## description

The TNETD7300/TNETD7301 is an ADSL bridge/router solution, integrating a broadband communications processor and peripherals, ADSL physical layer, ADSL line driver/receiver, USB physical layer, Ethernet physical layer (not available in TNETD7301), and power management for use in CPE remote terminal (RT) modems for residential and small-office applications. The TNETD7300/TNETD7301 can be used in modems ranging from simple Ethernet bridges to integrated access devices (IADs) and residential gateways (RGs).

**ULTRA-INTEGRATED ASYMMETRIC DIGITAL SUBSCRIBER LINE (ADSL)** 

CUSTOMER-PREMISES EQUIPMENT (CPE) BRIDGE/ROUTER SYSTEM-ON-A-CHIP

The TNETD7300/TNETD7301 includes features to enhance ADSL throughput when connected to a compatible central office ADSL modem. ADSL2+ provides downstream transmission rates far beyond the 12Mb/s limit of S=1/2 encoding.1 Extended Reach (READSL2) and All Digital Loop ADSL allow 384kb/s/128-kb/s service to be provided on loops as long as 21 kft. These features allow TNETD7300/TNETD7301 to greatly surpass the downstream throughput limit of 8-Mb/s and the 17.5 kft reach limits generally seen in previous ADSL modems, thus granting ADSL service providers access to a larger subscriber pool without requiring replacement of the local loop infrastructure.

The TNETD7300/TNETD7301 includes a new peripheral bus extension called VLYNQ<sup>™</sup> that allows VLYNQ-enabled devices to be gluelessly interfaced to TNETD7300/TNETD7301 for advanced applications such as voice-over-packet (VOP) telephony or ADSL-to-Wireless LAN(802.11) bridging and interfaces such as USB 2.0 High Speed and PCI.

Dependent on line lengths and loop conditions.



## TNETD7300/TNETD7301 functional block diagram



