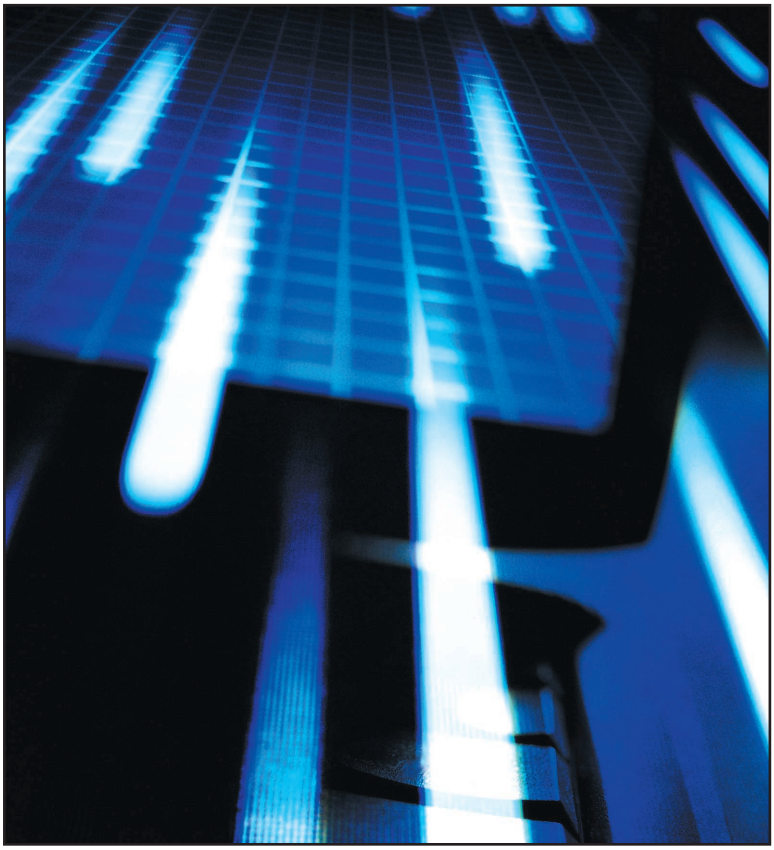
IMACS INTEGRATED MULTIPLE ACCESS COMMUNICATIONS SERVER

Advanced Voice and Data Applications

One Integrated Solution

Network Scalability and Flexibility.

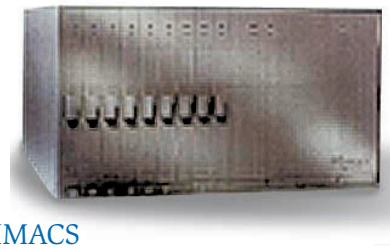


The concept of Integrated Access began with the introduction of the IMACS. Initially, the IMACS was a vision that brought bandwidth savings for voice and data access. IMACS has not strayed from its vision and has remained the most flexible, robust, and scalable integrated access solution in the telecommunications market today. In fact, we have continued to build on our promise to provide the most robust set of voice and data access services and applications on one manageable platform – IMACS.

