



OPERATOR INTERFACE PRODUCTS APPLICATION NOTE

Subject: Using EMM386 and the AT5+

AN# 1025B

Date: 7/16/96

Name: Irvin Hayes Jr

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Description: Setting up EMM386 with the AT5+

SYMPTOMS

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When you boot your computer and EMM386.EXE loads (from the CONFIG.SYS file) you may receive the following message:

EMM386 Not Installed - Unable to set page frame base address

CAUSE

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This message indicates that EMM386 was unable to find 64K of contiguous space needed for the expanded memory page frame.

When you specify the RAM switch (or no switch at all), EMM386 attempts to create a 64K page frame in the upper memory area (UMA), default starting location of E000. The actual amount of extended memory used will be 108K (64K + 44K = 108K). The extra 44K is used for tables that EMM386 sets up to emulate expanded memory.

This 64K of space acts as a window into expanded memory allowing programs to see all the available expanded memory 64K at a time. The AT5+ board uses the E000-EFFF range of memory for System BIOS which will causes this error.



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RESOLUTION

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If you receive the message noted above you can try the following:

- Use the NOEMS switch if expanded memory service (EMS memory) is not needed.
- Make sure HIMEM.SYS is installed above EMM386.EXE in the CONFIG.SYS file. Other devices should be loaded after EMM386.EXE.

NOTE: Some hardware configurations require certain device drivers be loaded before HIMEM.SYS. Specific examples are:

- DMDRVR.BIN (disk manager)
- EMM.SYS (expanded memory driver)
- ADAPTEC.SYS (driver for Adaptec controllers)
- Set any cards that that uses I/O addresses to the C800-CFFF range and use the following command line:

```
Device=C:\DOS\EMM386.EXE M5 X=C800-CFFF
```

This sets the page frame up at D000 and excludes the I/O range of the card in the back plane.



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You can also specify different locations for the page frame to begin, using the "mx" switch, where x is in the range of the following table:

1---> C000	8---> DC00
2---> C400	9---> E000 <-- Don't Use
3---> C800	
4---> CC00	
5---> D000	
6---> D400	
7---> D800	

For more information on EMM386.EXE switches, see page 606 of the User's Guide and Reference if you are using MS-DOS 5.0. If you are using MS-DOS 6, type "help emm386.exe" at the MS-DOS command prompt (without the quotation marks) and then press ENTER.