

# AS8223 FlexRay™ Active Star Device

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## Description

The AS8223 is a monolithic FlexRay™ compliant Active Star device which manages communication traffic between the communication controller interfacen and four FlexRay branches. It's also expandable to more branches through an Interstar interface.

One of the communication paths is operating as receiver while the others operate as transmitters. The four branches of the AS8223 consist of a FlexRay™ receiver and transmitters which support the bus wake-up function.

Additionally, the AS8223 comes with a Host Controller Interface to achieve active control of the power modes and error diagnosis. An autonomous mode is entered automatically, in which the device operates without the need for a host controller. The built in communication controller interface provides the standard transceiver functionality on the ECU using the AS8223.

The FlexRay™ Active Star Device is available in MLF 9x9 44 pin package.

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## Key Features

- Active Star device with 6 communication paths (four FlexRay branches, Communication Controller Interface and Interstar interface)

- Message forwarding upon all communication paths

- Data transfer up to 10 Mbps

- Compliant with FlexRay Electrical Physical Layer Specification V2.1 Rev B

- Excellent EMC performance

- Low susceptibility to EMI

- High end diagnostic capabilities for detecting faults on the bus lines

- Interface with bus guardian for bus supervision

- Automatic thermal shutdown protection

- Supports 12V and 24V systems with very low sleep current

- Integrated power management system

- Two INH pins for the external voltage regulators control

- Local wake-up input

- Remote wake-up capability via FlexRay branches

- Supports Autonomous Power Mode and Host Controlled Power Mode management

- Supports 2.5, 3, 3.3 and 5 V microcontrollers and automatically adapts to interface levels

- VCC supply voltage buffer for fail-safe conditions

- Protection against damage due to short circuit conditions on the FlexRay branches (positive and negative battery voltage)

- Operating ambient temperature range -40°C to +125°C Pb free

MLF 9x9 44 pin package

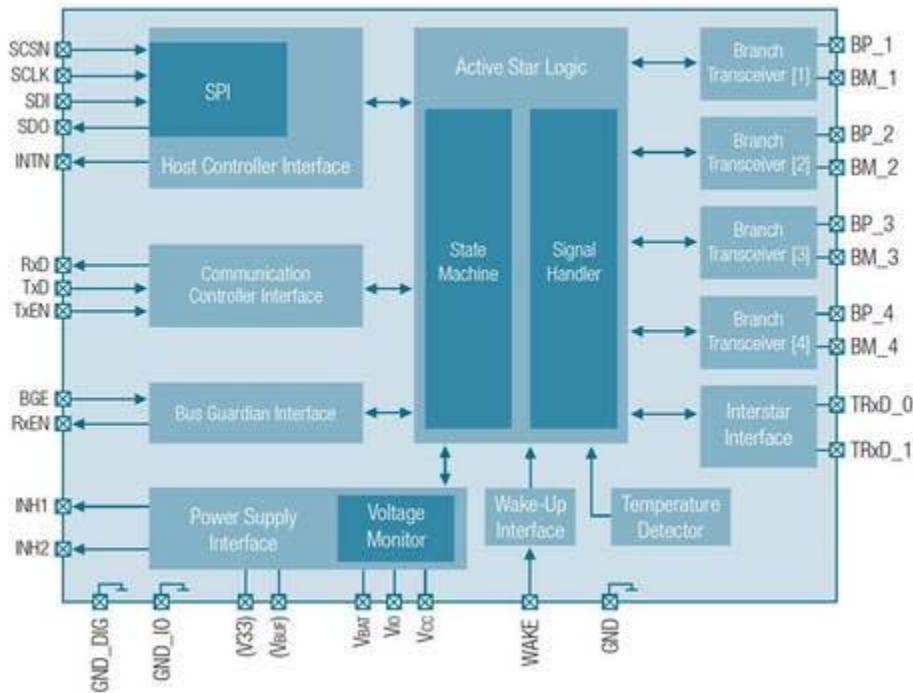
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## Applications

The AS8223 FlexRay™ Active Star Device is tailored for automotive gateways with embedded FlexRay Active Star functionality. Connecting several devices to the Interstar interface enables the extension of the FlexRay branches to the application needs.

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## Block diagram for AS8223 FlexRay™ Active Star Device

[Print Block diagram for AS8223 FlexRay™ Active Star Device](#)

AS8223 FlexRay Active Star Device Blockdiagram

URL: [www.austriamicrosystems.at/Products/Interfaces/FlexRay-Transceivers/AS8223](http://www.austriamicrosystems.at/Products/Interfaces/FlexRay-Transceivers/AS8223)

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