Keeping Customers and Competitors

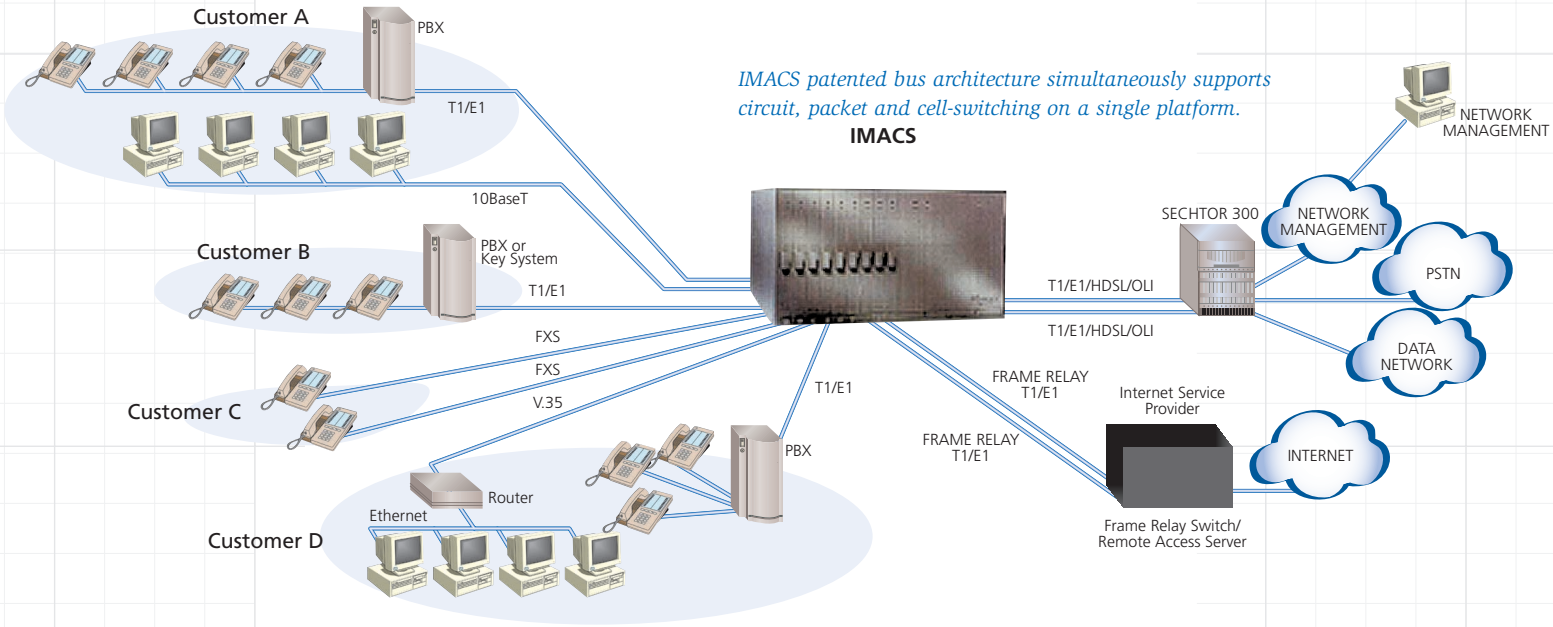
As carriers' customers requirements change, often faster than their ability to deploy services, specifying the right access solution can be the most risky part of staying ahead of the competition. And just as fast as your customers demand bundled services, alliances and interconnection agreements with internet service and other network providers are being signed, sealed, and delivered. A product that provides complete flexibility in not only service and applications, but flexibility and scalability, isn't just a requirement, it's a make or break business proposition.

The IMACS - with over 50 optional service application modules, three flexible, scalable chassis options, and two firmware platforms - provides an almost limitless combination of services, applications and network interfaces.



IMACS

- Concurrent support for Circuit, Packet, Frame, and Cell processing in one scalable solution
- A fully manageable access solution, part of a family of full featured IADs
- Carrier-class design (99.999% availability), NEBS 3, CE marked
- Integrated cross-connect to optimize bandwidth utilization for voice and data traffic
- Three flexible chassis for varied installation requirements



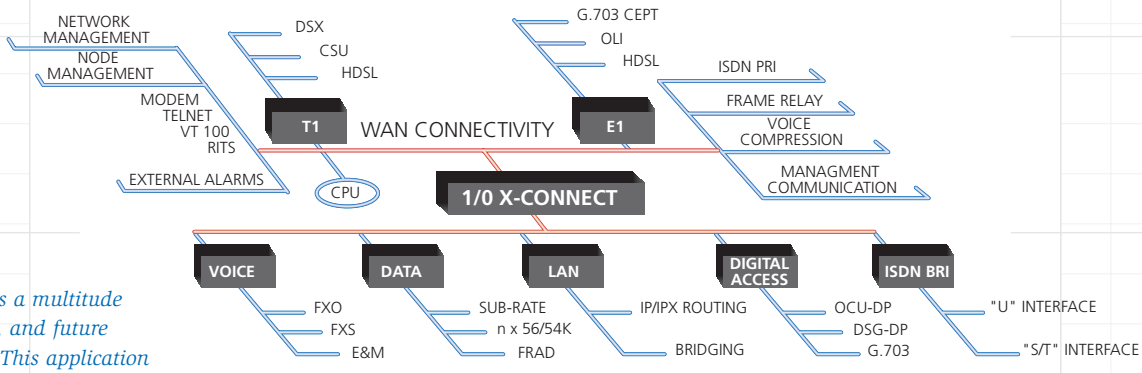
IMACS patented bus architecture simultaneously supports circuit, packet and cell-switching on a single platform.

