

FEATURES

Narrow-band power line communications IC
Integrates physical, data link and networking layers
Application layer
 Supports DL/T 645-1997 or DL/T 645-2007 data protocol (specific to China), as well as a pass through option
Networking layer
 Automatic baud rate negotiation
 Dynamic routing
Data link layer
 CRC checking
 Network key for data security
Physical layer
 FSK modulation
 Up to 2400 bps on a 3-phase network
 Simple serial interface to host microprocessor
 Single 3.3 V supply, low power (140 mW typical)
 Package and temperature range
 40-lead 6 mm × 6 mm LFCSP
 Fully specified for –40°C to +85°C operation

APPLICATIONS

Power line modems for AMR/AMI systems

GENERAL DESCRIPTION

In an advanced metering infrastructure (AMI) scenario, the ADE8167¹ IC provides the essential functions for a master modem; maintaining the network configuration and relaying messages between the utility back office and the slave modems associated with the energy meters.

The ADE8167 is a complete digital baseband processor IC that includes physical layer, data link layer, and networking layer functionality. The ADE8167 includes a receive path 12-bit analog-to-digital converter (ADC) and a transmit path digital demodulator to reduce the external analog front-end component count. The ADE8167 UART communicates directly with a host microprocessor. The ADE8167 master modem IC is designed to work with the ADE8157 slave modem IC for a complete power line communications system.

FUNCTIONAL BLOCK DIAGRAM

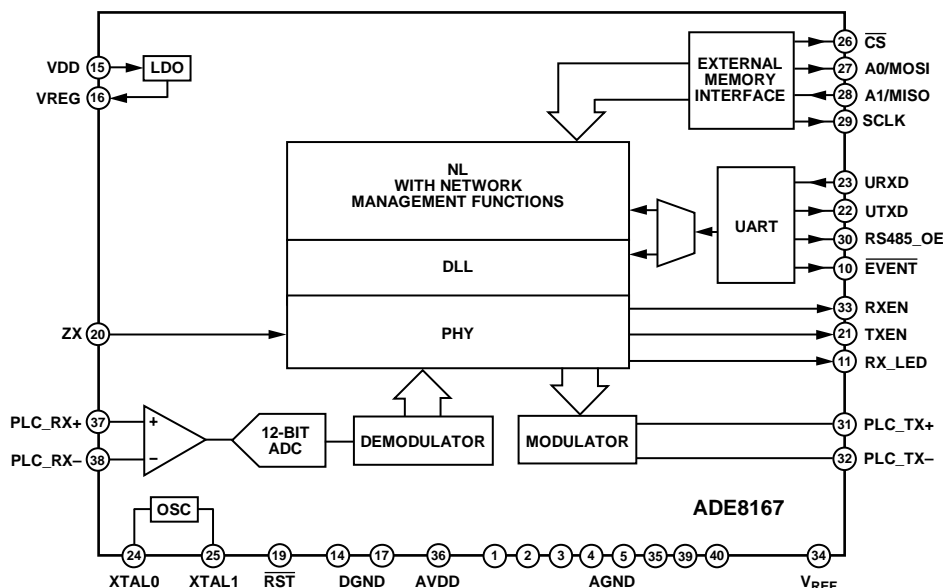


Figure 1.

For more information about the ADE8167, including the complete data sheet, contact your local Analog Devices, Inc., sales office at www.analog.com/sales.

¹ Patents pending in the United States, European Union, and People's Republic of China.

Rev. SpA

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