

XR31233, XR31234, XR31235

±36V Fault Tolerant, Single 3.3V CAN Bus Transceivers

Key Features

- Single 3.3V operation
- ±36V fault tolerance on analog bus pins
- Extended -25V to +25V common mode operation
- Robust ESD protection:
 - › ±16kV HBM (bus pins)
 - › ±8kV contact discharge (bus pins)
 - › ±3kV HBM (non-bus pins)
- Up to 1Mbps data rates
- 11898-2 ISO compatible
- GIFT/ICT compliant
- 5V tolerant LVTTTL I/O's
- 200µA low current standby mode
- XR31233: Loopback mode
- XR31234: Ultra low current sleep mode
 - › 50nA typical
- XR31235: Autobaud loopback mode

Applications

- Industrial control systems
- Motor & robotic control
- Drones & UAVs
- Medical Equipment
- Building & climate control (HVAC)
- Automotive & transportation
- Elevators
- Telecom Equipment

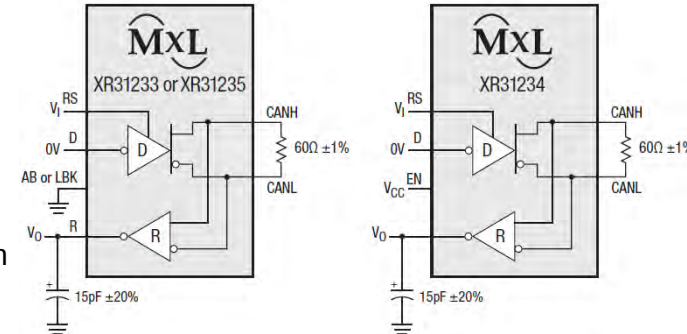
Key Competitive Advantages

Drop-in Replacements to SN65HVD233-34-35

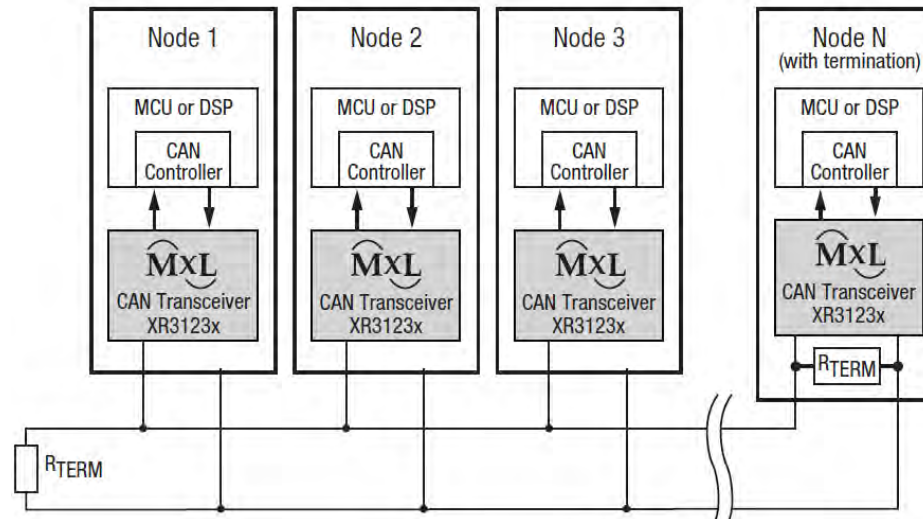
- Exar offers better common mode operation at ±25V

Benefits

- Meets CAN Bus Standards such as CANopen, DeviceNet, CAN Kingdom, ISO 11783, NMEA 2000, SAE J1939
- Power up/down with glitch-free inputs and outputs
 - › High-input Z with low VCC
 - › Monolithic output during power cycling
- Cross-wire protection, overvoltage protection (up to ±36V), loss of ground protection, thermal shutdown and common-mode transient protection of ±100V



Typical Application



Availability & Tools

In Production

- XR31233ED (Loopback Mode)
- XR31234ED (Sleep Mode)
- XR31235ED (Autobaud Loopback Mode)
- Standard SOIC-8 packages
 - › XR31233EDEVB
 - › XR31234EDEVB
 - › XR31235EDEVB

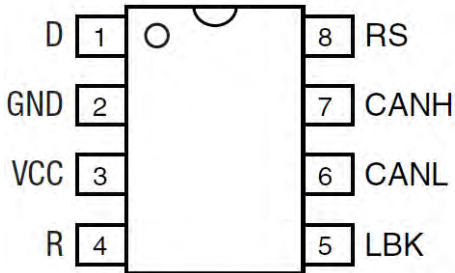
XR31233-34-35 Ordering Information and Pinouts

Ordering Information⁽¹⁾

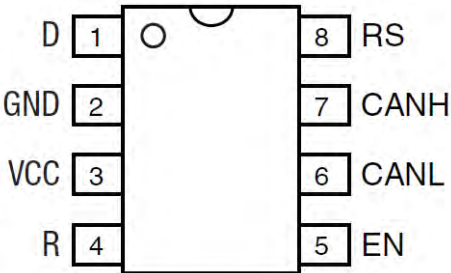
Part Number	Operating Temperature Range	Lead-Free	Package	Packaging Method	Feature ⁽³⁾
XR31233ED	-40°C to +125°C	Yes ⁽²⁾	NSOIC-8	Tube	Loopback mode
XR31233EDTR				Tape and Reel	
XR31234ED				Tube	Sleep mode
XR31234EDTR				Tape and Reel	
XR31235ED				Tube	Autobaud loopback mode
XR31235EDTR				Tape and Reel	
XR31233EDEVB	XR31233 Evaluation Board				
XR31234EDEVB	XR31234 Evaluation Board				
XR31235EDEVB	XR31235 Evaluation Board				

Note:

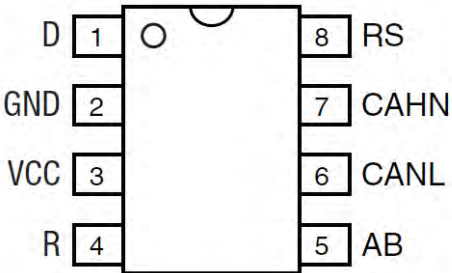
- 1. Refer to www.exar.com/XR31233 , www.exar.com/XR31234 , www.exar.com/XR31235 for most up-to-date Ordering Information.
- 2. Visit www.exar.com for additional information on Environmental Rating.
- 3. See pin function table for detailed description.



Top View, XR31233



Top View, XR31234



Top View, XR31235