

M13DESIGN – M13-RA6M3-EK EVALUATION KIT DATASHEET

OVERVIEW

With the **M13-RA6M3-EK** evaluation board, users will be able to develop and evaluate applications by using the on-board rich features such as camera input, LCD display, ethernet connection any many more with Renesas RA6M3 MCU device.

FEATURE

MCU

- R7FA6M3AH3CFC MCU (LQFP176 Package)
- 120MHz, Arm Cortex®-M4 core
- 2MB Code Flash, 640KB SRAM

MEMORY/STORAGE

- 32MB External QSPI Flash
- 16Kb Eeprom
- Optional microSD interface
- Optional 32MB SDRAM (TSOP54 footprint)

DEBUG

- On board debugger JLink-OB™ (SWD/JTAG)
- Virtual COM

GRAPHICS

- On board 4.3" TFT (480x272px)
- 8/10bit Camera Interface

OTHER FEATURES

- Ethernet (RMII and PHY)
- Audio Codec with 4 pole 3.5mm headphone connector
- 2 x USB connector (Host/Device)
- 3-axis Accelerometer
- 3 x user LEDs
- 2 x user switch
- 1 x Reset switch

EXPANSION

- 2 x Digilent PMOD™ Interface
- 1 x Mikrobus™ Interface

KIT CONTENT

- M13-RA6M3-EK board
- 1m, USB2.0, A male to micro-B male
- Optional: 0.3MPx camera
- Optional: MikroBUS™ WiFi 7 click (MIKROE-2046)

DEMO SOFTWARE

- **HTTPS server with automatic certificate generation using ACME & Let's Encrypt:**

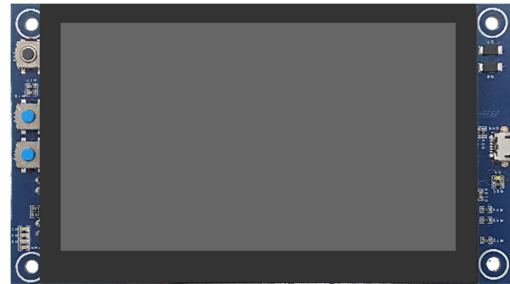
Let's Encrypt is a non-profit certification authority used to secure billion of public websites free of charges. This RA6M3 demo project leverages the ACME protocol to automatically order a certificate from **Let's Encrypt** and get a green padlock in the address bar!

- **Wi-Fi / Ethernet gateway:**

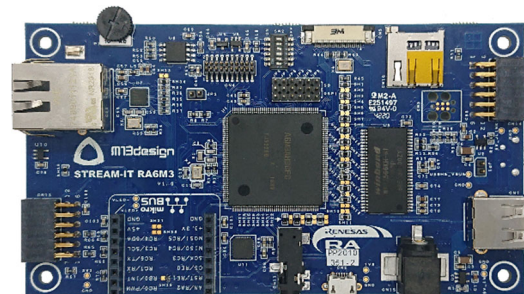
A Mikrobus™ Wi-Fi module is used to implement a gateway with multiple network interfaces. The project demonstrates the simultaneous use of Ethernet and Wi-Fi.

- **Web Radio demo**

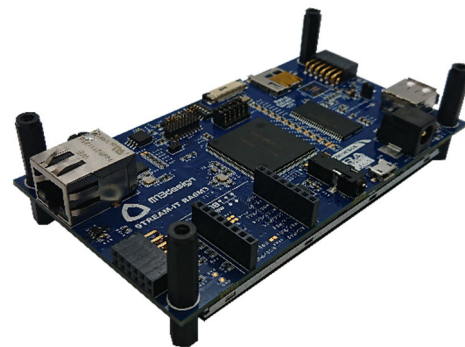
- **Camera network streaming demo**



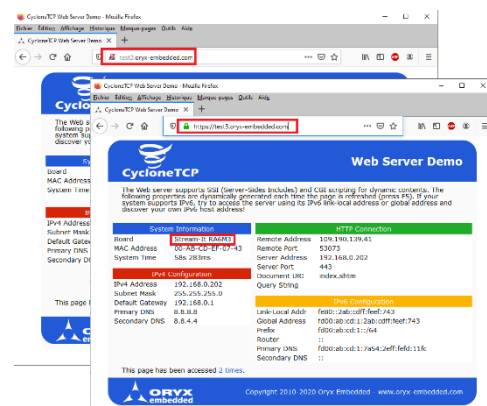
LCD side



Component side



Isometric view



HTTPS server powered by ORYX CycloneTCP / CycloneSSL / CycloneACME

Find out more here: <https://www.m13design.fr/products/M13-RA6M3-EK.html>