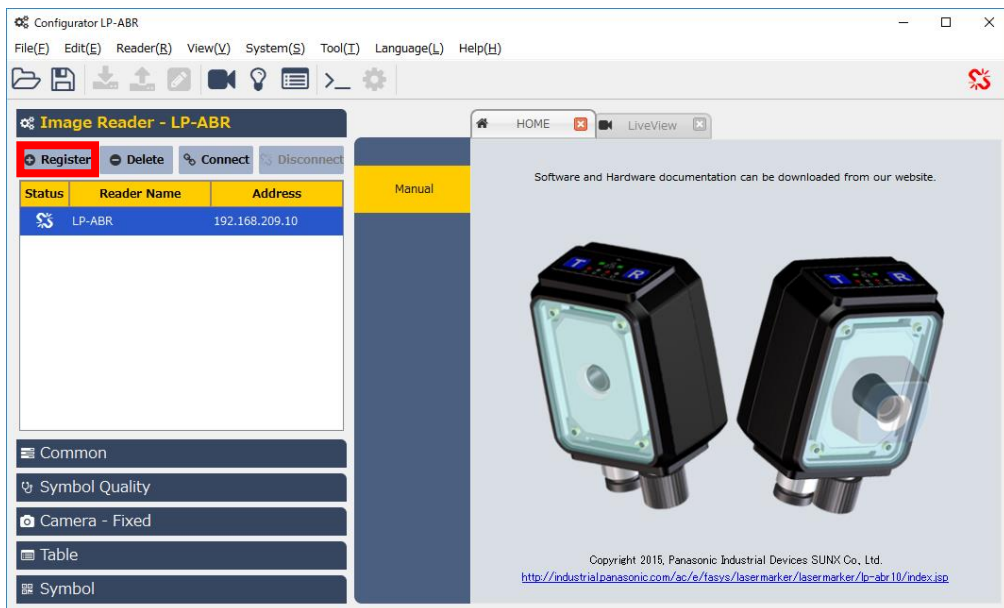
When 40seconds passes without any operation after this dialog box will be displayed, the Code Reader works the same way as the **No** is clicked. The Code Reader cancels the save and goes back to the Easy setting menu.

## 4 Advanced Setting Mode

This mode is for a manual configuration. It allows you to configure the detailed configuration parameter of the Code Reader's configurable functions.

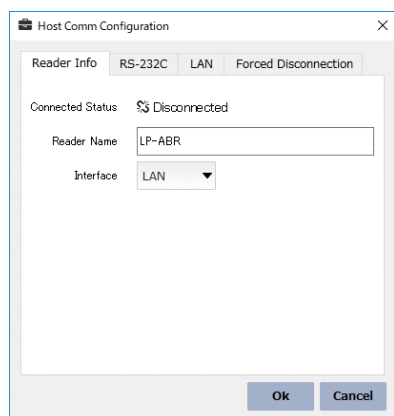
### 4.1 Registration of the reader to be configured

1. Register the reader to be configured.



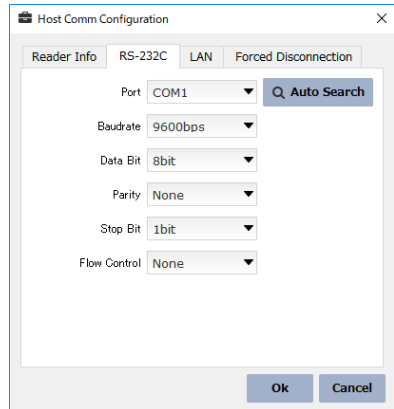
2. New Registration

- Click **Register** to display the host connection setting menu.

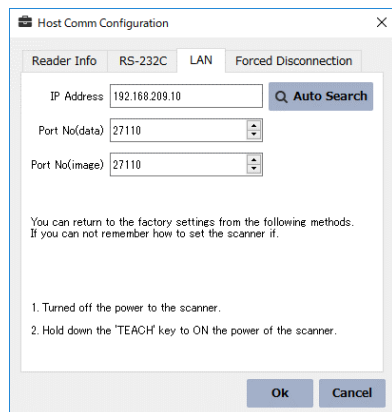


- Click "Reader Info" tab.
- Enter the Reader Name.
- Select a communication interface for the send and receive.

- Note that a LAN connection is required at the configuration of read parameter with the live preview of the image.



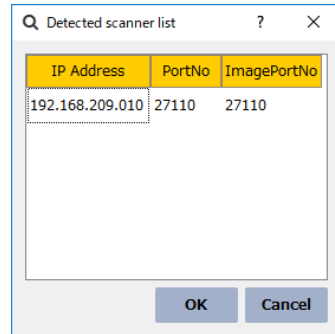
- Click “RS-232C” tab if you want to configure by RS-232C.
- The “Port Names” which are installed on your PC are displayed in a list. Select the port name which the Code Reader is connected.
- Configure “Baud rate”, “Data Bit”, “Parity”, “Stop Bit” and “Flow Control” to appropriate values depending on the setting of the Code Reader.
- When you click **Auto Search** when a “Port Name” is selected, the Code Reader searches and displays its communication setting automatically.



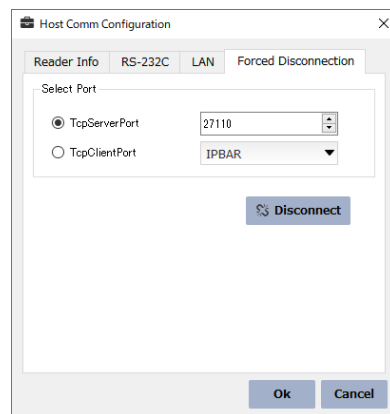
- Click “LAN” tab for the LAN setting. Refer to “4.8 Change the Setting of LAN” for more detail.
- Enter the information which are set on the Code Reader in “IP Address”, “Port Number (data)”, and “Port Number (data)”.



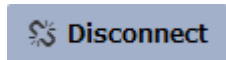
- When you click **Auto Search**, the Code Reader automatically loads the Code Reader that is connected to the same network domain, and displays the results in a list.



- Select an Code Reader which you want to configure from the list and double-click/click **OK** to enter the setting values in the entry fields.

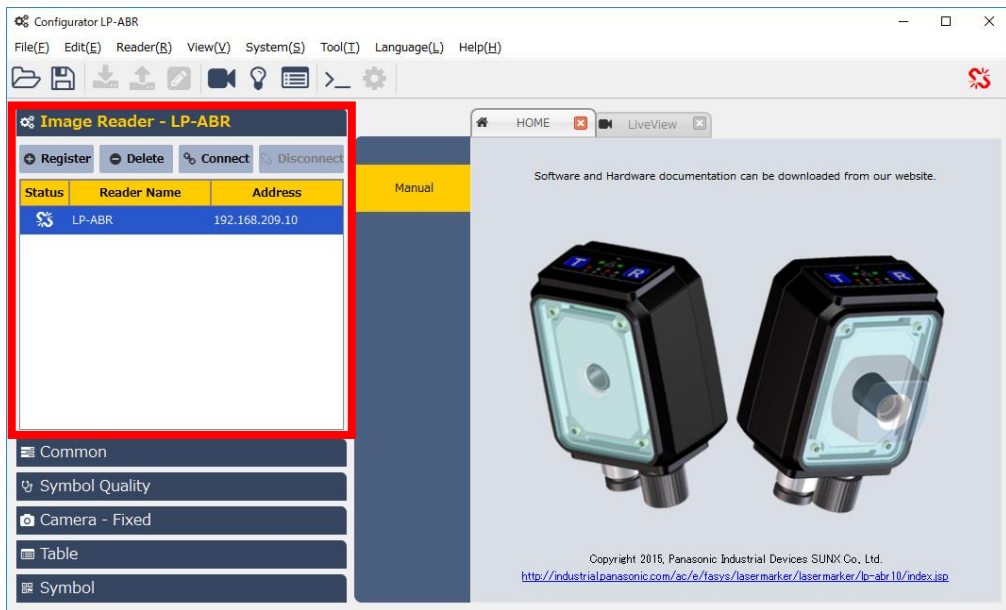


- If you want to terminate the network connection of the Code Reader when the LAN cable is disconnected accidentally, click “Forced Disconnection” tab.
- Enter the port name which the Code Reader was connected with and click



- **Disconnected** will be displayed on the screen when the connection is terminated properly.

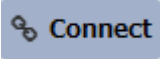
- Click **OK** after entering all the information. The information of the configured Code Reader will be displayed in the “Code Reader”.

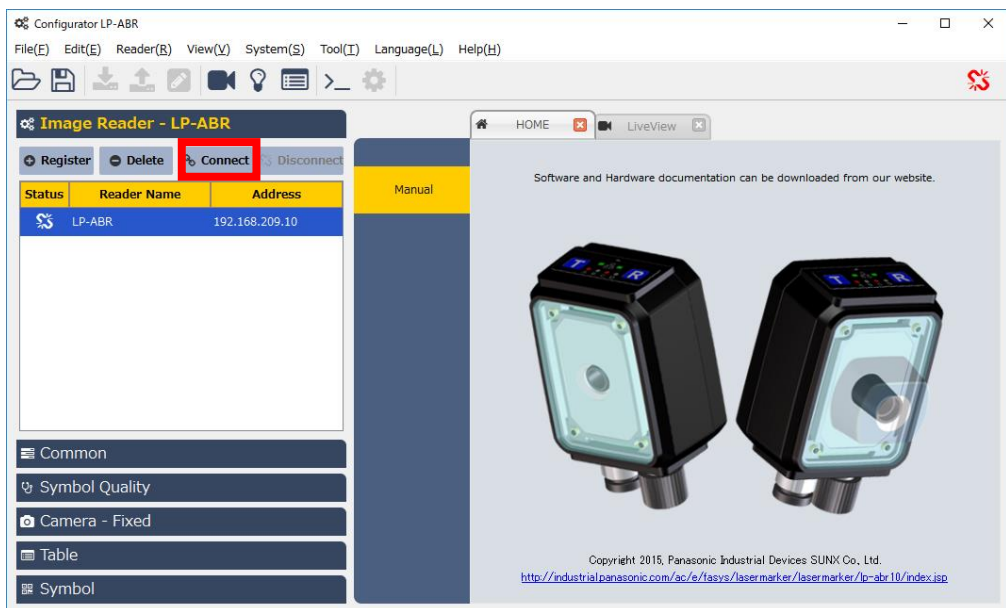


To edit a registered Code Reader setting:

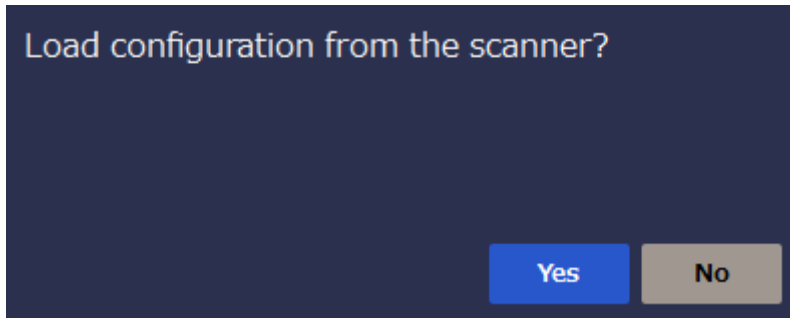
- Select the Code Reader's name from the "Scanner List" and double-click.
- After the "Host Communication Setting" is displayed on the screen, edit the setting in the same way as the "Host Communication Setting".

## 4.2 Connection with Code Reader

1. Select the Code Reader's name from the "Code Reader" and click  to connect with the Code Reader.



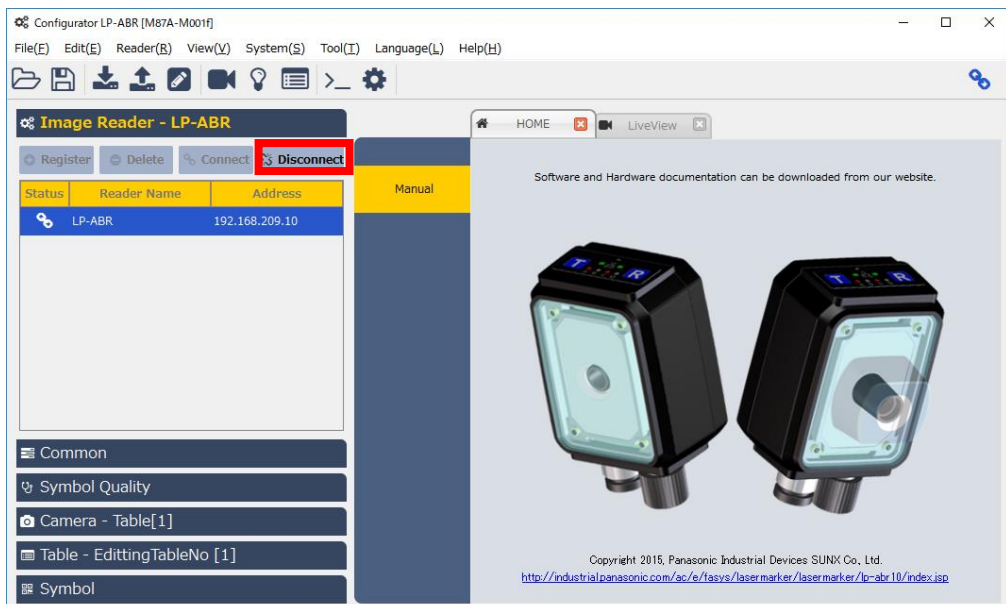
- When the Code Reader is connected properly, **Connected** will be displayed on the screen.
- When the connection is established, the confirmation dialog box whether to load the configuration from the Code Reader will be displayed on the screen.



- Click **Yes** to load the configuration information from the Code Reader and reflect it to the Configurator.
- Click **No** if you do not want to load the configuration information from the Code Reader.

#### 4.3 Disconnect from Code Reader

- To disconnect from the Code Reader, select the Code Reader's name from the list and click **Disconnect**.



2. When the Code Reader is disconnected properly, the message


Configure LP-ABR Disconnected

will be displayed on the

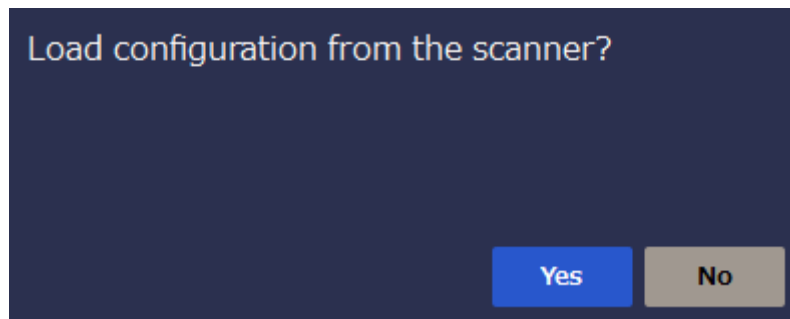
screen.



#### 4.4 Load Configuration

1. To load the configuration from the Code Reader, select "Reader" => "Load

Configuration" from the menu or click  in the tool bar.


2. The selection dialog box whether to load the configuration is displayed on the screen.



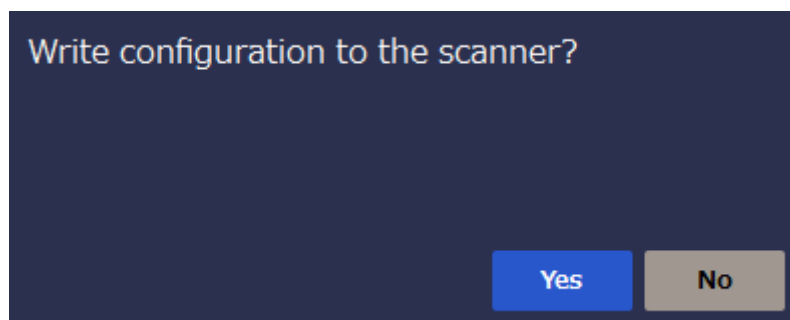
3. Click  to load the configuration parameter from the Code Reader and reflect to the Configurator.
4. Click  to cancel the load of the configuration parameter.

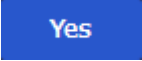
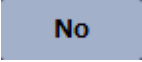
#### 4.5 Write Configuration Data

1. To write the parameter configured by the Configurator to the Code Reader, select


"Reader" => "Write Configuration" or click  in the tool bar.

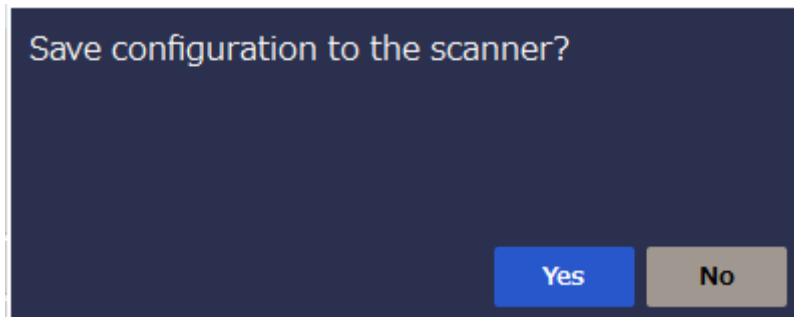
2. The confirmation dialog box whether to write is displayed on the screen.

