Display-to-Go™

Display-to-Go, 4MB™

Universal CardBus Display Adapter

Present to Anyone, Anytime, Anywhere on Anything!

User Guide For Windows 98

1. Introduction

Thank you for purchasing the Margi Systems Display-to-Go™ or Display-to-Go, 4MB™ Universal CardBus Display Adapter. Display to go allows mobile users to display onto digital or analog displays. These displays can be flat panel LCD's, projectors, plasma displays, CRT's or head wearable displays. Display-to-Go™ features include:

- Windows 98 Multiple Monitor Support

- For pure digital visual experience

- Independent size and resolution control of secondary display

- Type II PC Card CardBus interface for easy installation

- Conforms to the Digital Display Working Group (DVI Connector) and VESA (MDR20 Connector) digital standards

- Analog output for CRT monitors

- Easy Plug-and-Play installation

- Choice of VGA, VESA (MD-20), or DVI dongles

This guide contains the information for installation and use of the Display-to-Go CardBus cards. Please read this guide before using the Display-to-Go card for the first time. The README file included on the supplied disk may contain more recent information which may not be included in this guide. Be sure to read the README file as well.

For the purposes of this guide, Display-to-Go and Display-to-Go, 4MB will be referred to interchangeably. Where differences in procedure, specification, or operation occur, they will be noted.

Software updates are often posted on the MARGI Systems web site, www.margi.com under Support.

2. System Requirements

In order for Display-to-Go to function properly the following is required:

- Notebook with CardBus enabled PC Card slot

- Microsoft Windows 98 Operating System

- Pentium 166 MHz or higher processor

- Minimum 16MB of system memory

- CD ROM drive

- **Important Note:** Older notebooks that shipped with the original Windows 98 Gold (Released in August 1998), the graphics drivers may not be Multiple Monitor capable. Installing Display-to-Go on a system who's graphics controller does not a second display adapter may result in malfunction or system crash. It is important to check with your notebook vendor to make sure that the latest graphics drivers are installed on your notebook. Typically these drivers are available at your notebook manufacturers web site.

3. Installation / Setup

1. Insert the Display-to-Go card with the label facing upward into a CardBus enabled PCMCIA slot. Do not connect the dongle or secondary display at this time.

> If the Display-to-Go card cannot be properly inserted, check to see if the PC Card slot supports CardBus PC Cards. For more information refer to your notebook users guide or contact your PC manufacturer.

2. When the Display –to-Go card is inserted into the CardBus slot, the following window will appear. Click on the **[Next >]** button.

3. When the following window appears, select **Search for the best driver for your device (Recommended).** Then click on the **[Next >]** button.

4. When the following window appears, select **CD ROM drive.** Put the Display-to-Go drivers CD in the CD ROM drive. Then click the **[Next >]** button.

5. When the following window appears, click the **[Next >]** button. At this point the Display-to-Drivers will begin to install.

6. When the following window appears, click the **[Finish]** button.

7   The Margi Systems Display-to-Go PC Card is now successfully installed. The Display-to-Go icon, shown below, has been placed on the tool bar. There is no mention of Display-to-Go in the program listings.

