

IM2730 Sample Application Manual

Overview

IM2730 Sample Application (this application) can perform the following operations on the IM2730:

- Settings for IM2730
- Display of measured values
- Sending and receiving communications commands

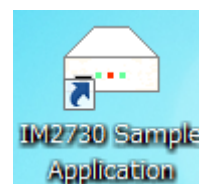
System requirements

- CPU: Operating speed of 1 GHz or greater
- RAM: 512 MB or greater
- OS: Windows 10, Windows 7 (32bit/64bit)
- Microsoft .NET Framework 4.6.1
- Interface: USB, LAN
- Monitor resolution: 1440 x 900 or greater
- Hard drive: Free space of 5 MB or greater (If .NET Framework 4.0 has not yet been installed, about 2.5 GB more free space will be required.)

Installing this application

1. Double click the downloaded file “setup_IM2730 Sample Application.exe”
2. Click [Next](#) every time when it appears.

3. The installation will be started. When it is completed, a shortcut, as shown in the right, will be created on the desktop.



Uninstalling the application

- Windows7

The application can be uninstalled by opening the Control Panel, choosing Apps, and then choosing Programs and Features.

- Windows10

The application can be uninstalled by opening the Windows Setting, choosing Apps.

Connecting the instrument to your computer

- Connecting the instrument via USB

You'll need to use a dedicated USB driver the first time you connect the instrument to your PC. This driver can be found on the CD-R disc that came with the instrument. It can also be downloaded from Hioki's website.

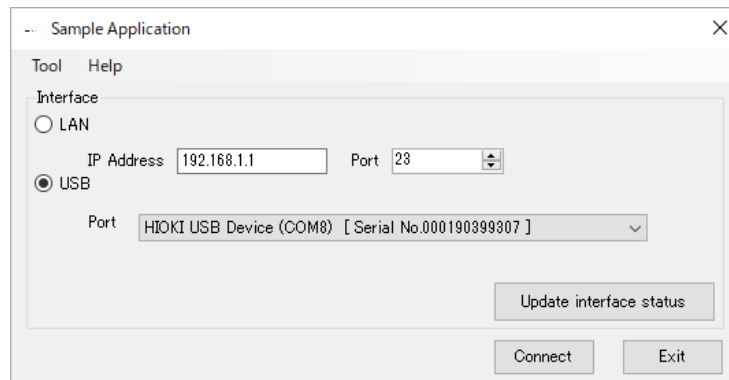
- Connecting the instrument via LAN

You'll need a LAN cross cable.

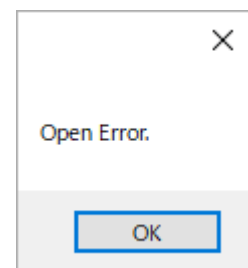
Launching and connecting to the application

1. Double-click the application's shortcut on the desktop. The measurement screen will be displayed.
2. Select an interface and click [Connect].

If you have connected to the PC via USB after starting this application, please click [Update Interface status].



3. If you get an error message like the one on the right, please make sure that you are using the correct IP address and port.
Also, the port may be used by other applications.



●Initial value of the device

IP address ... 192.168.1.1

Port ... 23

Application interface

The application will force the following settings upon connection.

When the application is closed, the following settings will be restored to the original settings at the time of connection.

※If it does not exit successfully or cannot communicate on exit, the settings remain as follows.

- Channel header [None]

:SYSTem:HEADer:CHANnel OFF

- Measured value parameters [all]

