

[Board index <./index.php>](#) \ [Marvin, the Paranoid Android <./viewforum.php?f=60>](#)
 \ [General Old Hardware <./viewforum.php?f=46>](#)

[CGA Compatibility Tester vs. VGA cards <./viewtopic.php?f=46&t=28983&st art=60>](#)

Reply 60 of 94, by h-a-l-9000

Posted on 2012-01-21, 18:37 <./viewtopic.php?p=254069#p254069>

> Gauntlet hangs with a black screen on the ET4000

Try to enable the retrace interrupt by jumper, but I doubt you will get around the "chopped up" problem.

Reply 61 of 94, by 5u3

Posted on 2012-01-21, 20:25 <./viewtopic.php?p=254074#p254074>

h-a-l-9000 wrote:

Try to enable the retrace interrupt by jumper, but I doubt you will get around the "chopped up" problem.

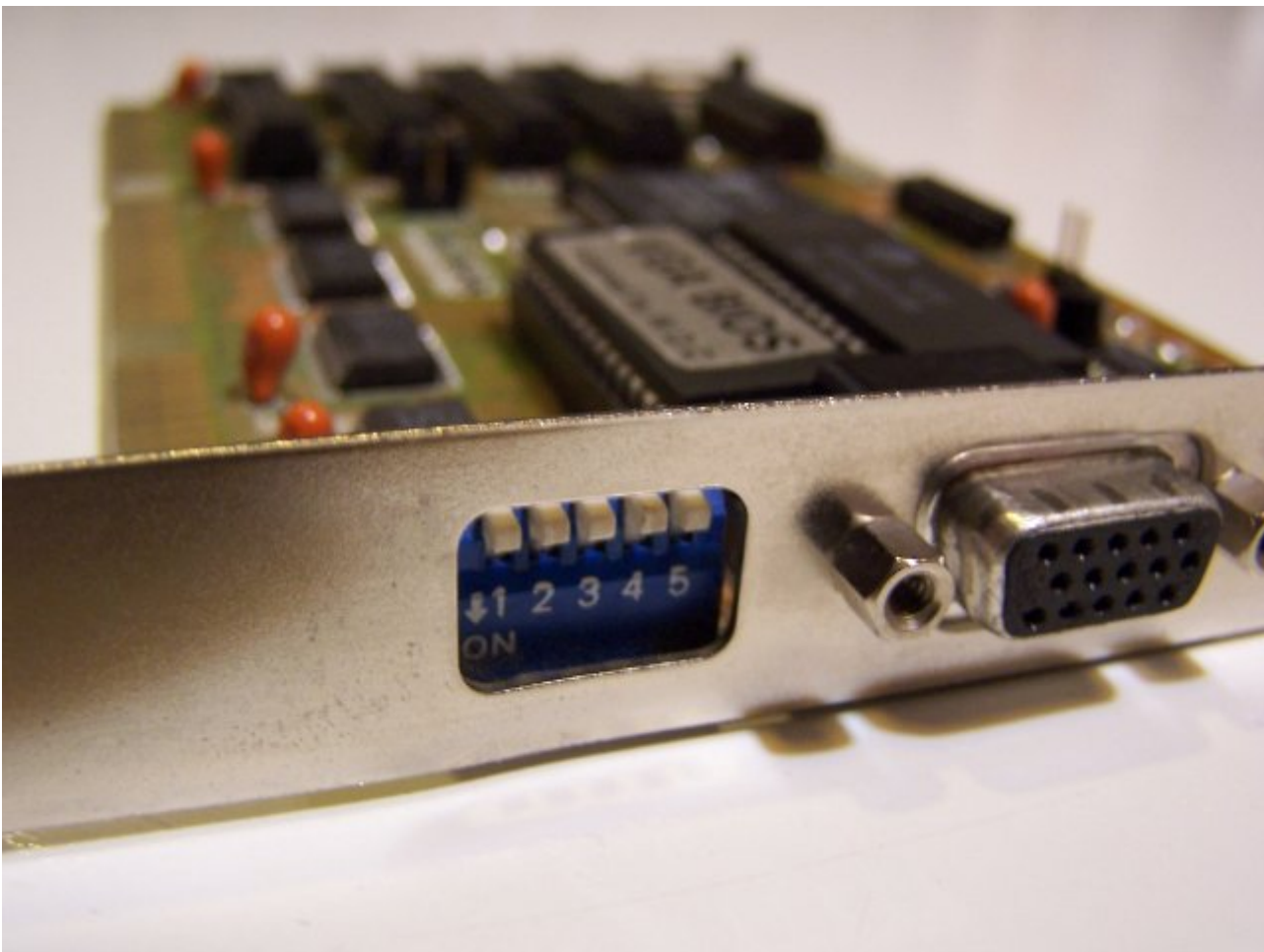
Yep, that did the trick on my Cirrus Logic GD5426. My ET4000 doesn't have IRQ2/9 connected unfortunately. And yes, the image was chopped up in the same way as on the Trident.