8   The windows Display Properties window shown below will be also be brought up on the desktop.
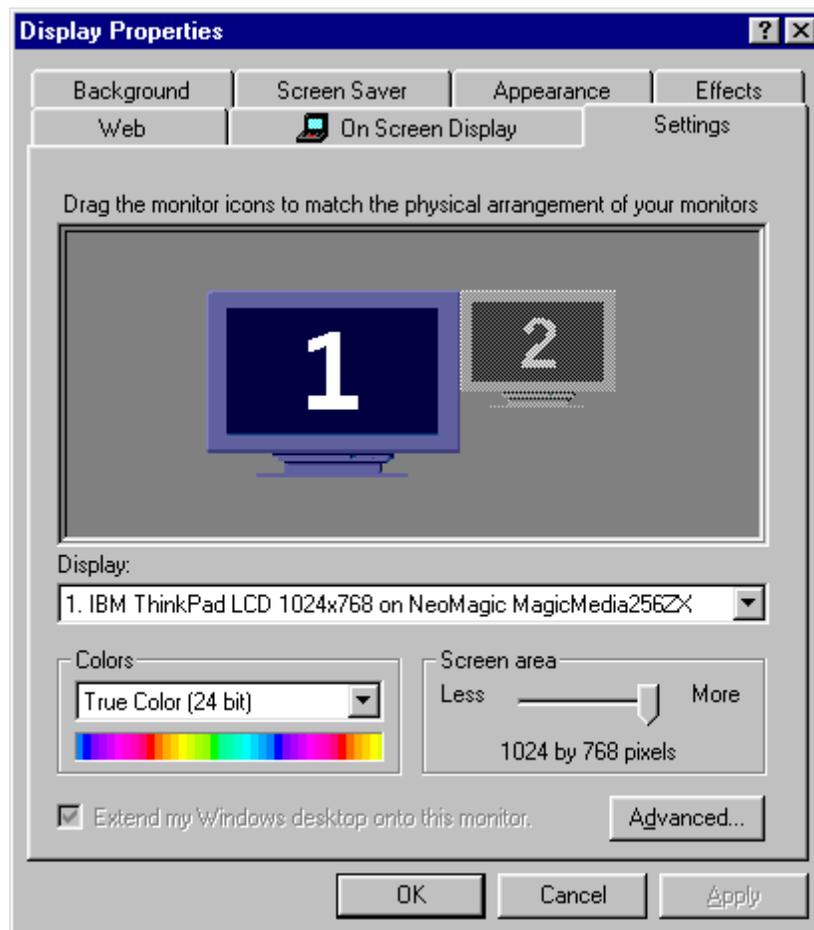
9   Connect Display to Dongle. Connect Dongle to the Display-to-Go card. Turn On your secondary display.

10.   Move the cursor over the grayed out Display #2 and click once. You will get the following info window. Select Yes.
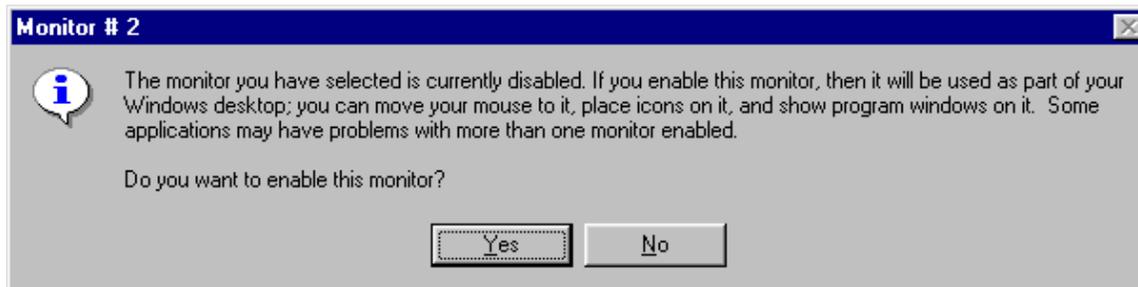
11.   In the Display Properties window Display #2 is now Blue and Display #2 is identified as "Super VGA 1600 x 1200 on MARGI Systems Display-to-Go.
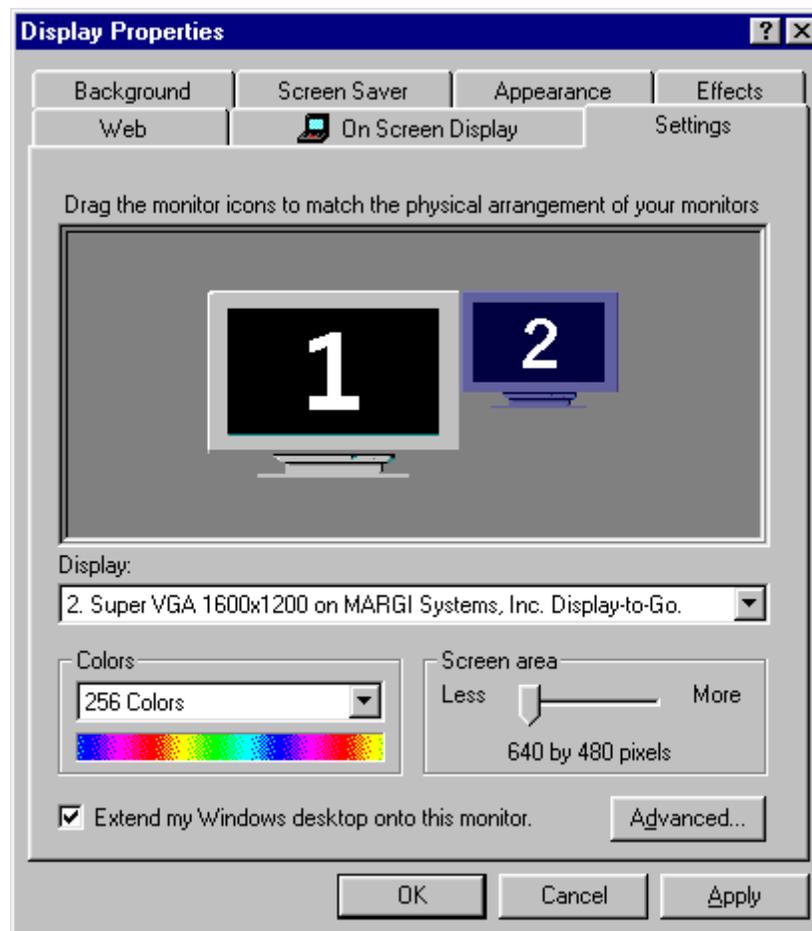
12   Adjust the Screen Area (resolution) and Color (color depth) to your desired levels.and
      select Apply.

