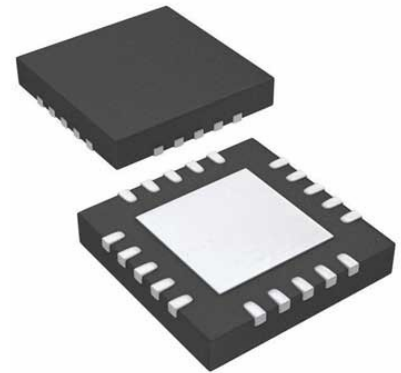


I2C Slave Device Extender Over Rugged Differential Link

Manufacturers	Analog Devices, Inc
Package/Case	20-Lead QFN (4mm x 5mm x 0.75mm w/ EP)
Product Type	Interface ICs
RoHS	
Lifecycle	



Images are for reference only

Please submit RFQ for LTC4331HUFD#PBF or [Email to us: sales@ovaga.com](mailto:sales@ovaga.com) We will contact you in 12 hours.

[RFQ](#)

General Description

The LTC4331 is a point-to-point SMBus compatible I2C slave device extender designed for operation in high noise industrial environments. Using a $\pm 60V$ fault protected differential transceiver, the LTC4331 can extend an I2C/SMBus bus, including SMBALERT and a control signal, over a single twisted pair differential link up to 1200m. With an extended common mode operating range the solution provides tolerance to large ground differences between nodes. For EMI sensitive environments, a slew rate control pin reduces the EMI emitted from the differential link.

In addition, the LTC4331 can act as an I2C to I2C bridge allowing independent bus frequencies between the local and remote networks. The solution is completely transparent to the master requiring no additional code in most cases; however, a control interface is provided for additional configuration and fault monitoring.

A master controller fully supporting SCL clock-stretching is strongly recommended.

Features

Up to 1MHz Serial Clock, Fast-mode Plus (Fm+)

Selectable Link Baud Rates Extend I2C Up to 1200m

Protected from Overvoltage Line Faults to $\pm 60V$

IEC Level 4 ESD $\pm 8kV$ and EFT $\pm 5kV$ on Link Pins

Extended Common Mode Range: $\pm 15V$

Remote Interrupt/SMBALERT and Control Signals

Low EMI Mode

SMBus 3.0 Compatible

I2C Idle Detection, and Stuck Bus Protection

I2C Device Address Sharing

3V to 5.5V Supply Voltage

1.62V to 5.5V Logic Supply

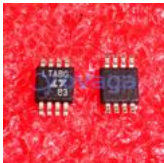
4mm \times 5mm 20-Lead QFN package

Application

Industrial Control and Sensors

Lighting and Sound System Control

Related Products



[LTC4300A-1IMS8#PBF](#)

Analog Devices, Inc
MSOP8



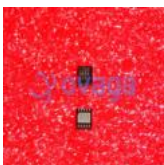
[LTC2870IFE#PBF](#)

Analog Devices, Inc
TSSOP28



[LTC6820HMS#PBF](#)

Analog Devices, Inc
MSOP-16



[LTC2854HDD#PBF](#)

Analog Devices, Inc
QFN-10



[LTC2870IUFD#PBF](#)

Analog Devices, Inc
28-QFN



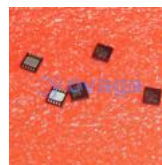
[LTC6820IMS#PBF](#)

Analog Devices, Inc
MSOP16



[LTM2881IV-3#PBF](#)

Analog Devices, Inc
LGA32



[LTC2852IDD#PBF](#)

Analog Devices, Inc
DFN10