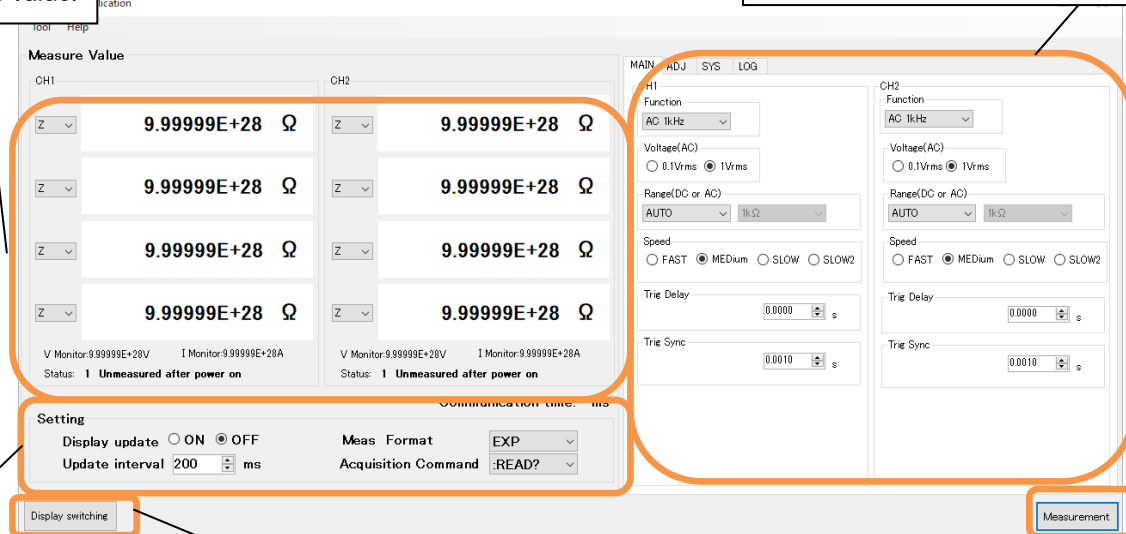
:FETCh:ITEM Z,Y,PH,Cs,Cp,D,Ls,Lp,Q,Rs,G,Rp,X,B

- Response of measured values [Measurements and Status]

:MEASure:VALid 18

Displays the measured value.

You can check the settings of the device and the log of command transmissions.



You can configure settings related to the display of measured values.

You can switch between the measured value display screen and full screen (image).

Press the button to take a measurement. (READ?)

Setting (MAIN)

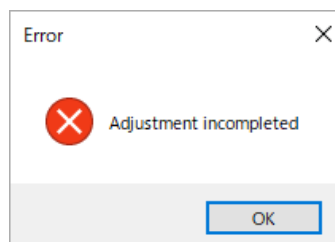
The screenshot shows the 'Setting (MAIN)' interface of the HIOKI application. It features two main columns for channel settings, CH1 and CH2. Each column has a tabbed interface with 'MAIN', 'ADJ', 'SYS', and 'LOG' tabs. The 'MAIN' tab is selected, showing various configuration options for each channel. For both CH1 and CH2, the 'Function' is set to 'AC 1kHz', 'Voltage(AC)' is set to '1Vrms', 'Range(DC or AC)' is set to 'AUTO' with a '1kΩ' sub-range, 'Speed' is set to 'MEDIUM', 'Trig Delay' is set to '0.0000 s', and 'Trig Sync' is set to '0.0010 s'.

- When the application is started, it is synchronized with the settings of the device. The settings of the channels to which the IM2791 is not connected are not synchronized. Also, the settings cannot be changed.
Even if the IM2791 is connected after startup, it will not be enabled.
Please reboot both the Device and the application.
- If you change the setting on the screen, the setting of this unit will be changed automatically.

Adjust (ADJ)

The screenshot shows the 'ADJ' (Adjust) screen of the HIOKI application. It features two main sections for CH1 and CH2. Each section has a table with columns 'Get', 'FREQ', and 'G[S]'. The 'Get' column contains checkboxes for various frequencies: DC, 120Hz, 1kHz, 10kHz, 100kHz, 200kHz, 1MHz, 2MHz, and 10MHz. The 'FREQ' column lists these frequencies, and the 'G[S]' column shows values like +0.00000E+00. Below each table is an 'EXEC' button. At the bottom of each channel section, there is an 'Execution Date' field and a 'Cable' selection (0.1m or 0.5m). The left sidebar has buttons for 'OPEN' and 'SHORT'.

