

## DESIGN SHOWCASE

# Supervisor IC indicates fan failure

The brushless DC fans found in many types of equipment can be crucial to the performance and longevity of that equipment. A quick indication of fan failure, moreover, can be essential in preventing major damage. Among the many approaches for identifying and indicating stalled fans, the circuit of **Figure 1** is very simple and reliable.

The fan's tachometer output connects to the watchdog input of a  $\mu\text{P}$  supervisor (U1). The LED remains off during normal operation. If the tachometer does not

change state within a watchdog timeout period, U1 lights the LED by asserting its reset output. As a result, the LED pulses on and off as the supervisor goes through its watchdog/reset cycle. The LED in this example has a 200ms on-time and flashes with a period of 1.6s, which is suitable for most purposes.

*A similar article appeared in the November, 2003 issue of EET.*

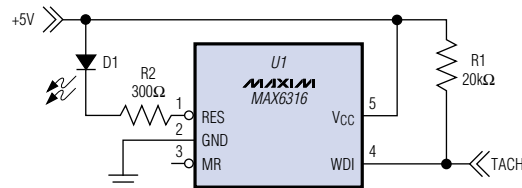


Figure 1. The MAX6316  $\mu\text{P}$  supervisor monitors a fan's tachometer output.