VGA and Touchscreen Interface for PC/104 MPC204

Features

✓ Low-cost VGA, 8 and 16-bit versions

✓ Drives flat panel displays and CRTs

✓ Drives wide variety of panel types (320x200 to 1280x1024)

✓ Software-driven matrix touchscreen interface (up to 16 x 8)

✓ V_{cc} and V_{EE} switching/sequencing

✓ Optional V_{EE} supply (0 to -22V)

✓ Optional AT keyboard port

✓ PC/104 format

The MPC204 is a low cost PC/104 operator interface solution. It allows flat panel LCD displays to be driven with standard PC code. The VGA subsystem supports monochrome and active matrix color. Standard VGA CRT monitors can also be driven. Panel and screen resolutions from 320x200 to 1280x1024 are supported.

An on-board VGA BIOS is in ROM. On-board switching of panel voltages, and an optional V_{EE} supply make panel interfacing easier. The MPC204 also includes an interface to matrix touchscreens overlaid on a flat panel display. The VGA output can be used to draw pushbuttons and other controls on the flat panel display. The returned X and Y coordinates of a finger or stylus press can be used by application software to act on operator selections. If not used for a touchscreen, these lines provide 8 digital inputs and 16 digital outputs.

An optional IBM AT-compatible keyboard port is also available. The MPC204 can be programmed using standard PC languages.
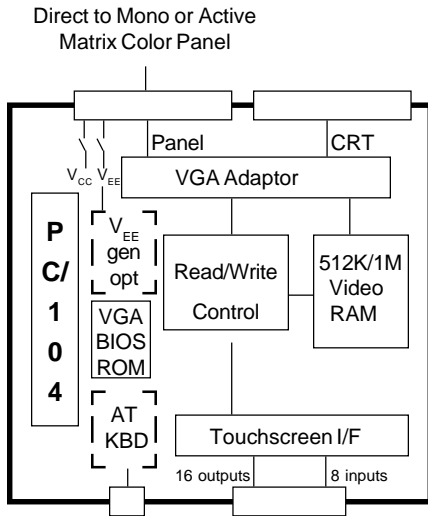
Software Support	Compatible Hardware	Mounting/Packaging
VGA BIOS included Touchscreen and KBD drivers included.	*Any Micro/sys CPU with PC/104 expansion connector [See Section 1] LCD Panels Kits, FPKIT-xxx [items above in Section 4] Flat panel displays VGA CRTs Matrix touchscreens AT keyboards*	*PC/104 standard*

Direct to Mono or Active
Matrix Color Panel

Specifications:

Mechanical:
- ❑ PC/104 standard, MPC204
- ❑ 3.55" (plus I/O region) x 3.775" x .6"

Power Requirements and switching:
- ❑ +5V ± 5% at 100mA max
- ❑ +12V ± 5% at 76mA max
  (if 204OPT1 installed)
- ❑ On-board switches for panel V_{CC} and V_{EE}

Environmental:
- ❑ 0° - +70°C operating
- ❑ -25° - +85°C storage
- ❑ 5%-95% relative humidity, non-condensing

PC/104 Interface:
- ❑ 8/16-bit PC/104 module
- ❑ Standard VGA mapping, 4 selectable port areas for touchscreen and AT KBD
- ❑ IRQ9 for VGA

Video Interface:
- ❑ 11 panel data lines, shift clock, line clock, frame clock, V_{CC}, gnd. Typical panels:
  LG Semicon: LP064V1 color
  Sharp: LM64K103 mono

Touchscreen:
- ❑ Resistive matrix type, up to 8 x 16

AT Keyboard Port Option:
- ❑ AT keyboard controller plus beeper control

External Connections:
- ❑ 40-pin header for flat panel display, pinout per Sharp LM64P101 monochrome panel
- ❑ 14-pin header for CRT monitor
- ❑ 26-pin header for touchscreen
- ❑ 10-pin header for KBD/beeper option
- ❑ V_{EE} input if supply option not installed

Ordering Information:

MPC204	VGA, touch interface, 16-bit
MPC204-1	VGA, touch, AT KBD, 16-bit
MPC204-8	VGA, touch interface, 8-bit
MPC204-9	VGA, touch, AT KBD, 8-bit
204OPT1	Adjustable V_{EE} supply onboard
204OPT2	Additional 512K RAM

Related Products:

FPKIT-M01	Monochrome Panel Kit
FPKIT-C02	Active Color Panel Kit
CA4029-X	Family of cables toLCD panels
CA4030	Cable to female DB15 for CRT
CA4054	Keyboard, Beeper breakout cable