

RapID Platform Generation 2 User Guide

EVALUATION KIT OPTIONS

EtherCAT: EV-RPG2-ECZ

EtherNet/IP: EV-RPG2-ENZ

Profinet: EV-RPG2-PNZ

Powerlink: EV-RPG2-PLZ

Modbus: EV-RPG2-MBZ

EVALUATION KIT CONTENTS

Baseboard

RapID Generation 2 module installed and preloaded with protocol specific software

Wall mount ac adapter, 90 V ac to 264 V ac to 12 V dc, 12 W, 1 A

4 power supply plug adapters (A, C, G, and I types)

1 USB A male to USB micro B male cable

Ethernet cable

ADDITIONAL HARDWARE NEEDED

PC with Windows® 10 operating system

DOCUMENTS NEEDED

Protocol specific user guides available for download from

the [ADI Chronous Developer Portal](#)

[EtherCAT Quick Start Guide](#)

[EtherNet/IP Quick Start Guide](#)

[PROFINET Quick Start Guide](#)

[POWERLINK Quick Start Guide](#)

[Modbus TCP Quick Start Guide](#)

GENERAL DESCRIPTION

This user guide describes how to set up the provided hardware of the evaluation kit and establish the link type specific host connection and connect the evaluation board to an industrial Ethernet network.

The operation of the EV-RPG2 boards vary by Industrial Ethernet Protocol, and separate user guides are available for each protocol on the [ADI Chronous Developer Portal](#).

The EV-RPG2 evaluation kits provide an end to end evaluation of the communication path from the host processor to the programmable logic controller (PLC) or PC-based tool.

The EV-RPG2 evaluation kits can completely verify the communication path between the host processor and a PLC before integrating the network interface into the end field device.

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REVISION HISTORY

4/2020—Revision 0: Initial Version

EVALUATION KIT PHOTOGRAPH

Figure 1 shows the contents of the evaluation kit.

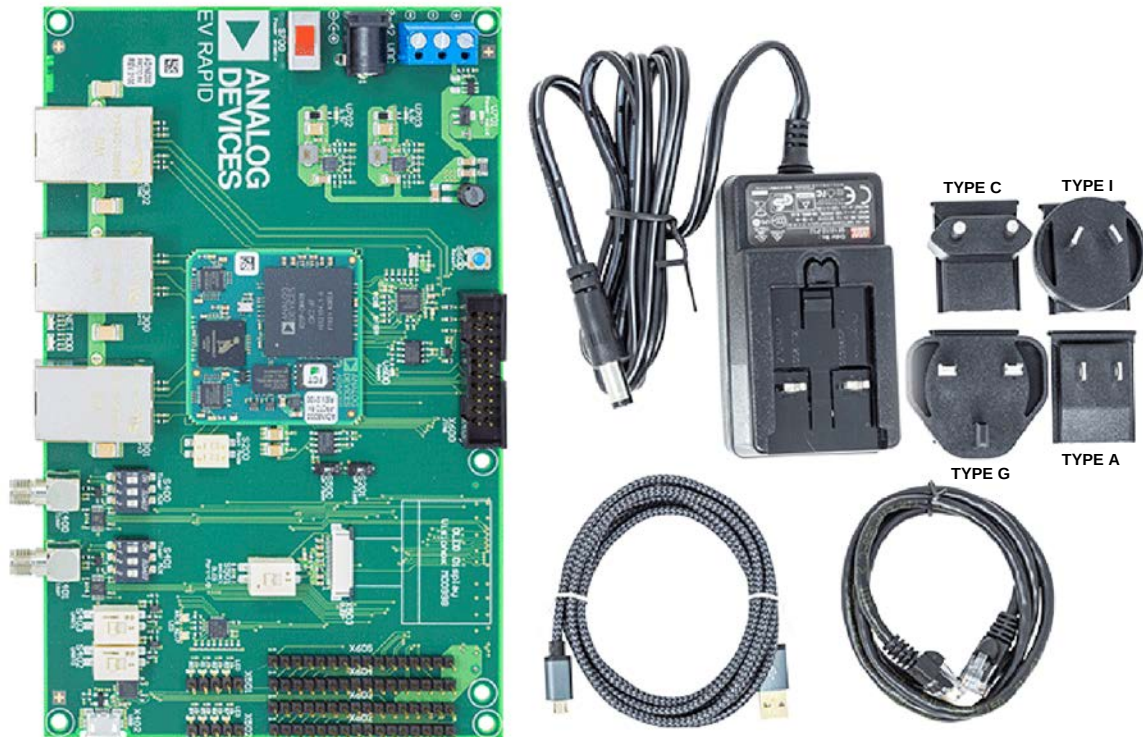


Figure 1. EV-RPG2 Evaluation Kit Example

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EVALUATION BOARD SETUP

ELECTROSTATIC SENSITIVE DEVICE (ESD) WARNING

Handle the hardware in this evaluation kit in accordance with proper ESD device handling techniques. Use a grounding wrist strap when using this evaluation board to prevent accidental damage to the hardware.

POWER SUPPLY AND GROUNDING

A wall adapter power supply is included with the evaluation kit. This power supply is 12 V, 12 W, 1 A, and attaches to the barrel connector on the evaluation board. A screw terminal on the evaluation board allows attachment of a lab benchtop power supply. For either type of power supply connection, the input voltage to the board must be in a voltage range of 9 V to 42 V.

HARDWARE SETUP

The following steps detail the hardware setup process. The evaluation kit comes preinstalled jumpers and preset switches. To set up the evaluation kit, take the following steps.