      Note: The Display-to-Go, 4MB will allow higher resolutions and greater color depth
      than the standard Display-to-Go card. See specifications section for differences.
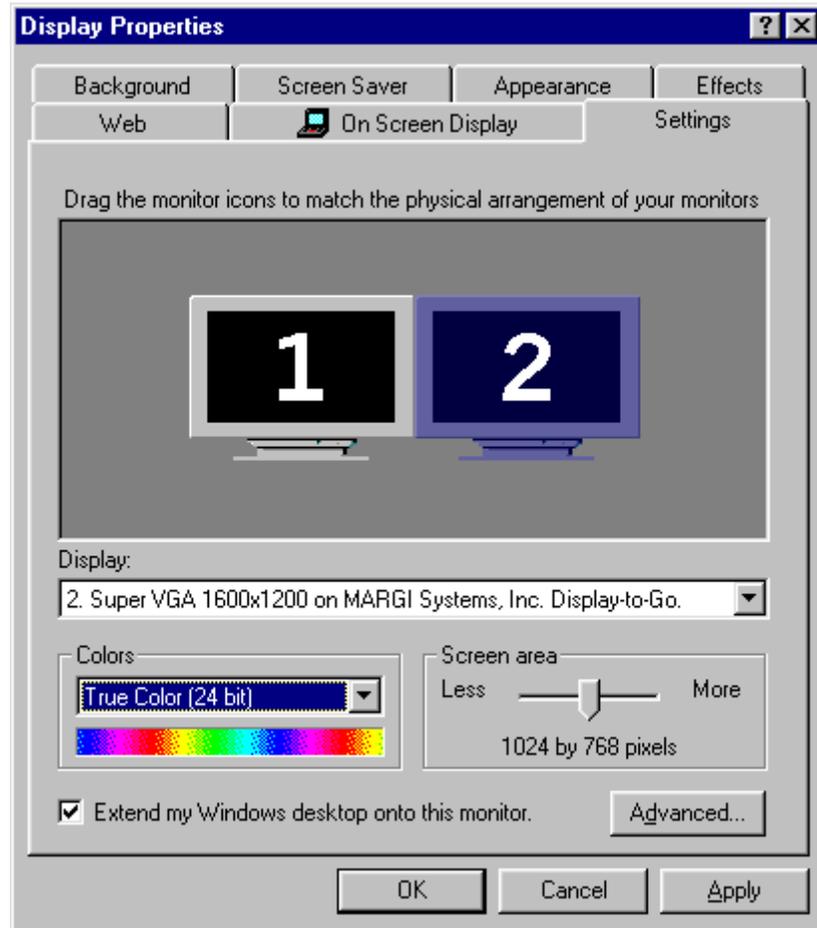
13   Pick apply the new color setting without restarting and OK from the Compatibility
      Warning window.

