

# SIS3809 VME Interrupter/FLIPFLOP

SIS GmbH  
VME

## SIS3809 Short Description

The SIS3809 is a four channel interrupter on base of the SIS360x/38xx board. The firmware design is made to allow the user to generate VME interrupts via standard front panel particle physics signal levels. Hence the board provides a way to overcome the lack of front panel interrupt signals on most commercial CPUs, which limits their event building capabilities in some setups. To provide means to control the overall experiment deadtime one FLIPFLOP output per channel is implemented. The FLIPFLOP is set with a pulse on the corresponding interrupt input and can be cleared under program control (in the interrupt service routine e.g.). The polarity of the FLIPFLOP signals can be inverted with a bit of the control register (i.e. level clear upon IRQ, level set under program control).

## SIS3809 Features

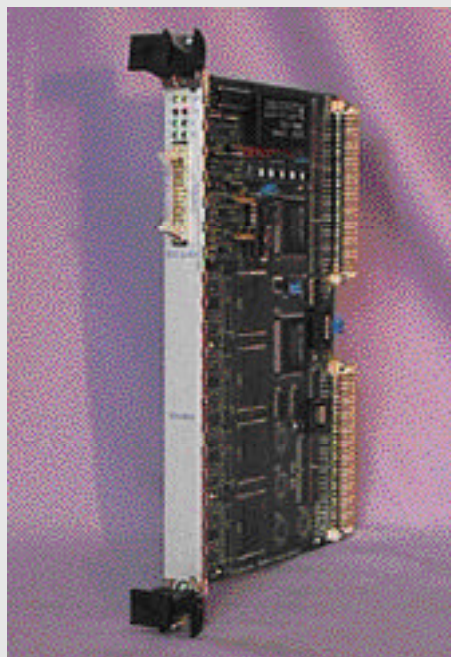
- 4 Channels
- programmable common interrupt level for all inputs
- one FLIPFLOP output/channel
- program controlled FLIPFLOP inversion
- FLIPFLOP LEDs
- NIM/TTL/ECL versions
- flat cable (TTL/ECL) and LEMO (TTL/NIM) versions
- Up to eight firmware files

## Board Design

Up to six XILINX FPGAs act as the working horses of the SIS3600/380x family. In the case of the SIS3809, which has no frontend XILINX chips, one handles the VME interface a second one is loaded with the actual interrupter mechanism. The FPGAs are loaded from a FLASH PROM, which is field upgradable.

## In/Outputs

The interrupter inputs and FLIPFLOP outputs are either equipped with a 20 pin header or 8 LEMO connectors. NIM (LEMO), TTL (LEMO or flat cable) and ECL (flat cable) are available as output options. In the TTL case the user has the possibility to choose among the high impedance and the 50 Ohm driver options.



SIS3809 Flat Cable Version

## VME Properties

The unit is in compliance with the VME standard, it supports the following VME features:

- A16/24/A32 D16/D32
- Base address settable via 5 rotary switches
- VME access LED (VIPA LED set)
- VME64x connectors
- VME64xP geographical addressing prepared
- VME64xP hot swap prepared

## Power Consumption

5V 2,0 A (i.e.  $P < 11W$ )

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