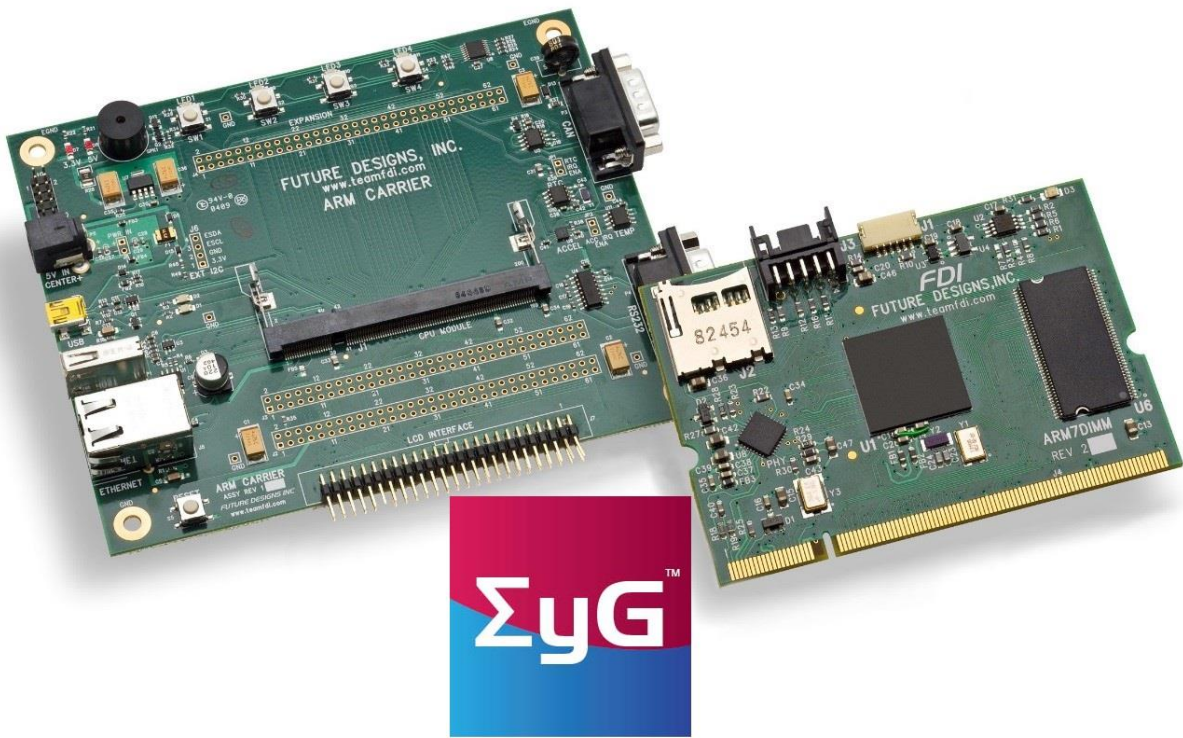


# Quick Start Guide

## ΣYG-S7G2-MDK



Version 1.3

**FDI** *Future Designs, Inc.*  
Your Development Partner  
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## 1.0 Introduction

The Future Designs, Inc. ΣyG™ Family provides a complete and qualified Graphical User Interface (GUI) / Human Machine Interface (HMI) platform for the rapid release of customer products. The core of ΣyG (pronounced, “sig”) is Renesas Synergy™ – a comprehensive and integrated software-based microcontroller platform. FDI adds the Synergy platform to its GUI hardware, systems and production expertise. The end result is a sum of high-quality products that provide a robust and proven source for GUI and HMI solutions:

$$\Sigma y G = \text{Renesas Synergy} + \text{GUI}$$

The ΣyG-S7G2 Modular Development Kit for the System on Module is the gateway for beginning Renesas Synergy™ projects. The ΣyG-S7G2 Modular Development Kit is compatible with FDI's ΣyG Modular Development LCD Kits but can be used independently as a lower cost option for those embedded applications without the need for a touch screen display. FDI offers low cost customization services for customer specific hardware, software or packaging applications at volumes of 500 units or more.

