

Description of Operation

The DM3725 is the central processor of the TG800 whole system, it has direct interface to on the board memory and all peripherals. The system has one 4Gbit NAND Flash, one 128Mx32bit LPDDR on the board.

The system also has some I/O port for the external multi-media applications. On network side, the system provide one 802.3 Ethernet RJ45 connection to LAN, one RJ45 port for the RS232 control. Eight SIMCARD and eight Antenna for GSM modules.

1 Interface

1.1 Interface between the DM3725 and NAND flash

The NAND flash in the system is mainly used for program and data storage, based on the application, the system need to support up to 512MB NAND flash, the system supports 8-bit and 16-bit NAND devices, supports NAND flash that requires chip select to stay low during tR read time.

Figure1.1 below shows the interface between processor and NAND flash:

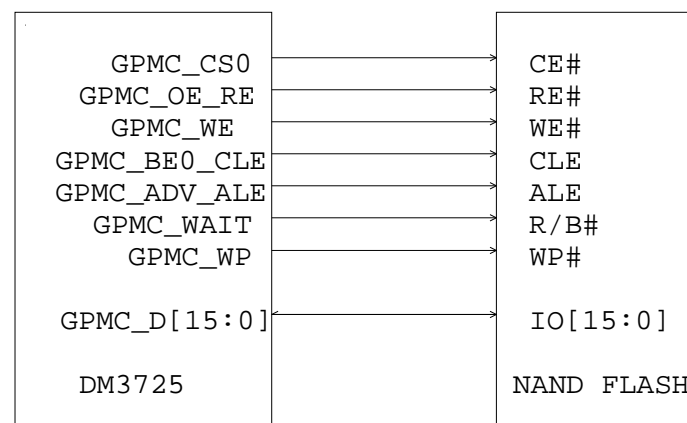


Figure1.1 Signal connection between dm3725 and NAND flash

1.2 Interface between the DM3725 and LPDDR

The DM3725's SDRAM controller is a dedicated interface to LPDDR SDRAM, it can be programmed to interface to up to 1Gbytes of SDRAM. A set of programmable timing parameters is available to configure the SDRAM bank to support memory devices. The memory bank is 32 bits wide for minimum device count and lower

system cost.

Figure1.2 below shows the interface between processor and LPDDR SDRAM:

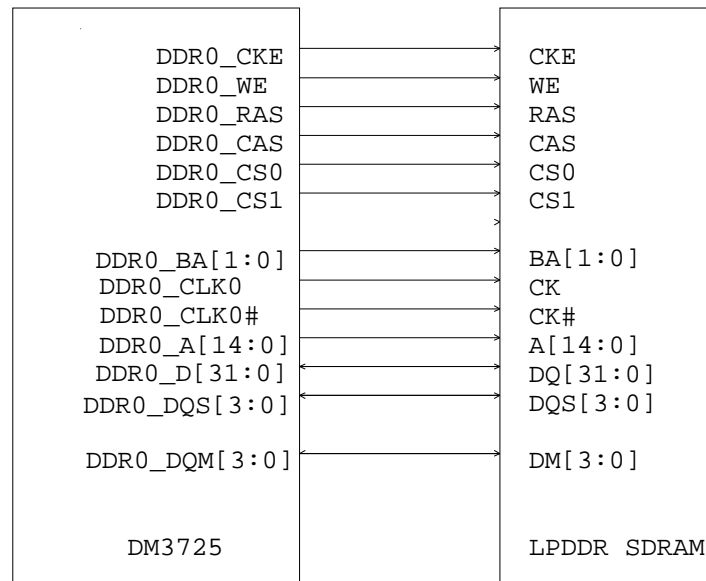


Figure1.2 Signal connection between DM3725 and LPDDR SDRAM

Main chip DM3725's MAX operating frequency is: 1GHz.