

| | | |
|---|---|------------------------------------|
|  | Effective Date : Dec 20' 97 | Product Change Notification |
|---|---|------------------------------------|

for Texas Instruments TMS-320F2xx DSP Platform

| Devices | Current Datasheet (Product Preview) | Packaging | Applies to Product Revisions |
|---------|-------------------------------------|---------------|------------------------------|
| 320F206 | SPRS050 - Nov'96 | 100 TQFP (PZ) | TMX - Rev2.x, 1.x |
| 320F240 | SPRS042 - Oct'96 | 132 PQFP (PQ) | TMP/TMX - Rev3.x/2.x/1.x |

Change in Flash Sectoring on F2xx DSP devices

The sector erase feature of the 320F240 and 320F206 flash will no longer be supported as part of the current device specifications. Previously, the on-chip flash of these devices were specified to have independently erasable sectors of 2Kx16bits. Eight sectors on the 'F240, and sixteen sectors on the 'F206

With the new change, the smallest block of flash that can be independently erased is one 16Kx16bits.

Reasons for change in Flash Sectoring

The sectoring feature of the current flash design may develop failures over multiple program/erase cycles. That is, data integrity for protected sectors cannot be guaranteed over the operating range of the 'F2XX products.

Fixing this would require a major design change on the actual flash core to provide a true sectoring mechanism.

Applications Impact on current designs

The majority of the applications for the on-chip flash of the 320F2XX products can be divided into the following two categories:

- Applications involving one-time production programming of the on-chip flash. Note : cDSP socket currently fall in this category. Field upgrades

are possible using a low-cost scan based emulation tool like the XDS510 emulation system.

These applications (specified above) will not be affected by the sectoring changes!!!

- Standalone applications requiring re-programming of the flash in the target system without direct human intervention. For example : an application that will update some flash locations based on changing inputs from the surrounding environment, or an application supporting field upgrades via a modem link.

Suggested Workarounds on F2xx DSP's

• **' F206**

- With the two independent flash modules (16kx16), this device still offers a single chip solution for these applications. One flash module can be used for non-changing code including flash programming algorithms, while the other flash module can be periodically re-programmed with updated code or data.

Note: Customers should not be using an 'F206 based design with flash sectoring. Also, the current flash utilities do not provide any explicit control on the sector size.

• **' F240**

- Since this device has only one flash module (16kx16), a single chip solution for these applications does require some type of sectoring. As stated, the sector protect approach is not an option here. One possible alternative is to use an inexpensive, slow external EPROM to store the flash algorithms.

For further detailed clarifications, please feel free to contact your local TI DSP support representative. Sorry for the inconvenience caused in this regard.

Sincerely,

TMS320-F2xx DSP Platform Product Support Team