- When the application is started, it is synchronized with the settings of the device.
The settings of the channels to which the IM2791 is not connected are not synchronized.
Also, no adjust can be made.
Even if the IM2791 is connected after startup, it will not be enabled.
Please reboot both the Device and the application.
- It corrects only the frequency that is checked in the [Get] box when you press the [EXEC] button.
- adjust will not be made normally in the following cases
 - When the OPEN adjust is made, the measured value is $1\text{k}\Omega$ or less.
 - When the SHORT adjust is made, the measured value is $1\text{k}\Omega$ or more.



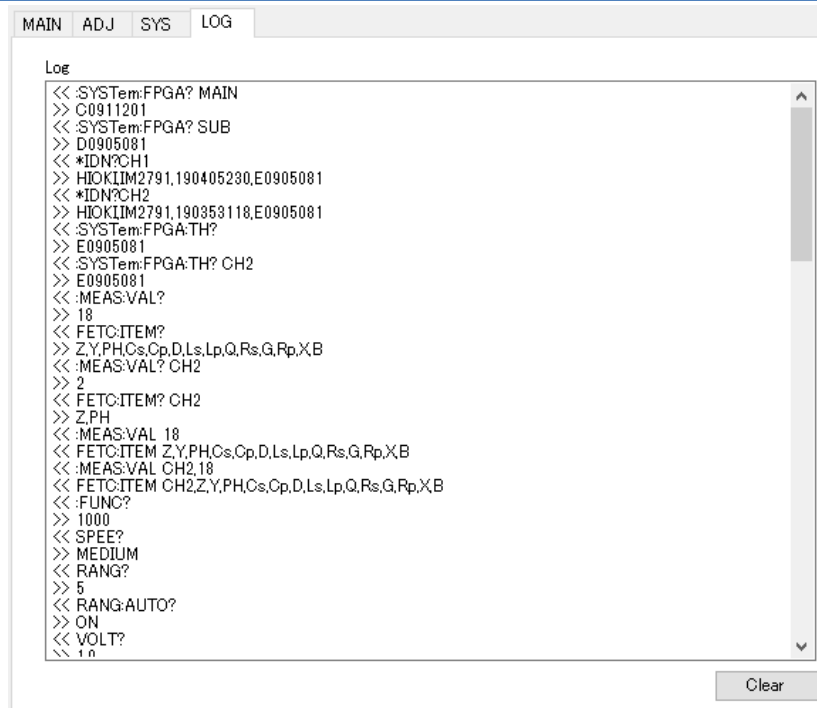
Setting(SYS)

The screenshot shows the 'SYS' settings menu with the following sections:

- LAN:** IP Address (169.254.0.10), Subnet Mask (255.255.0.0), Gateway (0.0.0.0), Port (9999), and MAC Address ("00-01-67-11-60-77"). A 'Reflect' button is present.
- Time:** Radio buttons for 'Set by PC time' (selected) and 'Optionally set'. Date and time fields are set to '00/01/01' and '12:00:00'. 'Set Setting' and 'Get Setting' buttons are available.
- Power Frequency:** Radio buttons for '50Hz' and '60Hz' (selected).
- Reset:** Buttons for ':PRESet' and '*RST'.
- Information:** A list of device details including Main Serial And Version (190399307 / V1.03), FPGA Version Main (C0911201), FPGA Version Sub (D0905081), Serial Number Unit CH1 (190405230), Serial Number Unit CH2 (190353118), FPGA Version Unit CH1 (E0905081), FPGA Version Unit CH2 (E0905081), Adjustment Date Unit CH1 (19/11/28), Adjustment Date Unit CH2 (19/03/28), Calibration Date Unit CH1 (19/11/28), and Calibration Date Unit CH2 (00/00/00).

- When the application is started, it is synchronized with the settings of the device.
- LAN
If you want to change the LAN setting, press the [Reflect] button.
The LAN setting of this product will not be changed until you press the [Reflect] button.
- Time
It is possible to set and read the time of the device.
- RESET
[:PRESet]...All the settings of the device, except for the communication settings and correction values, are initialized.
[*RST]...All settings of the device except for the communication settings are initialized.

Communication log (LOG)



The symbol that precedes the data(「<<」, 「>>」) has the following meaning.

NOTE: This symbol is not actually sent or received.