## 2.0 Prerequisites

### 2.1 Kit Contents

- Renesas Synergy™ ΣYG-S7G2-SOM Board
- Carrier Board
- 5 VDC, 2.3A North American Power Supply
- USB and Ethernet Cables
- Segger JTAG debugger and cables

### 2.2 Required Software Tools

- PC with Windows 7 or Windows 8
- e<sup>2</sup> studio Integrated Solution Development Environment (ISDE) from Renesas
- Renesas Synergy™ Software Package (SSP)
- GNU tool chain for ARM® Cortex®-M MCUs
- 7-zip

**NOTE:** Access to the Synergy Beta site is restricted to authorized Renesas Synergy beta program participants. If you require access to this site, contact your Renesas representative.



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The GNU tool chain and installation instructions for the tool chain are included in the e<sup>2</sup> studio ISDE download.

## 2.3 Installation

To install the tools, follow these steps:

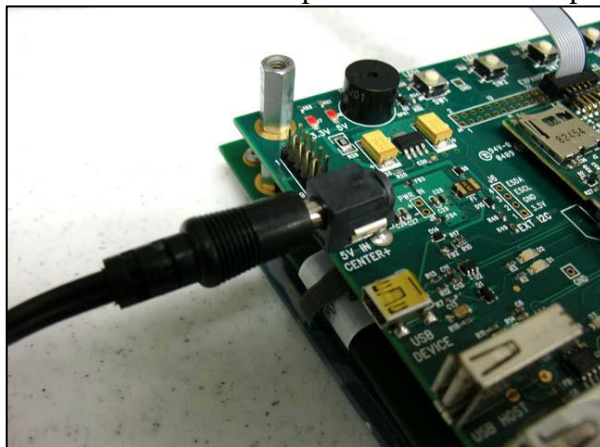
- 1) For optimal results extracting e<sup>2</sup> studio ISDE and Renesas SSP files, download the latest version of 7-Zip from <https://www.7-zip.org>.
- 2) Download the latest version of the e<sup>2</sup> studio ISDE from <https://synergybeta.renesas.com/> and extract the files using 7-zip.
- 3) Download the latest version of the SSP from <https://synergybeta.renesas.com/> and extract the files using 7-zip.
- 3) Locate the ISDE\_Installation\_Guide within the e<sup>2</sup> studio ISDE file directory. Follow the installation instructions provided in the document.

**NOTE:** Renesas SSP includes the license file in its installation directory at “<Install Directory>\ISDE\internal\projectgen\arm\Licenses”. You must load the license file prior to initiating the first Renesas Synergy project into the e<sup>2</sup> studio ISDE.

## 3.0 Startup Procedure

### 3.1 Power on Board

To power the boards and run the demonstration software, connect the 5V power supply to the ΣYG-S7G2-MDK kit. The device will start up and load the demo program from the internal flash.



### 3.2 Demonstration Program

Insert a formatted USB drive into the ΣYG-S7G2-MDK boards and connect them to your PC using an Ethernet cable. In your PC, set a static IP address on the PC to be on the same network (IP=192.168.0.x with Subnet mask=255.255.255.0). Once connected, the ΣYG-S7G2-MDK demonstration software will deliver you to a web page at the address <https://192.168.0.180>. Thread counts will automatically update or you can click on “System Variables” to force an immediate update. Use the 7 ThreadX tasks outlined on the web page to update the system variables.

