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Renesas Synergy™ PE-HMI1 Product Example

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Renesas Synergy™ PE-HMI1 Product Example

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Product Overview

The PE-HMI1 Product Example offers a unique perspective into a "design instance" of a particular end product, in this case a connected Human Machine Interface, closely representing how the actual end-product would be designed using the Synergy Platform. As a time saver, portions of this PE design can be re-used in actual end-product, or the entire PE design can be leveraged by using the documented design journey, included to describe the decision process made by the original PE designers, to modify the PE design to meet particular needs. Synergy PE design journeys document the methodology of how and why design choices were made and the reasoning behind the selection of components and methodologies. Synergy PEs offer complete and optimized hardware design with full documentation, a bill of materials (BOM) and Gerber files for PC board layout.

Designed to be used in a variety of connected graphical user interface (GUI) panel applications, the PE-HMI1 features a brilliant 7-inch WVGA color TFT display with capacitive touch screen and a CMOS imager that takes advantage of graphics capability provided by the Synergy S7 Series MCU from the S7G2 group. This kit can be used for development of access control, home automation, building automation panels, and other connected human interface applications.

The kit provides access, with no fee, to the e² studio Integrated Solution Development Environment (ISDE) for Synergy MCU device and software configuration plus extensive code development and debugging using the Renesas Synergy Software Package (SSP). Also included is a GCC C-compiler at no fee. To simplify development, all of the basic software components for graphics plus Ethernet, USB, WiFi, Bluetooth Classic, Bluetooth Low Energy and other communication protocols are included.

This kit supports GUI development on the WVGA color TFT display by providing access, with no fee, to the GUIXTM Studio desktop design tool to create UI graphics and flow before compiling to the MCU target.

Expansion capability is designed into this kit with industry-standard Pmod™ connectors for attaching a variety of multi-function boards in the market, or for connecting custom boards.

Power is supplied by Power over Ethernet (PoE) and the adapter is included in the kit. Alternatively the kit can be powered through a standard 5V adapter.

The PE-HMI1 also includes an external J-Link lite debugger.

* In order to activate and register the software components, this product needs Internet access.

Configuration

- Main board with 7" capacitive touch, WVGA color display
- Connection cables USB and Ethernet
- Power over Ethernet connector
- Adapter cable for external 5V power supply
- Plug-in industrial connector for RS232/485 & CAN (green connector)
- Quickstart guide with instructions how to download latest software and documentation

PC System Requirements

To use the e² studio ISDE, ensure that your PC meets the following minimum requirements:

- Microsoft® Windows® 7 with Intel® Core™ family processor running at 2.0 GHz or higher (or equivalent processor)
- Memory: 8 GB minimum
- Minimum 250 GB hard disk minimum
- USB 2.0
- Connection to the Internet

Videos



[FDI Reviews the Renesas Synergy PE-HMI1 Kit Hardware](#)



[FDI Reviews the Renesas Synergy PE-HMI1 Software and Programming](#)

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Ordering Information

Product name	Part Number (Ordering Number)	Availability
Product Example PE-HMI1	YSPEHMI1S20WS2	Available

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