

## PCI.ATIMach32.README

Authors: NeXT, Inc. (for the stock ATI driver)  
Steven J. McDowall (sjm@nmb.com)  
Gary W. Longsine (longsg01@nmb.com)

The accompanying video driver has been hacked up to provide a color display on a Mach32 PCI chipset.

It has been tested on the following computer(s) by the authors:

AST Premmia LX P/60 with 2MB video RAM and an AT&T 20C493-80 slowDAC  
AST Premmia LX P/60 with 2MB video RAM and an TI XXXX-135 (A ATI 68875 clone) fasterDAC  
AT&T P/60 thingy w/ PCI and no real model number...(AT&T20C493-80 slowDAC)

Note that despite the presence of 2MB of video RAM on some of the older AST machines, this driver can only produce 800 x 600 x 16bit color. The slow (evil \_and\_ rude) ramdac used in the tested machine limits the performance significantly.

AST no longer manufactures the machine with the evil slowdac, so if you're buying a new Premmia, not to fear, this driver produces lovely high resolutions (take your pick) on the newer Premmia.

Known bugs:

On a AT&T P/60 thing w/ an ATI on-board PCI (and the AT&T 20C493-80 braindead DAC) the

resolutions worked fine, but the colors resembled a "miami-vice" colour scheme ala NS..  
(We all voted it pretty cool)...

To Install:

Hopefully, if you are reading this the "package" is already uncompressed and un-tar'ed somewhere..  
If not, do so...

Within the ATI\_PCI folder you should find a nice ATI.config ICON. Double click to invoke it.  
It will ask if you want to replace the current driver, respond in the affirmative. (Of course,  
having a backup of the original one (in /usr/Devices) wouldn't be a bad idea..

Okay..Important safety tip, pay attention. After responding "Yes" to the Install Driver  
question, you will find yourself in the Configure app...Under Display.. Follow these steps:  
(And don't ask any questions)

1. Remove your current driver (esp. if it is the ATI one)
2. Click on "Done".
3. Click on "Save"
4. Yes, you really want to save a "bad" configuration (No Display Selected warning).
5. Exit the Configure app.
6. Re-start the Configure app.
7. Choose "Display".
8. Choose "Add".
9. Choose the "ATI Mach32 PCI Display Adapter" (works if on-board or not)...

NOTE: the "On-Board Mach32 PCI ATI" may work if you do have an on-board ATI and

the above driver doesn't.. Although we haven't seen any differences in the drivers..

10. Choose "Select" and pick a nice mode....  
2MB and a fast RAMDAC .. 1120 x 832 at 68 looks really nice  
SLOWDAC...Bummer..800 x 600 @ 60 is all you get even if you have 2 MB...
11. Choose "Done"
12. Choose "Save"
13. Quit Configure.app
14. Reboot and cross your fingers..

Debug hints:

1. If the screen is totally trashed, oops..We apologize...
2. REMEMBER!!! Use the command-numlock (Alt-NumLock key) and "blindly" hit the "r" key to re-boot..You should eventually see the screen blank-out and the machine reboot..
3. At the "boot:" prompt, remember to enter "config=Default" to restore the video to at least an useable mode..
4. If you see the message "Selected mode not available..Using Default"..That means you chose a mode that:
  - 1) You don't have enough VRAM for...or (worse yet)
  - 2) You don't have a fast enough RAMDAC for...

To check the RAMDAC speed, take a look at the end of your `/usr/adm/messages` file. You will see lots of little debug messages "prefixed by 'sjm'" and one of them will have something like:  
sjm: slowDAC = 0 ['YES' = 1]

If your says "slowDAC = 1", not much you (or us) can do.. Complain to your manufacturer about putting a cheap part in instead of the extra \$0.25 for a 135 MHZ one!