FC MODULE INPUTS

Result Exponent - The FC module receives the result exponent from the FA module. This is the exponent associated with the result coefficient from the FB module. The final result exponent is derived from this exponent in the normalization process.

Coefficient Sign - The FC module receives the coefficient sign from the FA module. The final state of the upper bit of the final result that is sent back to the VR's is derived from this signal. The signal may be altered on the FC module depending upon the type of instruction that is executed.

Constant Overflow - The FC module receives the signal constant overflow from the FA module. Constant overflow is set if a floating point to integer conversion is attempted and the resulting integer is longer than 48 bits.

Go Constant 122, 174 - The FC modules receives Go Constant anytime a 122 or 174 instruction is executed. These are floating point to integer type instructions.

Go Constant 123, 175 - The FC module receives Go Constant anytime a 123 or 175 instruction is executed. These are integer to floating point type instructions.

Enable Range Check - The FC module receives Enable Range Check from the FA module. This signal allows the FC module to set the range error signal to the EA module in the case of a floating point range error.

Adder Results - The result of the FB module coefficient add process are sent to the FC. The final coefficient is derived from the coefficient add result through the normalization process on the FC.

Normalization Count - The Normalization Count from the FB module is the result of a leading zeroes count on the result coefficient. The count is used on the FC module in the normalization process. The count is used as a shift value for coefficient shift and is also used as an exponent adjustment value.

Post Norm Right

Shift Equals Minus One - This signal comes from the FB module when normalization requires a shift of one place to the right. The negative one shift is generated if the unit was in add mode and there was a carry across the binary point on the coefficient add on the FB module.

Toggle Sign Bit - Toggle sign from the FB is used to change the state of the coefficient sign of the final result. The FB module generates toggle sign if the unit is in subtract mode for a normal floating point addition or subtraction operation and there was a carry across the binary point in the coefficient add process on the FB.