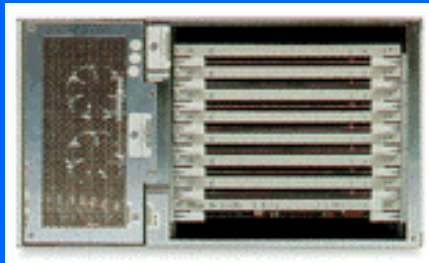


IDNX EQUIPMENT

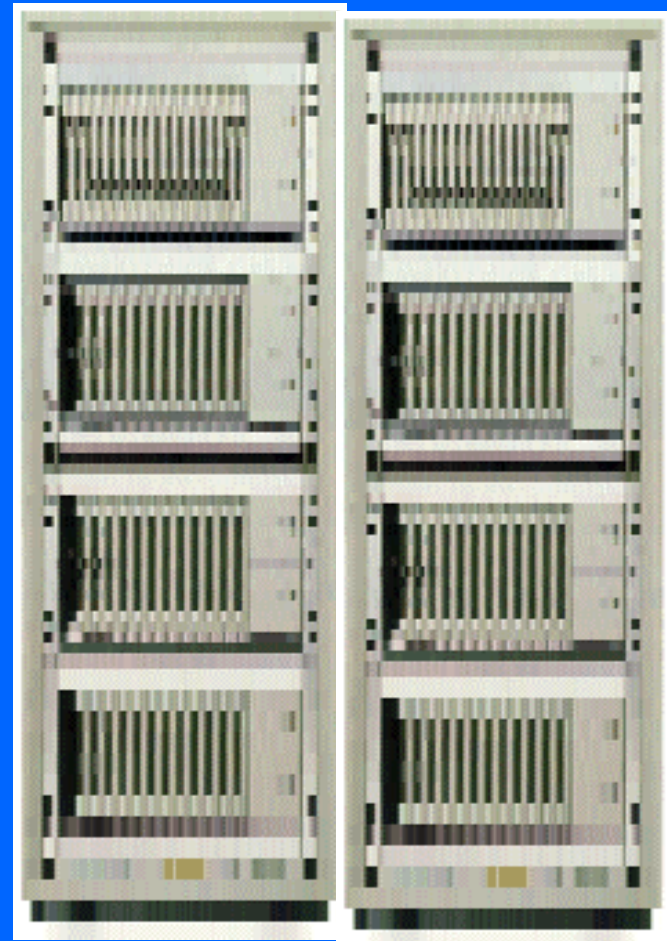
Micro-20

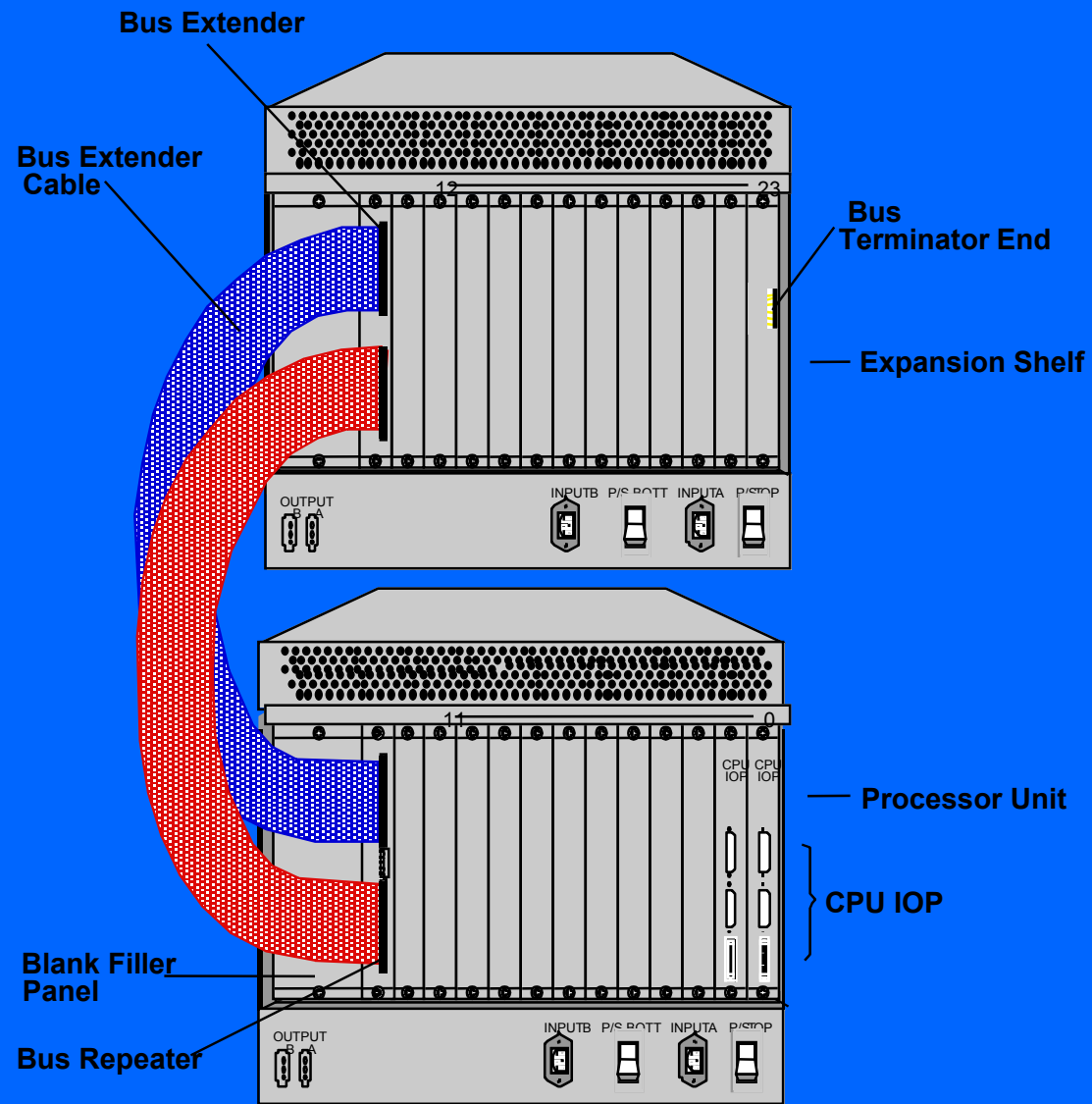


IDNX-20C

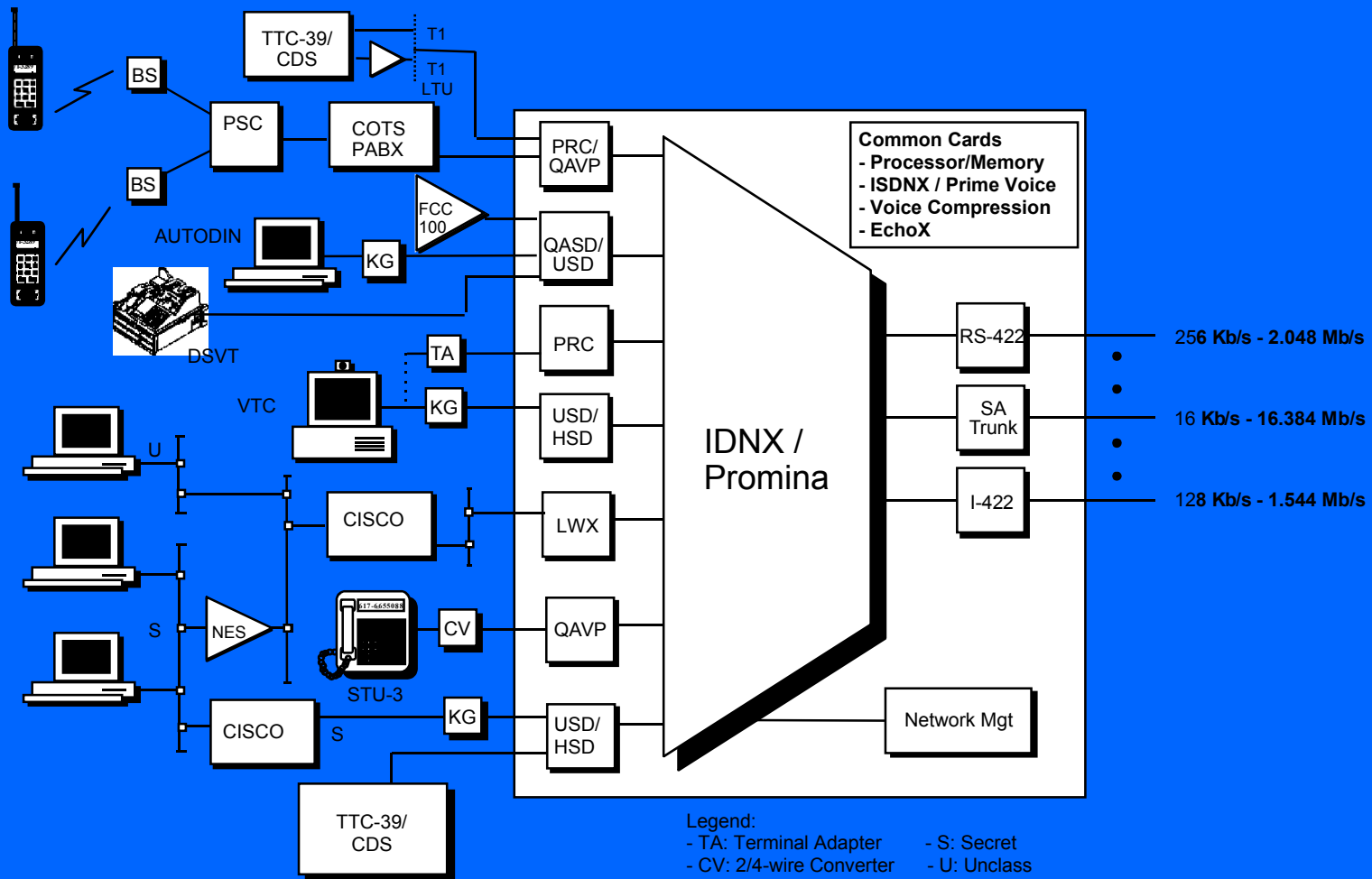


IDNX-90





Port and Trunk Interfaces



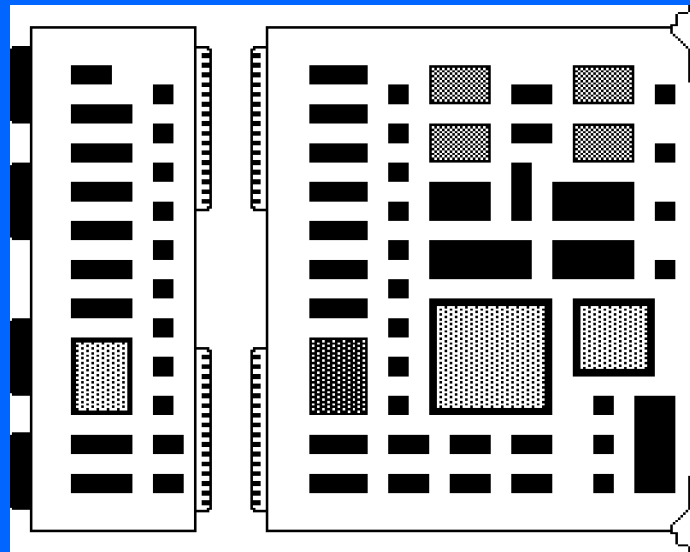
Inside an IDNX - Common Cards

Communications Resource Manager

<u>Voice</u>			<u>Trunks</u>
DS-1, 24 channels (X2)	PRC	T1 TRK	1.544 Mbps DS-1
CEPT, 30 channels (X2)	TMCP	56/64K TRK	56 or 64 Kb/s NRZ
4W E&M, 1 channel (X4)	QAVP	RS422 TRK	128 to 2048 Kb/s NRZ
