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OVERVIEW

Summary	A smart display solution, mikromedia HMI 3.5" Res has a 320x240px color display with a resistive touch panel on the front, and a powerful FT900Q 32-bit MCU with additional essential circuitry on the back - making it a standalone but cost-effective solution suitable for industrial applications.
MCU	mikromedia HMI boards are driven by FTDI Chip's FT900Q with their proprietary 32-bit RISC core with industry-leading performance. With execution from shadow memory, the MCU can achieve speeds of 3.1 DMIPS/MHz at 100 MHz . FT900Q has 256KB of Flash memory, a small part of which is taken by the built-in bootloader .
Additional circuitry	The concept of mikromedia HMI is to keep only the essential components that simplify its integration into a final product, whilst keeping overall costs down. The board integrates a microSD card for expanding storage capacity, a haptic feedback motor , small audio speaker , and a micro USB connector . A connector for interfacing the MCU with external electronics, along with a separate connector for FT900Q's parallel camera interface .
Display	mikromedia for HMI 3.5" Res has a high-quality Riverdi display with 16.7M color depth and 550 NIT brightness . The display is driven by a FT812 graphic controller . A mounting frame surrounding the screen simplifies integration.



KEY FEATURES

- **Size:** 3.5"
- **Resolution:** 240x320
- **Brightness:** 450
- **MCU:** FT900Q
 - Speed:** 100MHz; 310 DMIPS
 - Memory:** 256 KB Flash
 - Peripherals include:** 2xCAN, 2xSPI, 2xI2C, I2S, UART
- **Graphic controller:** FT812
- **Touchscreen:** Resistive
- **Interface:** Main connector, Camera connector, Micro USB
- **Storage:** 8MB Flash + MicroSD card slot
- **Audio speaker**
- **Mounting frame**



COMPARISON CHART

See how **mikromedia HMI 3.5" Res** compares with the rest of the product line.

Product Name	Size	Resolution	Touch Panel	Luminosity	Active Area	Graphics Controller	Haptic Feedback	Dot Pitch (mm2)
mikromedia HMI 3.5"	3.5"	320 x 240	None	540	70.08 x 52.56	FT812	No	0.73 x 0.219
mikromedia HMI 3.5" Res	3.5"	320 x 240	Resistive	450	70.08 x 52.56	FT812	No	0.73 x 0.219
mikromedia HMI 3.5" Cap	3.5"	320 x 240	Capacitive	480	70.08 x 52.56	FT813	No	0.73 x 0.219
mikromedia HMI 4.3"	4.3"	480 x 272	None	550	95.04 x 53.86	FT812	Yes	0.066 x 0.198
mikromedia HMI 4.3" Res	4.3"	480 x 272	Resistive	440	95.04 x 53.86	FT812	Yes	0.066 x 0.198
mikromedia HMI 4.3" Cap	4.3"	480 x 272	Capacitive	500	95.04 x 53.86	FT813	Yes	0.066 x 0.198
mikromedia HMI 4.3" UXB	4.3"	480 x 272	Capacitive, UX Black	500	95.04 x 53.86	FT813	Yes	0.066 x 0.198
mikromedia HMI 4.3" UXW	4.3"	480 x 272	Capacitive, UX White	500	95.04 x 53.86	FT813	Yes	0.066 x 0.198
mikromedia HMI 5"	5.0"	800 x 480	None	600	118.00 x 64.80	FT812	Yes	0.045 x 0.135
mikromedia HMI 5" Res	5.0"	800 x 480	Resistive	480	118.00 x 64.80	FT812	Yes	0.045 x 0.135
mikromedia HMI 5" Cap	5.0"	800 x 480	Capacitive	510	118.00 x 64.80	FT813	Yes	0.045 x 0.135
mikromedia HMI 5" UXB	5.0"	800 x 480	Capacitive, UX Black	510	118.00 x 64.80	FT813	Yes	0.045 x 0.135
mikromedia HMI 5" UXW	5.0"	800 x 480	Capacitive, UX White	510	118.00 x 64.80	FT813	Yes	0.045 x 0.135
mikromedia HMI 7"	7.0"	800 x 480	None	400	154.08 x 85.92	FT812	Yes	0.045 x 0.135
mikromedia HMI 7" Res	7.0"	800 x 480	Resistive	320	154.08 x 85.92	FT812	Yes	0.045 x 0.135
mikromedia HMI 7" Cap	7.0"	800 x 480	Capacitive	350	154.08 x 85.92	FT813	Yes	0.045 x 0.135

mikromedia HMI 7" UXB	7.0"	800 x 480	Capacitive UX Black	350	154.08 x 85.92	FT813	Yes	0.045 x 0.135
mikromedia HMI 7" UXW	7.0"	800 x 480	Capacitive UX White	350	154.08 x 85.92	FT813	Yes	0.045 x 0.135

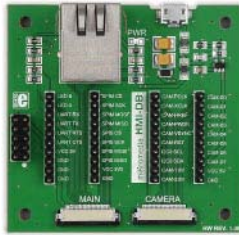
TOOLS AND ACCESSORIES



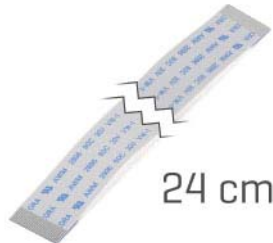
There's no use for a fast chip if it slows you down as a developer and [mikroC](#), [mikroBasic](#) and [mikroPascal](#) for FT90x do just the opposite — they make you more productive. Out of the box, the compilers have more than **500 functions** and more than **150 examples**. Currently, these are the only dedicated FT90x compilers on the market. [mikromedia HMI](#) developers should look no further.



[Visual TFT](#) is a drag-and-drop GUI design tool that generates code compatible with [mikroC](#), [mikroBasic](#) and [mikroPascal](#) for FT90x. It dramatically simplifies the process of designing and programming graphical user interfaces. With full support for both FT812 and FT813 graphic controllers, [Visual TFT](#) is the final part of the [mikromedia HMI](#) development equation.



The [mikromedia HMI breakout board](#) is a simple accessory that conveniently enables developers to access pins from the onboard FT900Q MCU. This simplifies development in the prototyping phase. This board also contains a microUSB port, an RJ-45 ethernet connector, as well as an external programmer connector (ideally used with [mikroProg for FT90x](#)).



The mikromedia HMI board connects to external electronics via standard 24-pin [flat cable](#) connectors. **A single cable is included in the mikromedia box.** With the breakout board you get two. Replacement cables are also available if the original cables wear out after prolonged use.