



## OVERVIEW

### Summary

A smart display solution, **mikromedia HMI 7" Cap** has a **800x480px** color display with a capacitive 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**.

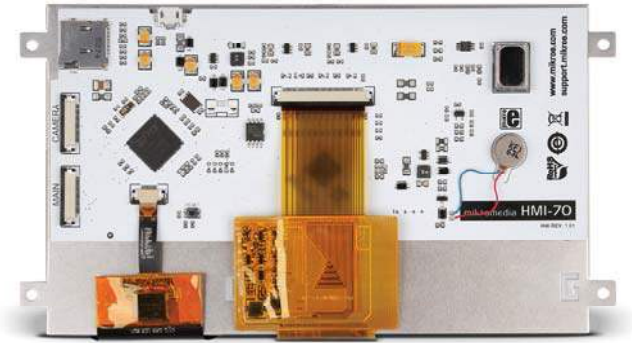
### Additional circuitry

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 7" Cap 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:** 7"
- **Resolution:** 800x480
- **Brightness:** 350
- **MCU:** **FT900Q**
  - Speed:** 100MHz; 310 DMIPS
  - Memory:** 256 KB Flash
  - Peripherals include:** 2xCAN, 2xSPI, 2xI2C, I2S, UART
- **Graphic controller:** **FT813**
- **Touchscreen:** Capacitive
- **Interface:** Main connector, Camera connector, Micro USB
- **Storage:** 8MB Flash + MicroSD card slot
- **Audio speaker**
- **Haptic feedback engine**
- **Mounting frame**



### COMPARISON CHART

See how **mikromedia HMI 5"** compares with the rest of the product line.

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

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