1. Plug the provided ac adapter into the wall socket, and connect the barrel connector of the ac adapter to the baseboard, as shown in Figure 2. The Power Valid LED illuminates blue. At this point, the evaluation board is powered.



Figure 2. Power Cable Connection and Power Valid LED

2. Switch the Power Enable switch on the baseboard to the ON position, as shown in Figure 3. The 3.3 V LED (V702) and the 5.0 V LED (V703) illuminate blue.

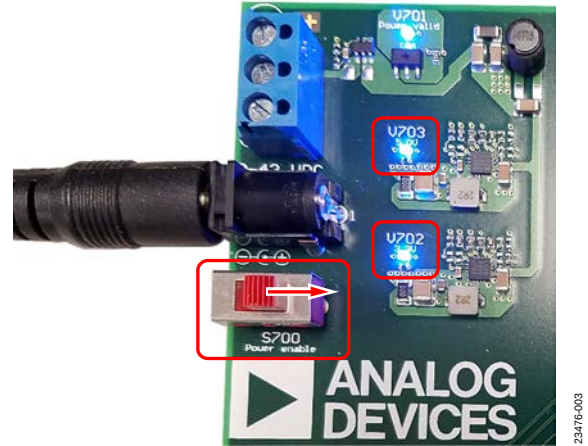


Figure 3. Power Switch in ON position and 5 V and 3.3 V LEDs

3. If it is necessary to reset the evaluation board, press the Reset switch, which illuminates two red LEDs, as shown in Figure 4.

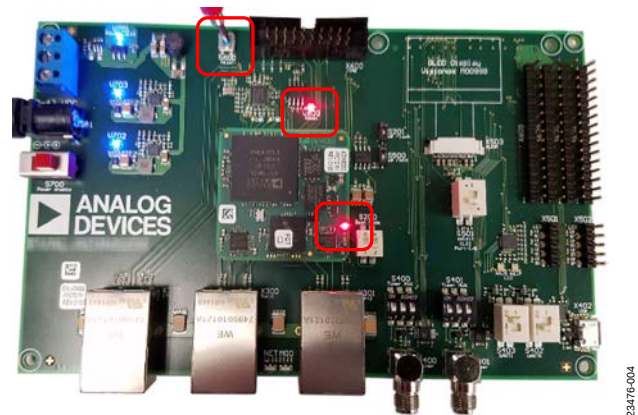


Figure 4. Reset Switch Location and Reset LEDs

CONNECTING THE ETHERNET HOST INTERFACE

Install the provided Ethernet cable between the host PC and the host port of the evaluation board as shown in Figure 5.

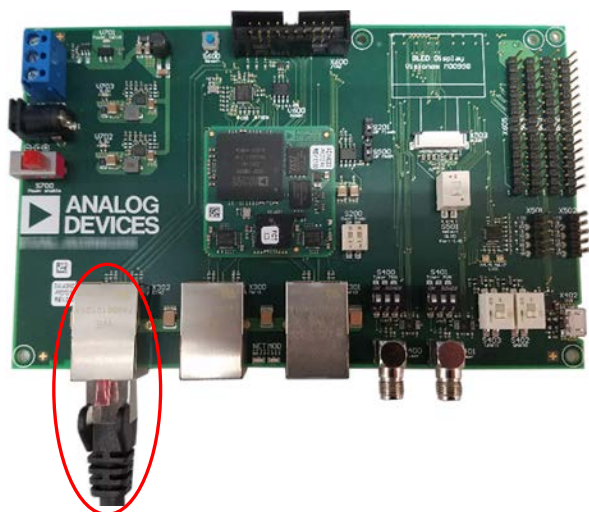


Figure 5. Ethernet Cable Connection

CONNECTING TO THE INDUSTRIAL ETHERNET

Use the two industrial Ethernet ports on the baseboard to connect the evaluation board to an industrial Ethernet network, as shown in Figure 6. The two industrial Ethernet ports are labeled Port 1 and Port 2 on the evaluation board.

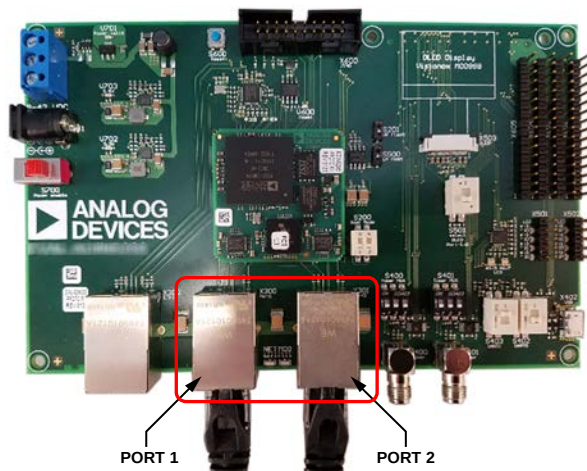


Figure 6. Network Interface Port Location

PROTOCOL SPECIFIC QUICKSTART GUIDES

After running the application example, the user can refer to the protocol specific user guide for an example of the network communication. The evaluation kit and protocol specific user guide must be used in conjunction with the [Design Integration Guide](#) to develop field device products. These user guides are available for download from the [ADI Chronous Developer Portal](#).



ESD Caution

ESD (electrostatic discharge) sensitive device. Charged devices and circuit boards can discharge without detection. Although this product features patented or proprietary protection circuitry, damage may occur on devices subjected to high energy ESD. Therefore, proper ESD precautions should be taken to avoid performance degradation or loss of functionality.

Legal Terms and Conditions

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