<u>LAN</u>		CEPT TRK	2.048 Mbps, HDB3
10 Mbps Ethernet	LWX	T3 TRK	45 Mbps, B3ZS
<u>Frame Relay</u>	FRX	SA TRK	16 Kb/s to 16 Mbps NRZ
<u>ATM UNI</u>	CellXpress		<u>Voice Compression</u>
<u>ISDN</u>	ISDNX	VC 31/62	32 & 24 Kb/s ADPCM
	QBRI	HDVC 12/24	16 or 8 Kb/s VAPC
<u>Data</u>		LD-CELP	4.8,8,9.6 & 16 Kb/s CELP
		EchoX	
1.2 to 64 Kb/s (X4)	QASD	CPU	Network Management I/O
1.2 to 1344 Kb/s (X2)	USD	CLK-2	Station Clock Interface
9.6 to 2048 Kb/s (X2)	HSD-2	PDU	Prime Power

Common Cards (continued)

IDNX Card Modules



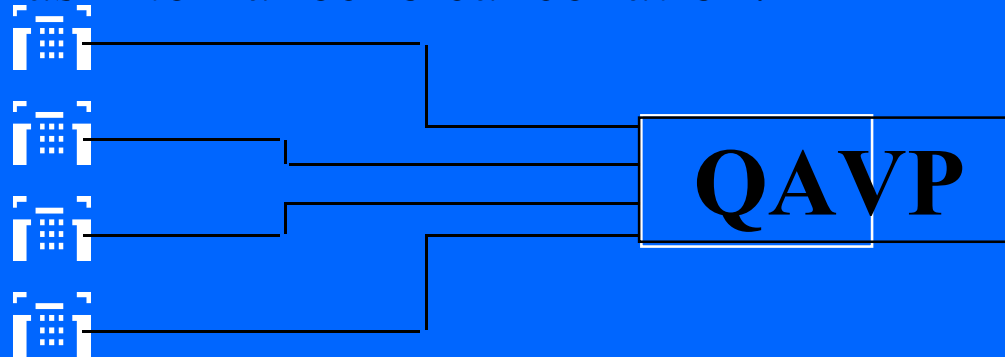