Managed, Integrated Network Flexibility, Minimal Cost

The IMACS is unrivaled in its network flexibility. The IMACS supports V.35, V.11/X.21, up to 8 HDSL, T1, E1, fractional T1, and fractional E1 interfaces. An integrated digital cross-connect is available to consolidate multiple voice, data, and T1/E1 services. Three chassis models, IMACS 600, 800, and 900, differ in their card capacity and card install options (front, or front and rear). All models support the same range of modular cards, power supplies, and system redundancy options. All IMACS systems can be fully managed either with local craft interface through a VT100, PC, or through the OnLine Element Management System using standard SNMP interfaces.

And two versions of firmware, depending on the application, add even greater flexibility for easy, cost effective network deployment. This enables you to deploy the right services with the right network equipment - with one equipment vendor.

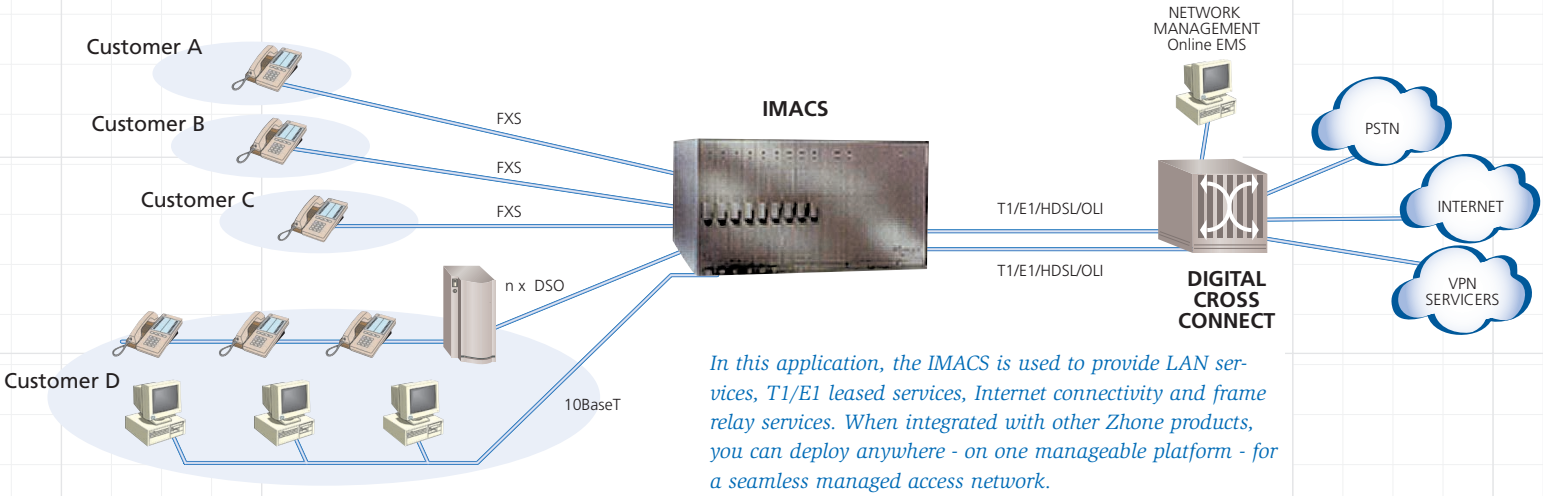
In addition, IMACS offers a powerful array of integrated network diagnostic and fault isolation capabilities. These include Bit Error Rate Testers, test tone and signaling state generation, digital and analog loopback support, and remote configuration and control. IMACS meets stringent standards criteria, such as NEBS and CE, which means you can deploy the IMACS almost anywhere in your network.



