



TJA1028 NXP LIN2.x/J2602 transceiver with integrated voltage regulator

Compact, cost-effective LIN slave SBC

This system basis chip (SBC) combines a LIN2.x transceiver with a 70 mA voltage regulator. Available in both SO8 and HVSON8 package. With the HVSON8 package (3 x 3 mm), it provides excellent thermals in a very compact footprint.

Key features

- ▶ LIN2.x or J2602 compliant transceiver
- ▶ 5 or 3.3 V linear voltage regulator capable of 70 mA
- ▶ Sleep mode with maximum 20 μ A current
- ▶ Standby mode with maximum 58 μ A current
- ▶ Robust ESD of > 6 kV IEC61000-4-2
- ▶ Excellent EMC performance without bus components
- ▶ Pb-free, RoHS, and Dark Green compliant packages
- ▶ 70% board space saving with HVSON8 package compared to SO8

Applications

- ▶ Parking assist
- ▶ Rain-light sensor
- ▶ Instrument clusters
- ▶ Garage-door opener
- ▶ Multifunctional steering wheel
- ▶ Alarm

The NXP TJA1028 is an ideal solution for LIN slave applications where size and cost are critical factors. For maximum design flexibility, eight variants are available. Options include choice of package (SO8 or HVSON8), a 5 or 3.3 V voltage regulator, and a LIN2.x or J2602 compliant transceiver.

Board space is often a critical factor in LIN slave applications. Making the TJA1028 available in two package options lets the designer optimize for size as well thermal performance. Measuring only 3 x 3 mm, the HVSON8 has a footprint that is 70% smaller than that of a regular SO8 package. The HVSON8 also has a heatsink that improves thermal performance by a factor of three. Improved thermal behavior enables the voltage regulator to supply up to 70 mA of current to the microcontroller and the peripherals. Higher thermal performance also supports higher ambient temperatures in comparison with a regular SO8 package.

The TJA1028 is designed for a wide range of automotive applications. It offers very good ESD and EMC performance and incorporates lower-power modes to ensure the lowest possible energy consumption.



TJA1028 block diagram

