

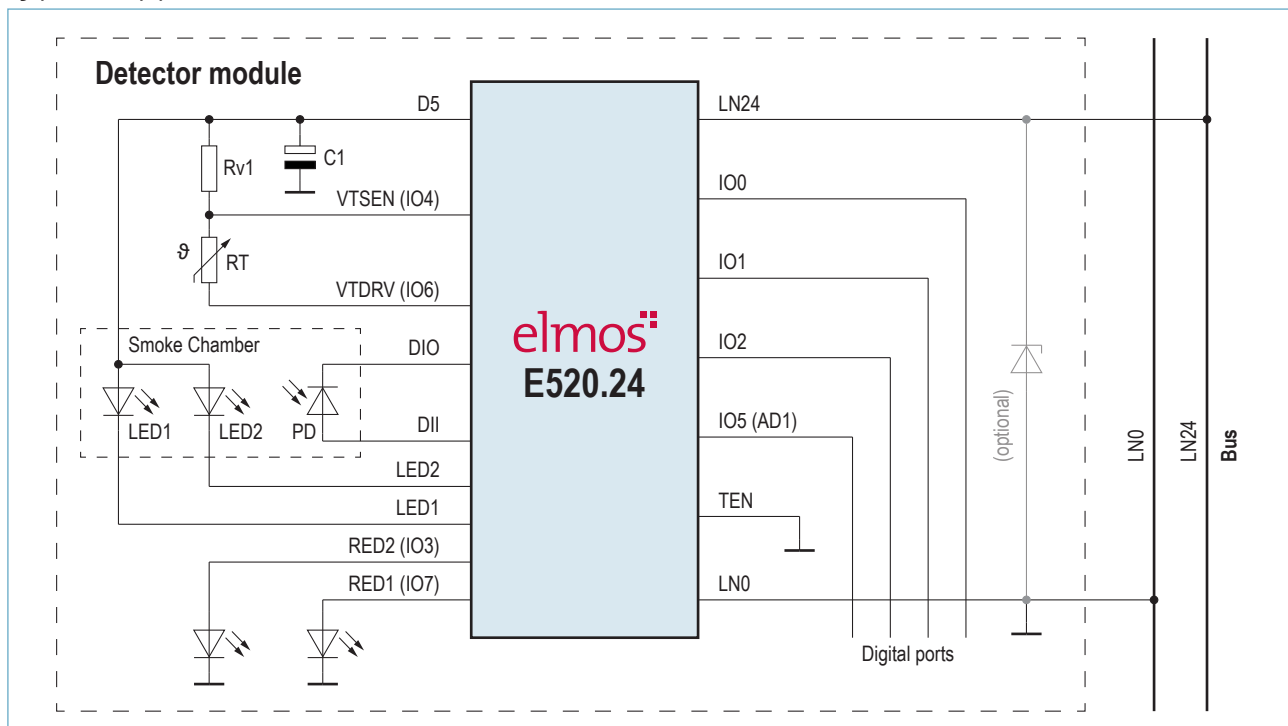
Features

- Designed for network addressable optical smoke detectors
- 2-wire programmable bus operation, with 8V .. 50V supply
- Low quiescent current using parallel regulator: average current down to 90µA, programmable
- Embedded 8-bit micro processor with 4kB or 8kB Instruction Memory and 128Byte RAM
- 48Byte MTP with 32Byte uncommitted for configuration data + 16 Byte for device ID and calibration
- 2 configurable 420mA LED driver
- Photo current input range (1.5 .. 45)nA
- 10 Bit ADC with 5 MUX channels
- Thermistor input
- Programmable LN24 Bus interface with configurable voltage thresholds and modulation currents (240mA)
- up to 8 digital general purpose IOs
- JTAG debug and programming interface
- Minimum number of external components

Applications

- Simplifies design of addressable smoke detectors required by legislation
- Fully programmable smoke detectors
- Device with GPIOs and LN24 bus interface
- Alarm Switch Controller

Typical Application Circuit



General Description

The IC E520.24 provides two high current driver for a transmitter LED and a high impedance I-V conversion for the current of the photo diode. Optimized response of both amplifier and ADC allow short transmitter pulses while keeping high detection efficiency. The amplifier's band pass filter characteristics remove noise from the signal.

Transmitter pulses and signal acquisition as well as signal evaluation are controlled by the embedded micro processor (µP) allowing the user to take full control over the system performance with the user defined program code running from Instruction Memory.

Up to two independent red LED driver can be used to indicate alarm or device status as controlled by the µP.

Up to 8 GPIOs can be used to control additional external components.

The configurable address allows bus operation with a huge number of detectors on the LN24 bus.

Ordering Information

Ordering-No.:	Temp Range	Package
E52024A67E	-40°C to +85°C	SOIC16
E52024Axxx	-40°C to +85°C	Die ¹⁾

1) Contact Elmos for bare die specifications

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