- **Two card positions per slot: Front & Rear**
- **Front Card = Feature card logic & interface to IDNX Bus**
- **Rear Card = Converts TTL to standard I/O user interfaces**

Common Cards (continued)

- **Voice:**

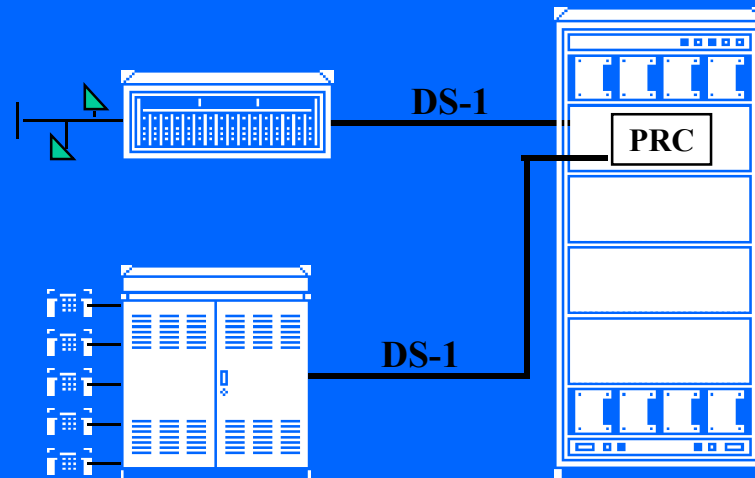
- **Quad Analog Voice Port (QAVP).**

- Provides for four analog interfaces.
- Supports 4-wire E&M (type 1-5) interfaces and signaling.
- Has internal echo cancellation.



Common Cards (continued)

- **Voice:** (continued)
 - **Primary Rate Card:**
 - Provides for two DS-1 interfaces
 - Accepts standard BRI with 24 DS0.

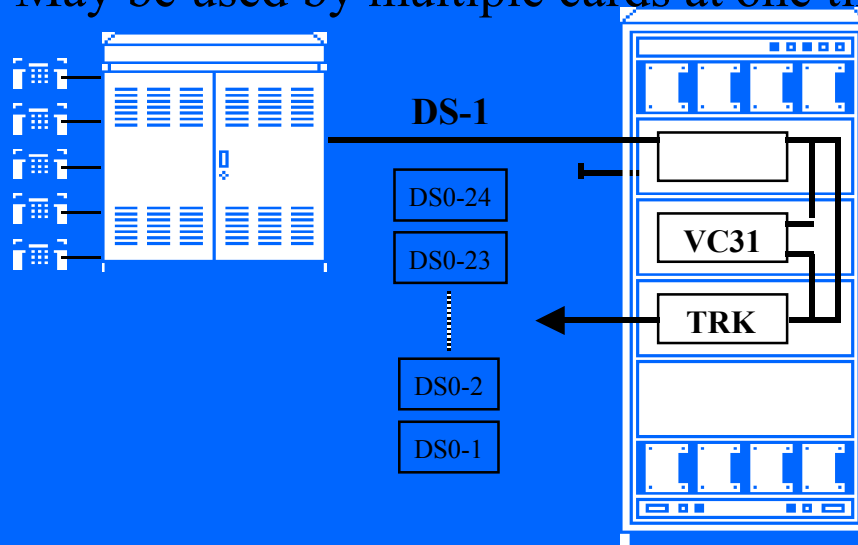


Common Cards (continued)

- **Voice server modules:**

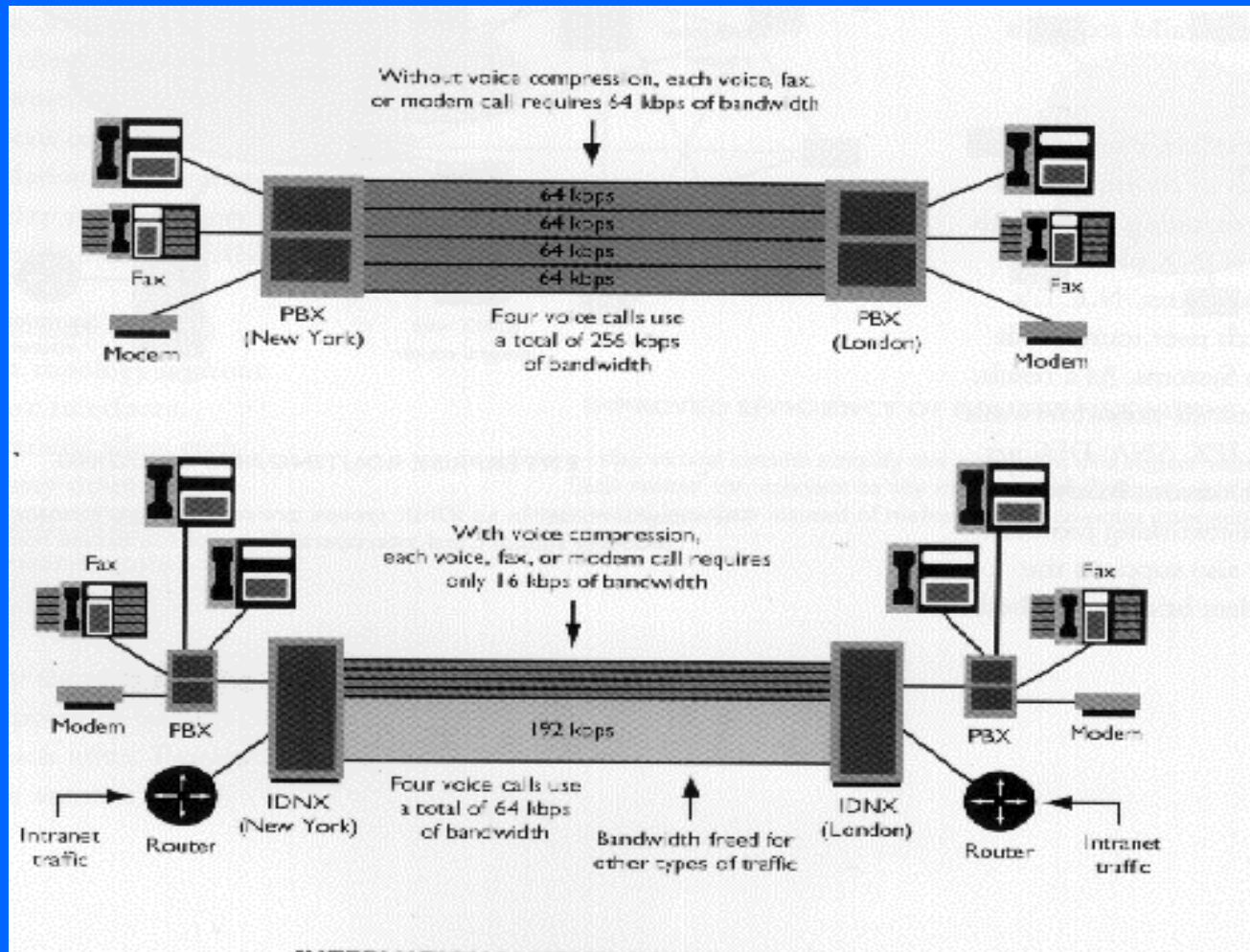
- **Voice Compression:**

- Defined at a port level for a 64 kb/s voice channel.
 - May be used by multiple cards at one time.



