Brainchild HMI Frequently	<b>Asked</b>	<b>Questions -</b>	- FAQ
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This document contains 89 FAQ for Brainchild HMI products.

Theses FAQ were numbered sequentially as they were developed in response to customer inquiries.

A table of contents starts on page 2 with some questions listed in multiple topics.

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### 1. Do you have any PLC drivers?

Yes, Many PLC drivers, Inverter drivers with various protocols over serial and Ethernet are supported. OPC server available to configure various PLC drivers.

#### 2. What is the difference between Panel studio, Panel studio plus and Data acquisition software Historical viewer?

Panel studio is basic HMI editing software with free basic symbols. Panel Studio plus is basic HMI editing software + Symbol factory which contains more than 4000 symbols. Historical viewer is PC software tool to view historical data and historical alarms in PC. Historical Viewer is supplied at no cost with both Panel studio and Panel studio plus.

# 3. Why do I have to pay for Panel studio plus software?

It is towards license fees for using symbols from Symbol Factory

#### 4. How I can read PLC data in HMI?

Procedure: Configure OPC server for specific PLC driver. Add tags and objects like a Bit lamp or word lamp into the screen. Now, link objects with tags

#### 5. How I can send a command from HMI to PLC?

Configure OPC server for specific PLC driver. Add tags, Insert button into screen ant then Configure events in the button

#### 6. How I can do scaling for the Analog tag in HMI?

It is accomplished during OPC server configuration after adding tag.

# 7. We are system Integrator Company. We have 3 programmers. Do we need to buy 1 hardware lock or 3 hardware locks for panel studio plus software?

You need to buy three hardware locks if you wish to use HMI editing software simultaneously in three Personal computers.

#### 8. Can I connect two different PLC's on the same Communication port?

Generally every PLC has proprietary protocols. In serial ports, it is not possible to keep two different PLC's on same RS422/RS485 network unless both of them support standard protocols like Modbus RTU. However, in Ethernet, it is possible.

# 9. Is it possible to connect HMI with Profibus Master Device?

Yes, it is possible. In this case, it is required to specify Profibus DP option for the networks while ordering the HMI or order Profibus DP card to field install within an existing HMI. A slot is available to fit various kinds of Field bus optional cards (Slave) like Profibus DP, DeviceNet, CANOpen, ProfiNet IO, Ethernet/IP, CC-Link, ControlNet, CompNet etc.

#### 10. HMI will be Master or slave in Profibus network?

With the optional Profibus DP network card installed the HMI is Profibus DP slave.

#### 11. Can I configure HMI as Modbus RTU Master and Modbus RTU Slave?

HMI can be configured as Modbus Master via OPC server. Panel Studio HMI editing software v1.1 and later Modbus RTU Slave (COM1/COM2) and Modbus TCP slave (Ethernet) drivers are supported.

# 12. I want to transfer some data from PLC1 to PLC2, both PLC's are from different vendors with different protocols. Can I use HMI for gateway application?

Yes, it is possible. You may use a function "Copy TagB to TagA" in scheduler.

# 13. How quick I can scan a tag from PLC and display it in HMI?

Minimum time is 100 milliseconds. However, please define scan rate properly in tag data base and also make sure that optimum communication settings are selected at both HMI and PLC.

# 14. I need to run HMI application in different countries. Can I display different languages in HMI for end users? Yes, it is possible.

# 15. Can I write scripts in HMI?

Yes, it is possible. You can write scripts in C language and call them via scheduler.

## 16. Can I install HMI in outdoor?

No. HMI is intended to install indoors in suitable enclosure.

### 17. Do you have HMI with function buttons?

At present, all our HMI are touch screen only, function buttons are not available.