BTW, I still haven't figured out the switches and jumpers of my WD90C30 card:



<http://xover.htu.tuwien.ac.at/~sub/GPLAVGA-1DC_01.jpg>

[ver.htu.tuwien.ac.at/~sub/GPLAVGA-1DC_01.jpg](http://xover.htu.tuwien.ac.at/~sub/GPLAVGA-1DC_01.jpg)>



<<http://xo>

[ver.htu.tuwien.ac.at/~sub/GPLAVGA-1DC_02.jpg](http://www.htu.tuwien.ac.at/~sub/GPLAVGA-1DC_02.jpg)>

The back side only has the serial number and the FCC ID: GPLAVGA-1DC

Anyone have a hint on this?

retro games 100 wrote:

I tried both demos on DosBox - just to check them out! I set the DosBox graphics configuration to = ega, but neither demo worked.

Try machine=vgaonly in DOSBox

Reply 62 of 94, by retro games 100

Posted on 2012-01-21, 20:58 <[./viewtopic.php?p=254078#p254078](http://www.viewtopic.php?p=254078#p254078)>

I found a settings page for a WD90C30 video card [here](http://stason.org/TULARC/pc/graphics-cards/U-Z/UNIDENTIFIED-XVGA-WD90C30.html) <<http://stason.org/TULARC/pc/graphics-cards/U-Z/UNIDENTIFIED-XVGA-WD90C30.html>>. I appreciate it's not your card exactly, but the dip-switch settings may function in the same way. I notice on this webpage that dip-switch #6 is optional. I see on your card that you have 5 switches. Your card and this webpage may "match up". Hopefully!

Regarding the jumpers, I reckon it's very likely that one out of the three on your card is for the memory configuration. Another may be for the zero wait state. Could the third remaining jumper be for the "jumper-based retrace interrupt", that h-a-l-9000 mentions, or could it be to enable the card to use an IRQ? Please note that these are guesses, and rather unhelpfully, I have no clue as to which jumper is which.

Reply 63 of 94, by 5u3

Posted on 2012-01-22, 00:03 <[./viewtopic.php?p=254091#p254091](http://www.viewtopic.php?p=254091#p254091)>

@rg100: Thanks for the "generic" WD90C30 settings page! This is the closest one I've seen so far 😊

At least the DIP switches seem to do something similar as described in the settings. None of the jumpers seem to bridge the retrace interrupt directly, yet the IRQ line is connected to somewhere on the board. I will search my multimeter and try to find out tomorrow.

Reply 64 of 94, by h-a-l-9000

[Posted on 2012-01-22, 00:10 <./viewtopic.php?p=254092#p254092>](#)

The chopped up picture happens because the game expects a pure EGA card which would use 200 scan lines. It programs the split screen registers accordingly.

On VGA however we have 400 doublescanned lines which the game doesn't know about. The split screen register doesn't care about double scanning and thus the split is too far up.

Reply 65 of 94, by 5u3

[Posted on 2012-01-22, 19:53 <./viewtopic.php?p=254179#p254179>](#)

Ah, nice to know, thanks h-a-l-9000!

Meanwhile I've figured out almost all of the jumpers on the WD card:

- 1 FCC-ID GPLAVGA-1DC, Western Digital WD90C30
- 2
- 3 SW1/1: Vertical scan rate configuration
- 4 Off: 31.5 KHz
- 5 On : 40 KHz
- 6
- 7 SW1/2, SW1/3: 1024x768 refresh rate
- 8 Off Off : 87i Hz
- 9 Off On : 70 Hz
- 10 On Off : 60 Hz
- 11
- 12 SW1/4, SW1/5: 800x600 refresh rate
- 13 Off Off : 56 Hz
- 14 Off On : 72 Hz
- 15 On Off : 60 Hz
- 16
- 17 JP1: Vertical retrace interrupt
- 18 JP2: 512k/1024k RAM
- 19 JP3: Unknown *
- 20 JP4: No waitstate

* JP3 connects Vsync on the VGA connector to Pin 1 on the WD90C30 chip. No idea really what it does, I get no change with it off or on.

