Input source selected by the control status register C0SR middle C0BG Bits and C0XR Register C0PS0 Joint control bits, in this section refer to the specific register description.

AC0P for AC0 Dedicated mode the positive terminal of the input channel. Note that in a different encapsulating sheet AC0P The pin is slightly different. QFP48 Package AC0P As an independent port. QFP32 This package AC0P Port and PD6 To a parallel port.

ACXP Comparator 0/1 Common positive terminal input. LGT8FX8P Two internal analog comparator, ACXP A comparator connected to both the positive terminal of the multiplexer selector, to facilitate work implement two comparators.

DAO From within 8 Place DAC Output. DAC The reference source can be input from the system power supply, the internal reference or from an external reference. DAC Please refer to the configuration DAC The relevant sections.

C0BG	C0PS0	AC0 The positive terminal of the input source
0	0	AC0P
0	1	ACXP
1	0	DAO
1	1	Closing the positive terminal of the comparator input channel

Negative input can choose from three different analog input:

1. Comparators 0/1 A common analog input ACXN
2. ADC Output multiplexer ADMUX
3. Internal differential amplifier output DFFO

The negative terminal of the comparator input by the channel selection from ADC Module ADCSRB Register CME00 / 01 Position control. When the negative terminal of the comparator input selector ADMUX When required by ADC Module ADMUX register CHMUX Select bit analog input channel, in this mode, input of the comparator can be implemented more flexibly extended.

ACXN Comparator 0/1 Common negative input, comparator facilitate 0/1 The collaborative work;

DFFO Output from the differential amplifier inside. Optional differential amplifier x1 / x8 / x16 / x32 Gain control can be achieved in small signal detection and measurement.

CME01	CME00	AC0 Negative input source
0	0	ACXN
0	1	ADMUX
1	0	DFFO
1	1	Close Channel negative input terminal of comparator

The comparator output filter

Internal support hysteresis comparator output a controllable electrically. Users can C0XR Register C0HYSE Bit enables the hysteresis circuit. Hysteresis comparator circuit may eliminate the unstable state of the state change process, reaches the output filtering function.

Recommended when using a comparator, the hysteresis circuit is opened, to obtain a stable output of the comparator. As shown below, the hysteresis comparator circuit is located between the analog output and digital output. When the input voltage of the positive terminal of the comparator **V_{IN+} more than the(V_{IN-} + V_{H+}) , The comparator COUT Output is high; and when V_{IN+} Voltage is less than (V_{IN-} - V_{H-}) , The comparator output is low. A hysteresis** circuit to avoid jitter when the comparator positive voltage close to the negative voltage terminal, the circuit itself is brought.

Comparator Hysteresis comparator output diagram: