

RA MODULE LOOKUP TABLE

16 K-40 Bit Words
4 K Storage Chips

RECIPROCAL LOOKUP UPPER HALF 8 K-40 Bit Words 4-2 K Word Banks
SQUARE ROOT LOOKUP LOWER HALF 8 K-40 Bit Words 4-2 K Word Banks

The RA module lookup table is loaded one byte at a time, from the Foreground Processor, during deadstart. It takes five transfers to load 1-40 bit word of lookup table data. The address used to load the table comes from a counter on the RA module.

The lookup table is read during reciprocal and square root approximation instructions. The address for a read comes from the upper twelve bits of the operand coefficient minus the upper most normalized bit. The upper bit of the address selects the upper or lower half of the table.

The table is divided into 4 banks. The 4 banks are loaded with identical data. Lookup values associated with a vector stream are read from sequential banks.