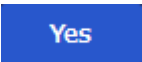
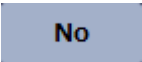


3. Click  to write the configuration parameter to the Code Reader.
  - The written configuration parameters do not be written to the non-volatile memory as long as you do not set data retention. Note that the configuration data will be discarded when the power of the reader is OFF.
4. Click  to cancel writing the configuration parameter.

#### 4.6 Save Configuration of Code Reader

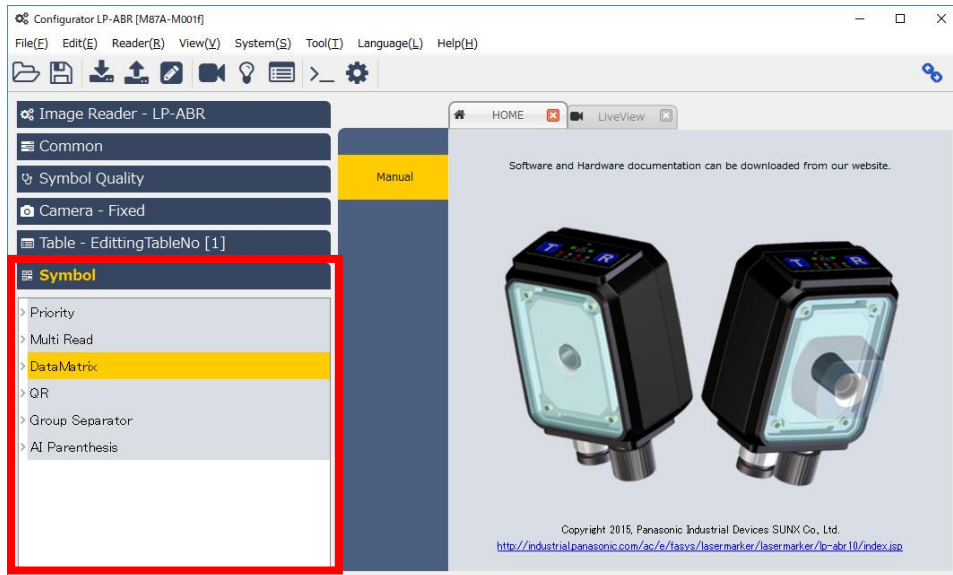
1. When the Code Reader is powered OFF, the configuration parameter will be discarded. To retain the configuration parameter after the Code Reader is powered OFF, data retention is required.
2. To save the configuration parameter, select “Reader” => “Save the Data” or click  in the tool bar.
3. The confirmation dialog box whether to save the configuration parameter is displayed on the screen.



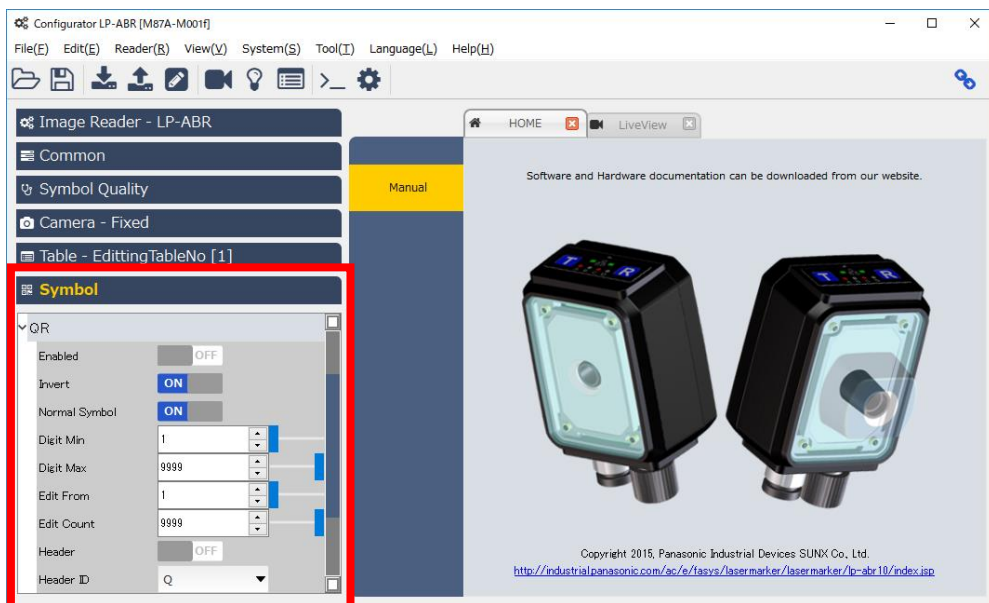
4. Click  to write the configuration parameter of the Code Reader to the non-volatile memory.
5. Click  to cancel the “Data Retention” to the non-volatile memory.

#### 4.7 Configuration of Symbol Reading and Confirmation Method

1. To configure the symbol reading, select the target symbol in the symbol configuration.
2. Click “Symbol Setting” and select enable/disable to decide which symbols to target.

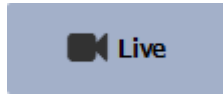


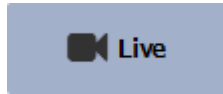
3. The targets which are already enabled as a reading target are highlighted.
4. Click the symbol name to read and select enable/disable.

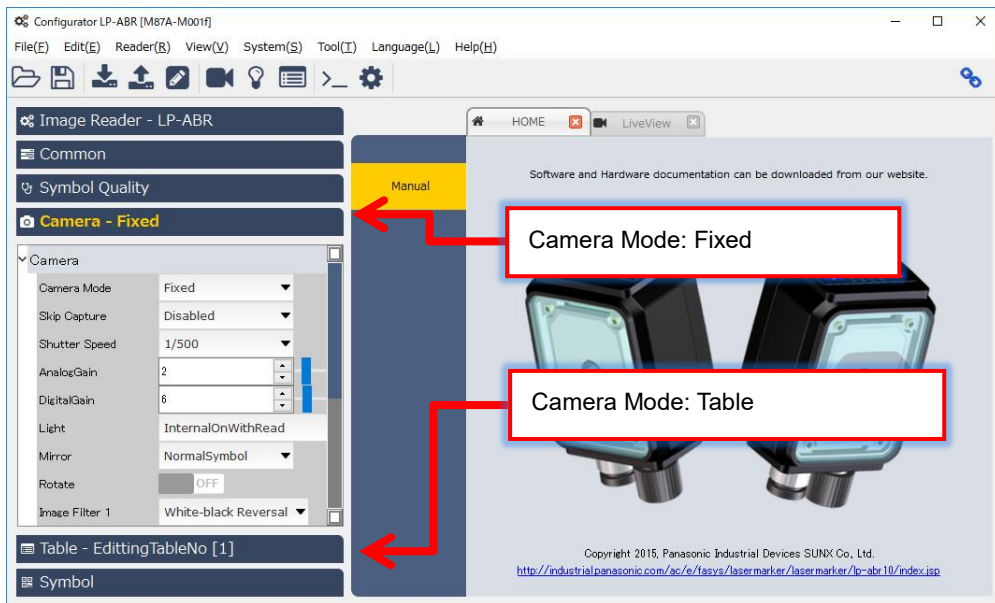


5. Click “ON” to enable the symbol. Configure other setting such as “inversion” as needed.

- Refer to “4.5 Write Configuration Data” to write the configuration parameter to the Code Reader.



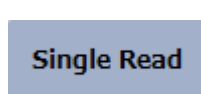
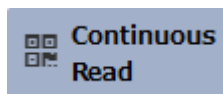
- Click  in the “Live View” tab.
- After the live view is displayed, the configurable parts of the read parameter depending on the camera mode which is set on the Code Reader will be displayed on the screen.

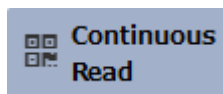
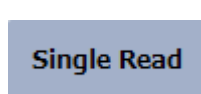


- The change of setting value such as shutter speed, analog gain is displayed on the live view in real time.
- Adjust the focus viewing the live screen to display the image properly.



- Click  to stop the live view.



- Click  or  to check if the symbol can be read.

- If the symbol reading is successful, the symbol data will be displayed in the lower left corner of the live screen.

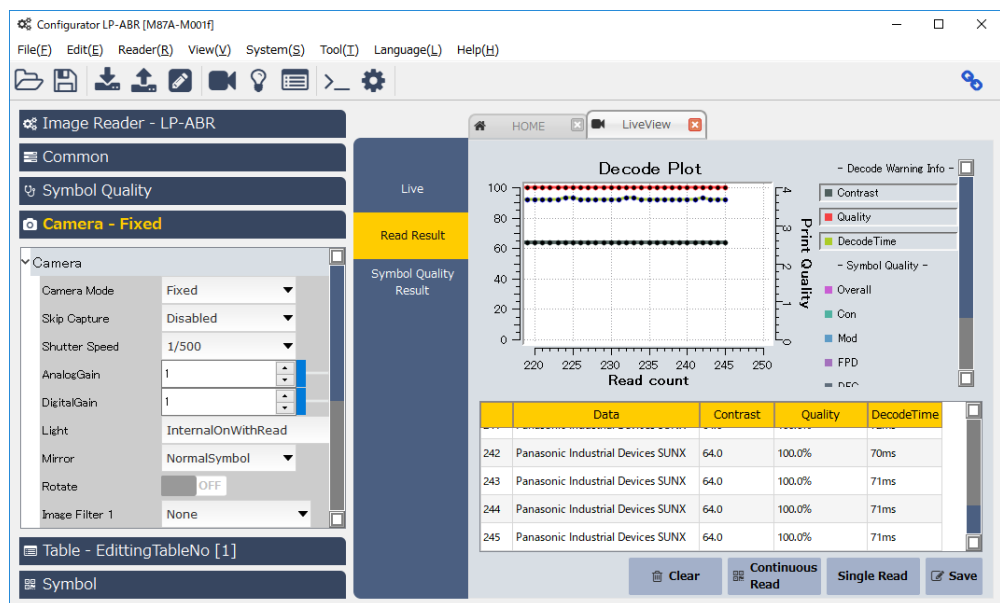
A frame is shown to the symbol recognized again.

Red : I wouldn't like the symbol reading state.

Yellow : The symbol reading state isn't that good.

Green : I'd like the symbol reading state.

- For the detailed read results, click “Read Result” in the sub menu of the “Live View” tab.



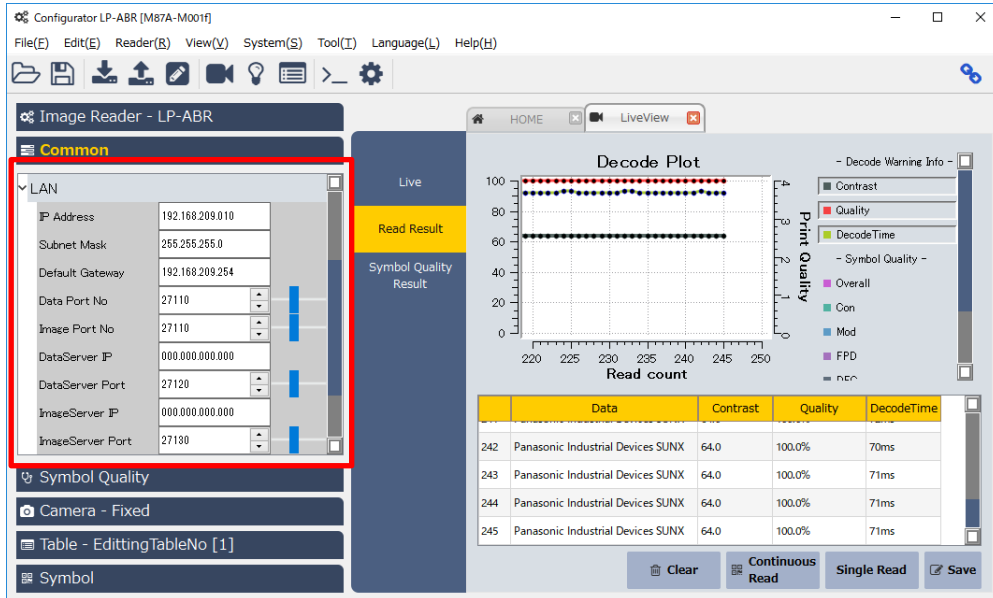
- The Code Reader displays the result on the screen adding the decoded symbol’s contrast, unused error correction, decode time, etc.
- Refer to “4.11.5 Read Result” for the detailed items.
- When the output setting for “Symbol Print Quality” configuration parameters is ON, you can output the print quality information of the decoded symbol. Refer to “4.11.6 Symbol Print Quality” and “4.11.5 Read Result” for the detail.

#### 4.8 Change the Setting of LAN

- To configure via LAN connection, set the IP address of the PC using the one in the same network as the Code Reader. This IP address should be currently unused and different from the Code Reader's. Refer to the instruction manual for the default values of the setting related to the Code Reader’s LAN.
- Connect to the Configurator and the reader referring to “4.1 Registration of the reader to be configured” and “4.2 Connection with Code Reader”.



3. To change the setting of LAN, select “LAN” from the general setting.



To connect with an IP address which is different from the displayed one, enter the IP address you want to change. Configure the port number, subnet mask and default gateway depending on your network environment.

Configure other items when you use the Code Reader as a TCP client at a communication. Note that Configurator does not support TCP server communication.

To receive the data from the Code Reader via TCP server communication, a software that supports TCP server communication is required.

4. Refer to “4.5 Write Configuration Data” to write the configuration data to the Code Reader. The configuration related to LAN connection is not reflected at this point. (The configuration will be reflected after the data writing, saving and restarting the computer)
5. Refer to “4.6 Save Configuration of Code Reader” to save the configuration which is written to the Code Reader.
6. Disconnect Configurator from the Code Reader and power off the Code Reader.
7. Change the IP address of the computer to establish a connect ion as needed.
8. Power on the Code Reader.

9. Refer to “4.1 Registration of the reader to be configured” and “4.2 Connection with Code Reader” to establish a connection with a new configuration.

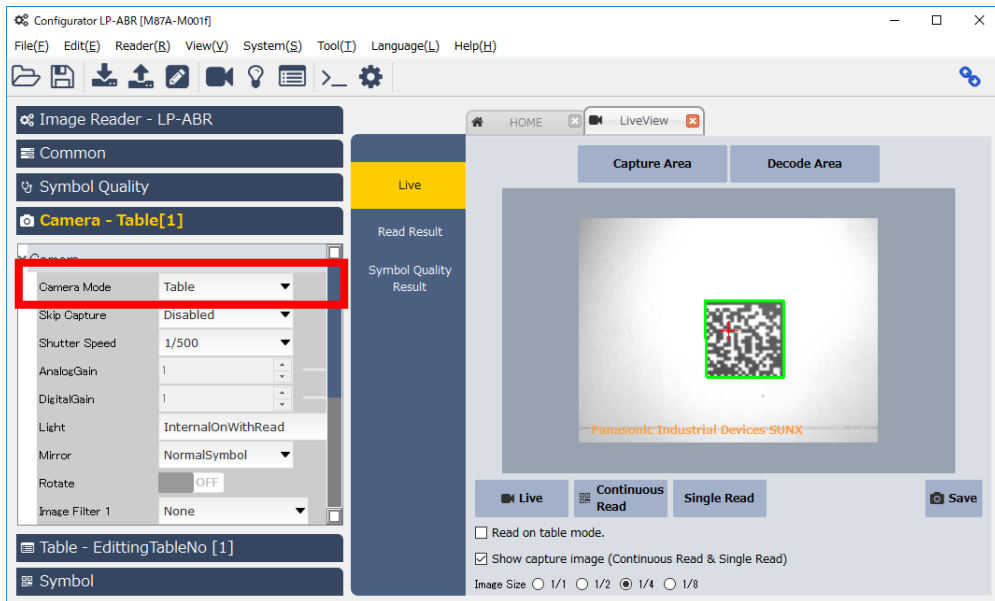
**Notice**

Contact with the network administrator if the network setting is unknown. A wrong setting may affect the current network.

