

Differences between MPC850SAR and MPC860SAR

The MPC860SAR manual should be used as a valid reference manual for MPC850SAR. The ATM microcode implementation for both parts is the same.

Please be aware of the following considerations:

- 1) SCC4 is not available on the MPC850SAR. However, the parameter RAM page associated with SCC4 is still available in the dual-port RAM. This parameter RAM page is used by the UTOPIA port.
- 2) The pinout is different for the MPC850SAR. Signal functionality is the same for both parts, but pin multiplexing is different. Refer to the MPC850SAR pin description and package diagram.

Also take note of the following subsection which will be added to the MPC8x0SAR manual in the next revision:

X. System Configuration Limitations of the MPC8x0SAR

X.1 UTOPIA Port Limitations

The implementations of the UTOPIA port on the MPC8x0SAR uses resources of both IDMA1 and SCC4. Therefore:

If the UTOPIA port is used on the MPC860SAR, then IDMA1 and SCC4 are not available.

If the UTOPIA port is used on the MPC850SAR, then IDMA1 is not available (SCC4 does not exist).

X.2 APC Limitations

Due to the implementation of the ATM Pace Controller (APC), there are certain limitations on system configuration of the MPC8x0SAR, relating specifically to which protocols can be enabled on which ports. If the APC is used on any channel in the MPC8x0SAR, then the user should consider the following limitations. If the APC is not used in the system (i.e. if the user schedules all cells in software via the APC_BYPASS command), then these limitations can be ignored.

The APC algorithm begins and terminates by referring to the APCST parameter on parameter page 4. Therefore, the APCST parameter on parameter page 4 must always be programmed. Thus, in order to avoid parameter RAM conflicts with this, parameter RAM page 4 can only be used for the following functions:

1. Parameter page 4 used with UTOPIA port
2. Parameter page 4 used with SCC4 in ATM mode
3. Parameter page 4 used with SCC4 in transparent mode (does not conflict with
4. Parameter page 4 unused.

For the MPC850SAR, SCC4 does not exist, so only options 1 and 4 are available.

Options 3 and 4 require that the APCST parameter on page 4 be programmed to deactivate ATM scheduling for SCC4/UTOPIA, and to point to the active ATM channels. For example, if SCC1 is used in ATM mode, then APCST on page 4 should be programmed to 0x0004, which sets:

NSER=CSER=00 (SCC1)

DIS=1 (APC disabled for current parameter RAM page)

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