JP1 turns out to be the vertical retrace interrupt jumper after all, but Gauntlet still comes up with the "blank screen" problem.

Also, my hope for finding a magical "60 Hz" switch for the CGA/EGA modes has been crushed. 😞

Ah well... I'm off testing some more games.

Reply 66 of 94, by sprcorreia

[Posted on 2012-02-01, 00:35 <./viewtopic.php?p=255693#p255693>](#)

Tested my Headland 8bit VGA/EGA/CGA/MDA and all tests are OK, except vertical retrace. It shows 70Hz. I tried to force CGA monitor mode in hardware but all i get from my LCD is an "OUT OF SYNC" message.

The known problem with the moving bars happens too. They only go half screen.

Edit: All tests done in CGA video hardware mode using VGA analog multisync setting.

Here's the card.



Reply 67 of 94, by VileR

Posted on 2012-02-01, 01:02 </viewtopic.php?p=255702#p255702>

sprcorreia wrote:

Tested my Headland 8bit VGA/EGA/CGA/MDA and all tests are OK, except vertical retrace. It shows 70Hz. I tried to force CGA monitor mode in hardware but all i get from my LCD is an "OUT OF SYNC" message.

The known problem with the moving bars happens too. They only go half screen.

Edit: All tests done in CGA video hardware mode using VGA analog multisync setting.

Awesome. Guess these results would need a footnote for the vertical retrace test... if your VGA LCD is getting an out-of-sync signal, it's probably one that a 200-line monitor would process as intended.

Reply 68 of 94, by sprcorreia

Posted on 2012-02-01, 01:42 <./viewtopic.php?p=255707#p255707>

VileRancour wrote:

Awesome. Guess these results would need a footnote for the vertical retrace test... if your VGA LCD is getting an out-of-sync signal, it's probably one that a 200-line monitor would process as intended.

Would a CRT monitor do the trick?

Last edited by [sprcorreia <./memberlist.php?mode=viewprofile&u=21339>](#) on 2012-02-01, 02:07. Edited 2 times in total.

Reply 69 of 94, by VileR

Posted on 2012-02-01, 02:04 <./viewtopic.php?p=255709#p255709>

Depends on the monitor. CGA is digital TTL while VGA is analog, so an ordinary VGA CRT would most likely choke on it.

Old "multisync" CRTs supported both kinds of interfaces though, with provisions for h/v refresh rates and so on, so they would be a good bet. Or just a CGA-only CRT, if the card can be jumpered correctly to support it.

Reply 70 of 94, by sprcorreia

Posted on 2012-02-01, 02:07 <./viewtopic.php?p=255711#p255711>

Good news! Tried a different LCD and it doesn't work either... but the "OUT OF RANGE" message comes with info:

Horizontal frequency - 15.7KHz

Vertical Frequency - 59.9Hz

So i think that with the right monitor i'll get 60Hz working just fine.

Edit: card supports all kinds of monitors since it has 15 pin and 9 pin interface.

Reply 71 of 94, by 5u3

Posted on 2012-02-01, 22:34 <./viewtopic.php?p=255811#p255811>

Thanks for testing your CL GD-510/520 sprcorreia! (The card looks super-cute btw.) Your result confirms rg100's tests. Looks like the Cirrus Logic does live up to its reputation of being 100% CGA compatible, only you'd need a CGA monitor for this to work, which most of us unfortunately don't have.

Which brings us to the point of whether we should count that as passed or failed. In order to stay within the scope of this thread, I've decided to leave it at "fail", but add a footnote like suggested by VileRancour.

While updating the table, I've added DOSBox 0.74 for comparison. It does very well, considering it doesn't really have a concept for overscan borders or repositioning the screen (emulating those features would open a quite a can of worms, see this [thread <http://www.vogons.org/viewtopic.php?t=9814>](http://www.vogons.org/viewtopic.php?t=9814) for example).

Reply 72 of 94, by retro games 100

Posted on 2012-02-04, 21:29 <./viewtopic.php?p=256144#p256144>

I just got a boxed ATI Wonder+ card. On the back of this box is an interesting feature list. It states: 100% Register Compatible: Register-level compatible in ALL modes: VGA, EGA, CGA, Hercules, and MDA. I hope to test this tomorrow, with the CGA test utility from 5u3's original post.