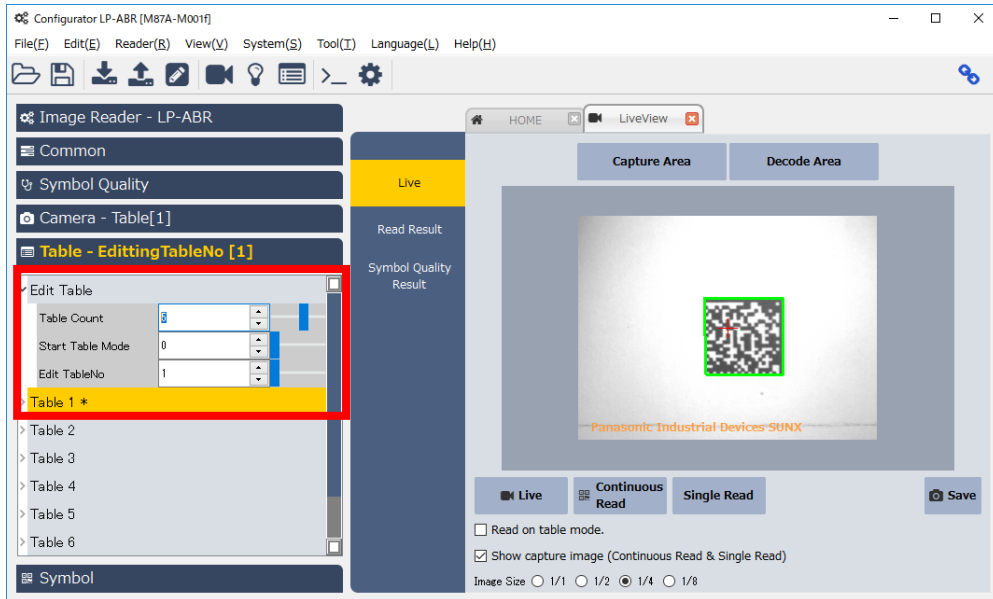
#### 4.9 Confirm Reading in Table Mode

The Code Reader reads symbols using maximum of 8 tables. When the reading is successful, the Code Reader uses the table setting at the next reading. When the reading is failed, the Code Reader uses the next table setting. Refer to the instruction manual for the detail of Table Mode.

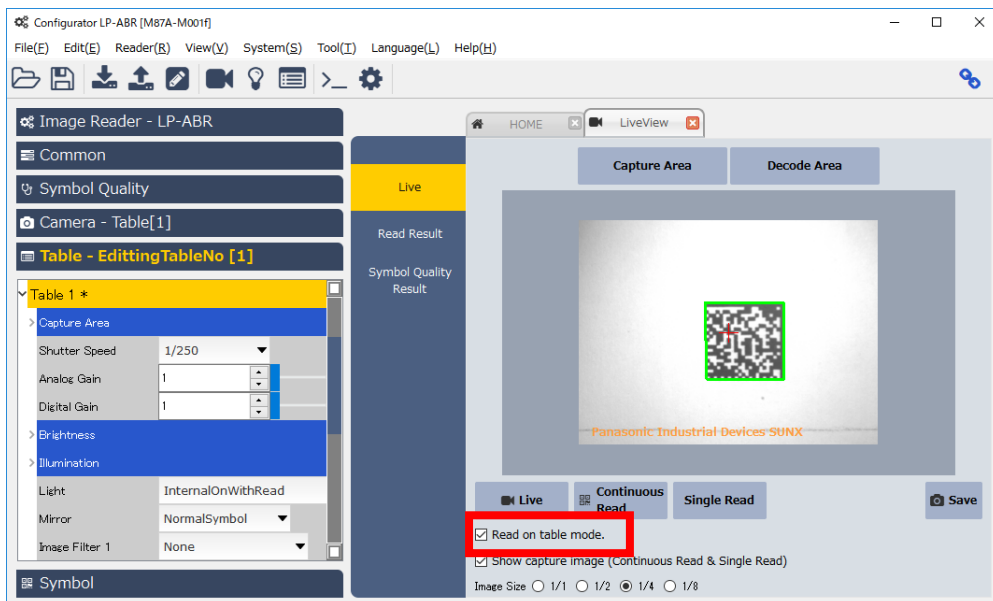
1. Refer to “4.1 Registration of the reader to be configured” and “4.2 Connection with Code Reader” to connect Configurator with the reader.
2. Select “Camera” in the menu and change the “Camera Mode” into “Table”.



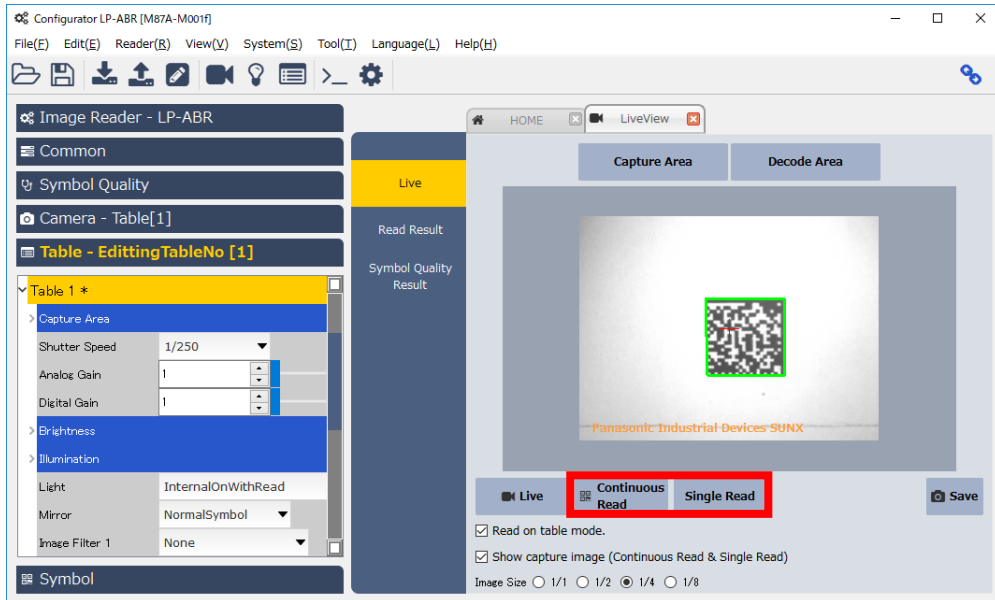
3. Select “Edit Table” in “Table” menu.



4. Set the number of tables to use. (e.g. The Code Reader uses table 1-5 if you set the number “5”.)
5. Set the “Start Table Mode” for “0”.
6. Check “Read on Table Mode”. Refer to “Live-view” in “4.11.4 Setting Sub-screen” to operate without the check.



7. Refer to “4.5 Write Configuration Data” to write the configuration parameter to the Code Reader.
8. Click “Continuous Read” or “Single Read” for a reading check. (Refer to “4.11.8 Table List” for the setting of each table).



## 4.10 Easy setting Tool

The screenshot shows the 'Easy Setting' window. At the top is a yellow 'Live View' header. Below it is a large grey area with a red crosshair. To the right of this area is a panel with a 'Switch the Guide and Result - [Guide]' button, followed by three text boxes: 'Click 'Live' button.', 'Adjust the distance and angle between the symbol and scanner referring to the Live view.', and 'Configure the shutter speed, analog gain, digital gain and illumination and adjust the brightness. These values can be increased a lot by the Digital gain and can be increased a little by the Analog gain. A shutter speed of 1/125 or faster is recommended.' Below these is a 'Click Auto-tuning button to start.' button. At the bottom right are 'Save scanner' and 'Close' buttons.

### ① Captured image display area

When “Live”/ “Continuous Read”/“Auto Tuning” button is pressed, the images captured with the Code Reader will be displayed in this area in real time.

### ② Configuration Area

This area is used for the configuration of the parameters of auto tuning or reading check.

This detailed view shows the configuration area with the following numbered callouts: 1. Shutter Speed (1/250), 2. Analog Gain (8), 3. Digital Gain (1), 4. Image Size (radio buttons for 1/1, 1/2, 1/4, 1/8), 5. Illumination (lightbulb icon), 6. Capture Area (camera icon), 7. Live (video camera icon), 8. Continuous Read (document icon), 9. Save image (camera icon), 10. Symbol quality (checkbox), 11. ISO Overall (dropdown menu), 12. Result save option (1 ~ 1 th), and 13. Start auto tuning (play button icon).

#### 1. Shutter Speed

- Adjust shutter speed in this field.
- The shutter speed can be changed during live/continuous read operation. The change is reflected in the captured image display area in real time.

#### 2. Analog Gain

- Adjust analog gain in this field.
- The analog gain can be changed during live/continuous read operation. The change is reflected in the captured image display area in real time.

#### 3. Digital Gain

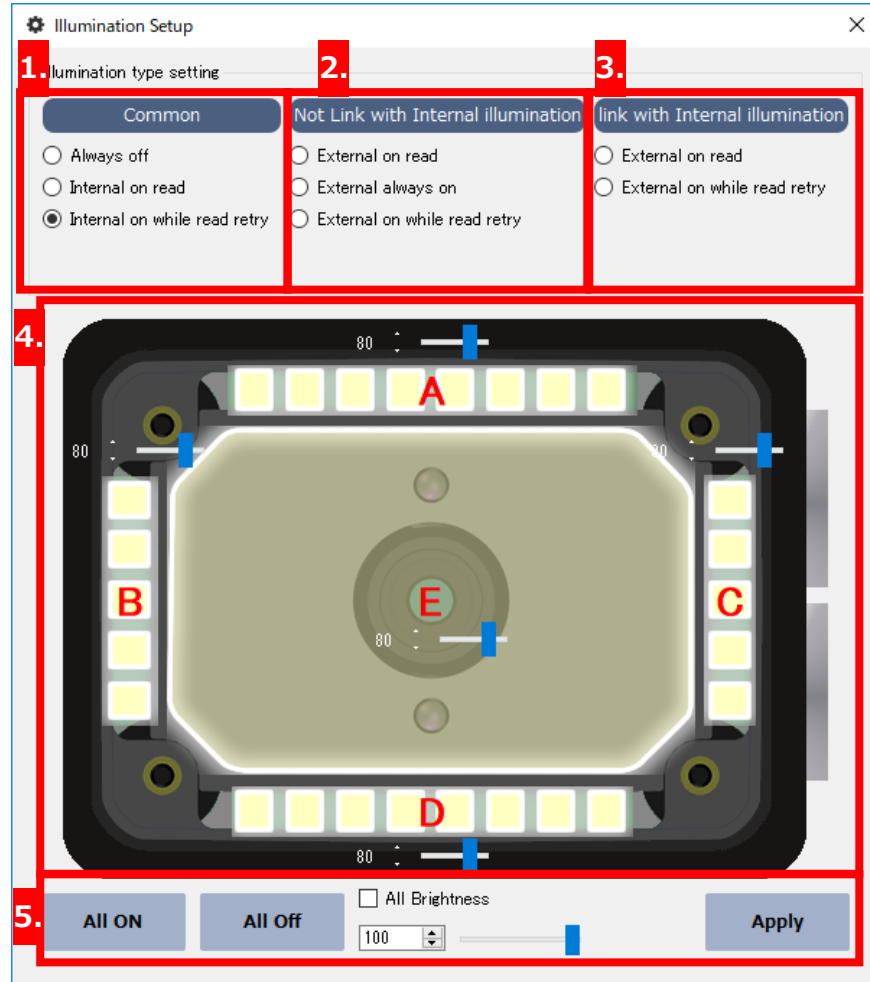
- Adjust digital gain in this field.
- The digital gain can be changed during live/continuous read operation. The change is reflected in the captured image display area in real time.

#### 4. Image Size

- Select the image size when you import a captured image from the Code Reader. The more the image size is small, the faster the display speed.
- The image size can be changed during live/continuous read operation. The change is reflected in the captured image display area in real time.

5. Illumination setup

- Display the illumination setup on the screen.
- When you click “Illumination” button, the following window will be displayed on the screen.



1. Common

Always off	No Illumination
Internal on read	Turns ON the internal illumination at the use of Hard Trigger/Soft Trigger .
Internal on while read retry	Turns on the internal illumination during reading operation at SYNCMODE=1

2. Not Link with Internal illumination

Configures the external illumination.

External ON read	Turns ON the external illumination at the use of Hard Trigger/Soft Trigger .
External always ON	Always lights the external illumination regardless of the state of the trigger.
External ON while read retry	Turns on the external illumination during reading operation at SYNCMODE=1 or SYNCMODE=2.

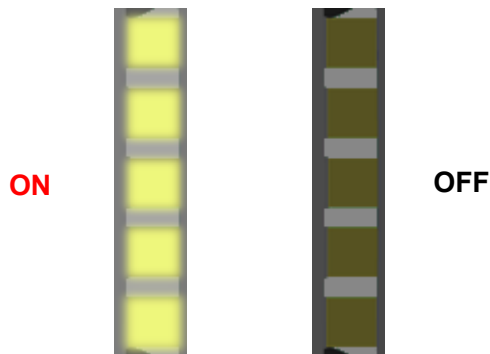
3. Link with Internal illumination

Configures the external illumination works with the internal.

External ON Read	Turns on both of the internal and external illumination at the use of Hard Trigger/Soft Trigger .
External ON while Read Only	Turns on both of the external illumination during reading operation at SYNCMODE=1 or SYNCMODE=2.

4. Configuration of Internal Illumination and brightness value

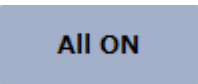
- Click any part of A,B,C,D, and E to switch the Internal illumination ON and OFF.

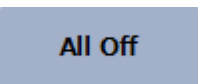



- Click and drag in the slider  to change the brightness value of each illumination (A,B,C,D, and E).

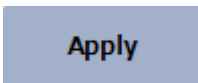


5. Batch Configuration of Illumination and Application of Configuration of Configurator

- Click  to turn ON all the illumination in A,B,C,D, and E parts.

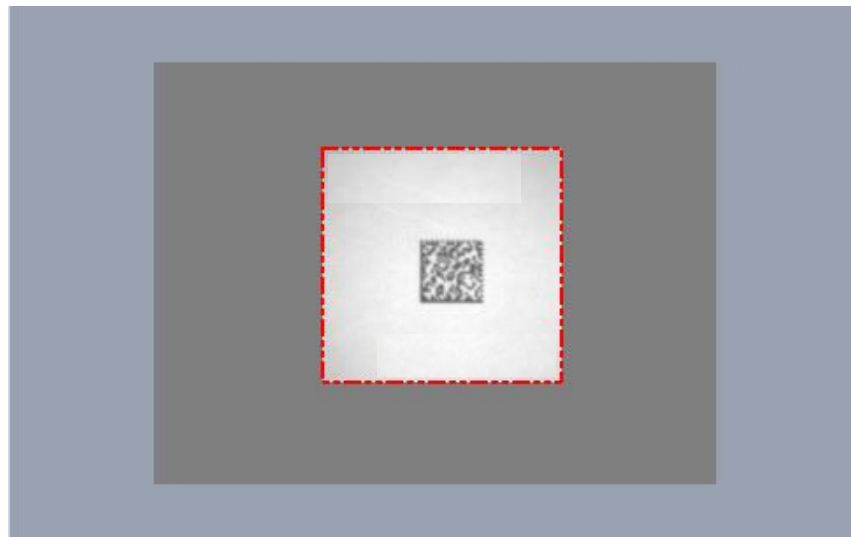
- Click  to turn OFF all the illumination in A,B,C,D, and E parts.

- Check “All Brightness”  to change all brightness slider values to the same value.

- Click  to reflect the illumination setup to the Code Reader.

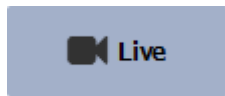
6. Capture Area

Click “Capture Area” to display the frame with red dotted line which indicates the captured area in the captured image display area.



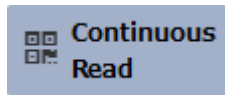
Click and drag the corner of the frame with red dotted line to change the capture area. When you do this operation during operations, it is reflected to the setting in real time.

## 7. Live



- Click **Live** to display the captured image with the Code Reader in the captured image display area in real time.

## 8. Continuous Read



- Click **Continuous Read** to display the image captured with the Code Reader in the captured image display area in real time and to read the symbols.
- Click “Switch the Guide and Result” in Easy setting menu to display the detail of the read result.

The screenshot shows a software interface with a menu titled "Switch the Guide and Result - [Result]". On the left, there are four instruction boxes: "Click the 'Live' button.", "Look at the live view, please adjust the distance and angle of the symbol and the scanner.", "You can set the lighting, shutter speed, the gains to adjust the brightness. These values can be increased a lot by the Analog gain and can be increased a little by the Digital gain. A shutter speed of 1/125 or faster is recommended.", and "Click the 'Auto Tuning' button.". A red arrow points from the third box to the right. On the right, the "Decode Plot" graph shows "Print Quality" on the y-axis (0 to 100) and "Read count" on the x-axis (150 to 180). Below the graph is a table with columns "Date", "Contrast", and "Quality".

