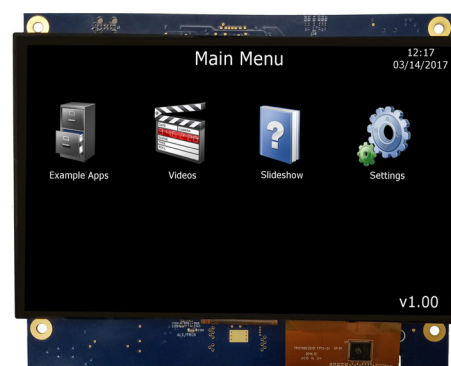The 7.0" IoT-enabled PCAP Touch Screen LCD GUI, SYG-70CP, adds a secure, Renesas Synergy™-based, option to FDI's ΣyG® product family (pronounced "Sig"). The high speed, secure S7G2 microcontroller is combined with Trusted Objects hardware security and Visible Things™ optimized wireless communications to capture and send data securely for IoT sensor to cloud applications.

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 is Renesas Synergy – a comprehensive and integrated software-based microcontroller platform. FDI adds the Synergy platform to its GUI hardware, systems and production expertise, with the result being a family of high-quality products that provide a robust and proven source for GUI, HMI, and IoT solutions:

ΣyG = Renesas Synergy™ + GUI

FDI offers 7.0" IoT-enabled PCAP Touch Screen LCD GUI development kit and production module options. ΣyG development kits include everything needed to kick off a project including JTAG debugger, power supply, cables, microSD card and full documentation. Once your design is complete, we offer cost-effective ΣyG production modules for prototypes or high-volume production. FDI also offers engineering design and production support services. FDI is committed to saving customers time, money and hassle. So, no matter how much (or little) support you need along the way, FDI can make your project concept a reality.

14.7 mm

Development Kit Part #: **SYG-70CP-DK**
Development Kit MSRP (Qty 1) : $499.00 (USD)
Production Module Part #: **SYG-70CP-BA**
Production Module MSRP (Volume) <$225.00 (USD)

Production guaranteed until 2027 or longer.

Module Features

- 7.0" TFT WVGA 800 x 480 PCAP Touch Screen Panel
- Renesas S7G2 240MHz CPU with 4MB Internal Flash, 640KB SRAM
- 16MB of QSPI Serial Flash
- 32MB of SDRAM (optional to 64MB)
- Wireless Capabilities with LSR 450-0152R module
- Trusted Objects Hardware Security
- Visible Things™ compatible
- High Speed SD interface supporting 15fps video playback
- MicroSD Memory Card Socket
- USB Device Mini-B for 5.0 VDC power and PC communications
- Internal Real-Time Clock with Supercap Backup
- Speaker, 3-axis Accelerometer, Temp Sensor, ALS/Proximity Sensor
- Pmod Type 2A connector with SPI and optional I2C
- Cortex-M 9-pin JTAG Debug Connector
- XBee Expansion Header for Cellular Modems, Wireless Modules
- External Expansion via two I/O Connectors (70 pins)
    - UART, I2C, SPI, USB Host/Device, RMII Ethernet

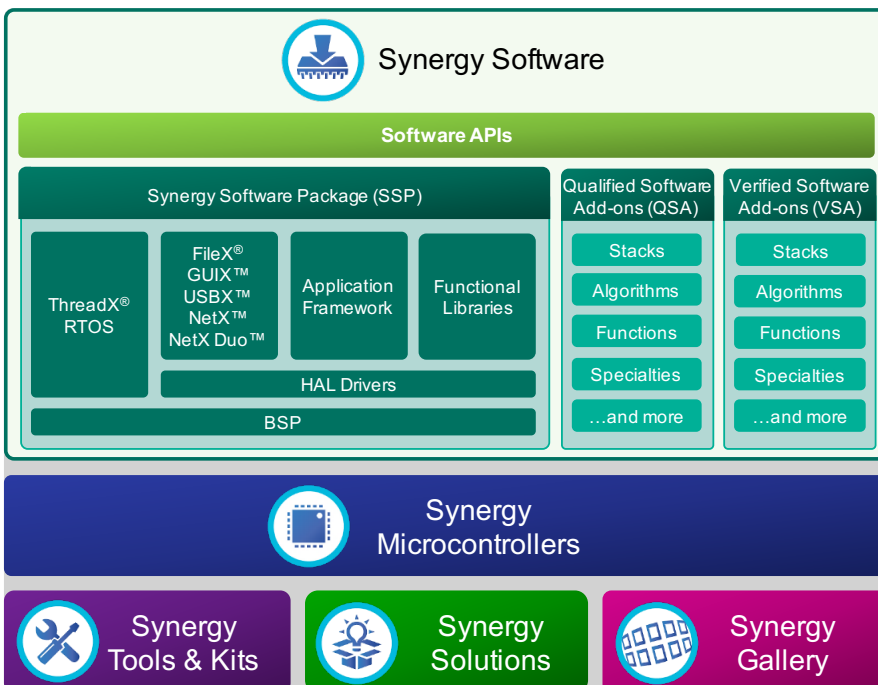PLATINUM PARTNER
RENESAS

AVNET®

Technical Specifications

Production Module

- Part number: **SYG-70CP-BA**
- MSRP (Volume) <$225.00 (USD)
- Contrast Ratio: 500:1 typical
- Brightness: 300 nits typical
- Horizontal Viewing Angle: 70° L / 70° R
- Vertical Viewing Angle: 60° U / 70° D
- Power consumption typ/max: 800 / 955mA
- Overall Size: 170.18(W) x 143.64(H) x 14.70(D) mm
- Operating Temperature Range: -20°C to +70°C
- Viewable area: 154.08(W) x 85.95(H) mm
- Weight: 285g
- Touch Resolution: 800 x 480
- Number Simultaneous Touches:1
- Glass Hardness: ≤5H

Development Kit

- Part number: **SYG-70CP-DK**
- MSRP (Qty 1): $499.00 (USD)
- Includes SYG-70CP-BA Production Module
- AC power supply
- Mini JTAG debugger with cables
- USB device cables for power and PC communications
- 4GB (or larger) microSD Memory Card
- Documentation and Example Software

Synergy Software

RENESAS Synergy™

Accelerate. Innovate. Differentiate.

The Renesas Synergy Software Platform Includes:
- Express Logic's ThreadX© RTOS, communication stacks, file systems & graphics library
- Renesas and IAR Software toolchains are Free
- IAR Software Analysis tools are also Free
- Advanced security support
- Associated developer's tools with context-aware documentation

See more at: TeamFDI.com/SynergySoftware

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