

AS1910 - AS1915

Dual-Voltage Microprocessor Supervisory Circuits with Reset and Watchdog

1 General Description

The AS1910 - AS1915 microprocessor supervisory circuits were designed to generate a reset when one of the two monitored supply voltages falls below a factory-trimmed threshold, and to maintain the reset for a minimum timeout period when both supplies are above their reset thresholds. Guaranteed to be in the correct state for Vcc higher than +1.0V, these devices are ideal for multiple-voltage systems with strict monitoring requirements.

The AS1913/AS1914/AS1915 feature factory-trimmed thresholds to monitor a primary voltage between 1.8 and 3.6V, and a secondary voltage between 0.9 and 2.5V.

For the AS1910/AS1911/AS1912, a secondary monitoring voltage can be user-adjusted via an external resistor divider down to 0.6V.

The devices are available with the reset output types listed in Table 1.

Table 1. Standard Products

Model	Reset Output Type
AS1910/AS1913	Active-Low Push/Pull
AS1911/AS1914	Active-High Push/Pull
AS1912/AS1915	Active-Low Open-Drain

The AS1910 - AS1915 include a manual-reset input for systems that never fully power down the microprocessor. Additionally, these devices feature a watchdog timer to help ensure that the processor is operating within proper code boundaries.

The AS1910 - AS1915 are available in a 6-pin SOT23 package.

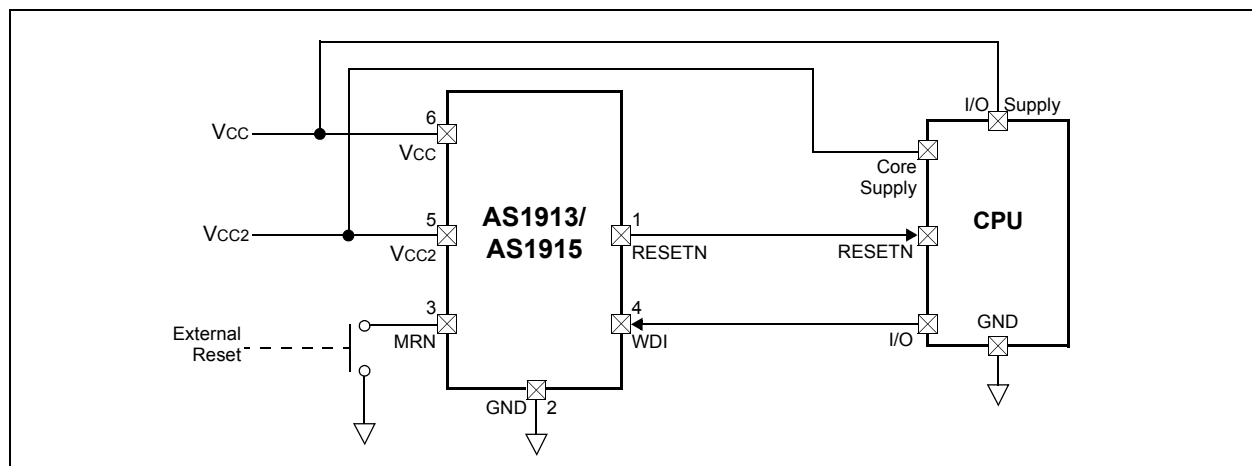
2 Key Features

- Primary Vcc Supervisory Range: +1.8 to +3.6V
- Secondary Vcc Supervisory Range: +0.9 to +2.5V (AS1913/AS1914/AS1915)
- User-Adjustable Threshold Down to +0.63V (AS1910/AS1911/AS1912)
- Guaranteed Reset Valid Down to Vcc = +1.0V
- Reset Timeout Delay: 215ms
- Manual Reset Input
- Three Reset Output Types
 - Active-High Push/Pull
 - Active-Low Push/Pull
 - Active-Low Open-Drain
- Watchdog Timeout Period: 1.5s
- Immune to Fast Negative Vcc Transients
- External Components Not Required
- 6-pin SOT23 Package

3 Applications

The devices are ideal for portable and battery-powered systems, embedded controllers, intelligent instruments, automotive systems, critical CPU monitoring, and any multi-supply application.

Figure 1. Typical Application Diagram



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