Date	Contrast	Quality
172 Panasonic Industrial Devices S...	63.0	100.0%
173 Panasonic Industrial Devices S...	63.0	100.0%
174 Panasonic Industrial Devices S...	62.0	100.0%
175 Panasonic Industrial Devices S...	62.0	100.0%
176 Panasonic Industrial Devices S...	63.0	100.0%

## 9. Save Image

- After any of the operation of Live, Continuous Read and Auto Tuning, click with the captured image is displayed on the screen to display the dialog box to save a bitmap file. Enter the location and the file name and click the “Save Image” button to save the file as a bitmap file.
- The file is saved as a 8-bit color bitmap.

## 10. Symbol quality

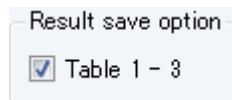
- Enable the Symbol quality to check the print quality of the symbol in read result (③) when the read is successful.

11. Standard to be Adopted in Symbol quality

- You can select the standard to be selected in the Symbol quality.
- If you want to display all the quality items, select “ISO” or “AM DPM-1-2006”.

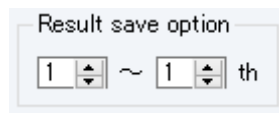
12. Saving Result Option

- When the auto tuning is successful, select how to save the read parameter.



- Check “Result save option” to save the read result to each of the read parameter which is used in fixed camera mode and the table 1-3 which is used in the table mode when you save read parameters. Uncheck “Result save option” to save only the best result to the read parameter which is used in fixed camera mode.

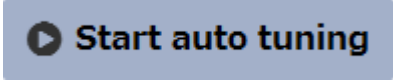
※In case of after a while(Ver.M001f)

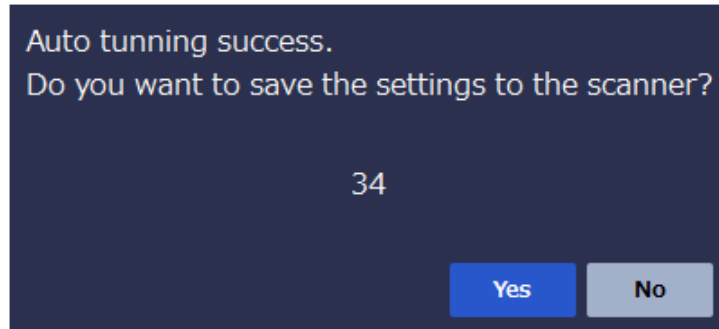


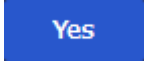
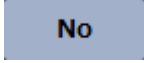
the reading parameter for which a reading result was

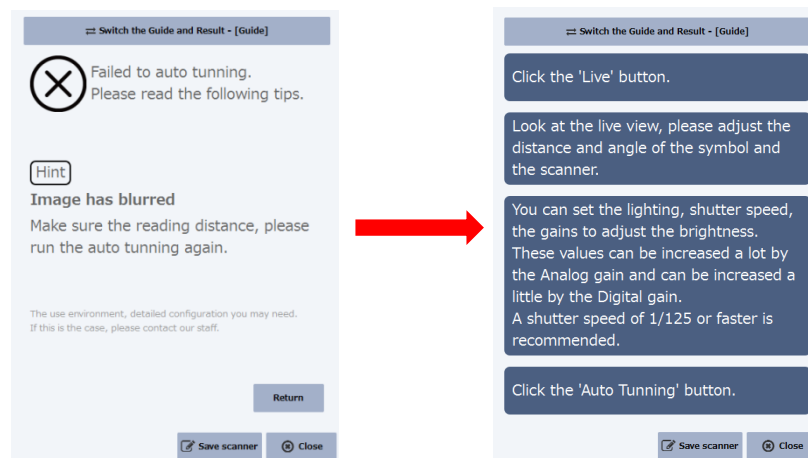
best enters "the designated table number". When designating it more than 2 tables, only a remaining number is preserved by the table number next to it in turn from the parameter to which a result was preferred in the next. (It can be preserved to at most 3 tables.)

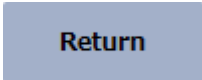
### 13. Auto Tuning

- Click  to start Auto Tuning of read parameter.
- When the auto tuning is successful, the following confirmation dialog box will be displayed on the screen.

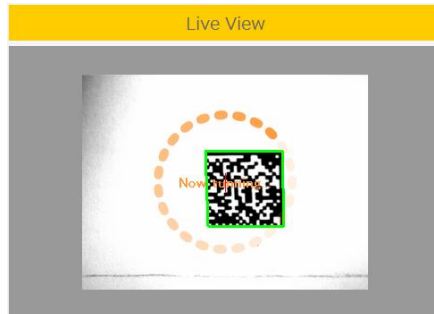


- Click  within 40 seconds to save the read parameter which was selected in the save result option. The message which indicates that the save was successful will be displayed in the ③ area. If 40 seconds passes with no action, the save of auto tuning result will be cancelled.
- You can check the result which was read by auto tuning when you click the switching button of the guide display in the ③ area soon after the auto tuning.
- Click  to cancel the save of auto tuning result.
- If the auto tuning is failed, a “Auto Tuning Failed” message will be displayed in the ③ area.



- Click  to go back to the auto tuning guide.

- The occasion after Ver.M001f classifies by color the symbol used for judgment according to the reading situation by a frame, and indicates an emphasis.



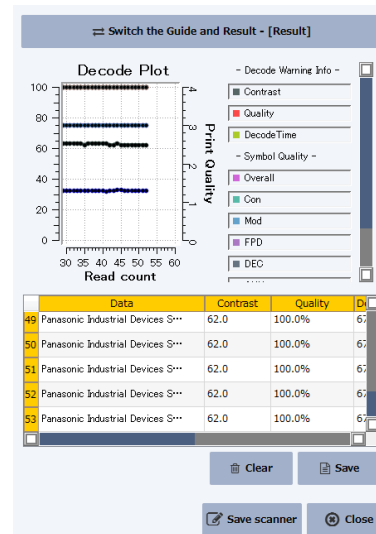
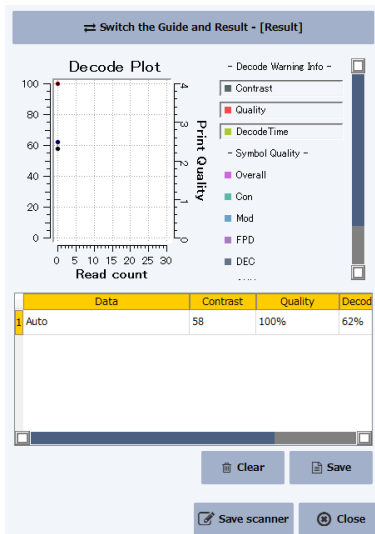
Judgment	The item		
	contrast	Unused slip orrection	decoding time margin
good	55%~100%	75%~100%	40%~100%
normal	20%~54%	50%~74%	20%~39%
bad	0%~19%	0%~49%	0%~19%


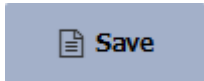
### ③ Guide and Display of Read result

- The guide and read result are displayed in this area.

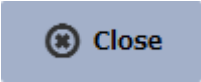
⇄ Switch the Guide and Result - [Guide]

- Click to switch the display of the read result and guide.
- The operation steps until start the auto tuning is written in the guide. Follow the steps to start the auto tuning properly.
- The read result displays the value read by auto tuning or the symbol data read by continuous read.

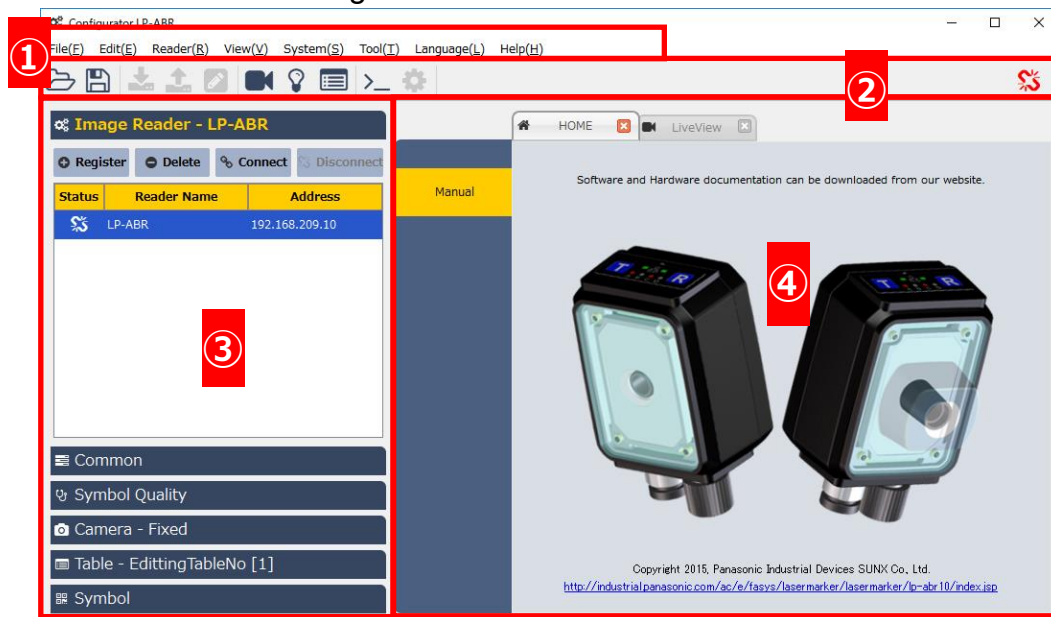


- “Auto” will be displayed in the “Data” part if the result was read by auto tuning.
- The decoded symbol data or print quality result (when the printing check function is enabled only) are displayed on the screen If the result was read by the continuous read.
- Click  to delete the read result.
- Click  to save the read result as a CSV file.
- Click the legend parts of the graph of the test results monitor (Contrast, Quality, DecodeTime, etc.) to hide or display them in the read result.
- Refer to the “4.11.5 Read Result” for the detail.

④ Close

- Click  to exit the Easy setting menu.
- The operation may be different from the instruction on the screen after closing the menu depending on the timing when you started the Easy setting.
  - The connection between the Code Reader will be disconnected by closing the menu. After the disconnection, you will go back to the mode selection.
  - If you start the Configurator from the advanced setting menu, the connection between the Code Reader is sustained and you will go back to the advanced setting menu.

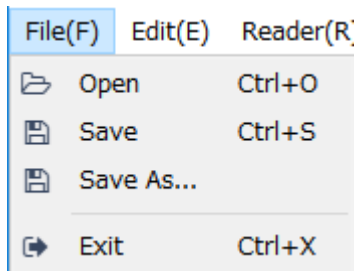
## 4.11 Advanced Setting



- ① Menu
- ② Tool Bar
- ③ Reader List and Main Setting Menu
- ④ Sub Setting Menu

#### 4.11.1 Menu

##### 1. File



Open:

Opens the setting file and reflect it to the Configurator.

Save:

-Saves the parameter configured by Configurator

-If the configuration file is opened, the file is overwritten to an opened configuration parameter.

-If no configuration parameter is opened, a new configuration file will be created and saved.

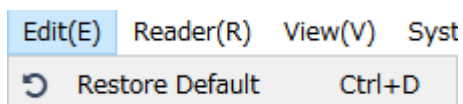
Save as..:

Creates a new configuration file and saves it.

Exit:

Return to mode selector screen.

##### 2. Edit









Return to the default setting:

Returns the parameter configured by the Configurator to the default.



### 3. Reader

Reader(R)	View(V)	System(S)	Tool(T)
	Read Config		Ctrl+F1
	Write Config		Ctrl+F2
	Save Config		Ctrl+F3
	Symbol		
	Restore Default Settings		Ctrl+F4
	Restore Lan Settings		Ctrl+F5

#### Read Config:

Read the configuration parameter from the Code Reader and reflects the parameter to the Configurator.

#### Write Config:

- Write the parameter configured by the Configurator to the Code Reader.
- If you have not done the data retention, the data will be deleted when you turn off the power of the Code Reader.

#### Save Config:

Stores the configuration parameter which is set in the Code Reader to the non-volatile memory of the Code Reader.

#### Symbol:

Configures the setting related to the reading of all symbols.

Read Symbol All Disabled
Symbol Header All Enabled
Symbol Header All Disabled
Symbol Footer All Enabled
Symbol Footer All Disabled

- Read Symbol All Disabled:  
Disables all the symbol setting.
- Symbol Header All Enabled:  
Enables the symbol headers of all symbols.
- Symbol Header All Disabled:  
Disables the symbol headers of all symbols.

- Symbol Footer All Enabled:  
Enables all the symbol footers.
- Symbol Footer All Disabled:  
Disables all the symbol footers.

Restore Default Settings:

Returns the configuration parameter of the Code Reader to the default.

Restore LAN Settings:

Returns the LAN setting of the Code Reader to the default.

#### 4. View

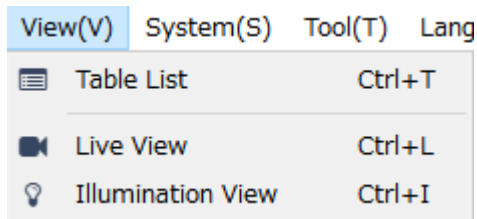


Table List:

Displays the Table List.

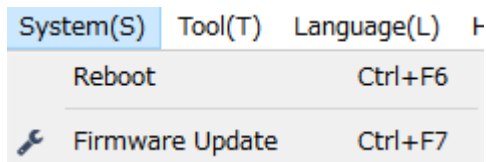
Live View:

Adds the live-view screen as a tab and displays it in the sub screen.

Illumination View:

Adds the setting menu of internal illumination as a tab and displays it in the sub screen.

#### 5. System



Reboot:

Reboots the Code Reader.

Firmware Update:

-Displays the firmware update menu.

-Refer to “5. Firmware Update” for the detail.

## 6. Tool

Tool(T)	Language(L)	Help(H)
>_	Terminal	Ctrl+F8
⚙	Easy setting tool	Ctrl+F10

Terminal:

Adds the terminal menu as a tab and displays it in the sub screen.

Easy setting Tool:

Starts Easy setting Tool.

## 7. Language

Language(L)	Help(H)
Japanese	Ctrl+J
• English	Ctrl+E
Chinese	Ctrl+C
Korean	Ctrl+K

Japanese:

Changes the display language of Configurator into Japanese.

English:

Changes the display language of Configurator into English.

Chinese:

Changes the display language of Configurator into Chinese.

Korean:

Changes the display language of Configurator into Korean.










## 8. Help

Help(H)	
ℹ About Configurator LP-ABR	Ctrl+A
AboutQt	Ctrl+Q

About Configurator LP-ABR:

Displays the version information of the Configurator.

#### 4.11.2 Tool Bar

-  Opens the configuration file and reflects it to the configuration parameter of Configurator.
-  I name, and a setting parameter of Configurator is preserved.
-  Imports the configuration parameter from the Code Reader and reflects it to the Configurator.
-  Writes the parameter configured by the Configurator to the Code Reader.
-  Stores the configuration parameter to the non-volatile memory of the Code Reader.
-  Adds the live view tab and displays it in the sub screen. If the live view tab has been already added, the Configurator activates the live view tab.
-  Adds the internal illumination setup tab and displays it in the sub screen. If the internal illumination tab has been already added, the Configurator activates the live view tab.
-  Displays the Table List.
-  Adds the terminal tab and displays it in the sub screen. If the terminal tab has been

already added, the Configurator activates the terminal tab.



Activates the Easy setting.



This icon is displayed on the screen during the live, continuous read and single read.



This icon is displayed on the screen during being connected with the image reader.

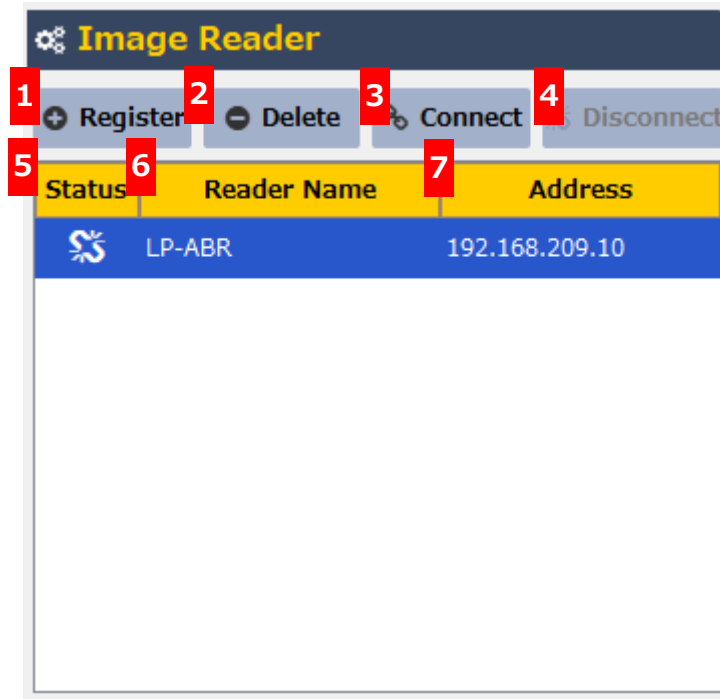


This icon is displayed on the screen during being disconnected from the Code Reader.