#### 18. What is operating system in HMI? Can I install windows XP in HMI?

All our HMI are having WinCE operating system. No, it is not possible to install windows XP OS in our HMI

# 19. We are OEM Company. Can you supply WinCE hardware to us? Can I run my own applications in WinCE operating system?

If Panel Studio HMI editing software is not sufficient to develop your application or you require to use your own applications designed for WinCE yes we can provide HMI with WinCE V6.0 Core, WinCE V6.0 Pro. Refer to HMI order matrix for appropriate HMI part number and contact the contact the factory/supplier for more details.

#### 20. I want to write a Math formula, how I can do this in HMI?

Create internal memory tags, use Scripts, it has different functions available for Math functions.

# 21. I completed project in 10" HMI. Now, I have another similar project with 10" size. Can I use some of screens from earlier projects in new project?

It is possible to open multiple sessions of HMI software. So, open both the projects simultaneously in PC, then, copy and Paste the screen elements between projects.

#### 22. Do you have template in HMI software? If so, how many templates are available?

Any screen can be configured as a template (Except screen 1) and then link this with other normal pages. If you edit a template, it will be reflected in all other screens dynamically. It is possible to have more than 1 template screens in a project.

#### 23. HMI editor software support Pop up screens?

Yes, it is possible. Please refer section 6.6.2 in HMI user manual for more details.

# 24. I have developed project in 4" HMI and now, I want to use same program in HMI 7". Can I convert application from 4" to 7"?

You may open HMI 4" project first. Then, apply Project save as and select HMI 7" size with correct resolution. You may give new project name for this. Please do remember, it will not change any object sizes from 4" to 7". Only extra space will be available in new project. However, Panel Studio HMI editing software V1.20 onwards, a new "Group panel" object added in Basic Objects. First group a screen in 4.3" size, then, in HMI 7", you can try to increase the size and check

# 25. I have some problems with Power supply. Can I change power supply card myself or I need to send HMI back to factory/Supplier?

It is possible to order power supply spare and it can be easily replaced by customer.

#### 26. Can you supply HMI to PLC cables?

Yes, it is possible, please refer HMI accessories catalog.

# 27. Can I store data in USB flash memory directly?

No, it is not possible. First it stores data in either internal memory or SD card. Then, you can dump data from internal memory/SD card to USB stick.

## 28. How I can view historical data stored in USB or SD card in PC?

Install "Historical viewer" software that is included with Panel Studio HMI editing software for this purpose.

### 29. I want to connect a printer to HMI. Is it possible?

Yes, it is possible from V1.2x onwards. We support 2 kinds of Printers USB Printer: Driver for PLC language 4, 5 & 6 is available. Any printer supporting above languages should work and they can be directly connected to HMI. The main applications include printing historical data, alarms in several pages. Please refer printer user manual for exact protocol details Line Printer: Driver supporting ESCP language is available. In this case, you need to connect printer to PC first and then connect HMI to PC via Ethernet. The main application of line printing is to print single line alarms/events. Please refer section 6.10 for more details.

#### 30. What is the difference between Online and Offline simulation?

Offline simulation: It is to test HMI application in PC before downloading application to HMI, without connecting PLC to PC. It is possible to enter some values for the tags via table to check the application.

Online simulation: It is to test HMI application in PC before downloading application to HMI, connecting PLC directly with PC. It works for 2 hrs. only.

# 31. I want trigger an activity with respect to time at Real time clock. Is it possible?

Yes, it is possible. Use schedulers, set time and job.

## 32. Do you have RTC in HMI? How about battery?

Yes, RTC is available. Battery is rechargeable type and typical life time is 10 yrs.

#### 33. Can I download HMI application via serial port?

No, it is not possible. Use Ethernet or USB flash disk for this purpose.

## 34. I want to update firmware in HMI. Is it possible?

Yes, it is possible. Please contact factory/supplier for latest firmware updates.

#### 35. I want latest HMI editor software updates. Is they are free of cost? Where I can find them?

Generally updates are supplied free of charge. Please contact factory/supplier for latest software updates.

## 36. Can I use HMI in safety/emergency control application?

No.