「<<」 ... Data sent to the device

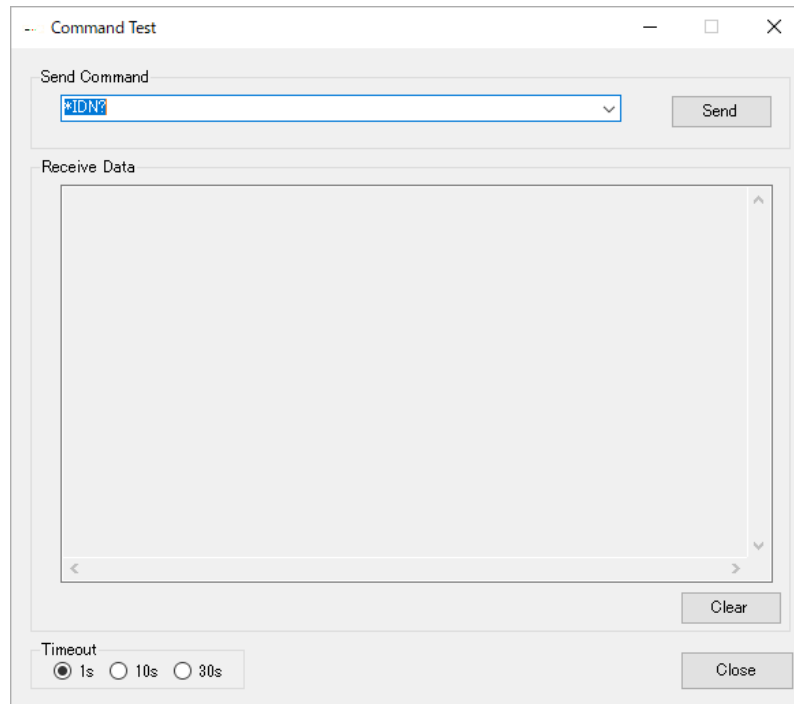
「>>」 ... Data received from the device

The following is how you can show or hide it in the log.

- Displayed in the log.
 - Commands and response for setting synchronization at startup.
 - Commands and responses when changing settings from the app.
- Hidden in the log
 - Transmission and reception of arbitrary commands.
 - Command and measurement value when the [Display update] is ON.
 - Measurement commands and values when the [Measurement] button is pressed.

Arbitrary command

A new window will open from [Tool] – [Command Test].



You can send arbitrary command.

When this window is closed, it returns to the original screen. In that case, it is synchronized with this instrument.

Measured value display

Sample Application

Tool Help

Measure Value

CH1

Z 9.99999E+28 Ω

Z 9.99999E+28 Ω

Z 9.99999E+28 Ω

Z 9.99999E+28 Ω

V Monitor: 9.99999E+28V I Monitor: 9.99999E+28A

Status: 1 Unmeasured after power on

CH2

Z 9.99999E+28 Ω

Z 9.99999E+28 Ω

Z 9.99999E+28 Ω

Z 9.99999E+28 Ω

V Monitor: 9.99999E+28V I Monitor: 9.99999E+28A

Status: 1 Unmeasured after power on

Communication time: ms

Setting

Display update ☐ ON ☒ OFF

Update interval 200 ms

Meas Format EXP

Acquisition Command :READ?

Display switching Measurement

- **Update interval**
Sets the update (query transmission) interval when the [Display update] is ON.
If it takes longer than the update interval, the update will be done at the interval of the communication time.
- **Acquisition Command**
 - :READ?...Acquisition of the trigger + measurement values.
 - :FETCh?...Acquisition of measured values

Example (:FETCh?)

Connect the system and the device via a LAN, and connect the application to the unit via USB.

Set the acquisition command to [:FETCh?] and periodically update the measured values.

When triggered by the system, the measured values in the application software are also updated.

The application can be used as a monitor.

- **Meas Format**
 - EXP...It is a 5-digit number.
 - UNIT...Significant digits is 6.

Disclaimer

This application is freeware. HIOKI E.E. Corporation is not liable for any damage or loss sustained as a result of its use or for any bugs, issues, or defects that it may contain.

Please note that HIOKI is unable to respond to questions about this software.

Thank you for your understanding.