

## mikromedia HMI 4.3"



PID: MIKROE-2278

RS Product Code; 122-5389

A smart display solution, mikromedia HMI 4.3" has a high-brightness 480x272px color display 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.

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.

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.

mikromedia for HMI 4.3" Res has a high-quality Riverdi display with 16.7M colour depth and 550 NIT brightness. The display is driven by a FT812 graphic controller. A mounting frame surrounding the screen simplifies integration.

Tutorial on [learn.mikroe.com](https://learn.mikroe.com) | Code for demo example on [Libstock](#) | Schematics on [documentation page](#).

Extras. mikromedia HMI breakout board (sold separately) 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).

## Specification

Display size	4.3"
Resolution	480x272px
Graphic controller	FT812
Brightness	550
Touch Screen	None
Architecture	FT90x (32-bit)
MCU	FT900Q
MCU speed	100MHz; 310 DMIPS
MCU Memory	256 KB Flash
MCU Peripherals	2xCAN, 2xSPI, 2xI2C, I2S, UART
Interface	Main connector, Camera connector, Micro USB
Storage	8MB Flash + MicroSD card slot
Peripherals include	Audio speaker, Haptic feedback engine
Integration	Mounting frame
Power Supply	5V (via USB)
Weigh	135g

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
<b>mikromedia HMI 4.3"</b>	<b>4.3"</b>	<b>480 x 272</b>	<b>None</b>	<b>550</b>	<b>95.04 x 53.86</b>	<b>FT812</b>	<b>Yes</b>	<b>0.066 x 0.198</b>
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