## Multi-Service Platform

To stay competitive in today's ever changing market, service providers must develop and deploy new value added services to increase revenue and increase end user satisfaction. The Internet and other data networks are having a profound impact on the way services are delivered, providing the means for other operators to compete from points far beyond local exchange boundaries. Thus, it is imperative for carriers to make the right choice, when selecting their value added service platform.

XOP Network's Universal Service Node (USN) is a carrier grade platform that offers multiple value added services in one integrated platform thus eliminating the need to deploy multiple unique solutions from multiple vendors. This approach has several advantages;

**Reduce Capital Expense:** By replacing multiple single point solutions with a single multi-point solution an operator can reduce the CapEx associated with such service platforms by 80%.

**Reduce Operational Expense:** Having multiple services present in one platform allows precious network resources to be dynamically shared across all services. This leads to optimum utilization of network bandwidth resources thereby reducing the associated OpEx by 50%.

**Leverage Multiple Services:** Having multiple services present in one platform allows individual services to leverage capabilities of other companion services there by creating a more valuable feature set that is otherwise not possible with the one service per platform paradigm.

**Grow Over Time:** All services available on the USN are individually licensable. A service provider can start with one or more services initially and add additional services as needed. Additional services can be turned up by enabling service specific license keys remotely.

**Plan For the Future:** All services available on USN can be accessed over TDM trunks or SIP trunks or both. This gives additional degree of freedom to the network planners as they consider migration from legacy TDM environment to VoIP/SIP environment. Additional VoIP/SIP trunk ports can be added to a USN via remote access.

**Common Branding:** All services available share same the 'look and feel'and can be customize to support your own company and service brand identity.

**Robust Equipment:** Because equipment robustness is very important to service providers, the USN ships with disk drives and redundant power supplies (-48vdc) in a NEBS compliant chassis.

**High Availability Architecture:** Because service uptime is very important to service providers, the USNs can be deployed as a pair of Hot and Standby servers at two different geographical locations. Their databases are automatically kept in sync via real time updates over a TCP/IP connection. The USNs SNMP MIBs can be integrated easily with a service provider's external NMS allowing visibility to network and equipment alarms.

## Key considerations when deploying a Universal Service Node system:

**Scalable:** Deploy between 8 and 480 ports; add more capacity as your needs increase

**Reliable:** Linux operating system in a carrier-grade server, with redundancy options

**Customizable:** Brand your system with your company name and company colors

**Manageable:** Web based system administration of network resources

**Flexible:** All services are accessible over TDM and IP interfaces

**Expandable:** Start with one service and add others as needed

**Useable:** Same look and feel for all services

**Adaptable:** Begin offering services over your TDM network, easily migrate to VoIP

**Secure:** Tamper-proof, designed for military standards

# Features / Specifications

## Revenue Generating Value Added Services

• Feature-rich Audio Conferencing

• Web conferencing/Desktop Sharing

• Enhanced Firebar with Find-me

• Hoot-n-Holler Conferencing

• Multi-modal Mass Notification

• Enhanced Voicemail

• Desktop Video Conferencing

• Click-to-Talk

## Voice Quality

• Toll quality voice

• Echo cancellation

• Automatic gain control

• Tone clamping

• Loudest Speaker

## System Level Features

• Web portal for administrative functions

• Web portal for end user functions

• Bulk loading of subscribers using CSV files

• Real time view of any service activity

• Extensive call logs

• Multiple administrator logins

• Secure logins based on HTTPS

• SNMP MIBs for integration with external NMS

• Automated failure reporting

• On demand local and off site backup and restore

• 1+1 hot and standby system configuration

• Web portal customization

## Technical Specifications

**USN-xxx Port Configurations**
The number of ports can be any mix of TDM and VoIP.
Number of ports: 8 through 480 per chassis.

**Protocols**

| | |
|---|---|
| T1 CAS | E&M (Wink Start, Immediate Start) |
| T1 ISDN | NI-2, 4ESS, 5ESS, DMS250, INS1500, Q.Sig |
| E1 CAS | Many country specific MFC-R2 variants |
| E1 ISDN | NET5, DPNSS, DASS32, QSIG |
| VoIP | SIP, H.323 |
| DTMF Relay | Inband, RFC2833, SIP Info |

**Interfaces**

| | |
|---|---|
| T1 Telephony Interface | DSX-1 |
| Impedance | 100 Ohm |
| Framing | SF (D3/D4), ESF For ISDN |
| Line Coding | AMI, B8ZS |
| Connector | RJ-48C on Front Bracket |
| E1 Telephony Interface | CEPT E1 |
| Impedance | 120 Ohm balanced |
| Framing | CCITT G.704 with CRC4 |
| Line Coding | HDB3 |
| Connector | RJ-48C on Front Bracket |
| VoIP Interface | 100BaseT Ethernet, RJ-45 |
| Encoding formats | G.711, G.729, G.723 |

**Server Specifications**
1U, 2U or 4U standard 19" × 30" rack mountable industrial grade chassis
SATA RAID 1 Mirrored Disks
Power: 110-240 VAC, 47-63 Hz, 600 Watts max
-48 V power supply (optional)
Redundant power supplies (optional)
Weight: 20–40 kg

**Operating Requirements**

| | |
|---|---|
| Operating Temperature | + 0 deg Celsius to 50 deg Celsius |
| Storage Temperature | -20 deg Celsius to 70 deg Celsius |
| Humidity | 8% to 80% non-condensing |

Hardware Warranty: One year included
Software Maintenance: Basic and advanced packages available