BTW, I upload my pictures using google picasa. I've noticed, looking through some of my old posts on Vogons, that google picasa is automatically making my pictures highly condensed, and consequently they now look really poor. Can anyone recommend an alternative to google's picasa, because I think that's poor service. For example, in "x number" of months time (not sure how long exactly), the image below will look significantly degraded.

Features

VGA WUNDER+™ 256: 256K video memory, upgradeable to 512K.

VGA WUNDER+ 512: 512K video memory.

High Performance Speed: Using a 16-bit datapath, fast page memory, dynamic CPU/CRT memory interleaving and extended FIFO depth, the **VGA WUNDER+** is even faster than VRAM designs and up to 350% faster than other VGA designs.

Wide Monitor Support: Non-interlaced and interlaced.

132 Column Text: Text modes of 132 column by 25 and 44 rows for more on-screen text.

High Resolution Graphics: **VGA WUNDER+ 256** Extended Graphics: 1024x768 in 4 colors, 800x600 in 16 colors, **VGA WUNDER+ 512** adds: 1024x768 in 16 colors, 800x600, 640x480 and 640x400 in 256 colors.

Supports 60/70Hz Screen Refresh in ALL High Resolution Modes: Faster refresh rate updates screen 60 or 70 times a second reducing eyestrain and perceived flicker.

100% Register Compatible: Register-level compatible in ALL modes: VGA, EGA, CGA, Hercules, and MDA.

Analog and Digital Ports: Supports both analog and digital monitors.

Driver Support: Drivers supplied include AutoCAD Display List Manager, AutoCAD, VersaCAD, Ventura, Windows 286, 386 and 3.X, Lotus, GEM, and Presentation Manager. Additional drivers provided by third party software companies.

Switchless Installation: Automatic Installation eliminates all jumpers and switches, for fast and simple set-up. Automatically configures for 8 or 16-bit bus and monitor type.

Mouse Included: A Microsoft compatible bus mouse and mouse port are included at no extra charge.

Specifications

System Requirements: IBM PC/XT/AT/386/486, PS/2 Model 30, or compatible systems.

Bus: IBM PC or AT, 8 or 16-bit slots.

Video Display Buffer: **VGA WUNDER+** 256K bytes of video memory, socketed for additional 256K (80ns, 256Kx4 DRAM). **VGA WUNDER+ 512:** 512K bytes of video memory.

Video Display Modes: 1024x768 in 4 and 16* colors, 800x600 in 16 and 256* colors, 640x400* and 640x480* in 256 colors, 132x25/44 text in 2 and 16 colors. See Software/Monitor Compatibility Chart for monitor support. (* Requires 512K video memory).

Sync Signals:

Horizontal Vertical

56.4 kHz	69.7 Hz	1024x768/70Hz non-interlaced
48.3 kHz	59.6 Hz	1024x768/60Hz non-interlaced
48.0 kHz	72.0 Hz	800x600/72Hz non-interlaced
37.6 kHz	60.0 Hz	800x600/60Hz non-interlaced
36.7 kHz	69.8 Hz	640x480/70Hz non-interlaced
35.5 kHz	87.0 Hz	Multisync & 8514 monitors (1024x768 interlaced)

35.0 kHz	56.0 Hz	Multisync monitors (800x600 non-interlaced)
33.8 kHz	96.0 Hz	8514 monitors (800x600 interlaced)
31.5 kHz	60.0 Hz	Multisync Analog monitors (640x480)
31.5 kHz	70.0 Hz	Multisync Analog monitors (640x400)
31.0 kHz	88.0 Hz	Seiko 1430 monitors (800x600 interlaced)
21.8 kHz	60.0 Hz	EGA monitors
18.4 kHz	50.0 Hz	TTL monochrome monitors
15.8 kHz	60.0 Hz	RGB monitors

Connectors: Analog Video: 15 pin D shell (female) IBM standard. Digital Video: 9 pin D shell (female) IBM standard. Mouse: 9 pin circular connector Microsoft bus mouse compatible.

Mouse Interrupt: IRQ 2-5 or none.

Monitor Compatibility: IBM PS/2 85XX analog monitors. IBM 5151 TTL monochrome, 5153 RGB color, 5154 EGA color monitors. Multisync and other monitors compatible with above standards.

Dimensions: 4.2" (W) x 6.25" (D).

Power: +5V +/-5% @ 500mA typical.

MTBF: 100,000 hours.

Warranty: Two years limited warranty.