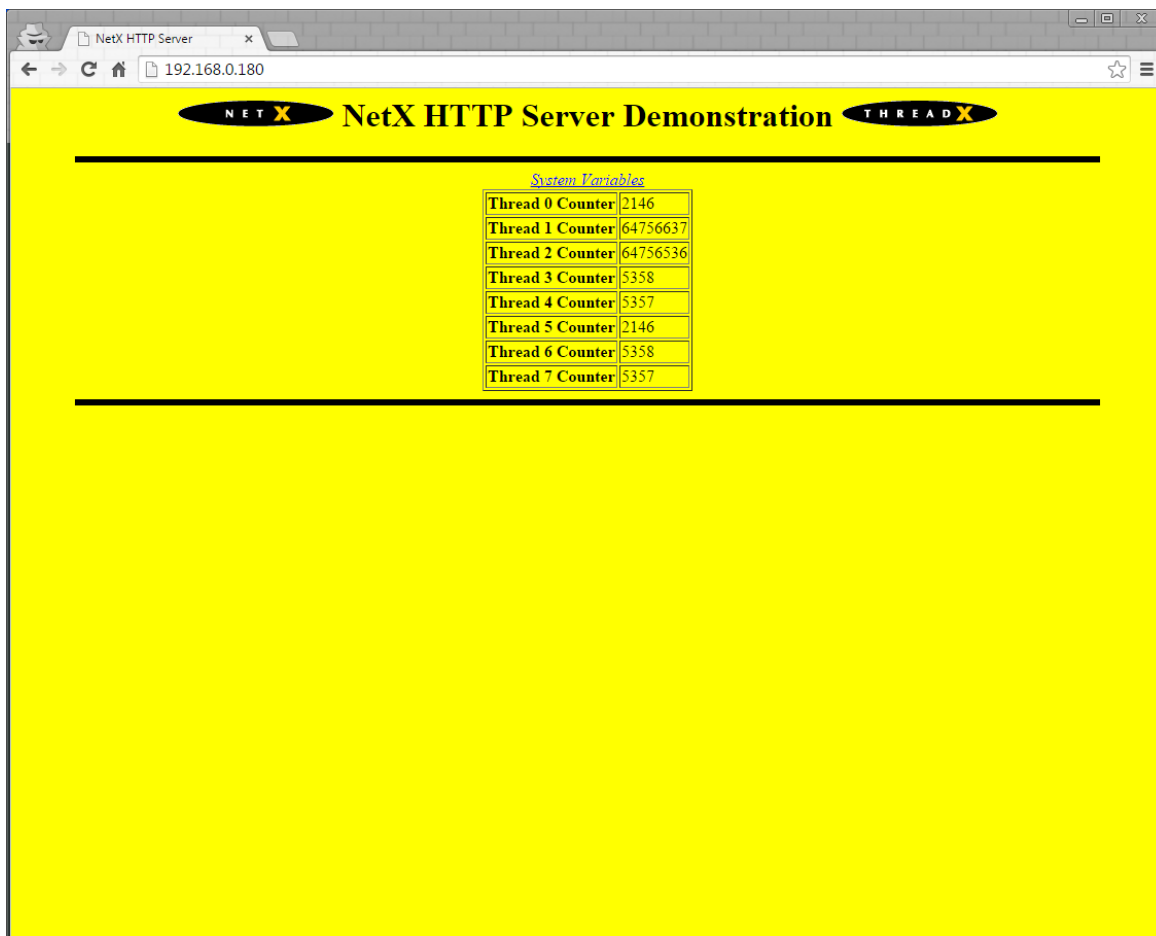


Figure 1: ThreadX ΣYG-S7G2-MDK Demonstration



## 4.0 Support

### 4.1 Where to Get Help

Online technical support is available at <https://www.teamfdi.com/support/>

### 4.2 Useful Links

- Future Designs Inc. Forums: [https://www.teamfdi.com/?post\\_type=forum](https://www.teamfdi.com/?post_type=forum)
- ΣYG-S7G2-MDK Product Page: <https://www.teamfdi.com/product-details/syg-s7g2-mdk>
- Renesas Synergy:  
<https://www.renesas.com/us/en/products/synergy/hardware/microcontrollers.html>
- SEGGER J-Link LITE: <https://www.segger.com/jlink-lite-cortexm.html>
- Renesas Forums: <https://www.renesasrslz.com/>
- 7-Zip: <https://www.7-zip.org>