## 37. Can I connect Modbus RTU IO modules directly with HMI without using any PLC?

Yes, it is possible for small applications. You can configure HMI as Modbus RTU Master and IO modules as slaves and then exchange data between HMI and IO modules. For complex logic and control tasks, it requires to use PLC.

### 38. Do you have some demo programs available?

During installation of HMI editing software, please select "Demo Projects". By default, these demo projects are available at following path C:\Program Files\Panel Studio\Demo Project

#### 39. How many screen views can I have in any HMI?

It depends on memory left in your HMI project.

#### 40. Is it possible to calibrate touch screen by user? When does it require calibration?

Yes, it is possible. Apply power supply to HMI and perform calibration from Control center screen. Normally calibration information is stored in non-volatile memory. When user press a button and if boundaries are not correct and if it is not working properly, then, it may need to perform calibration once to store new settings into non-volatile memory.

#### 41. I lost my application backup. Can I upload application from HMI to PC back?

Yes, it is possible. After completing application development, it is best practice to save editing software with exact version used for development along with Project source code in multiple locations as per your company back up policy to maintain and retain electronic files.

## 42. Do you have any tools to check communication between PC and PLC?

You may use OPC Server or OPC client for this purpose. Please check OPC server manuals for information about this.

#### 43. Can I use more than 1 network option card in HMI?

No, it is not possible. Only one slot is available to insert network option card.

#### 44. I am getting error message "Memory used almost full ... "in HMI

To clear message "Memory used almost full. Alarm and data log stop work. Please dump or clear alarm and data log If internal memory is less than 5% in HMI" you must dump or clear historical data manually or plan to execute dump/clear functions from the scheduler periodically to have enough internal memory available to use

## 45. What is the difference between HMI 730 and HMI 750?

HMI 750: CPU 1Ghz, 256MB RAM, SD, standard Ethernet, many Networks, IP65 aluminum front bezel, optional stainless steel IP66K front bezel, optional sound I/O&O/P+3DI+3DOdsc@123

HMI 730: CPU 677Mhz, 128MB RAM, optional SD, optional Ethernet, no Networks, IP65 plastic front bezel, no sound I/O&O/P, no 3DI+3DO

# 46. Do you have any limits for number of tags, objects, pictures etc..?

From HMI editing software V1.1 onwards, there are no limits and now it depends on free memory in ROM and RAM. It is suggested to maintain free memory greater than 30 MB after downloading application. From Control center, check free flash memory (ROM) after pressing "System information". To know RAM, run application from Control center, it shows free memory and total RAM during loading bar for a while

#### 47. Remote Viewer: Can I connect one HMI Remote viewer session to 4 HMI?

Yes, it is possible. However, performance depends on PC. Please refer chapter 9 in HMI user manual for more details.

## 48. Remote Viewer: Can I display one HMI in three different PC?

Yes, it is possible. Please refer chapter 9 in HMI user manual for more details.

#### 49. Remote Viewer: How many HMI Remote viewer sessions are possible for one HMI?

Maximum 3 HMI Remote viewer sessions are possible for single HMI. Please refer chapter 9 in HMI user manual for more details.

#### 50. HMI Remote viewer use and security features?

It's assumed to be safe to use HMI Remote viewer in Local area network and there might be security related issues when using with Virtual private network/Internet. So, design the system with appropriate external distributed firewalls, make sure PC running HMI Remote viewer has latest security updates, antivirus software with latest updates to mitigate risk

# 51. Remote Viewer: Is it possible to enter password in HMI and then enter this password in HMI Remote viewer to establish a session?

Yes, it is possible. Please enter password in HMI at control center. At Control center, press "Instrument", then "Advanced", now enter "Password"

# 52. Remote Viewer: What are port numbers that are required to enter at firewall settings to allow HMI Remote viewer session?

Contact factory/supplier for further information.

#### 53. Remote Viewer and VNC: How I can connect HMI to internet?

You need to get fixed IP address from your internet solution provider for your facility. This IP address will be unique in global network. Then, you can use HMI Remote viewer and if installed VNC in any PC connected to Internet to monitor and control HMI.