14   You will get a Display Properties resizing warning. Click OK. Your secondary Display
        will come up at the resolution and color depth you selected.
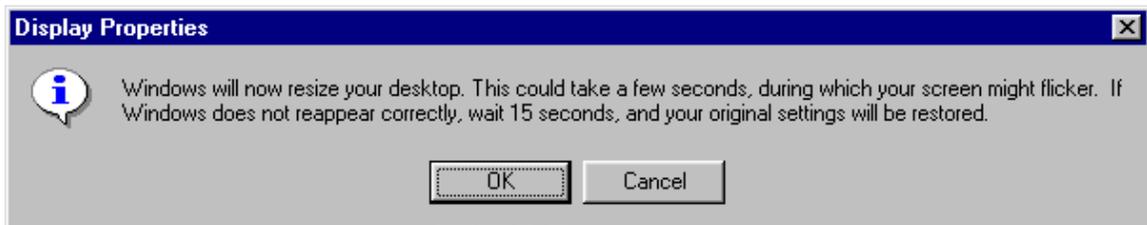
15   Answer Yes to the Do you want to keep the setting dialog box.
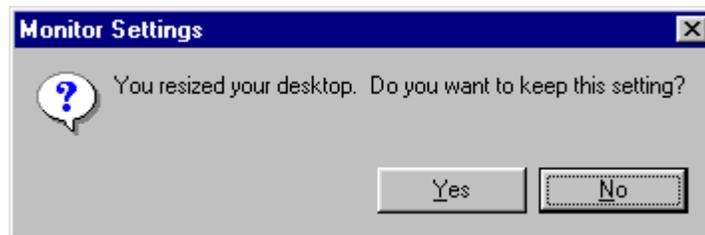
16   OPTIONAL: The relative position of the secondary Display in the software setup can be
        adjusted to match the physical placement of the displays. This can be done by dragging
        display #2 to the location with respect to display #1. In the picture below we have moved
        display #2 to the left of display #1. The cursor and extended windows will travel off the
        left side of display #1 now.

Display Properties

| Background | Screen Saver | Appearance | Effects |
| Web | On Screen Display | Settings | |

Drag the monitor icons to match the physical arrangement of your monitors

Display:
2. Super VGA 1600x1200 on MARGI Systems, Inc. Display-to-Go.

Colors
True Color (24 bit)

Screen area
Less ———— More
1024 by 768 pixels

☑ Extend my Windows desktop onto this monitor.   Advanced...

OK   Cancel   Apply

17   When finished with all desired adjustments, select apply and then OK. The extended
      display is configured and functioning. Any further adjustments can be made using the
      Display-to-Go window which can be accessed by right clicking on the Display-to-Go
      icon.   The functions of that window are explained in Section 4.

4. Display-to-Go Tray Application

This section will explain the Display-to-Go application.

1. In order to start the Display-to-Go application, right click on the Display-to-Go icon on the Windows 98 Toolbar, and select "Open Display-to-Go".

2. The Display-to-Go application will now be launched. The picture and chart below defines each of the functions of the Display-to-Go window.
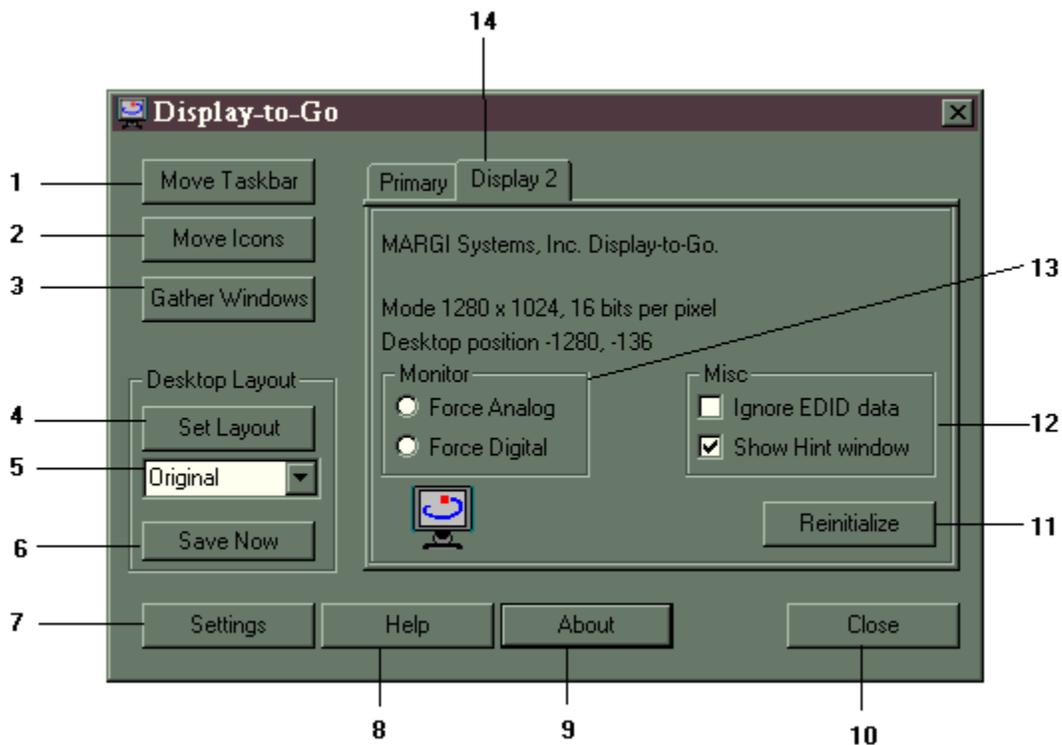
Number	Title	Description
1	Move Taskbar	Click to move Windows taskbar to the next display.