### 4.11.3 Main Configuration Menu

The Code Reader's information and configuration parameter can be edited in Main Configuration Menu.

#### ➤ Code Reader List



1. Register

Register the information of the Code Reader to connect

2. Delete

Delete the Code Reader's information selected from the list.

3. Connect



Establishes a connection with the Code Reader selected from the list.

4. Disconnect

Disconnect from the Code Reader selected from the list.

5. Status

Displays icons indicating the connection status between the Code Reader.

	Disconnected
	Connected

6. Reader Name

Displays the registered Code Reader's name.

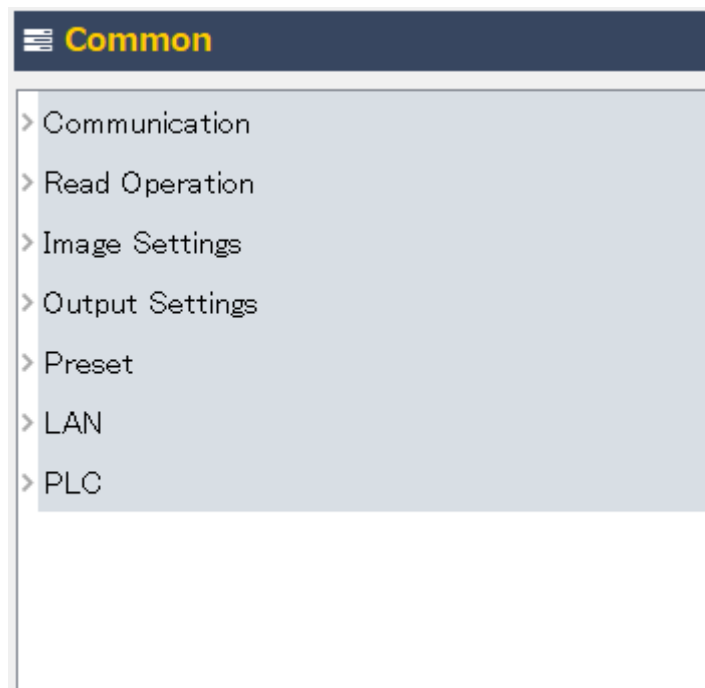
7. Address

-Displays the destination address of registered Code Reader.

-When the Code Reader is connected through LAN connection, the Code Reader displays its IP address.

-When the Code Reader is connected through RS-232C, the Code Reader displays the name of COM port.

➤ Common



◇ Communication

Communication	
Baudrate	9600bps ▼
Frame	8N1 ▼
Header	None ▼
Terminator	CR/LF ▼
Separator	, ▼
Prefix	<input type="checkbox"/> OFF
PrefixChar	[NUL] ▼
Suffix	<input type="checkbox"/> OFF
Suffix Char	[NUL] ▼
RS/CS	<input type="checkbox"/> OFF
TCP/C	<input type="checkbox"/> OFF
Select Port	RS-232C ▼
Control Code	Through ▼
Timeout	1000ms ▲▼

Name	Command
Baudrate	BAUD
Frame	FRAME
Header	HEAD
Terminator	TERM
Separator	SEPA
Prefix	PREFIX
PrefixChar	PREFIX
Suffix	SUFFIX
SuffixChar	SUFFIX
Suffix	RSCS
TCP/CS	TCPCS
Select Port	COMFROM
Control Code	LABELTX
Timeout	TXWAIT

Refer to the instruction manual of the Code Reader for the detailed setting values.



◇ Read Operation

▼ Read Operation

Error Message	BR
Decode Limit	1000ms
Sync Mode	Single
Sync Delay	0ms
Output Timing	Read
Read Timeout	3000ms
Sync Interval	1s
Capture Limit	<input type="checkbox"/> OFF
Max Image	1
Image Interval	100ms
Contrast Pos X	0
Contrast Pos Y	0
Contrast Width	1280
Contrast Height	960
Test Mode	<input type="checkbox"/> OFF
Test Count	10
WarningInfo(232C)	<input type="checkbox"/> OFF
WarningInfo(LAN)	<input type="checkbox"/> OFF
MirrorInfo(232C)	<input type="checkbox"/> OFF
MirrorInfo(LAN)	<input type="checkbox"/> OFF

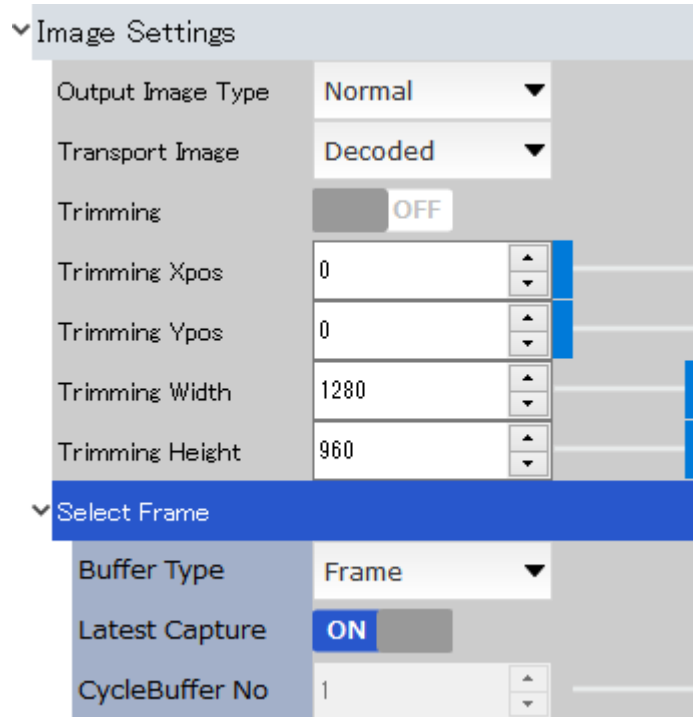
SymbolInfo	<input type="checkbox"/> OFF
DecodeInfo(232C)	<input type="checkbox"/> OFF
DecodeInfo(LAN)	<input type="checkbox"/> OFF
ReadTimeInfo(232C)	<input type="checkbox"/> OFF
ReadTimeInfo(LAN)	<input type="checkbox"/> OFF
CameraInfo(232C)	<input type="checkbox"/> OFF
CameraInfo(LAN)	<input type="checkbox"/> OFF
TableNoInfo(232C)	<input type="checkbox"/> OFF
TableNoInfo(LAN)	<input type="checkbox"/> OFF
ContrastInfo(232C)	<input type="checkbox"/> OFF
ContrastInfo(LAN)	<input type="checkbox"/> OFF
QualityInfo(232C)	<input type="checkbox"/> OFF
QualityInfo(LAN)	<input type="checkbox"/> OFF
BccInfo(232C)	None ▼
BccInfo(LAN)	None ▼
LengthInfo(232C)	None ▼
LengthInfo(LAN)	None ▼
PositionInfo(232C)	None ▼
PositionInfo(LAN)	None ▼
NameInfo(232C)	<input type="checkbox"/> OFF
NameInfo(LAN)	<input type="checkbox"/> OFF

Refer to the instruction manual of the Code Reader for the detailed setting values.

Name	Command
Error Message	BR
Decode Limit	DECODELIM
Sync Mode	SYNCMODE
Sync Delay	DELAY
Output Timing	VOUT
Read Timeout	TOTALLIM

Name	Command
Sync Interval	contintvl
Capture Limit	CAPLIM
Max Image	MAXIMG
Image Interval	WAITIMG
Contrast Pos X	CSX
Contrast Pos Y	CSY
Contrast Width	CWX
Contrast Height	CWY
Test Mode	TEST
Test Count	TMN
WarningInfo(232C)	CHKBCR
WarningInfo(LAN)	CHKBCR
MirrorInfo(232C)	MRTX
MirrorInfo(LAN)	MRTX
SymbolInfo	SYMBOLTX
DecodeInfo(232C)	DTTX
DecodeInfo(LAN)	DTTX
ReadTimeInfo(232C)	TTTX
ReadTimeInfo(LAN)	TTTX
CameraInfo(232C)	AGCTX
CameraInfo (LAN)	AGCTX
TableNoInfo (232C)	TBLTX
TableNoInfo (LAN)	TBLTX
ContrastInfo(232C)	CONTTX
ContrastInfo(LAN)	CONTTX
QualityInfo(232C)	QTTX
QualityInfo (LAN)	QTTX
BCCInfo(232C)	BCCTX
BCCInfo(LAN)	BCCTX
LengthInfo(232C)	LENTX
LengthInfo (LAN)	LENTX
PositionInfo(232C)	XYTX
PositionInfo(LAN)	XYTX
NameInfo(232C)	NAMETX
NameInfo(LAN)	NAMETX

◇ Image Settings




Refer to the instruction manual of the Code Reader for the detailed setting values.

If the latest capture of the image frame selection is ON, you cannot edit the cycle buffer number. Set the Latest capture OFF to edit the number.

Name	Command
Output Image Type	MODE
Transport Image	IMGSEL
Trimming	IMODE
Trimming Xpos	PX
Trimming Ypos	PY
Trimming Width	WX
Trimming Height	WY
Buffer Type	IMGFRAME
Latest Capture	IMGFRAME=0,0
CycleBuffer No	IMGFRAME

◇ Output Settings

▽ Output Settings

Buzzer	<input checked="" type="checkbox"/> ON
Chattering	None ▼
Digital Out1	GO ▼
Digital Out2	NG ▼
Digital Out3	Ready ▼
GO KeepNextSync	<input type="checkbox"/> OFF
GO OneShotTime	300 ▲▼
NG KeepNextSync	<input type="checkbox"/> OFF
NG OneShotTime	300 ▲▼
My Name	<input type="text"/> 

Refer to the instruction manual of the Code Reader for the detailed setting values.

Name	Command
Buzzer	buz
Chattering	CHATT
Digital Out1	DOUT1
Digital Out2	DOUT2
Digital Out3	DOUT3
GO KeepNextSync	GOOUT
GO OneShotTime	GOOUT
NG KeepNextSync	NGOUT
NG OneShotTime	NGOUT
My Name	MYNAME



◇ LAN

▼ LAN

IP Address	192.168.209.010	
Subnet Mask	255.255.255.0	
Default Gateway	192.168.209.254	
Data Port No	27110	▲▼
Image Port No	27110	▲▼
DataServer IP	000.000.000.000	
DataServer Port	27120	▲▼
ImageServer IP	000.000.000.000	
ImageServer Port	27130	▲▼
Connection Request Time	0	▲▼
Session Timeout	0	▲▼

Refer to the instruction manual of the Code Reader for the detailed setting values.

Name	Command
IP Address	IPADR
Subnet Mask	IPADR
Default Gateway	GWADR
Data Port No	IPPORT
Image Port No	IPPORT2
DataServer IP	IPBAR
DataServer Port	IPBAR
ImageServer IP	IPIMG
ImageServer Port	IPIMG
Connection Request Time	RTIME
Session Timeout	STOUT

- PLC Link

▼ PLC

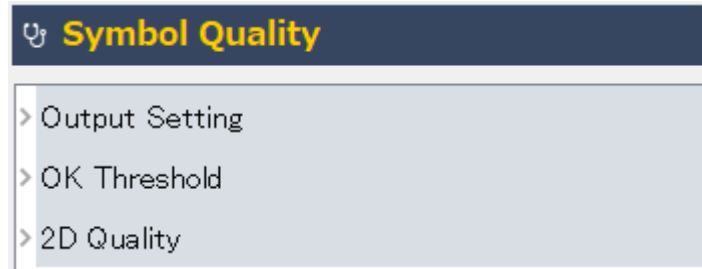
IP Address	192.168.000.010
Port No	9600
Address	0
Endian	Little
Mode	PlcEnd
Padding	Null
Time	10
TriggerArea Interval	10
TriggerArea Sync	<input checked="" type="checkbox"/> ON

Refer to the instruction manual of the Code Reader for the detailed setting values.

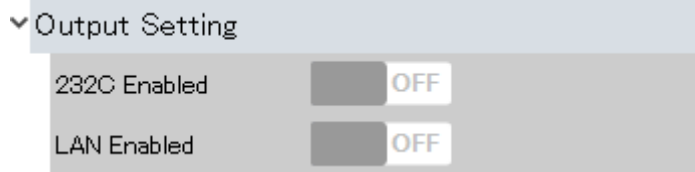
Name	Command
IPAddress	IPPLC
Port No	IPPLC
Address	PLCDTA
Endian	PLCMCEND
Mode	PLCMODE
Padding	PLCPAD
Time	PLCTIM
TriggerArea Interval	PLCINTVL
TriggerArea Sync	PLCTRIG



➤ Symbol Quality



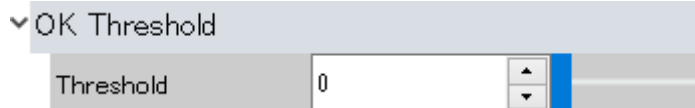
✧ Output Setting



Refer to the instruction manual of the Code Reader for the detailed setting values.

Name	Command
232C Enabled	PQTX
LAN Enabled	PQTX

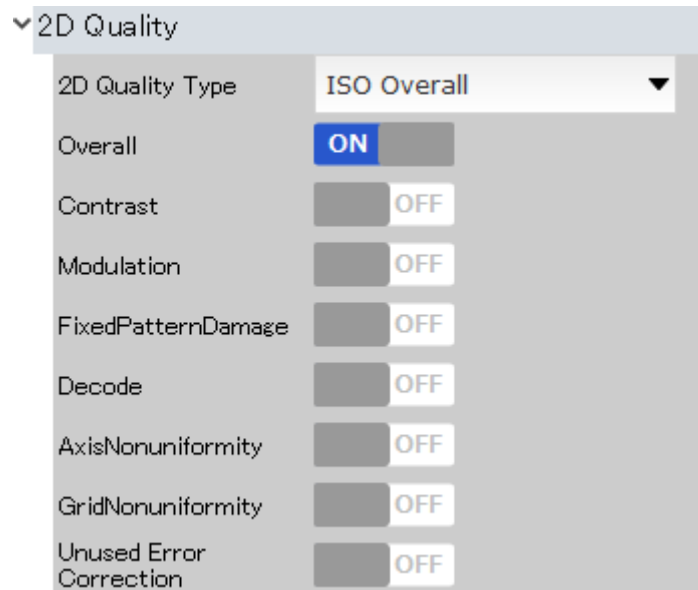
✧ OK Threshold



Refer to the instruction manual of the Code Reader for the detailed setting values.

Name	Command
Threshold	PQOKTH

- 2D Quality



Refer to the instruction manual of the Code Reader for the detailed setting values.

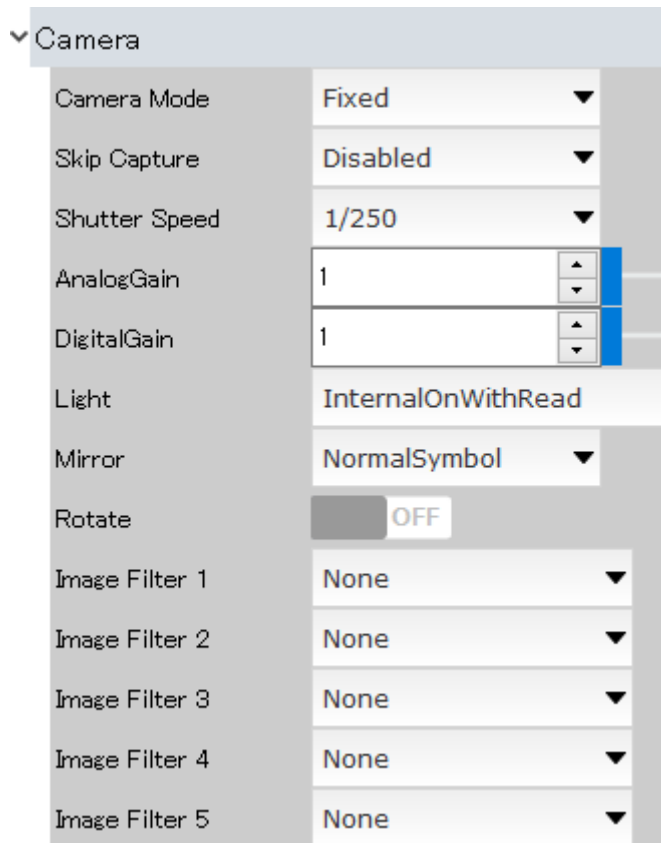
The Contrast, Modulation, FixedPatternDamage, Decode, AxisNonuniformity, GridNonuniformity, and Unused Error Correction are displayed only when “ISO Overall” or ” AIM DP-1-2006 Overall” are selected in the 2D Quality type menu.

