

## FEATURES

### Display Characteristics

- Available in 10.4" diagonal
- High-quality image with wide viewing angle
- LED backlight, 1,000 Nits, typical
- Real backlight control (no night-blindness)
- 4:3 aspect ratio
- 1024 x 768 resolution
- 1200:1 typical contrast ratio
- Colors - 24-bit (16,777,216)

### LCD Controller

- VGA: Analog RGB, 0.7Vp-p
- Monitor automatically scales the input signal

### Touch Screen

- 5-wire resistive touch screen with USB and RS-232

### Power

- Wide input voltage range with transient protection
- Input voltage range 9V to 34V DC
- Lower power consumption  
14W max
- Supplied cable mates directly with the Octagon RMB-C2B and MOBL-D2.

### Environmental

- -20°C to +65°C, operating
- IP65/NEMA4
- 10% to 90% RH, non-condensing

### Applications

- In-vehicle display
- Cars
- Trucks
- Mining
- Busses
- Marine
- Trains
- Aircraft
- Industries



## DESCRIPTION

The Tough Touch display is water & dust-proof to NEMA-4/IP65 and have been designed for operation in continuous vibration environments and the ability to withstand repeated shocks.

A 75mm VESA mount allows the use of industry-standard, in-vehicle mounting hardware.

The touch screen interface supports both USB and RS-232 (allowing operation with long cable runs). An internal speaker allows PC audio and warning tones to be easily heard.

The display operates from 9V to 34V DC and have load dump and transient protected power input, allowing direct connection to vehicle power. Typical operating power is 8-11 watts due to the LED backlight - extremely low for a monitor with this performance.

An operating temperature range of -20°C to +65°C allows the Tough Touch displays to be used in a wide variety of conditions.

A low-cost Screen Maintenance Kit is available to easily change the protective covering of the screen. The covering protects the glass from urban grit, mining dust, etc., as well as providing additional knock protection.

*Call Octagon Sales for help in optimizing a solution  
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# SPECIFICATIONS

## LCD Controller

- VGA: Analog RGB, 0.7Vp-p
- 10.4" – 640x480, 800x600, 1,024x768, 1,280x1,024.
- Monitor automatically scales the input signal
- Input vertical frequency - 60Hz and 70Hz. 60Hz is recommended
- On-Screen Display (OSD) includes: Contrast Ratio, Brightness, H-position, V-position, Clock Phase and Color Balance

## Power

- Input voltage range 9V to 34V DC
- Power consumption - 11W typical, 14W maximum -
- The monitor has a digital input for power on and off control. This input is different from the Power On/Off button. Using this input results in zero off state power consumption
- Load dump and other transients specified in ISO-7637

## User Interface

- Front panel buttons are: Power On/Off, Backlight Brightness Up and Down, OSD Menu
- OSD menu control buttons are: Menu/Select, Left and Right

## Audio

- Front panel mounted speaker, with internal fixed gain mono amplifier. The speaker is intended for connection to a PC for operator feedback and warning tones

## Touch Screen

- 5-wire resistive
- Glass thickness - 1.8mm
- Operation force < 1N with a stylus of 0.8mm radius
- Linearity < 1.5% for both X-axis and Y-axis
- Contact bounce < 10ms
- Impact - No damage with a 9g steel ball dropped into the center of the panel from a height of 30cm
- Static Load: 5kg load over a 10mm area for 10 seconds
- Hardness - 3H pencil pressure 1N @ 45 degrees
- Durability write test - 10,000,000 times with a force of 250g and a silicon rubber stylus of 0.8mm radius
- Durability knock test - 1,000,000 times with a force of 250g, 3Hz R8/HS60

## Touch Screen Controller

- Resolution - 2,048 x 2,048
- Report rate - 250 points/second maximum with USB interface. 160 points/second maximum with RS232 interface
- Response time - 20ms

## Physical Characteristics

- 263mm Wide x 244mm High x 42mm Deep (plus 54mm

mated connector)

- Weighs 1.45kg - 10.4", 1.0kg - 8.0"
- Operating temperature -20°C to +65°C
- Storage temperature -20°C to +80°C
- 10% to 90% RH, non condensing

## Cable and Compatibility

- Military grade connectors compatible with the Octagon RMB-C2B and MOBL-D rugged computer families
- Intended to be bundled with the above computer
- Power and protection supplied by the computers, no battery connection necessary.
- 3M cable and 5M cable options

# ORDERING INFORMATION

- #7709135 10.4" Tough Touch
- #7509132 3.0M Cable option
- #7509133 5.0M Cable option
- #7559139 Screen Maintenance Kit - 10.4"

Represented by:

Rev 06 9/2014