Number	Title	Description
2	Move Icons	Moves all Windows desktop icons to the next display.
3	Gather Windows	Gathers all active window(s) on the display controlled by Display-to-Go and moves them back to the primary monitor. This is useful if the Display-to-Go card is removed or the dongle is disconnected and active windows have been left on the secondary display.
4	Set Layout	Click this button to set the highlighted layout in the pull down.
5	Layout Files	This pull down section shows saved layouts. Highlight the layout that you would like and click on **Set Layout** button to invoke the particular layout that you desire.
6	Save Now	If you have moved any icons or taskbar onto another display(s) and would like to keep the layout, click this button after naming your desired layout in the pull down section
7	Settings	Clicking this button will bring up the Windows Display Properties Dialog box. See figure below
8	Help	Clicking this button will bring up the Display-to-Go Help.
9	About	Clicking this button will show the Display-to-Go About box. This is for application version numbering and link to the Margi web site.
10	Close	Clicking this button will close the Display-to-Go application
11	Reinitialize	Clicking this button will reinitialize the Display-to-Go card. This is useful if you have removed the connection from one display and connected to another display
12	Misc	Checking **Ignore EDID data** will set the display that is connected to the Display-to-Go card to the display settings in the Windows Display Properties. If **Ignore EDID data** is un-checked, the panel type, width, height and refresh rates are set automatically. Most users should

		leave the **Ignore EDID data unchecked.**
		Checking/Un-checking **Show Hint window** will either show/not show the Display-to-Go Hint Window on the display connected to the Display-to-Go card when the card is initialized.
13	Monitor (May not be visible depending on driver version you have)	Checking **Force Analog** will force the Display-to-Go card to analog mode. You will need to click the **Reinitialize** button to invoke this feature. Checking **Force Digital** will force the Display-to-Go card to digital mode. You will need to click the **Reinitialize** button to invoke this feature. If both fields are un-checked the detection of an analog or digital display will be automatic. **It is recommended that the user leave these two radio buttons unchecked.**
14	Display Tabs (May not be visible depending on driver version you have)	Clicking these tabs will show the detailed information (manufacturer, display settings) of the graphics controller internal to the notebook **(Primary)** and the detailed information of the secondary controller **(Display-to-Go PC Card).** In some cases there may be a third or forth monitor installed

3. Right clicking the Display-to-Go icon on the Windows 98 Toolbar brings up the following choices:

    – Open Display-to-Go – Opens the Display-to-Go application.

    – **Move Taskbar** – Moves taskbar to the next display

    – **Gather Windows** – Gathers all active window(s) on the display controlled by Display-to-Go and moves them back to the primary display. This is useful if the Display-to-Go card is removed or the dongle is disconnected and active windows have been left on the secondary display.

    – **Move Icons** – Moves all Windows desktop icons to the next display.

– **Uninstall Display-to-Go** – Uninstalls all Display-to-Go driver and application files.

– **Help** – Brings up the Display-to-Go Help file.

– **About Display-to-Go** – Brings up dialog box that shows driver version number and link to the Margi web site.

– **Remove from taskbar** – Removes the Display-to-Go application from the taskbar.

5. Windows 98 Multiple Display

This section will help users with the Microsoft® Windows® 98 Multiple Display feature.