Name	Command
2D Quality Type	PQTYPE2D
Overall	PQITEM2D
Contrast	PQITEM2D
Modulation	PQITEM2D
Fixed Pattern Damage	PQITEM2D
Decode	PQITEM2D
AxisNonuniformity	PQITEM2D
GridNonuniformity	PQITEM2D
Unused Error Correction	PQITEM2D

➤ Camera Fixed



● Camera



Refer to the instruction manual of the Code Reader for the detailed setting values.

When the Camera Mode is "Fixed", the configuration items other than Camera Mode and Skip Capture are disabled and the items for table setting are enabled. When the Camera Mode is "Table", all the items other than Camera settings are enabled and the configuration items for each table number in the table setting are disabled.

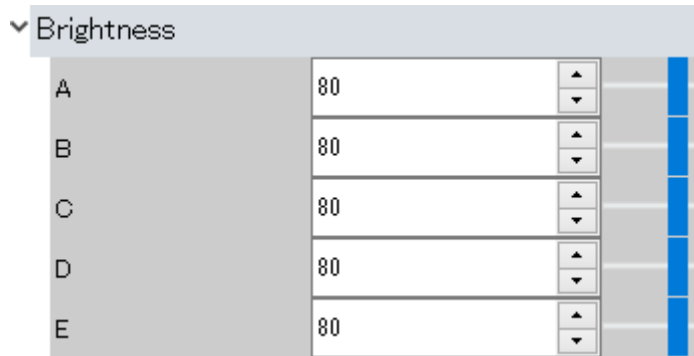
The mode name selected in the Camera Mode is displayed in the mode setting panel.

#### Camera



Name	Command
Camera Mode	AGC
Skip Capture	SKIPCAP
Shutter Speed	SHUTT
AnalogGain	GCV
DigitalGain	CAMexgain
Light	LIGHT
Mirror	MIRROR
Rotate	ROTATE
Image Filter 1	IPFUNC
Image Filter 2	IPFUNC
Image Filter 3	IPFUNC
Image Filter 4	IPFUNC
Image Filter 5	IPFUNC

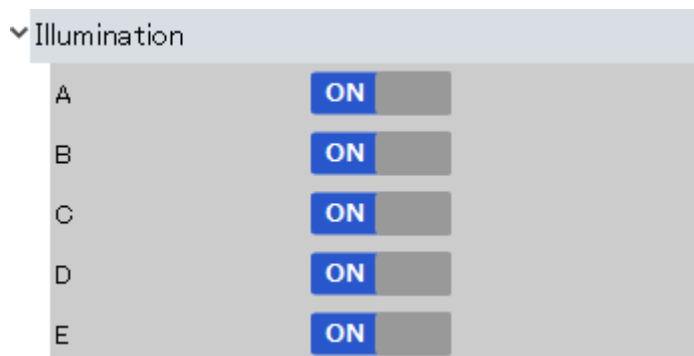
- Brightness



Refer to the instruction manual of the Code Reader for the detailed setting values.

Name	Command
A	CAMbrightness
B	CAMbrightness
C	CAMbrightness
D	CAMbrightness
E	CAMbrightness

- Illumination



Refer to the instruction manual of the Code Reader for the detailed setting values.

Name	Command
A	CAMled
B	CAMled
C	CAMled
D	CAMled
E	CAMled

- Capture Area

▼ Capture Area

Left	0	▲ ▼
Top	0	▲ ▼
Width	1280	▲ ▼
Height	960	▲ ▼

Refer to the instruction manual of the Code Reader for the detailed setting values.

Name	Command
Left	Left of CAPMODE
Top	Top of CAPMODE
Width	Width of CAPMODE
Height	Height of CAPMODE

- Decode Area

▼ Decode Area

Link CaptureArea	<input type="checkbox"/> OFF	
Left	0	▲ ▼
Top	0	▲ ▼
Width	1280	▲ ▼
Height	960	▲ ▼

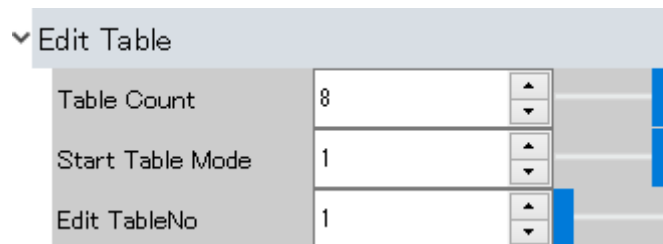
Refer to the instruction manual of the Code Reader for the detailed setting values.

Name	Command
Link CaptureArea	Mode of DECMODE
Left	Left of DECMODE
Top	Top of DECMODE
Width	Width of DECMODE
Height	Height of DECMODE

➤ Table



● Edit Table



Refer to the instruction manual of the Code Reader for the detailed setting values.

The table numbers specified with the editing table numbers are displayed in the table edit panel.



Name	Command
Table Count	ENABLEDDMTBL
Start Table Mode	STARTDDMTBL1
Edit TableNo	EDITDDMTBL

- Table 1-8

Table 1 *	
Capture Area	
Shutter Speed	1/250
Analog Gain	1
Digital Gain	1
Brightness	
Illumination	
Light	InternalOnWithRead
Mirror	NormalSymbol
Image Filter 1	None
Image Filter 2	None
Image Filter 3	None
Image Filter 4	None
Image Filter 5	None

Refer to the instruction manual of the Code Reader for the detailed setting values.

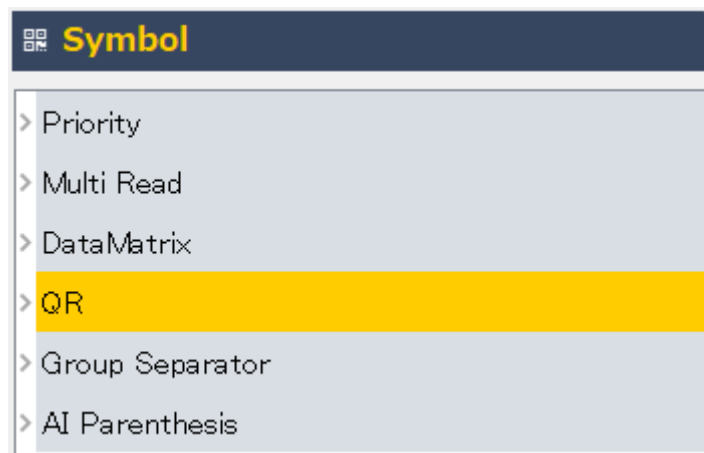
The settings of Table 1-8 are viewable/editable in list format from the “Table List”. Refer to “4.11.8 Table List” for the detail.

Name	Command
Capture Area	DDMcapmode
Shutt Speed	DDMshutt
Analog Gain	DDMgain
Digital Gain	DDMexgain
Brightness	DDMbrightness
Illumination	DDMled
Light	DDMlight
Mirror	DDMmirror
Image Filter 1	DDMpreproc
Image Filter 2	DDMpreproc



Name	Command
Image Filter 3	DDMpreproc
Image Filter 4	DDMpreproc
Image Filter 5	DDMpreproc

- Symbol



- Priority

▼ Priority

QR	1	▲ ▼
Micro QR	2	▲ ▼
Data Matrix	0	▲ ▼

Refer to the instruction manual of the Code Reader for the detailed setting values.

Name	Command
QR	DECPRIO
Micro QR	DECPRIO
Data Matrix	DECPRIO

- Multi Read

▼ Multi Read

Symbol Count	1	▲ ▼
Output Order	First	▼

▼ Symbol 1

Digit	0	▲ ▼
First Char	3f	▲ ▼
Second Char	3f	▲ ▼
Symbolgy	Any	▼

> Symbol 2

> Symbol 3

> Symbol 4

> Symbol 5

> Symbol 6

> Symbol 7

> Symbol 8

> Symbol 9

> Symbol 10

Refer to the instruction manual of the Code Reader for the detailed setting values.

Name	Command
Symbol Count	LABELS
Output order	OUTFORM
Digit	SET=\$N
First Char	SET=\$C
Second Char	SET=\$C
Symbolgy	SET=\$S

- DataMatrix

▼ DataMatrix

Enabled	<input type="checkbox"/> OFF
Invert	<input type="checkbox"/> OFF
Normal Symbol	<input type="checkbox"/> OFF
Rectangle	<input type="checkbox"/> OFF
Digit Min	1
Digit Max	9999
Edit From	1
Edit Count	9999
Header	<input type="checkbox"/> OFF
Header ID	d
Footer	<input type="checkbox"/> OFF
Footer ID	d

Refer to the instruction manual of the Code Reader for the detailed setting values.

Name	Command
Enabled	SET=dM
Invert	SET=dM
Normal Symbol	SET=dM
Rectangle	SET=dM
Digit Min	DIGIT=d
Digit Max	DIGIT=d
Edit From	EDIT=d
Edit Count	EDIT=d
Header	SYMHEAD=d
Header ID	SYMHEAD=d
Footer	SYMFOOT=d
Footer ID	SYMFOOT=d

- QR

▼ QR

Enabled	<input checked="" type="checkbox"/> ON
Invert	<input checked="" type="checkbox"/> ON
Normal Symbol	<input checked="" type="checkbox"/> ON
Digit Min	<input type="text" value="1"/> ▲ ▼
Digit Max	<input type="text" value="9999"/> ▲ ▼
Edit From	<input type="text" value="1"/> ▲ ▼
Edit Count	<input type="text" value="9999"/> ▲ ▼
Header	<input type="checkbox"/> OFF
Header ID	<input type="text" value="Q"/> ▼
Footer	<input type="checkbox"/> OFF
Footer ID	<input type="text" value="Q"/> ▼

Refer to the instruction manual of the Code Reader for the detailed setting values.

Name	Command
Enabled	SET=QM
Invert	SET=QM
Normal Symbol	SET=QM
Digit Min	DIGIT=Q
Digit Max	DIGIT=Q
Edit From	EDIT=Q
Edit Count	EDIT=Q
Header	SYMHEAD=Q
Header ID	SYMHEAD=Q
Footer	SYMFOOT=Q
Footer ID	SYMFOOT=Q

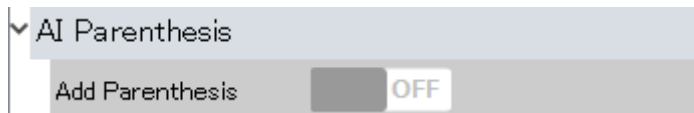
- Group Separator



Refer to the instruction manual of the Code Reader for the detailed setting values.

Name	Command
GS	GS1GS
GS Id	GS1GS

- AI Parenthesis



Refer to the instruction manual of the Code Reader for the detailed setting values.

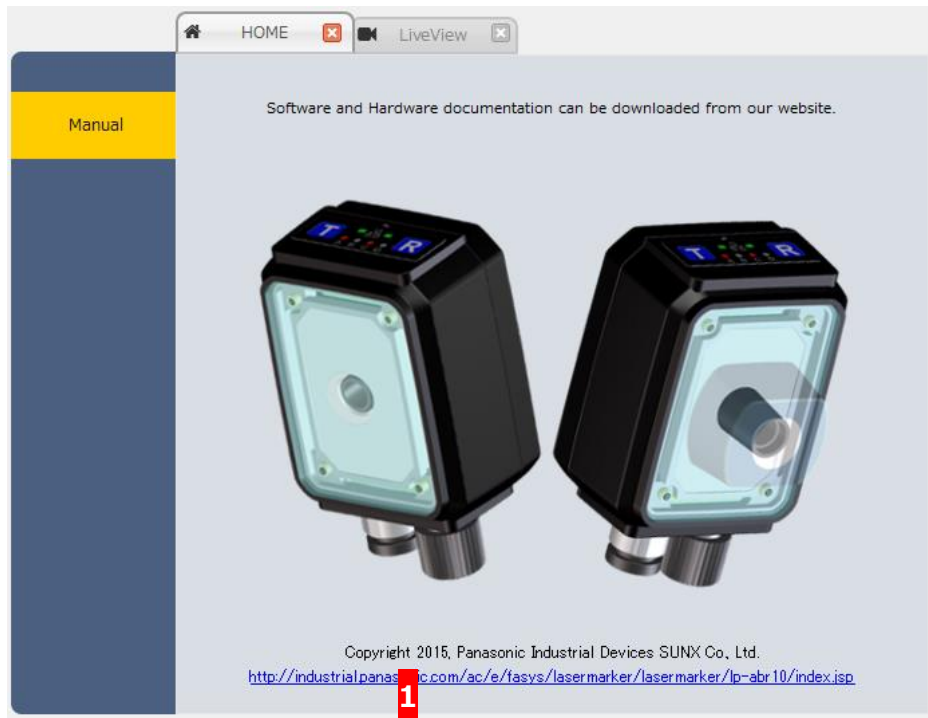
Name	Command
Add Parenthesis	GS1AI

#### 4.11.4 Setting Sub-screen

- The sub-screen assists the setting main-screen.
- The sub-screen consists of HOME tab, Live-View tab, illumination setup tab and terminal tab. The live-view tab is only displayed on the screen when you start the sub-screen.

HOME	Displays the external links of this manual Code Reader's manual.
Live-View	Displays the captured image for read parameter setting, reading operation, reading results, etc.
Internal Illumination setup	Configures the ON/OFF of internal illumination and the value of brightness.
Terminal	Various commands can be run directly. Refer to the Code Reader's instruction manual for the various commands.

- HOME

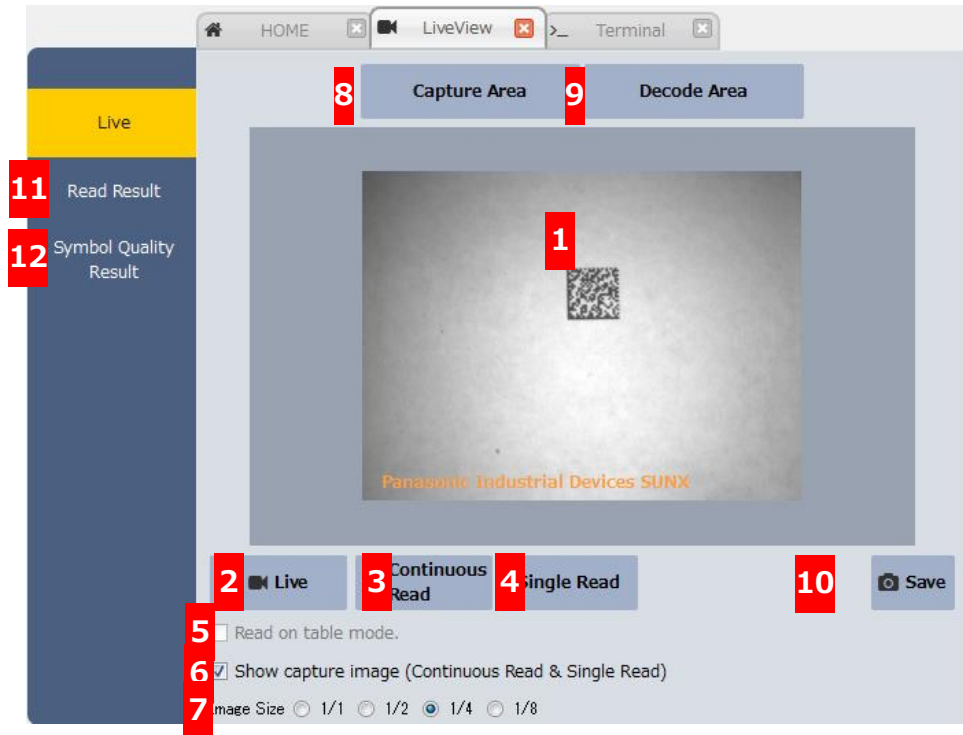


#### 1. Our Company's Website

- Click the following link to jump to our company's website via web browser. (An internet connection is required.)

<http://industrial.panasonic.com/ac/e/fasys/lasermarker/lasermarker/lp-abr10/index.jsp>

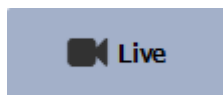
- Live-View

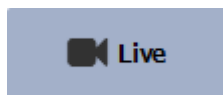


1. Captured Image Display Area

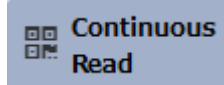
- The images captured with the Code Reader are displayed in this area in real time.
- Double-click this area to start the Image Viewer. Refer to “4.11.7 Image Viewer” for the detail of Image Viewer.

2. Live



- Click  to display the images captured with the Code Reader in the captured image display area in real time. Symbol reading is not done if you click Live button.
- Configures the read parameter viewing the displayed image. If you change the values of read parameter, the change is reflected in real time.

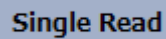
### 3. Continuous Read



- Click **Continuous Read** to read the symbol continuously. When “Show capture image(continuous Read & Single Read) is checked  Show capture image (Continuous Read & Single Read)”, the image captured with the Code Reader will be displayed at the same time.
- You can confirm whether the symbol is read successfully by the buzzer or by referring to the reading data displayed in the bottom left corner of the captured image display area.