### 54. Remote Viewer: What is the best advice to reduce risk when using HMI Remote viewer applications via internet?

Enter password at Control Center. We suggest using all the security features available in HMI editing software. There are 9 security levels available to configure and link every button with appropriate security level and then assign users with appropriate security levels to reduce risk. Make sure first screen in HMI application dedicated for user log in with assigned security levels.

#### 55. Remote Viewer: Can I have access for full control of HMI from HMI Remote viewer?

Yes, it is possible.

## 56. Remote Viewer: Can I use HMI Remote viewer session for monitoring only without any control?

Yes, it is possible. In this case, we suggest using all security features in HMI editing software and make sure every button in HMI application will have security level of minimum 2. Then, for monitoring purpose, create users with security level 1

## 57. Besides of those drivers you have, can you develop a new driver for our devices? Any condition?

The answer is yes. To develop a specific driver, we need protocol information, the device itself for testing, and reasonable quantity.

## 58. Is Ethernet a standard for all models?

No, it is standard on HMI 750, 1050 & 1550 and optional on lower cost HMI 450 & 730.

## 59. Do you supply faceplate in any other color than green?

Yes, besides standard green faceplate silver grey is available.

#### 60. Do you supply neutral faceplate to OEM?

Yes, neutral faceplates without logo and product name are available.

#### 61. Can you offer private label on both faceplate and HMI software?

Yes, based on reasonable quantity we can do private label on both. The HMI software includes a tool called Customization, which allows the user to change logo, software name and company name.

# 62. How do you compare your HMI with other competitors'?

We position our HMI with 1st tier European & American specifications and features but at competitive prices. Please refer details from comparative charts supplied.

### 63. How can I quickly get an impression on your editing software?

You may download the editing software from CD or our website. In addition you may also download the self-training programs with audio that will provide step by step instruction.

### 64. Even it is expensive, my customers are happy with HMI they have. How can we switch their HMI to yours?

Show them better specifications, features on hardware, software on comparative charts, and competitive price. If they have reasonable quantity, suggest your FAE to do the application program for them, and finally offer them a free sample with the program for testing.

#### 65. What is the difference between Ethernet and EtherNet/IP?

Ethernet/IP is Allen Bradley's Ethernet protocol. Ethernet is just hardware port.

#### 66. Can Ethernet or other Networks be added on later?

A Networking card may be field installed in any of our HMI models, 450/730/750/1050/1550.

Ethernet is standard in HMI 750/1050/1550 and optional for HMI 450/730. Ethernet cannot be field installed in HMI 450/730 as due to hardware board design it must be specified at time of order and production.

## 67. To replace expensive Siemens MPI adapter, can you offer something?

Yes, specify optional network card MPI/Profibus-DP. Network cards may be field installed in existing HMI.

Another way is to use existing Siemens Ethernet OPC Server on Ethernet port. You just need to make sure to select Siemens PLC with Ethernet port. In this case, no MPI adopter/ external module is necessary

### 68. What is the product warranty period of time?

It is two-year warranty after shipping.

#### 69. Is it possible to run our own software instead of yours?

Yes, it is easy to run 3rd party software because HMI is built on WinCE V6.0. When running 3<sup>rd</sup> party software recommend HMI specified with WinCE V6.0 Core or WinCE V6.0 Pro at time of order entry.

# 70. Can your HMI run InduSoft SCADA software?

Yes, with WinCE V6.0 Pro, they can run InduSoft Web Studio smoothly.

## 71. Do you offer other color housings besides standard silver grey?

Yes we can for large OEM quantity and for several models offer dark grey housings in OEM quantities.

### 72. To save expensive Mitsubishi communication module, can you offer something?

Yes, our HMI can directly communicate with the CPU ports of Mitsubishi Q02, Q02H and Q00UJ without the expensive Mitsubishi communication module.

### 73. Can HMI support barcode reader?

Yes, HMI can support barcode reader via USB port.