One of the main benefits of the Margi Systems Display-to-Go CardBus Card is that it takes advantage of the multiple display support feature in Microsoft® Windows® 98. You can multitask faster and increase the virtual size of your desktop by adding additional displays to your notebook PC. You'll be able to see "the big picture" more clearly with the ability to control several displays through a common desktop location.

Here are a few examples of what you can do with multiple displays from your notebook using the Margi Systems Display-to-Go CardBus Card:

- Track HTML code on one display and Web-page content on another.
- Monitor incoming email messages on one monitor while browsing the Web on another.
- Compare multiple versions of a layout, graphic, or design from different displays.
- Divide the display of a video game among different strategic angles to keep a watchful eye on your enemies.
- Create a panoramic view of a large or very detailed spreadsheet.
- View stock quotes on the Internet on one display while analyzing financial data on the other.
- Station conference attendees at different displays and conduct a Microsoft® PowerPoint 2000® presentation from your computer at the front of the room.

 It is important to note that most applications can be dragged freely from one display to the other, but dialog boxes and quick menus might pop up on the primary only. Some programs will only open up on the primary display, but can then be dragged to the secondary display.

Arranging Displays

The primary, secondary (and third display if two Display-to-Go cards are installed) displays can be arranged in many combinations.
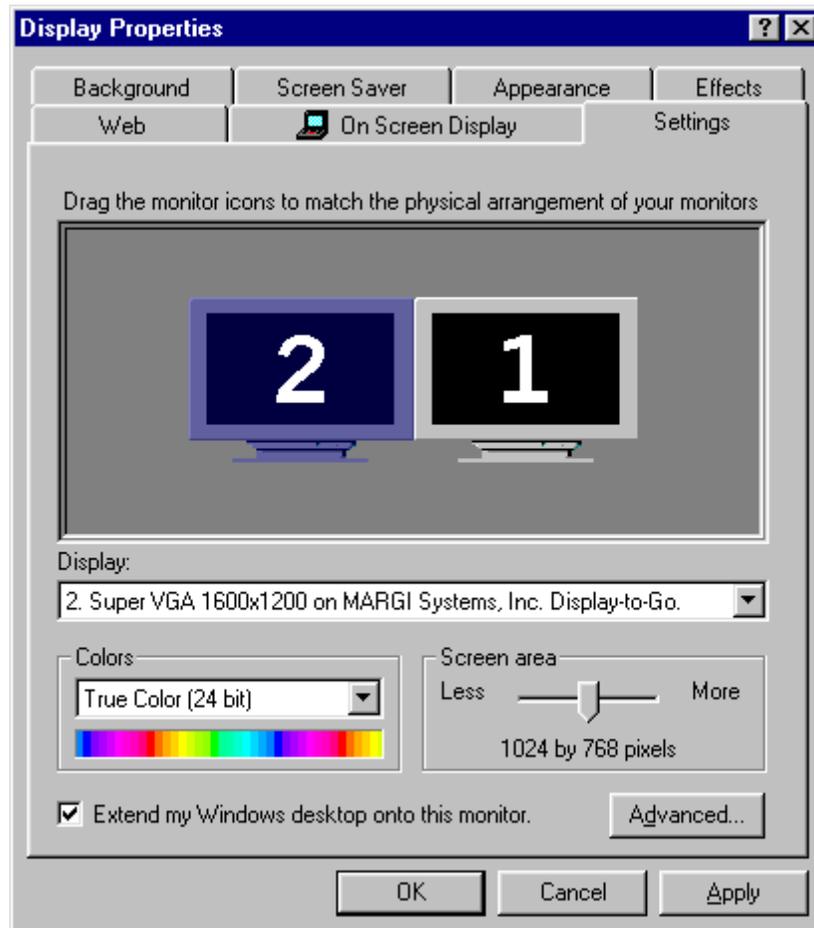
In the example above, display 1 will be the users notebook LCD and display 2 will be the secondary display. If you are having trouble figuring out which display is which, hold down the left click button on your mouse and number will appear on the actual display.

Typically the user will want to arrange the displays the way the displays are physically located. In the example above the secondary display is located to the left of the notebook LCD.