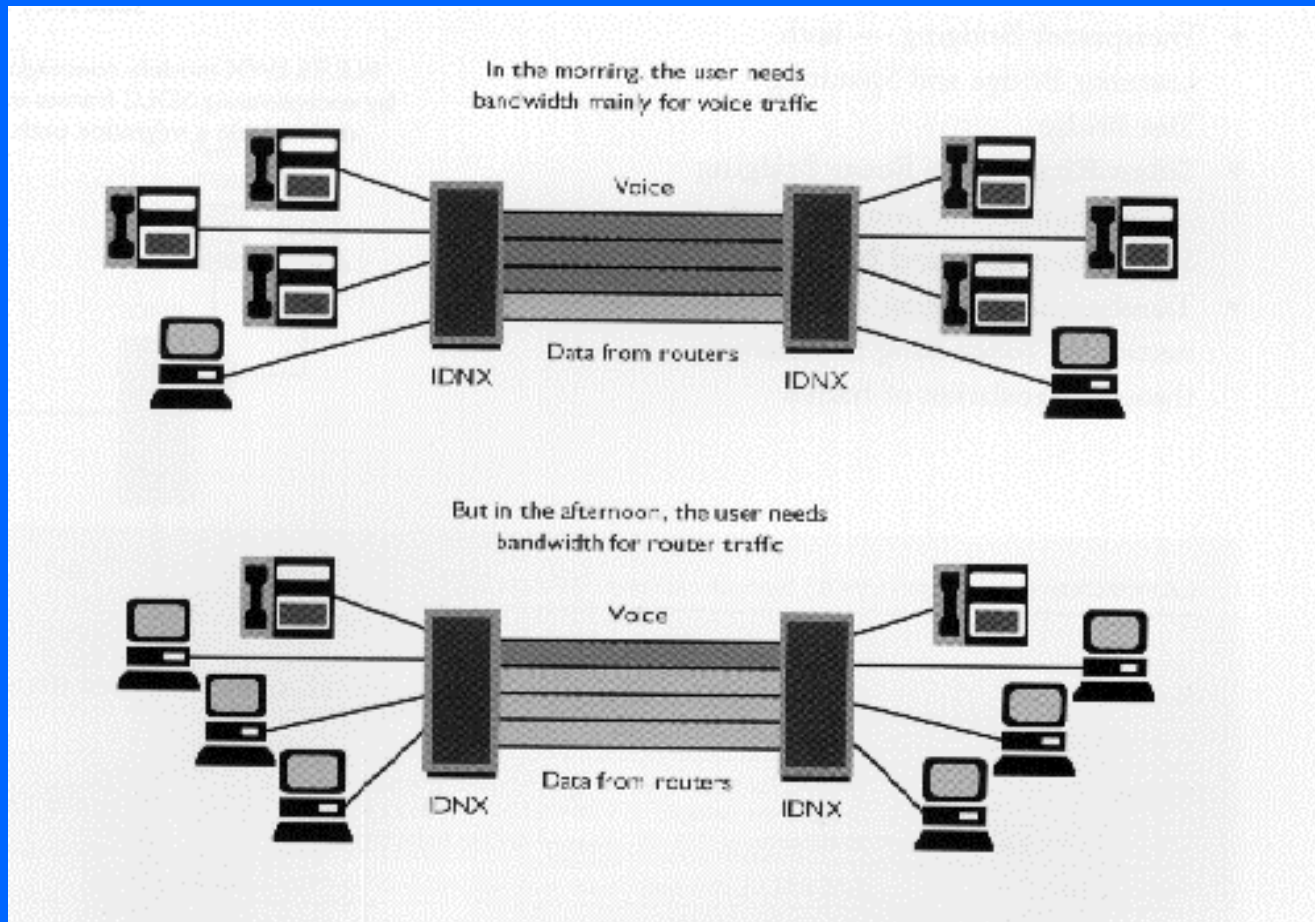
Common Cards (continued)

– Voice Compression:



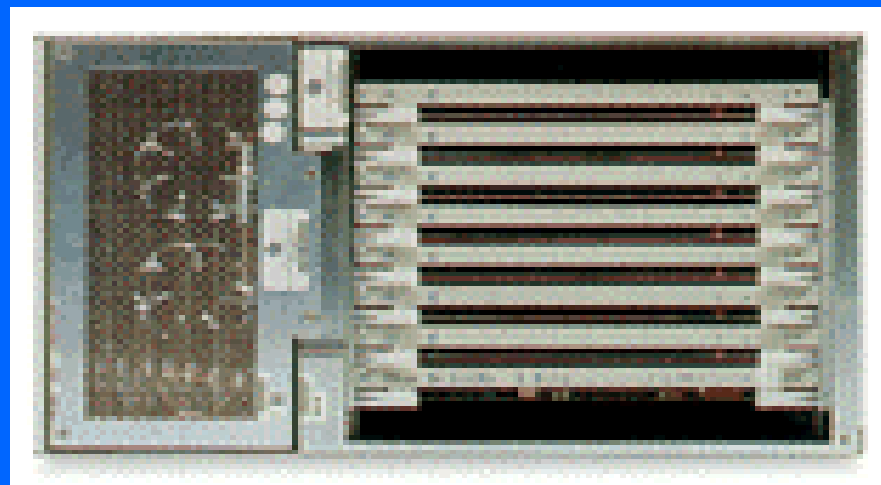
Common Cards (continued)

– Load sharing:



Common Cards (continued)

- **Voice server modules:** (continued)
 - **EchoX:**
 - Provides echo cancellation.
 - Supports up to 32 digital voice interface ports.
 - Works like voice compression card (shared resource).