### 4. Single Read



- Click **Single Read** to read the symbol only once. When “Show capture image(continuous Read & Single Read) is checked  Show capture image (Continuous Read & Single Read)”, the image captured with the Code Reader will be displayed at the same time.
- You can confirm whether the symbol is read successfully by the buzzer or by referring to the reading data displayed in the bottom left corner of the captured image display area.



## 5. Read Check of Table Mode

- When “Read on table mode.” is checked  Read on table mode. , the Code Reader reads in table mode. Note that the camera mode should be “Table mode” and the “Starting table number” should be 0. Refer to “4.9 Confirm Reading in Table Mode” for the detail.
- When “Read on table mode.” is unchecked  Read on table mode. and the camera mode is in “Fixed”, the Code Reader reads using the read parameter of the camera setting. When the camera mode is set to “Table”, the Code Reader reads using the table of “Edit table number”.

## 6. Show Capture Image

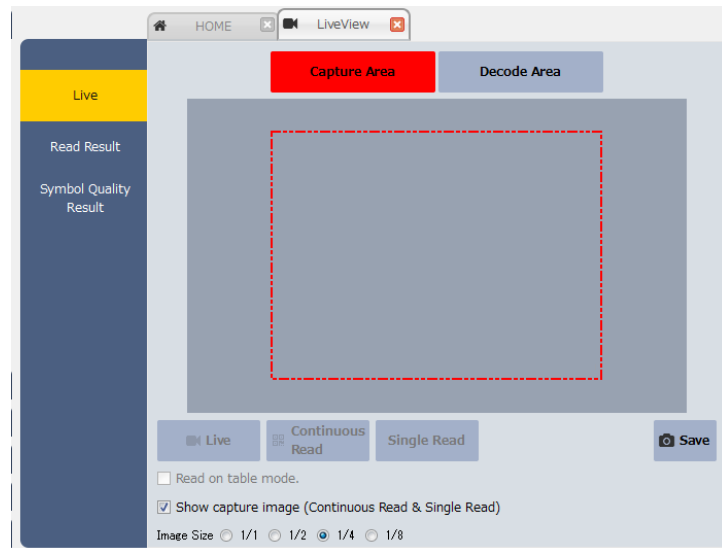
- When “Show capture image (Continuous Read and Single Read)” is checked  Show capture image (Continuous Read & Single Read) , the images captured with the Code Reader are always displayed in the captured image display area during the continuous read and single read.
- When “Show capture image (Continuous Read and Single Read)” is unchecked  Show capture image (Continuous Read & Single Read) , the images captured with the Code Reader will not be displayed.
- The operation to read the next symbol slows down while the captured image is displayed.
- Check “Show captured image” if you want to configure the read parameter viewing the image.

## 7. Image Size

- Select the image size when you transmit the image captured with the Code Reader.
- Smaller image size makes the display speed faster. Note that the image quality will be rough with small image size.

## 8. Capture Area

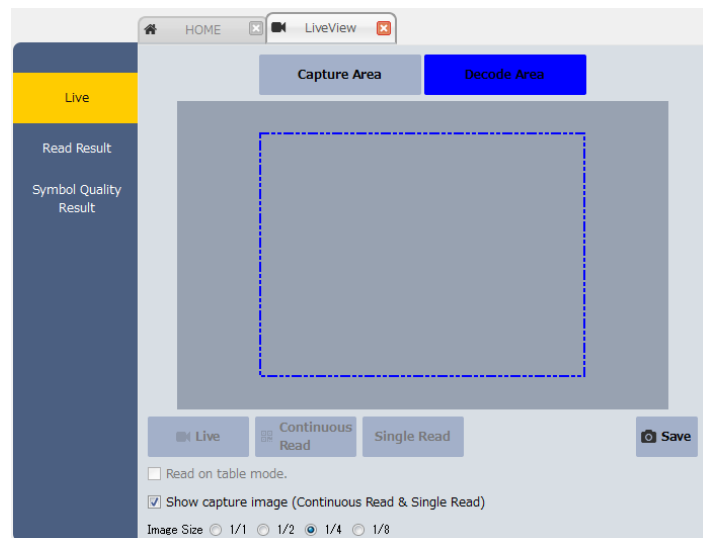
- Click **Capture Area** to display the red dot-lined square which indicates the capture area. You can change the area size dragging the four corners of the square frame by the mouse.



- Narrowing the capture area may enhance the reading performance.

## 9. Decode Area


- Click **Decode Area** to display the blue dot-lined square which indicates the decode area. You can change the area size dragging the four corners of the square frame by the mouse.



- Narrowing the decode area may enhance the reading performance.

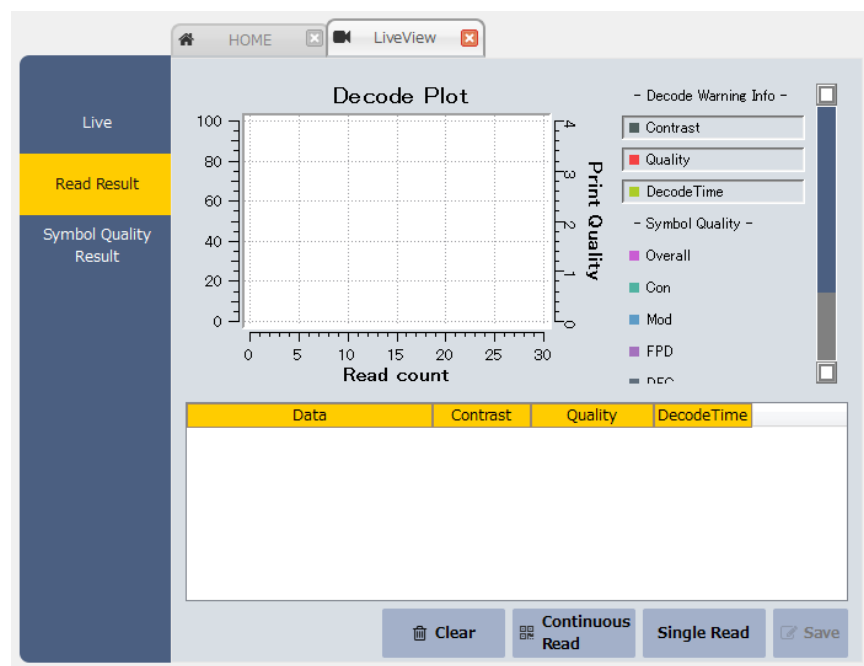
## 10. Save



- Click  when an image is displayed in the captured image display area to save the image in bitmap format. The file will be saved in 8-bit color mode.

## 11. Read Result

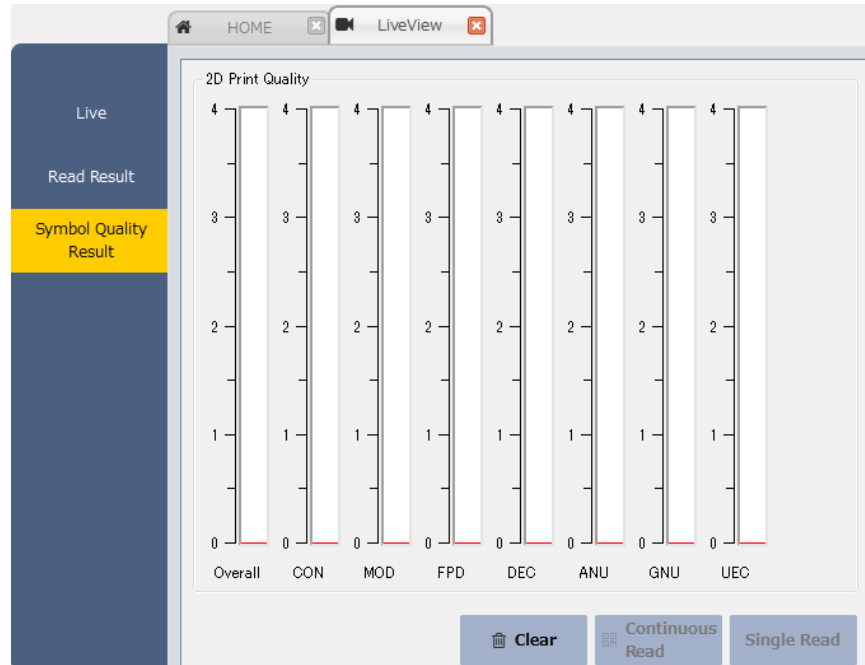
- Click “Read Result” in the side menu to check the detail of the captured symbol data.



- Refer to “4.11.5 Read Result” for the detail of read result screen.

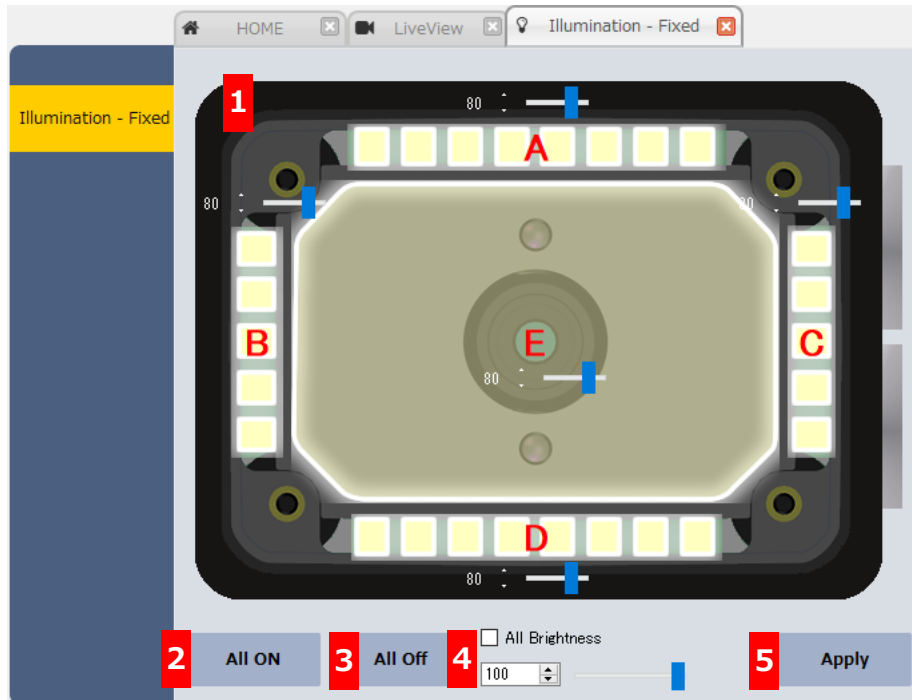
## 12. Symbol Quality Result

- Click “Symbol Quality Result” in the side menu to view the print quality of the captured symbol data visually.



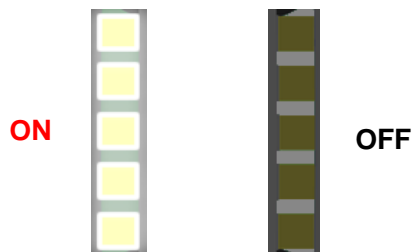
- Refer to “4.11.6 Symbol Print Quality” for the detail of the symbol print quality.

- Internal Illumination



1. Display Area of Internal Illumination and Brightness Value

- Click A, B, C, D, and E part in the figure to switch the ON/OFF of the internal illumination.



- Use the slider  to adjust the brightness value of each illumination.


2. All ON

- Click  to turn on all the illumination.

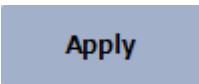
3. All OFF

- Click  to turn off all the illumination.

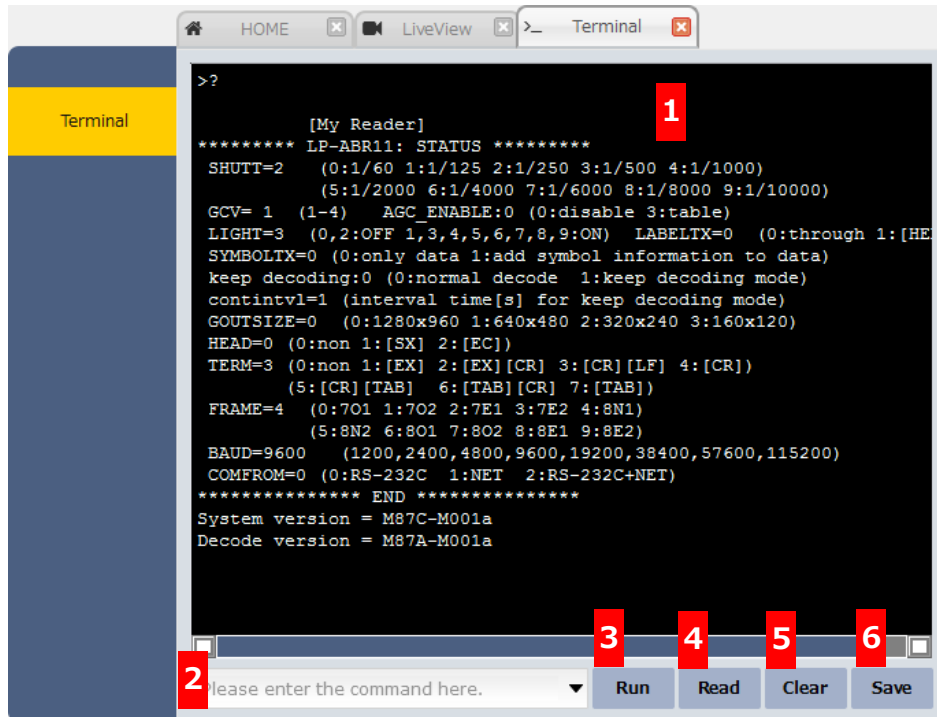
4. Equalize All Brightness Value

- Check “All Brightness” and use the slider  to equalize all the brightness value.
- When you check “All Brightness” and change the brightness value, all the brightness values in the setting area for the internal illumination and brightness value will be changed into the same value.

5. Apply

- Click  to reflect the configuration of internal illumination as a read parameter.

- Terminal



1. Command Execution Display Area

- The executed command and execution result are displayed in this area.

2. Command Input Area

- Input a command in this area or click **Run** to run the command and display it in the command execution display area.

3. Run

- Click **Run** to run the command which was input in the command input area.

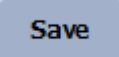
4. Read

- Click **Read** to run the soft trigger (g) and start the symbol reading operation.
- This operation can also be run pressing F5 key.

5. Clear

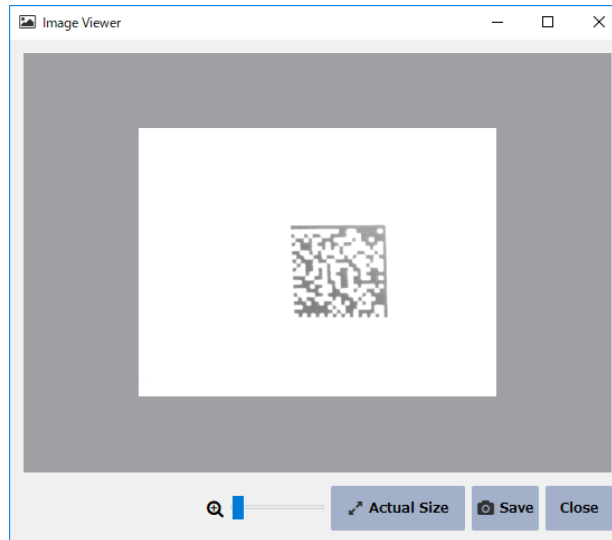
- Click **Clear** to clear all the contents in the command execution display area.

6. Save

- Click  to save the contents in the command execution display area as a text file.

7. Other Function

- Press F9 key to acquire the latest captured image saved in the Code Reader and display the image with the Image Viewer.

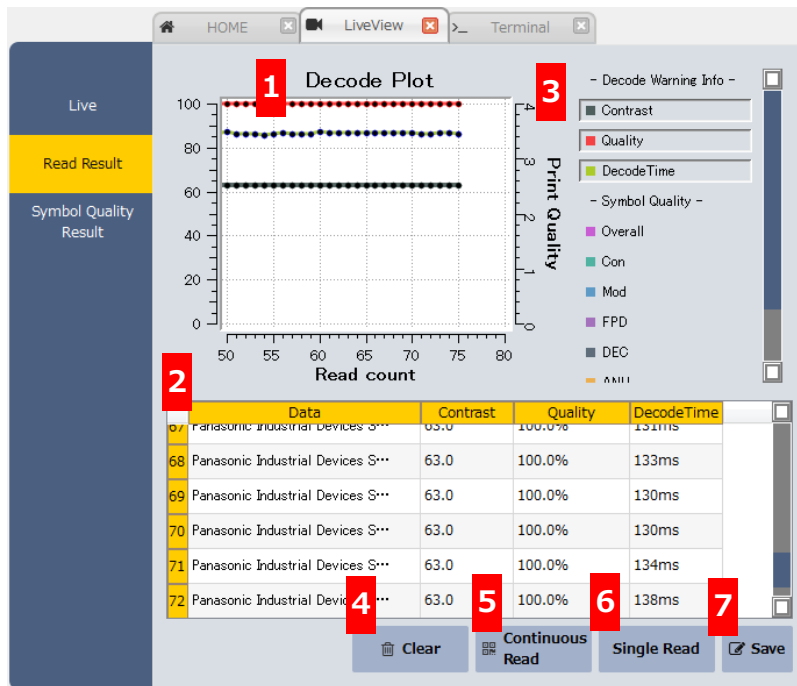


- Refer to “4.11.7 Image Viewer” for the detail of Image Viewer.



