1010101010101010101010101010101010101010
1010101010101010101010101010101010

CONEXANT®

Single-Chip ADSL Endpoint
CX82320

Broadband Internet Connectivity

Conexant's broadband communications portfolio includes a comprehensive suite of semiconductor solutions that enable the digital home and information network. The Conexant AccessRunner CX82320 Single-Chip ADSL Endpoint is unique in the industry. The ADSL Endpoint provides all of the benefits of a transitional ADSL bridge/router, but at a significantly lower cost structure due to its advanced architecture and Bill of Material reductions.

The CX82320 ADSL Endpoint is like no other ADSL product. As a simple modem for single user deployments it has all of the robust and user-friendly characteristics of a traditional ADSL bridge/router, including Web-based configuration and provisioning. Additionally, the ADSL Endpoint does not require a complex, host CPU burdening driver that is required by typical low cost single user modems such as traditional ADSL-USB or ADSL-PCI modems. Instead, the ADSL Endpoint processes all ADSL data completely, including all ATM Segmentation and Reassembly (SAR), PPPoE, and PPP, etc. just as a traditional ADSL bridge/router. The advantage of this type of architecture is that the ADSL Endpoint provides the robustness of an ADSL bridge/router by providing Ethernet frames to the PC and not relying on a host PC driver that burdens the PC CPU.

The CX82320 ADSL Endpoint provides significant cost savings over the traditional ADSL bridge/router. By utilizing the PC to provide power, the ADSL Endpoint does not require an external power supply or any costly BOM to support a wall-mount power supply. Additionally, by storing the firmware for the ADSL Endpoint on the PC, costly flash memory is not required. Lastly, by consolidating PC interfaces, the ADSL-Endpoint does not require costly BOM to support an RJ-45 interface. The result is robustness and usage model of an ADSL bridge/router, but at the much lower cost structure of an ADSL-USB modem.

Another unique application of the CX82320 ADSL Endpoint is as a basis from which to build a modular broadband gateway. Service providers wish to capture additional revenue from advanced hardware and services all the while continuing to provide extremely cost effective modems for mass-deployment. The answer to this challenge is the CX82320 ADSL Endpoint as the first step in a modular broadband gateway. Because the ADSL Endpoint provides the processing power and capability of an ADSL bridge/router, the ADSL Endpoint can be expanded with simple modular upgrades to support advanced deployments, such as multi user ADSL routers, ADSL Wireless routers, and/or ADSL VoIP terminals. The combination of low cost structure of ADSL Endpoint .... ular expansion makes the ADSL Endpoint an ide............................ rs to mass-deploy and then upgrade on an as ne....

CX82320 ADSL Endpoint Distinguishing Features

- Complete ADSL on a chip
- Full-rate ADSL and G.lite operation
- Annex A and Annex B support
- Integrated ADSL transceiver, AFE, and Line Driver
- Low cost architecture
- Integrated PPPoE/PPPoA/PPP
- Ethernet frames passed to PC
- Support all major PC operating systems
- Web-based management
- Plug-n-Play installation without opening the PC
- First step in a modular broadband gateway
- 208-pin fine pitch ball grid array (FPBGA)

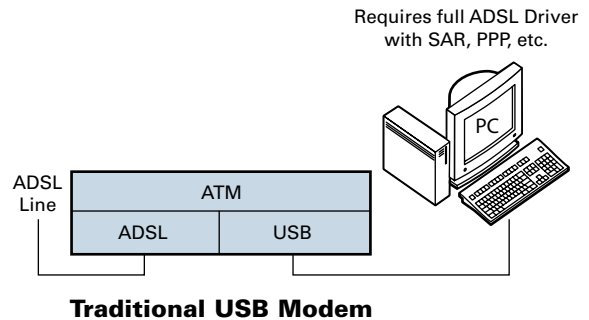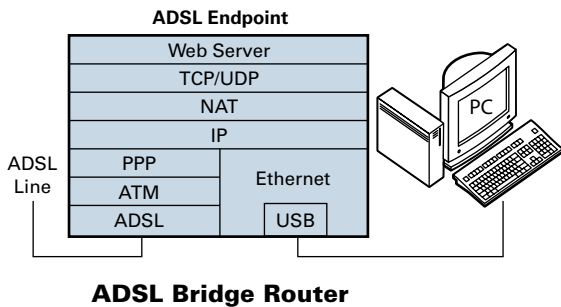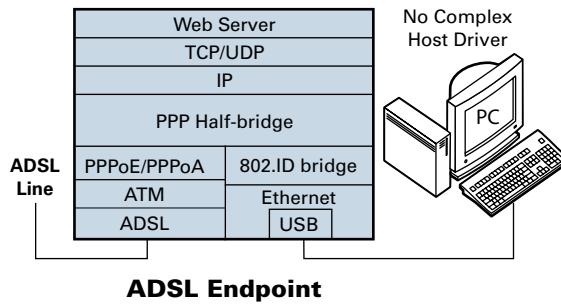| **Part Number**	CX82320
Description	Single-Chip ADSL Endpoint

CX82320 Endpoint Features

- Complete ADSL on a chip
- Low cost architecture
- No flash memory
- No power supply
- Lowest cost PC interface
- Full rate ADSL and G.lite operation
- Annex A and Annex B Support

- Robust architecture
- All protocols implemented on chip
- Ethernet frames passed to PC
- No complex PC driver required
- Familiar look and feel
- Web based management
- Support for all major PC operating systems
- Expandable to advanced modular gateway solutions

Typical Modem Firmware Architecture Comparisons

No Complex
Host Driver

| Web Server |
| TCP/UDP |
| IP |
| PPP Half-bridge |
PPPoE/PPPoA	802.ID bridge
ATM	Ethernet
ADSL	USB

**ADSL
Line**

PC

ADSL Endpoint

ADSL Endpoint

| Web Server |
| TCP/UDP |
| NAT |
| IP |
PPP	Ethernet
ATM	
ADSL	USB

**ADSL
Line**

PC

ADSL Bridge Router

Requires full ADSL Driver
with SAR, PPP, etc.

| ATM |
| ADSL | USB |

**ADSL
Line**

PC

Traditional USB Modem

C O N E X A N T