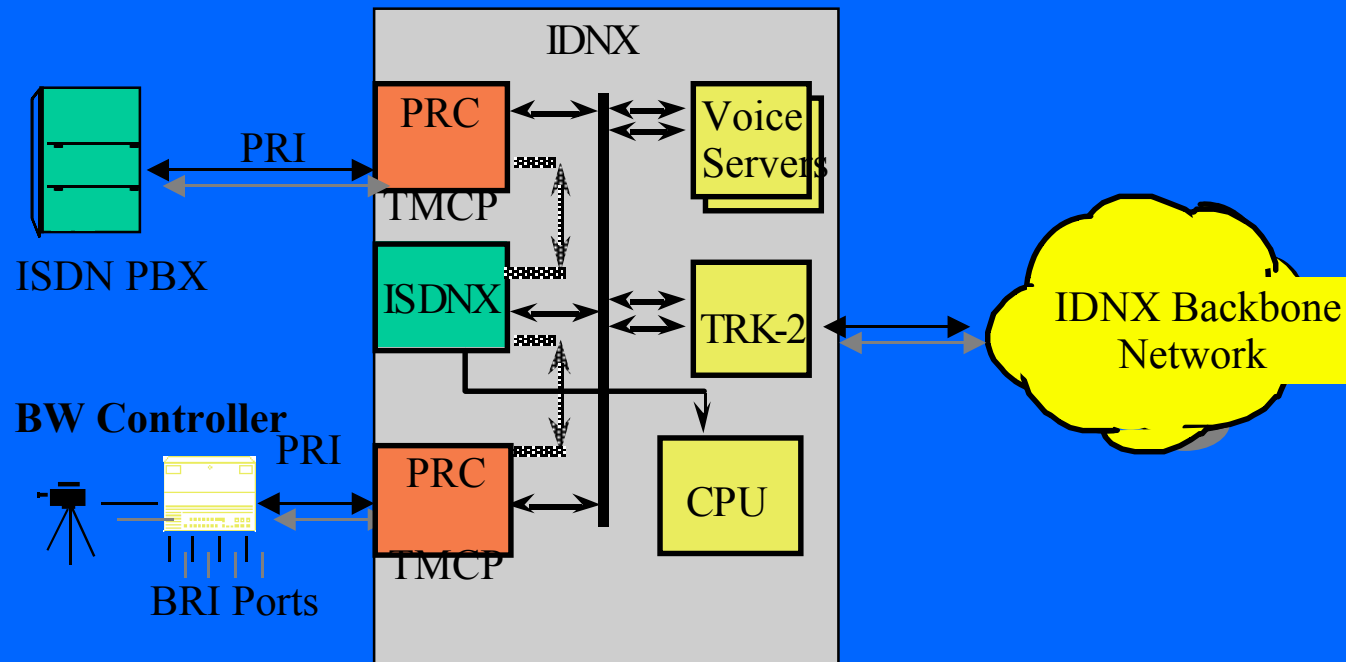


Common Cards (continued)

- **Voice server modules:** (continued)
 - **ISDNX:** Supports Integrated Switched Digital Network (ISDN) circuit switching and routing.
 - Enables devices such as PABXs, video codecs, terminal adapters/inverses multiplexes, routes, etc., to connect via Primary Rate Interface.
 - Calls routed to receiving node via best path, i.e., no intervening switches are required. **NO TANDEM SWITCHING.** Eliminates multiple A/D and D/A.

ISDNX MODULE (continued)