#### 74. How does your HMI communicate with various temperature controllers in the market?

Our HMI can communicate with temperature controllers with Modbus RTU or TCP/IP communications with the HMI configured as the Master.

# 75. What's reason to choose WinCE as HMI operation system?

WinCE is mature and stable system with many ready-made tool that reduced development time for Panel Studio HMI editing software and is easy to implement 3rd party software.

### 76. What's sound input and output for?

Sound input can work with microphone, for example to leave a message to the next shift worker in factory. Sound output works with speaker, for example to play the alarm warning.

# 77. Can we easily replace Siemens HMI by yours?

Yes, it is easy because of same dimensions, panel cutouts, use of Symbol Factory and options of stainless steel front bezels.

## 78. How do you compare your HMI software with others?

It was developed by taking advantages of Siemens' and AB's software. So, it is quite powerful and handy. Please refer details on comparative charts.

#### 79. Does your software support multilingual?

Yes, software Panel Studio does support multilingual in two ways. To display multilingual on HMI, specific languages can be keyed in via keyboard. To read the software itself, the user can also choose any one of 18 available languages.

# 80. Can your HMI be used for data acquisition purpose?

Yes, our HMI supports data acquisition function. The user can read real-time and historical data and trend on HMI. Also, it is possible to search and export data to Excel format as well as use the included PC based Historical Viewer software to view exported data..

### 81. My application needs three COM ports, but your HMI only offers two. Any solution?

Yes, by using the USB port on the HMI and a specific USB to COM converter US-101-485 supplied by us, the user may a 3rd COM port.

### 82. Can two HMI exchange data each other? How to do it?

Yes, it can be done by configuring one HMI as Modbus RTU Master and another as Modbus RTU Slave.

### 83. If I use COM2 port for RS-485 communication, how many devices can be connected in maximum?

It depends on Transceivers and Protocol used. In case if low power Transceivers are used, it is possible to communicate with maximum of 247 devices on Modbus protocol. In case of high power Transceivers are used, it can drive till 32 devices.

## 85. I wish to connect keyboard and mouse to HMI. You have only one USB host. What to do?

You can use commercially off the shelf USB hub available and then connect your devices to hub.

# 86. What are the differences between the Symbol library included with Panel Studio and the optional Panel Studio Plus with Symbol Factory?

Panel Studio's Symbol library offers 112 basic symbols divided into 18 categories with one symbol from each category useable. Run-time animation supports up to 32 bands, animation on background color, visibility, flipped and rotated in 4 directions linked to a picture file.

Panel Studio Plus with Symbol Factory offers over 4K symbols (all useable) with each symbol selectable as transparent or color background. Symbols are in high resolution and .NET components. Run-time animation supports up to 50 bands with each band covering foreground color or blinking in different styles of shade, solid or visibility.

## 87: How do I purchase and install Panel Studio Plus with Symbol Factory?

The optional Symbol Factory is embedded within every copy of Panel Studio. Accessing Symbol Factory requires specifying and purchase of Panel Studio Plus "tongle" that is then inserted into the PC USB port to enable access to Symbol Factory.

# 88: VNC Server: Can I connect to the HMI via VNC viewers available for PC and smart devices (iPhone, Android, etc.)?

Yes a VNC Server may be embedded in the HMI to allow access by remote VNC Viewers. Refer to the technical downloads for more information.

89. Can I load and display pdf files on the HMI to be used as a source for manuals and other documents for my appliance?

Yes, pdf files may be loaded into the HMI application and accessed from the runtime. This feature was added in Panel Studio v1.34 and requires HMI operating system software code 5 or 6 depending upon if standard or optional *Panel Studio Plus* with Symbol Factory is used. The operating system software order code 5 *specifies "WinCE 6.0 Pro Platform with Panel Studio Development Software"* while code 6 specifies "Win CE 6.0 Panel Pro Platform with Panel Studio <u>Plus Development Software"</u>.