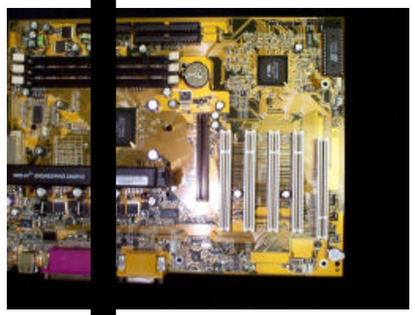
ACR.Lite™ Motherboard & ACR.Lite Card (HomePNA 1/2 + V.90 + USB)



The ACR.Lite Motherboard Reference design(above right) is available from VIA Technologies. The ACR.Lite card Reference Design(above left) size is scalable from 1/2 length full size PCI through the new small form factor low profile PCI. This reference design is available from AMD.

ACR SIG Charter

- To develop an open specification for a new and advanced PC communication riser card providing a common architecture for analog modem, Ethernet, phone-line and wireless networking, DSL, and audio functions
- To reduce communications peripheral development costs and form factor size requirements
- To answer demand for emerging and new communications technologies
- To accommodate the communications technology advances while mitigating the impact of standards change
- To allow multiple generations of core logic components and software emulators to implement a specification without frequent motherboard architecture changes

Contact Us

The ACR SIG manages the development of the ACR Specification. The ACR SIG is an open, not-for-profit organization of adopters from the microcomputer industry. ACR SIG membership is available to the microcomputer industry.

If you are interested in becoming an ACR SIG adopter, or for [illegible] tions and development materials relative to the ACR S[illegible] an e-mail message to ***info@acrsig.org.***

ACR SIG

Advanced Communications Riser
Email: info@acrsig.org
Home: www.acrsig.org

ACR vs Intel's CNR

"CNR seems to be a point solution with many forced trade-offs. **ACR seems to be a comprehensive strategy offering backwards compatibility, a long expected life cycle, plus it encourages innovation, differentiation and competition."**

Quote from InQuest Market Research–April 2000

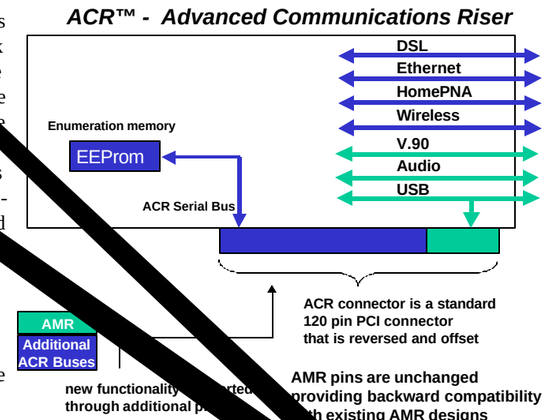
www.inqst.com/acrcnr.htm

www.acrsig.org

ACR - The Open Communications Riser Standard

Architecture for Integration & Enumeration

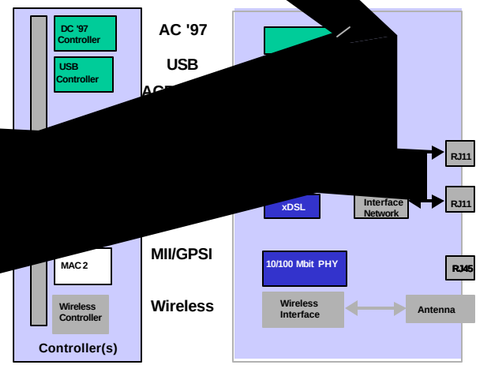
The ACR Specification supports modem, audio, Local Area Network (LAN) and Digital Subscriber Line (DSL). Buses are reserved for future wireless bus support. Beyond the limitations of the AMR Specification, the ACR Specification enables riser-based broadband communications, networking peripherals and audio subsystem designs.



ACR uses a standard 120 pin PCI connector. The ACR architecture allows robust device enumeration.

Standard Buses Promote Fast Time to Market

The ACR interface combines several existing communications buses, and introduces new and advanced communications buses answering industry performance communications [illegible] erals.



Features & Benefits

The ACR Specification provides the following technology, cost and integration benefits:

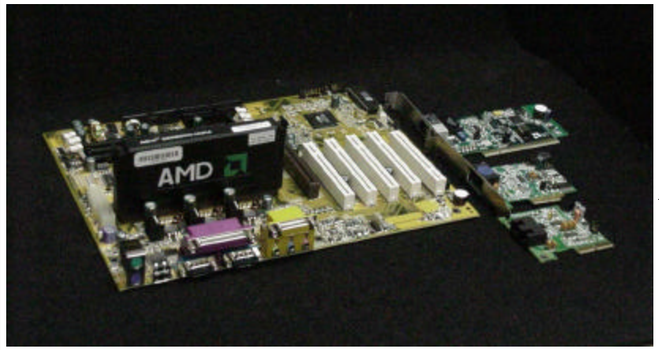
- Allows diverse and scalable communications, networking and audio functions.
- Eliminates enumeration and Plug-n-Play challenges by the addition of an EEPROM/PROM and new signals.
- Supports simultaneous AMR, multiple network interfaces, and a DSL interface on a single riser card.
- Frees multiple PCI bus slots for use by other peripherals.
- Enhances or replaces discrete silicon hardware cores with software emulation cores.
- Adds interfaces and collects the RJ-11 communications and networking functions, such as analog modems, HomePNA Networking and DSL through a single jack.
- Reserves pins for a wireless interface that supports both current and anticipated bandwidth requirements.
- Uses an existing low-cost 120 pin PCI A-stagger connector.