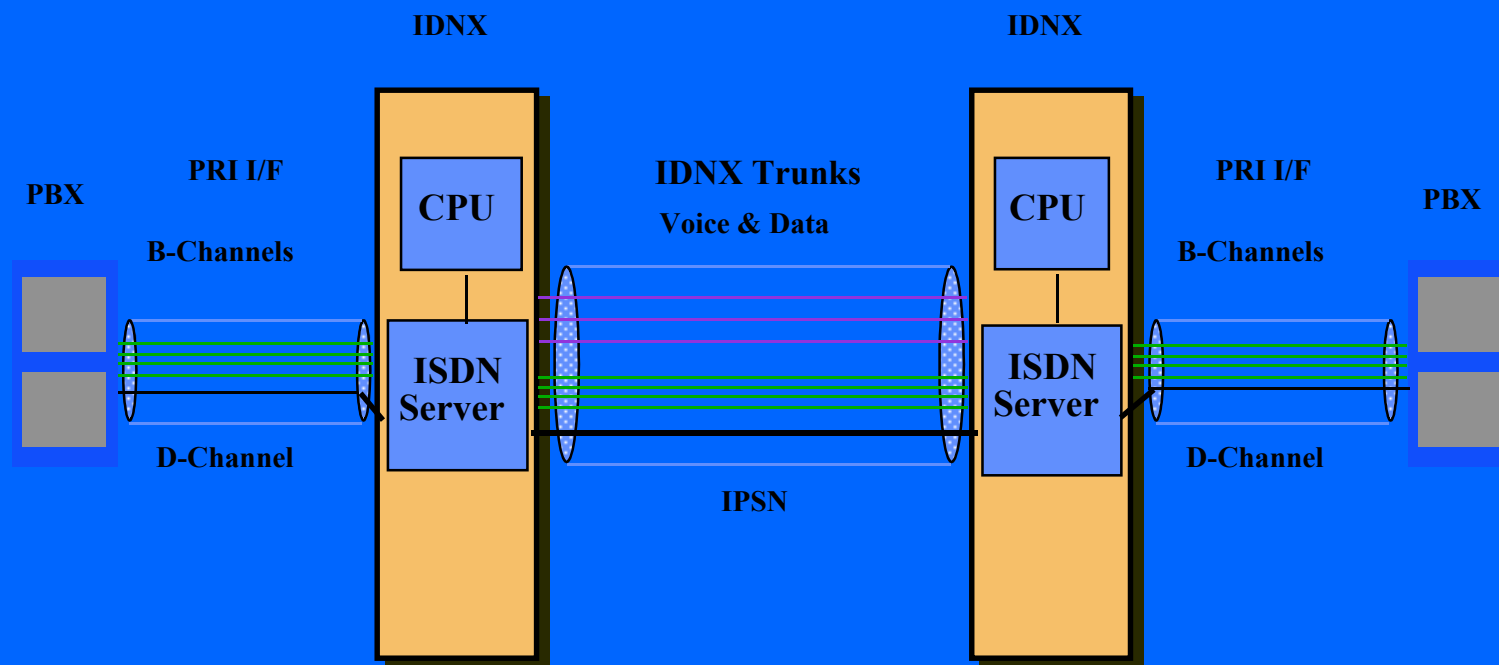
- **ISDNX Architecture:**



- D-channel routed from PRC/TMCP to ISDN server (ISDNX) for processing
- B-channels routed directly to trunk/port for transmission/termination
- ISDN servers communicate over ISDN Packet Switch Network (IPSN)
- ISDN server & IDNX CPU co-operate on call processing

ISDNX MODULE(continued)

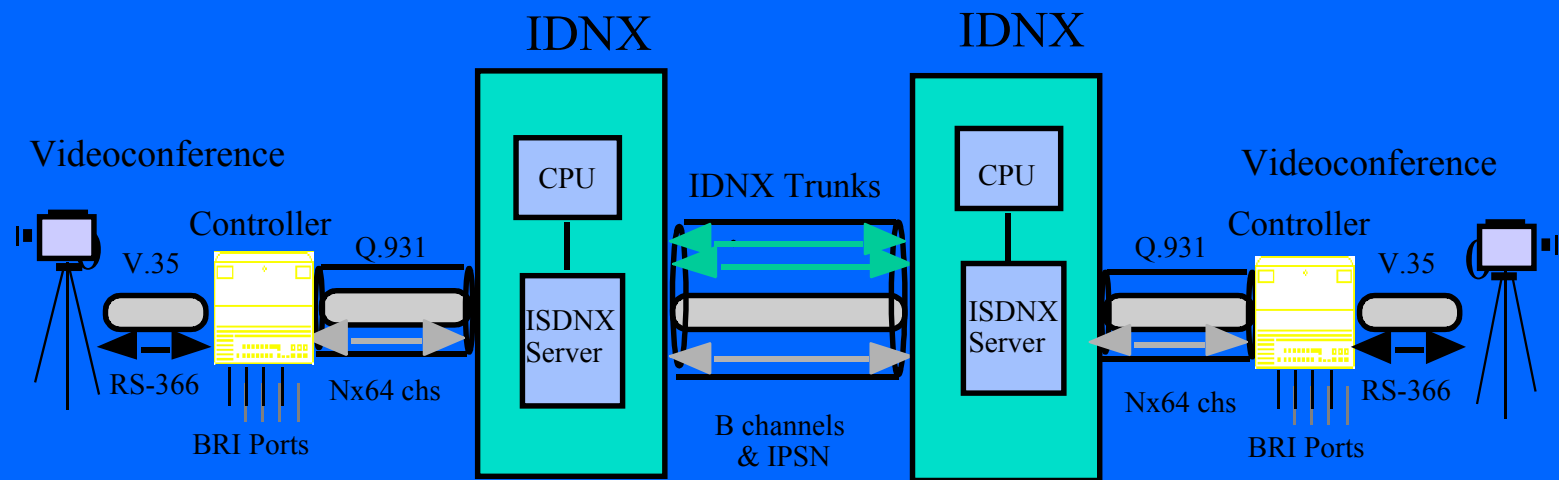
- **PBX/ISDNX ISDN Signaling Interaction:**



- PBX-IDNX Signaling = Q.931 D Channel
- IDNX-IDNX Signaling = ISDN Packet Signaling Network

ISDNX MODULE(continued)

- **ISDNX Dial-up Video Tele Conference:**



- Direct dial video tele-conference from video system keypad via ISDN circuits
- PRI BW Controller converts RS-366/V.35 to Q.931 to Nx64 Kb/s channels
- Dial-up Wideband Video to any location in the Enterprise

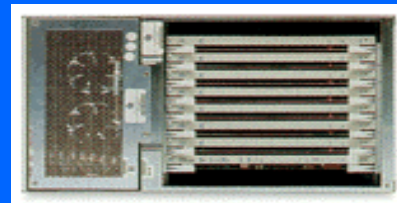
Common Cards (continued)

- **Serial data Modules:**

- **Quad Asynchronous Synchronous Data: (QASD)**

- Four physical user interfaces.
- Five interface types available:
 - - RS-232 DCE & DTE.
 - - V.35 DCE & DTE.
 - - RS-530 DCE.

