Mikromedia HMI

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IC/Module	FT900Q, FT81x, Riverdi displays
Interface	Main, Camera
Power supply	3.3V
Website	www.mikroe.com/mikromedia-hmi

mikromedia HMI is the name of a product line of 18 smart displays intended to be used as OEM parts. It's a spinoff from the original mikromedia, the feature-rich multimedia development board. Because a subset of our customers started integrating ordinary mikromedia boards into serial products, we created mikromedia HMI, a version optimized for scale – removing all excessive circuitry from the original mikromedia to lower the cost, keeping only the essential components that simplify its integration into a final product.

All mikromedia HMI boards are powered by FT900Q, FTDI Chip's 32-bit MCU with their proprietary RISC architecture, with FT812 or FT813 graphic controllers driving the Riverdi brand displays. The boards are available in four screen sizes: 3.5", 4.3", 5", 7", with different touchscreen options (capacitive, resistive, or without). For integrating into larger systems, they either have mounting frames or glass bezels.

The hardware is fully compatible with mikroC, mikroBasic and mikroPascal for FT90x, as well as Visual TFT, the GUI design software.

Features

Here is an overview of features of the mikromedia HMI product line, for more details on each model, visit associated product pages.
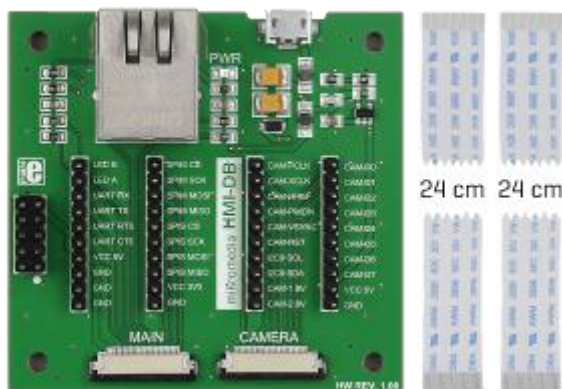
- Size: 3.5", 4.3", 5", 7"
- Resolution: 320x240, 480x272, 800x480
- Brightness: 320-600 NIT
- MCU: FT900Q
  - Speed: 100MHz; 310 DMIPS
  - Memory: 256 KB Flash
  - Peripherals include: 2xCAN, 2xSPI, 2xI2C, I2S, UART
- Graphic controller: FT812 (on models with no touchscreen or resistive touchscreen), FT813 (on models with capacitive touchscreen)
- Touchscreen: Resistive or capacitive
- Interface: Main connector, Camera connector, Micro USB
- External storage: MicroSD card slot
- Audio speaker
- Haptic feedback engine (on most models)
- Mounting frame or bezel

Schematics

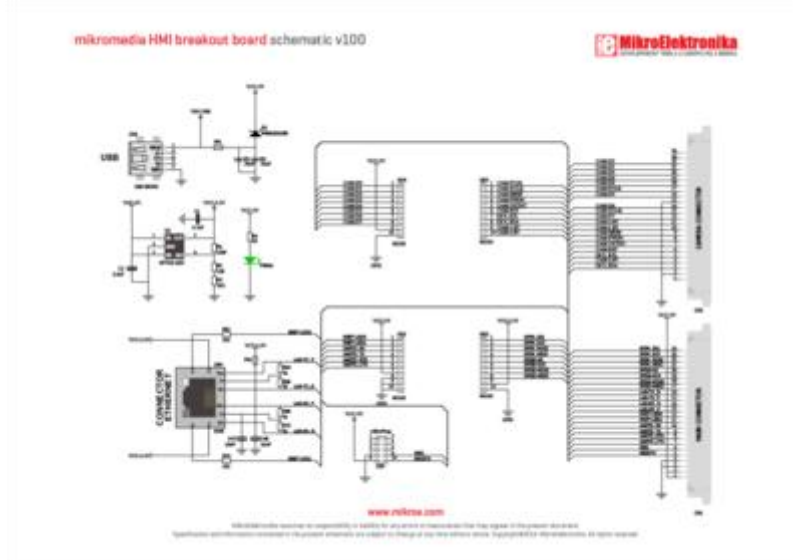The following is a list of schematics for individual mikromedia HMI boards. Missing products will be added soon.

- [mikromedia HMI 4.3" schematic](#)
- [mikromedia HMI 3.5" schematic](#)

mikromedia HMI breakout board

To simplify development in the prototyping phase, a mikromedia HMI breakout board is available. It is a simple accessory that conveniently enables developers to access pins from any of the 18 mikromedia HMI smart display boards. Each mikromedia HMI is powered by an FT903Q

32-bit MCU, and this board directly interfaces to it, which simplifies development in the prototyping phase (mikromedia HMI boards are intended for use as OEM parts). The breakout board also contains a micro USB port, an RJ-45 ethernet connector, as well as an external programmer connector (ideally used with mikroProg for FT90x). Two 24-pin flat cables are included in the packaging, enabling the use of both mikromedia HMI connectors at the same time (MAIN, CAMERA).

Schematic also available in [PDF](PDF)

Resources

- mikromedia HMI homepaga

- mikromedia HMI tutorial

- mikromedia HMI code examples on Libstock