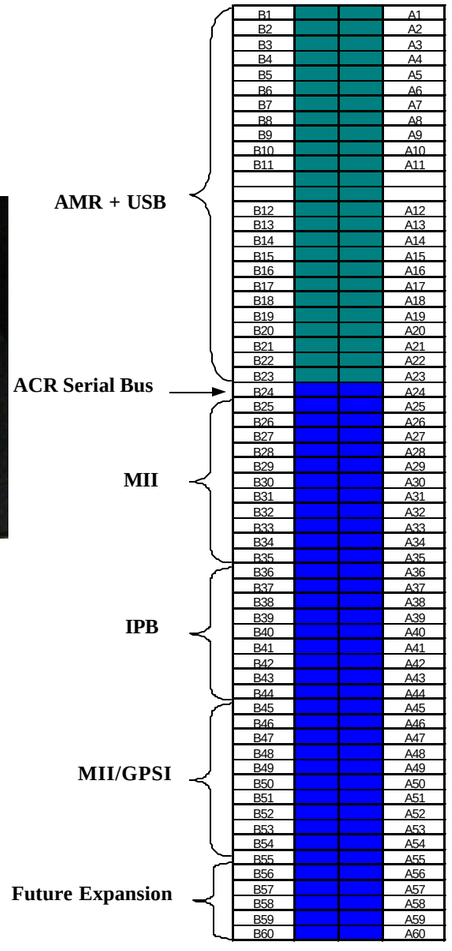
ACR Connector

Backward Compatible and Forward Looking

AMR Compatibility

ACR is based on a standard 120 pin A-stagger PCI style connector that is reversed and offset. It is fully compatible with existing AMR designs.





The ACR Connector is a standard 120 PCI A-Stagger that is reversed and offset.

MII

MII is compatible with many existing Ethernet and HomePNA PHYs. This allows quick deployment of integrated LAN/WAN designs on a single riser. ACR.Lite (shown below) provides HomePNA/V.90 LAN/WAN solution.

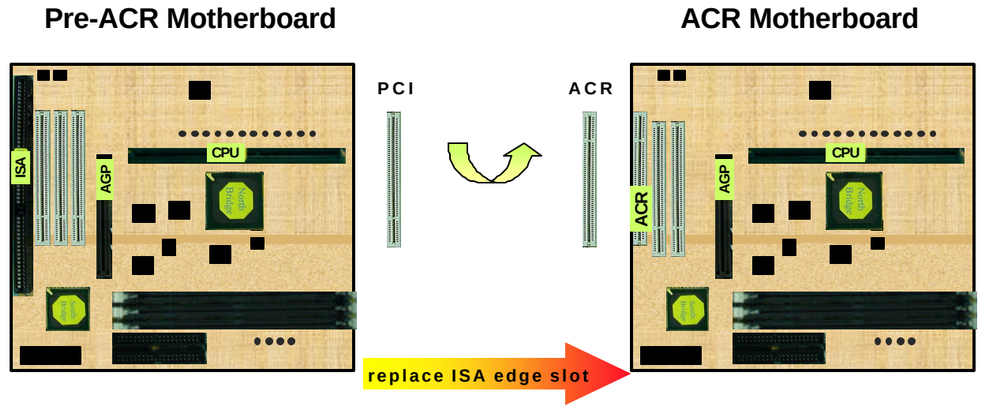
Integrated Packet Bus (IPB)

An important objective of the ACR Specification and technology involves allowing the host system CPU to directly process the communications stream. The Integrated Packet Bus (IPB) Data Link Specification, developed in tandem with the ACR Specification, accomplishes this objective. IPB offers high-speed data transfers in a variety of hardware and software core combinations, supporting multiple types of communications designs. This approach allows OEMs the flexibility to implement communications solutions across a wide range of the performance and cost spectrums.

ACR Motherboards

No New Connector Tooling and No Continual Motherboard Re-Layout

ACR defines a placement for the standard 120 PCI connector. It is offset and reversed making it compatible with existing AMR designs. while preventing standard PCI cards from being plugged into the ACR slot in the PC chassis. The ACR connector can replace the legacy ISA connector as shown below. ACR requires no new connector inventory since it uses the standard PCI connector! Given the expandability of the ACR buses, the investment made in motherboard layout can be protected.



ACR cards

Config to Order—WAN/LAN

The OEM now has one motherboard solution for multiple skews. ACR cards define the platform WAN/LAN capability at the depot. The ACR design philosophy promotes the "**Sealed Case Initiative**" reducing the likelihood of costly service calls related to communication subsystems upgrade problems.

ACR Card	WAN	LAN
ACR.Lite™	**V.90**	**HomePNA(1 or 2) or Ethernet**
ACR.Hub™	**Cable Modem or DSL**	**HomePNA(1 or 2) or Ethernet**
ACR.Xtreme™	**Cable Modem, DSL or Wireless**	**Wireless, HomePNA, or Ethernet**