

## Stereo Viewing

# Inexpensive Hardware for Full Color TNT Stereo

Choose any of the following display systems to add full-color stereo viewing to the 2012 version of TNTmips Pro, TNTmips Basic, TNTmips Free, TNTedit, or TNTview.

	Stereo is Useable in Each TNT Product				Drawing Tools			
	Active Glasses	Passive Glasses	Glasses-Free	Anaglyph Glasses	Annotate	GeoToolbox	Sketch	Edit
TNTmips	✓	✓	✓	✓	✓	✓	✓	✓
TNTedit	✓	✓	✓	✓	✓	✓	✓	✓
TNTview	✓	✓	✓	✓	✓	✓	✓	✓
TNTmips Basic (low-cost product restricted to web-based geodata and terrain or local geodata and terrain within its size limitations)	✓	✓	✓	✓	✓	✓	✓	✓
TNTmips Free (free product restricted to local geodata and terrain within its size limitations)	✓	✓	✓	✓	✓	✓	✓	✓



### Completely “glasses free” Toshiba portable (\$1,000).

*(this is also a powerful laptop capable for all your projects)*

No glasses are required for using all TNT stereo capabilities in full color stereo on this glasses free 3D laptop. It is a powerful new portable that does not require any glasses for using TNT in full color 3D on its 15.6" screen. This Toshiba QOSMIO laptop also has the latest powerful features such as i7 (i.e., 4 cores), USB 3, stereo DVD, 3D video, ... It comes configured as the QOSMIO model F755-3D150, F755-3D320, and F755-3D350. Make sure of these product numbers as there are other Toshiba QOSMIO 3D laptops that are not glasses free stereo and use active 3D glasses and display boards that are not supported in stereo by TNTmips.

### Lowest cost at \$100

*(just add a 2nd 23" color passive 3D monitor or use your 3D TV)*

Simply add one of the following inexpensive 23", passive 3D monitors to your computer to use TNTmips in full-color stereo. No special graphics card is required.

The cost of a good 23" second monitor is about \$200. The 3D monitors recommended below are about \$300 so the additional cost to use the monitor for full-color stereo is \$100. Or, you can connect to and use any newer passive 3D TV you have access to for the cost of an appropriate HDMI cable. Make sure the cable you use is rated as Enhanced HDMI.

A 3D passive stereo monitor or TV can be added and used for TNT stereo on any Windows 7/Vista/XP, or MacOS desktop or portable such as a mini-Mac, a Mac portable, and other older portables such as a netbook.

These 23" passive stereo monitors come ready to use with light-weight, inexpensive polarized glasses. New passive stereo is the same technology and quality as commonly used for 3D movies. In fact, the same glasses used in the theater can be used with these passive monitors. All these monitors are about equal in full-color stereo quality but vary in other features such as built-in speakers and power supplies.

ViewSonic V3D231 23", HDMI & DVI & VGA, 1 pair 3D glasses

LG D2342PB-PN 23", HDMI & DVI & VGA, 1 pair 3D glasses

HP2311gt23 23", HDMI & DVI & VGA, 2 pair 3D glasses

Use any big screen passive 3D TV or projector as a TNT 2D or 3D monitor. Every new or older passive 3D TV will work with your desktop or laptop graphics. Passive 3D TVs are sold by LG, Toshiba, Visio, and others.

## Highest quality for desktop computers

*(requires NVIDIA Quadro\* graphics in your desktop or laptop computer and an active 3D monitor)*

Add to your desktop computer an NVIDIA Quadro\* graphics card from PNY, NVIDIA, or other that has a Quad-Buffered OpenGL driver. A suitable Quadro 400 or 600 graphics card costs about \$100. Use any active 3D monitor, newer active 3D TV, or active 3D projector.

The active 3D monitors listed below have been tested for use with TNT stereo; for highest quality choose the 23" or 27" Samsung A950 monitor)

Viewsonic VX2268WM	22", DVI& VGA, \$200
Acer HN274H BIIIID	27", HDMI, DVI, VGA, built-in emitter, 1 pair of glasses, \$550
Alienware (Dell) OptX AW2310	23", HDMI & DVI, HDMI, \$450
Samsung S27A950D	27", HDMI & DP, built-in Bluetooth emitter, 1 pair of 3D glasses, \$600
Samsung S23A950D	23", HDMI & DP, built-in Bluetooth emitter, 1 pair of 3D glasses, \$450

The emitter for the active glasses is built-in and glasses are included where noted. If this is not shown then a separate emitter box that plugs into a USB port and the glasses must be added. The NVIDIA 3D Vision kit provides these at \$120.

For the absolute highest quality choose the 23" or 27" Samsung monitors from this list. They use the newest 3D technology and provide brilliant TNT stereo with light-weight comfortable glasses. They do not flicker and are useable even under bright fluorescent or window lighting, and other extreme office lighting conditions.

Alternatively, use a big screen active 3D TV or projector as a TNT 2D and 3D monitor. Connect from the NVIDIA Quadro Board or laptop using an HDMI connector on the TV. An enhanced HDMI connector and enhanced HDMI cable are recommended for maximum resolution. New or many recently purchased (within 2 years) active 3D TVs use this Enhanced HDMI connector. Suitable active 3D TVs are sold by Samsung, Sharp, Sony, Panasonic, Mitsubishi, and others.

## Laptops

Laptops are available that display active 3D using shuttered glasses on their built-in monitor. To use TNT stereo on these laptops' built-in monitor and on a 2nd add-on monitor the laptop must use an NVIDIA Quadro\* board that has a Quad Buffered OpenGL driver. Suitable laptops are available from HP, Dell, Fujitsu, Lenovo, and perhaps others using the Quadro FX graphics board.

At this time MicroImages is not aware of any laptop whose built-in display screen supports passive stereo using polarized glasses. An external passive 3D monitor, 3DTV, or 3D projector can be added to any laptop to use TNTmips in stereo.

\* For active 3D TNT stereo does not support or use DirectX or Vision 3D or any Radeon or GeForce graphics card. Only NVIDIA Quadro graphics cards are supported by TNT stereo. TNT stereo uses the Quad-Buffered OpenGL driver that is available from NVIDIA for their Quadro quad-buffered display cards in desktop computers or in laptops. The only Quadro board not suitable for TNT stereo is the Quadro NVS board commonly used in business-oriented computers and laptops. The required Quad-Buffered OpenGL driver used by TNT is not available for the NVIDIA Quadro NVS board.

## Completely free using anaglyph (\$0)

In the past MicroImages shipped paper anaglyph glasses with every new TNT product. We now include a pair of good plastic anaglyph glasses in every shipment. If you must continue to work without modern stereo viewing hardware these plastic glasses are much better, even when worn over your prescription glasses. MicroImages will send these new plastic anaglyph glasses to anyone who does not have them and has purchased a TNT 2012 product by any method. However, you must pay the shipping charge by DHL or FEDEX (sorry, no surface mail as it would not be reliable). Getting your plastic glasses would be very easy for you if you have a DHL or FEDEX account number; simply provide your account number to MicroImages with your request.