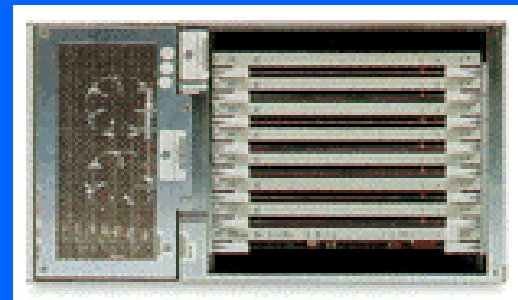
Low speed user data



Common Cards (continued)

- **Serial data Modules: (QASD)**
 - All attributes are software defined:
 - - Circuit End Points.
 - - Call & Preempt Priority.
 - - Permanent/Demand Bandwidth.
 - - Terrestrial, Fiber, etc. Routing restrictions.
 - - Asynchronous Port Speeds = 75 bp/s to 19.2 Kb/s
 - - Synchronous Port Speeds = 1.2 Kb/s to 64 Kb/s.

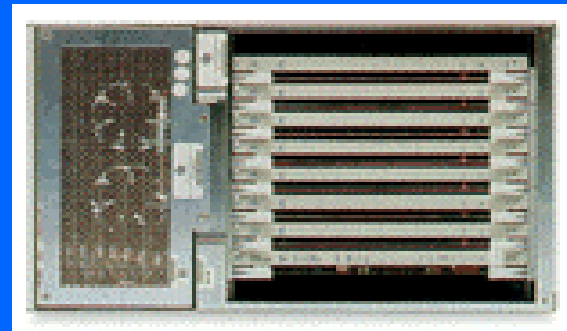
Low speed user data



Common Cards (continued)

- **Serial data Modules:**
 - **Universal Synchronous Data (USD) Module**
 - Two physical user interfaces.
 - Interface types available:
 - - RS-232 DCE & DTE.
 - - V.35 DCE & DTE.
 - - RS-449/422 DCE & DTE.
 - - Bi-Phase Mil-188 DCE.
 - - Dual RS-530 DCE.

High speed user data



TRUNK MODULES

- **T1**
 - 1.544 Mbs. D3/4 framing
 - Several zero suppression algorithms offered.
 - DS-1 interface
- **CEPT and RS-422**
 - 128 - 2.048 Mbs
 - CEPT is UTI(CCITT std) European compliant
 - KG-resync.
 - G.703 and RS-422/449 interface.
- **Others**
 - Low Speed 128-256 Kbs with RS-422/449 interface
 - 1.920 Mbs French Std with x.21 interface
 - 56 and 64 Kbs with V.35 and x.21 interfaces

TRUNK MODULES (continued)

- **SA Trunk: “the deal”**
 - 2000 rates from 16 Kb/s to 16 Mb/s.
 - Transmit and receive rates independently settable.
 - 32 bit interleaver to protect against burst errors.
 - 10 msec Doppler buffer for satellite links.
 - Supports sync, async, and pass through calls.
 - Supports one way and duplex calls.

TRUNK MODULES (continued)

- **SA Trunk: “the deal” goes on**
 - **Supports internal or external send timing.**
 - **Crypto resync provided.**
 - **EIA-530, RS-422 interface.**
 - **Redundant or non-redundant.**
 - **Optional 1-1 redundant configuration.**

DATA MODULES

- **LAN/WAN Exchange PX2:**
 - A multi-protocol router (CISCO 4500) on a card.
 - Uses 25 MHz 68030 with up to 8 Mb of DRAM.
 - Provides a LAN to WAN exchange.
 - Provides one Ethernet physical interface (15-pin AUI or 9-pin token ring), and up to eight logical serial interfaces from 16 - 2.048 Mb/s (IDNX-20) and up to 4.0 Mb/s (IDNX-90).
 - Serial ports can be assigned to local or remote nodes.

Promina 800 Series

Multiservice Access Platform



800



400



200

What is Promina ?

- Promina 800 Series is the next Generation of IDNX/90, IDNX/20 and IDNX Micro/20 Product Line
- Supported Promina 800 Models Are:
 - Promina 800 (IDNX 90)
 - Promina 400 (IDNX 20)
 - Promina 200 (IDNX u20)
- Promina 800 Released As Software Version 1.0
- All Models Incorporate New CPU Cards And the Vx-Works Operating System

Why the Name Change to Promina

- Promina is N.E.T.'s trademark for ATM Capability
- Promina 800 introduces significant changes to IDNX Architecture
- Minimizes Confusion for Our Customers

Promina 800 Product Features

- Faster CPUs for increased call performance
 - Minimum 2 to 4 times faster
 - CLB = 1.5 Mips PLM = 26 Mips
 - HPC = 4.5 Mips PPM = 64 Mips
- Network Server on a Card (PSM)
 - Front-end Processor to Outside World
 - Process Network Management Tasks
 - Process O/I Commands
 - 820 MB Hard Disk replaces memory cards for more code and network management data storage
 - DOS File System allows easy access to data

Why Upgrade to Promina 800 Series

- Improved Performance
- Increased Availability
- Improved Serviceability
- Open Network Management via SNMP
- ATM Capability
- Faster New Feature Availability
- Year 2000 Compliant

QUESTIONS?

QUESTIONS,

COMMENTS,

VOTES,

CHOICE BITS OF
GOSSIP?????