SOFTWARE

Modes	Resolution	Colors/Palette	Digital Monitors		
			TTL	RGB	EGA
ATI Extended Modes	1024x768 Non-interlaced	16/135K			
	1024x768 Interlaced	16/135K			
	800x600	256/256K			
	640x480 640x400	256/256K			
VGA	640x480 All 17 VGA Modes	16/125K			
EGA	640x350 640x200 320x200	16/54 16/54 16/54			
CGA	640x320 320x200	2/8 4/16			
Hercules	720x348 640x400	16/4 8/16			
MDA	720x350	Mono Attributes			

Lines in 132 Columns

ATI Technologies Inc.
3761 Victoria Park Avenue
Scarborough, Ontario

- 1 Check Sync Signals for resolution support on your monitor.
- 2 Displayed in shades on monochrome monitors. Color requires 512K memory.
- 3 Interlaced.

Reply 73 of 94, by SquallStrife

Posted on 2012-02-04, 23:30 <./viewtopic.php?p=256155#p256155>

Imgur and Photobucket are both good.

Reply 74 of 94, by AdamP

Posted on 2012-03-16, 23:56 <./viewtopic.php?p=261135#p261135>

Results form my ATI Rage 128 AGP2x 16mb



- Border/Overscan: Fail
Med res background: Fail
Hi res foreground: Fail
Med res palettes: Fail
- 40 column display: Pass
Hi colour backgrounds: Fail
Textmode cursor: Fail
Snow: Pass (That is, there was no snow)
8x8 font: Pass (I think; I'm not sure what I'm looking for)
- Vertical retrace: Fail
Horizontal retrace: Fail
Textmode row: Pass (again, I'm not sure what I'm looking for, but it looked okay)
Row/column: Fail (garbled second screen)
Interlace: Pass
Display positioning: Fail (not sure what I'm looking for, but the screen didn't look right)
Address reprogramming: Fail (didn't scroll correctly vertically, but horizontal was okay)
- Block memory read: Different result each time. Ranges from 128KB/s to 1038KB/s for the tests I did.
Block memory write: Same. 128-2105KB/s
Interleaved read: 78-1073KB/s
Interleaved write: 68-171KB/s

I'll test my Matrox Mystique 220 when I get a chance.

Reply 75 of 94, by carlostex

Posted on 2015-04-22, 00:02 <./viewtopic.php?p=416851#p416851>

Yes i know, it's been 3 years since the last post but i don't feel like starting a new thread. And this thread already has loads of good info.

So i made a video testing a Trident 9000i card i got in the mail. Used SVM89.EXE to set CGA mode and these were the results.

Trident 9000i CGA test. <<http://youtu.be/hhkDeO8pLZg>>

Not bad right? I didn't think my LCD monitor would pass the 60Hz test but it did quite OK. And i forgot how slow these Trident cards were.

Reply 76 of 94, by 5u3

Posted on 2015-04-22, 18:22 <./viewtopic.php?p=416977#p416977>

carlostex wrote:

Trident 9000i CGA test. <<http://youtu.be/hhkDeO8pLZg>>

I get "This video is private. Sorry about that. : \" from Youtube.
It'd be interesting to see if the tests look the same on TVGA 8900 and 9000.

Reply 77 of 94, by carlostex

Posted on 2015-04-23, 08:26 <./viewtopic.php?p=417075#p417075>

5u3 wrote:

I get "This video is private. Sorry about that. : \" from Youtube.

It'd be interesting to see if the tests look the same on TVGA 8900 and 9000.

It should be OK to watch now.

Actually i think the results seem to be pretty much the same.

Reply 78 of 94, by 5u3

Posted on 2015-04-29, 21:05 <./viewtopic.php?p=418105#p418105>

Nice to know the SVM98 utility works on 9000 series Tridents too. Thanks!

Reply 79 of 94, by carlostex

Posted on 2015-04-29, 22:38 <./viewtopic.php?p=418128#p418128>

5u3 wrote:

Nice to know the SVM98 utility works on 9000 series Tridents too. Thanks!

I will have more cards in the future to test, if you're still interested to update the first page with more cards. 😊

BTW it would be extremely useful if we find all the available utilities to test the cards in CGA mode. (For those that need it of course)

VOGONS site design is distributed under a [CC BY-NC license <https://creativecommons.org/licenses/by-nc/4.0/>](https://creativecommons.org/licenses/by-nc/4.0/). User-generated content is distributed under our [open content policy </licenses>](#). © 2002–2023 vogons.org.