The IMACS provides a multitude of flexible, scalable, and future proof applications. This application allows you to offer POTS service as well as LAN connectivity on a single, manageable platform.

Integrated Applications Flexibility

The IMACS is designed to continuously meet the needs of a changing telecommunications landscape. With its advanced patented modular architecture, voice and data services can be deployed quickly and cost effectively. Applications include: POTS (FXS, FXO, E&M), IDSN (BRI and PRI), voice compression (ADPCM and ACELP), VPN access, Internet access, integrated routing capabilities, voice over Frame Relay, Digital Data Networks (DDN), analog private lines, and numerous others. And the IMACS is being used in both public and private, as well as traditional facilities-based and wireless networks.



In this application, the IMACS is used to provide LAN services, T1/E1 leased services, Internet connectivity and frame relay services. When integrated with other Zhone products, you can deploy anywhere - on one manageable platform - for a seamless managed access network.

More About IMACS

Find out more about how the IMACS Integrated Access solution gives you voice and data service flexibility, network scalability, unrivaled applications interfaces, and cost efficiencies to dominate any market. Call your IMACS representative, or 1-877-ZHONE 20. You can visit our web site at www.zhone.com or email us at sales@zhone.com

IMACS INTEGRATED MULTIPLE ACCESS COMMUNICATIONS SERVER

System Highlights

- Up to 8 T1/E1/HDSL interfaces
- Complete System Redundancy
- NEBS Level 3 Certified
- Fully manageable via OnLine Element Management System
- Interchangeable set of WAN, User and Server cards to match specific applications
- Three chassis models for installation flexibility and scalability
- Full interoperability with all IMACS or ZHONE products

System applications & Specifications

Please consult our web site or call your Zhone sales representative for a detailed description of applications and specifications.

Applications

- POTS (FXS, FXO, E&M)
- ISDN PRI Services
- ISDN BRI Services
- ISDN Video Conference & Broadcast
- P-Phone Extension (Nortel)
- Voice Compression
- Automatic Call Center Distribution Connectivity
- Digital Data Service
- Fractional T1/E1
- Frame Relay
- LAN services/ethernet
- Internet Access
- T1/E1 Conversion

Interfaces

- T1 (Up to 8)
- E1 (Up to 8)
- T1 or E1 HDSL (Up to 8)
- Optical Line Interface (Fiber Connection)
- V.35, RS-530, RS-232, RS-449, RS-422, V.24, DDS, 2B1Q, SLC96, 10BaseT, 10Base2

Power

- 120/240 VAC
- -48 VDC
- 24 VDC
- Power Consumption: 125 W
- Output Power: 55 W continuous
- AC-to-DC power converter available (-48 VDC)
- Dual Feed & Redundancy available
- Ring generation

Chassis

- Model 600 : 9.25 in (23.5 cm) H x 17 in (43.2 cm) W x 9.13 in (23.2 cm) D
- Model 800: 9.25 in (23.5 cm) H x 17 in (43.2 cm) W x 15.4 in (39.1 cm) D
- Model 900: 15.5 in (39.4 cm) H x 17 in (43.2 cm) W x 9.5 in (24.1 cm) D

Standards Compliance

- ANSI 310-D
- UL 459, 1459, EN60950
- Bellcore GR-63-Core (NEBS 3), GR-1089-Core
- Bellcore TR-TSY-000008 (TR08)
- CE EN 500 81-1, 500 82-1, 55022, FCC Part 15
- FCC Part 68, CTR 12, CTR 13, ACA T5016
- IEC 297-1
- ITU-G703, G.704, G.732, G.735, G.736, G.823, G.824

Management

- OnLine Element Management System
- HP Openview, Sun Solaris, NT Workstation 4.0, Q3/CMIP, Corba
- Connectivity: modem, SLIP, PPP, FDL Timeslot 24 (T1) or 31 (E1), ISDN D-channel, Frame Relay PVC
- Interface: SNMP

Clocking

- Stratum 4
- Sources: internal, frame relay interface, T1, E1

Redundancy

- Power Supply
- CPU
- WAN interfaces

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