#### 4.11.5 Read Result

- Displays the detail of captured symbol data.



##### 1. Test Results Monitor

- Displays the additional information and the print quality of the captured symbol data in a line graph.

##### 2. Display of Reading Data

- Displays the captured symbol data, additional information and print quality.

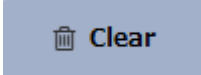
3. Display/Hide Additional Information and Print Quality

- Click the items in the legend portion of the test results monitor to switch the Display/Hide the test results monitor and reading result.

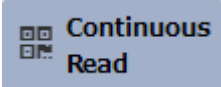


Additional Information	
Contrast	Contrast
Quality	Unused error correction
DecodeTime	Decode time
Print Quality	
Overall	2D Total Quality
Con	2D Contrast
Mod	2D Modulation
FPD	2D Fixed pattern damage
DEC	2D Decode
ANU	2D Non-uniformity of axis
GNU	2D Non-uniformity of grid
UEC	2D Unused error correction


4. Clear

- Click  to clear the test results monitor and reading result.

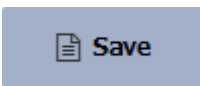
5. Continuous Read

- Click  to start the continuous symbol reading.

6. Single Read

- Click  to read the symbol only once.

7. Save

- Click  to save the result as a CSV file when the reading result is displayed on the screen.

#### 4.11.6 Symbol Print Quality

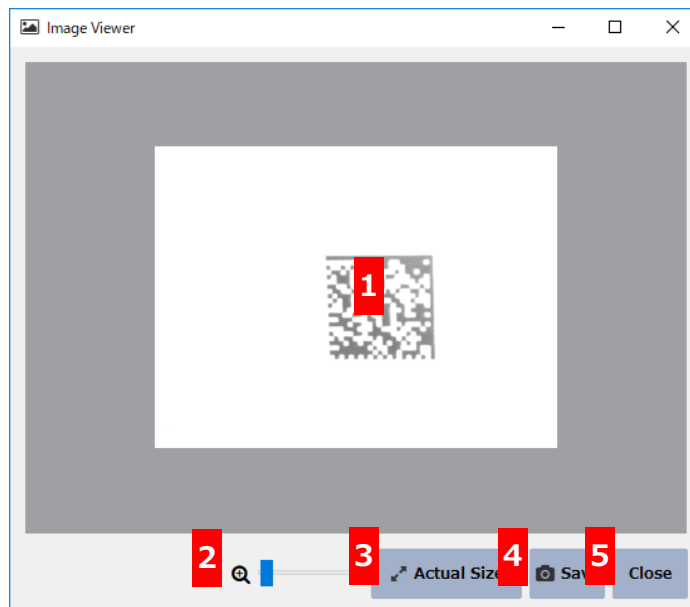
- You can view the print quality of the captured symbol data visually.
- To output the print quality, enable the output Symbol print quality of the configuration parameter. If any of "ISO General" or "AIM DPM-1-2006 General" is selected in the symbol print quality setting, the value of general quality "Overall" will be only output.
- The print quality is indicated as a value of 0-4. Higher values mean better result.



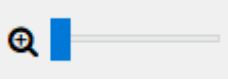
1. Overall
  - General Quality
2. CON
  - Contrast
3. MOD
  - Modulation
4. FPD
  - Fixed Pattern Damage
5. DEC
  - Decode
6. ANU
  - Non-uniformity of Axis
7. GNU
  - Non-uniformity of Grid
8. UEC
  - Unused Error Correction

#### 4.11.7 Image Viewer

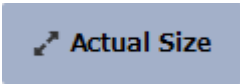
- You can start the Image Viewer from Easy setting Mode, Live-View and Terminal.
- How to start Live Viewer
  - From Easy setting Mode
    - ✧ Double- click the captured image display area.
  - From Live-View
    - ✧ Double- click the captured image display area.
  - From Terminal
    - ✧ Press F1 key.
- Image Viewer screen

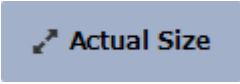



1. Captured Image Display Area
  - ✧ Displays the image captured with the Code Reader in this area.
2. Scaling

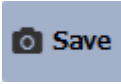
- ✧ Scales the image by the slider bar  or Ctrl + mouse wheel.
- ✧ Drag the slider left to zoom out.
- ✧ Drag the slider right to zoom in.
- ✧ Double-click anywhere in the captured image display area to scale the image focusing the part. This prevents the displacement of the symbol at the scaling.

3. Actual Size

- Click  to switch the image size as shown below.

Click at 	Displays the captured image in the resolution when it was imported from the Code Reader.
Click at 	Displays the captured image in the captured image display area resolution.


4. Save

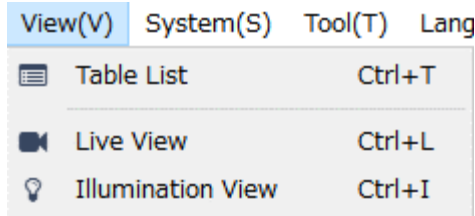
- Click  to save the displayed image as a BMP file to your computer.

5. Close

- Click  to exit the Image Viewer.

#### 4.11.8 Table List

- Displays the table list by clicking “Table List” in the menu or clicking  in the tool bar.
- Click “Table List” in the menu.



- The table list is shown with each table's read parameters configured in the table setting of the setting main menu. The read parameters can be changed directly from the table list.

- **Table List**

	Fixed	1*	2	3	4	5	6	7	8
CaptureLeft	0	0	0	0	0	0	0	0	0
CaptureTop	0	0	0	0	0	0	0	0	0
CaptureWidth	1280	1280	1280	1280	1280	1280	1280	1280	1280
CaptureHeight	960	960	960	960	960	960	960	960	960
ShutterSpeed	1/250	1/250	1/250	1/250	1/250	1/250	1/250	1/250	1/250
AnalogGain	1	1	1	1	1	1	1	1	1
DigitalGain	1	1	1	1	1	1	1	1	1
Brightness A	80	80	80	80	80	80	80	80	80
Brightness B	80	80	80	80	80	80	80	80	80
Brightness C	80	80	80	80	80	80	80	80	80
Brightness D	80	80	80	80	80	80	80	80	80
Brightness E	80	80	80	80	80	80	80	80	80
Illumination A	true	true	true	true	true	true	true	true	true
Illumination B	true	true	true	true	true	true	true	true	true
Illumination C	true	true	true	true	true	true	true	true	true
Illumination D	true	true	true	true	true	true	true	true	true
Illumination E	true	true	true	true	true	true	true	true	true
Light	InternalOnWi...	InternalOnWi...	InternalOnWi...	InternalOnWi...	InternalOnWi...	InternalOnWi...	InternalOnWi...	InternalOnWi...	InternalOnWi...
Mirror	NormalSymbol	NormalSymbol	NormalSymbol	NormalSymbol	NormalSymbol	NormalSymbol	NormalSymbol	NormalSymbol	NormalSymbol
Filter 1	None	None	None	None	None	None	None	None	None
Filter 2	None	None	None	None	None	None	None	None	None
Filter 3	None	None	None	None	None	None	None	None	None
Filter 4	None	None	None	None	None	None	None	None	None
Filter 5	None	None	None	None	None	None	None	None	None

#### 1. Table Number

- ◇ Indicates the setting values of each table.
- ◇ **1\*** is added next to the table number of the tables which are the target of the confirmation of read parameter in the Live-view.

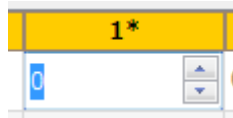
- ✧ The items shown as “Fixed” are the read parameters when the table mode is “Fixed”.
- ✧ Move and Copy of Table
  - Each table number can be moved to the other by drag and drop.

	1*	2	1*	3
	0	0	0	0
	0	0	0	0
	1970	1970	1970	1970

- This is the sample of the move of Table 1 to Table 2.
- Right click the each table number to display the context menu below. Click “Copy” when you want to copy a setting value of a table. Right click the target table number and click “Paste”.

	1	2
	0	0
	0	0
	1970	1970

2. Read parameter setting items of table
  - ✧ Displays the read parameter setting items of table.
3. Setting value of table read parameter
  - ✧ Displays the read parameter to be set to each table.
  - ✧ Double-click a cell of each read parameter to enter the edit mode and change the setting values directly.

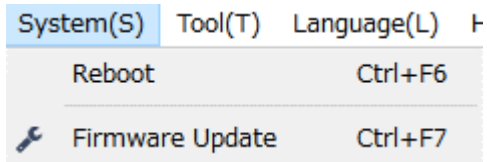


4. OK
  - ✧ Click OK button to reflect the setting values configured in the table list to the Configurator’s table setting and to exit.
5. Cancel
  - ✧ Click Cancel button to discard the values configured in the table list and to exit.

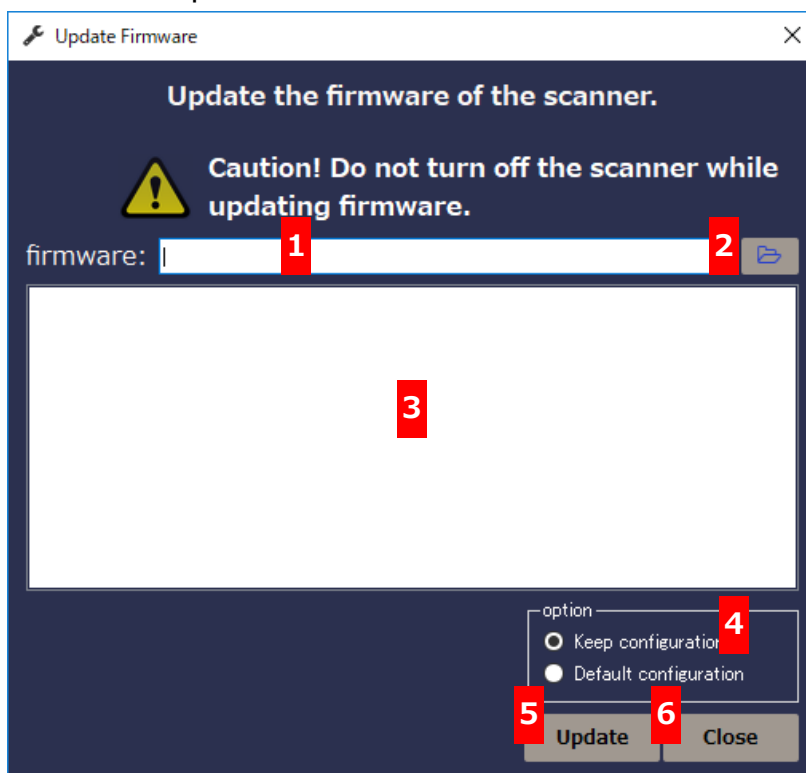


## 5 Firmware Update

You can update the firmware of the Code Reader with Configurator. Select “Firmware Update” in the system menu.



### 5.1 Firmware Update Menu

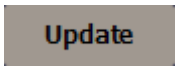


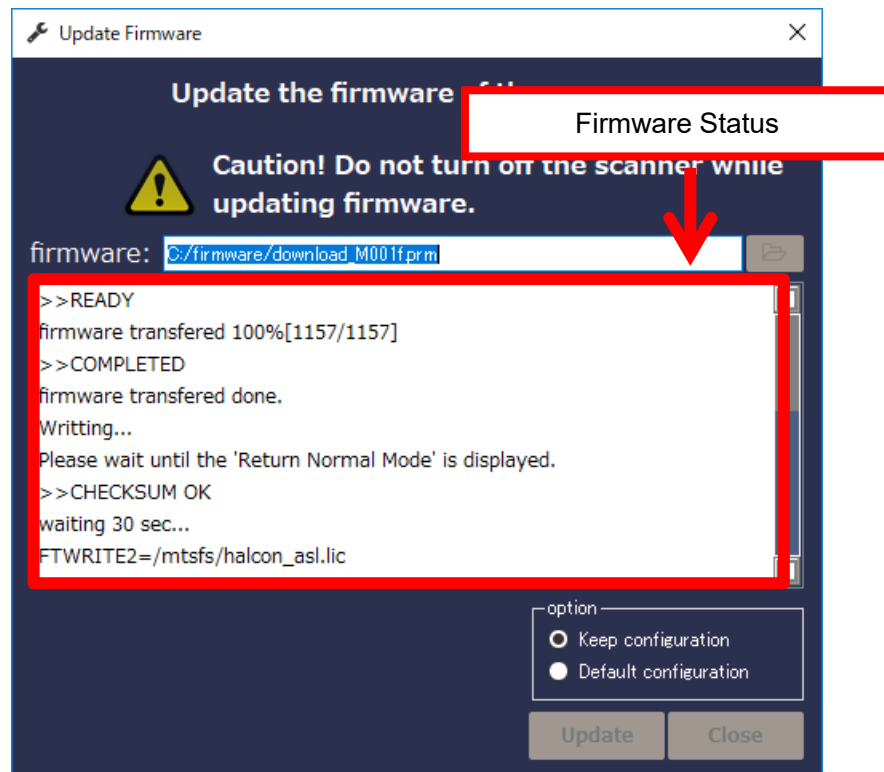
1. Enter the path to the firmware file
  - Enter the path to the firmware file manually.
2. Firmware file selection
  - Select a firmware file to open from the file open dialog box and enter the path in the entry field.
3. Update status display area
  - Displays the status of the firmware update.

4. Option

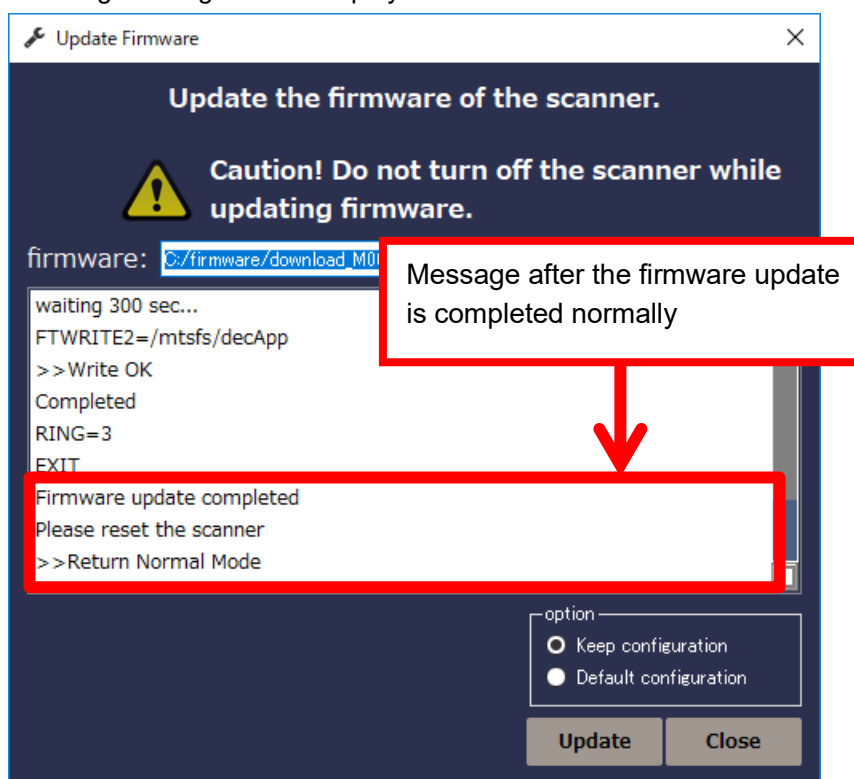
- When you select “Keep configuration” and update the firmware, the configuration parameter will remain unchanged after the update.
- When you select “Default configuration” and update the firmware, the configuration parameter will return to default setting after the update.

5. Update

- Click  to start the firmware update and display the status of the update in the update status display area.

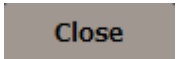



- When the update is done normally, the buzzer sounds for 7 times and the following message will be displayed on the screen.



- Follow the guide and reset the Code Reader after the firmware update is done normally.

6. Close

- Click  to exit the firmware update menu.

 **Notice**

DO NOT turn off the Code Reader during firmware update. It may cause a file system crash.

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## Panasonic Corporation

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