The following web sites provide in depth and up-to-date information on multiple display functionality:
http://www.realtimesoft.com/
http://www.gameart.com/braindead/opengl/
http://www.microsoft.com/INSIDER/articles/multimon.htm
http://home.columbus.rr.com/luna/multimon.html

6. Appendix A: Product Specifications

Display-to-Go™

2MB on board graphics memory
64-bit graphics engine
Type II CardBus card

Digital panel display support:

      Up to 800 x 600 at 24 bpp

      Up to 1024 x 768 at 16 bpp

      Up to 1280 x 1024 at 8 bpp

Varying refresh rates: 60, 75, or 85 Hz
Operating voltage: 3.3V DC
Power consumption: 1.0W

Display-to-Go, 4MB™

4MB on board graphics memory
64-bit graphics engine
Type II CardBus card

Digital panel display support:

      Up to 800 x 600 at 24 bpp

      Up to 1024 x 768 at 24 bpp

      Up to 1280 x 1024 at 24 bpp

      Up to 1600 x 1200 at 16 bpp

Varying refresh rates: 60, 75, or 85 Hz
Operating voltage: 3.3V DC
Power consumption: 1.0W

Model Numbers

Display-to-Go™

90007 VGA Dongle Version

90008 MD-20 Dongle with DVI Adapter
     Version

Display-to-Go, 4MB™

90401 VGA Dongle Version

90402 MD-20 Dongle Version

90403 DVI Dongle Version

Appendix B: Troubleshooting

Frequently Asked Questions

Q. How is Display-to-Go different from the VGA connector on my laptop?

  A. *Display-to-Go is a secondary graphic adapter. Since it is a secondary graphic controller, it can independently control the resolution of the secondary display device. An example of this would be the notebook LCD resolution is set to 800x600, 16-bit and the secondary display device can be set to 1024x768, 16-bit. If you use the VGA out connector on the laptop the user is always limited to the resolution of the notebook.*

Q. What is the advantage of the Windows 98 multiple monitor support?

  A. *The Display-to-Go drivers support the Windows 98 multiple monitor mode. Users are able to run separate applications on the notebook LCD or secondary display device. The typical scenario is that of presenters wanting their audience to see only the presentation and not the notes of the presentation. The presenter would launch the presentation, drag it to the secondary display device for their audience to see. Then they would launch their notes, which only they would see on the notebook LCD..*

Q. Will Display-to-Go support Windows 95 or NT4?

A. *No. Unfortunately these two operating systems do not support multiple graphic adapters.*

Q. Will Display-to-Go support DVD video on the secondary display?

A. *No. The Display-to-Go graphics chip does not support motion vectors or have the benefit of AGP like the primary display card. Depending on your hardware you may be able to run MPEG I applications however.*

Support Contact

Before filling out the Technical Support Form below, please try to resolve the problem by using the help guide or log into our web site (http://www.margi.com). Also, check the "**Readme.doc**" file for information that has changed since the Help file was created.

Two Ways to contact the MARGI Customer Service and Support:
1. Fill out the MARGI's Online Support Form by logging into
    (http://www.margi.com/supportform.html)

2. Fill out the "Technical Support Form" below prior contacting us
    Tel: (510) 657-4435   Fax: (510) 657-4430

Contact Information
Name : _____
Company : _____
Address : _____
City, State & Zip Code : _____
Country : _____
Telephone : _____
Fax : _____
E-mail : _____

Product Information
Type of PCMCIA Card : _____
SERIAL Number : _____
Driver Version : _____
Purchased Date : _____
Purchased From : _____

Notebook / Laptop Information
Brand : _____
Model : _____
Operating System : _____
Video (VGA) Adapter : _____
--- driver version _____
Audio Controller : _____
--- driver version _____
PCMCIA Socket Controller _____

Glossary

- *Card and Socket Services* - A set of software interfaces that automatically detect insertion and removal on PCMCIA cards and allocates the appropriate computer resources.

- *CardBus* - A faster, 32-bit bus version of the PCMCIA standard (older PC Cards are only 16-bit). It supports speeds up to 33 Mhz, and it has some other cool features like bus mastering. Its higher data rates are ideal for uses like fast Ethernet or, say, FireWire PC Cards. It is important to recognize that older, non CardBus cards do work in CardBus slots. It simply gives you the option to use faster cards.

- *PCMCIA - Personal Computer Memory Card International Association* - This is the organization responsible setting the standards followed by any card that bears this name. These standards describe things like physical characteristics and electrical specifications.