

# Narrow-Band Power Line Communications Slave Modem IC

### **Data Sheet**

# **ADE8157**

#### FEATURES

Narrow-band power line communications IC Integrates physical layer, data link layer, and networking layer **Application layer** Supports DL/T 645-1997 or -2007 data protocol (specific to China), as well as a pass-through option Networking laver Automatic baud rate negotiation **Dynamic routing Data link layer CRC error checking** Network key for data security **Physical layer FSK modulation** Up to 800 bps on a single-phase 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

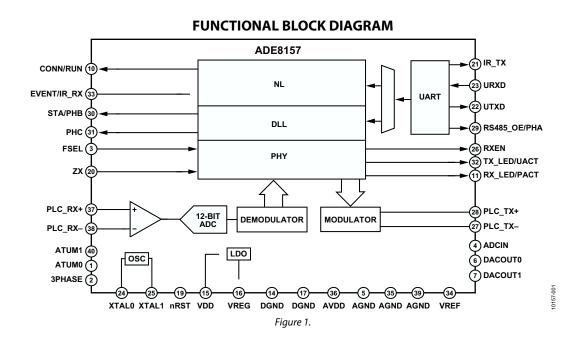
#### **GENERAL DESCRIPTION**

The ADE8157<sup>1</sup> is a complete digital baseband processor IC that includes a physical layer (PHY), data link layer (DLL), and networking layer (NL). The ADE8157 includes a high performance receive path analog-to-digital converter (ADC) to reduce the external component count. An on-chip digital modulator creates the transmit signal for an external field effect transistor (FET) driver. The ADE8157 can communicate directly with an energy meter over the on-chip UART. The ADE8157 slave modem IC is designed to work with the ADE8167 master modem IC for a complete power line communication system.

In an advanced metering infrastructure (AMI) system, the ADE8157 IC provides the essential functions of a slave modem, which enables energy meters to communicate over the power line. Each slave modem operates as a node in a mesh network. The mesh network is under the control of a single master modem. The ADE8167 IC provides the foundation for a master PLC modem.

#### **APPLICATIONS**

Power line modems for AMR/AMI systems



For more information about the ADE8157 slave modem IC, contact your local Analog Devices, Inc., sales office.

<sup>1</sup> U.S. patents pending.

#### Rev. SpB

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## ADE8157

### NOTES



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