

## BHUMIKA APPLICATION NOTE

### Voice and Data over IP

**Voice over IP: Voice Interfaces - FXO, FXS, E&M**

**Data over IP: Data Interfaces - RS232, G.703, iDSL, X.21, V.35, V.36, RS530, G.HDSL. 10BaseT over IP**

Our [Voice and Data Multiplexers](#) along with our [IP-Tube-E1](#) provide an excellent solution to terminate all your Voice, Data and Video interfaces over an IP interconnect. TDM over IP is a great alternative to traditional Voice over IP as it maintains all existing PBX features and preserves bandwidth.

Integrated with our [Voice and Data Multiplexers](#), it provides a great solution for terminating Voice (FXO, FXS, E&M) and Data (RS232, V.24, V.35, V.36, Fractional E1 etc.) traffic over IP.

This Bhumika Integrated solution gives you the flexibility to mix and match various voice and data interfaces; and terminates them over IP using one set of boxes; i.e. you do not require separate solutions to terminate Voice and data interfaces.

#### **Voice Interfaces:**

- FXO
- FXS
- E&M (2 Wire and 4 Wire)
- FXS-FXS (Hot-line)

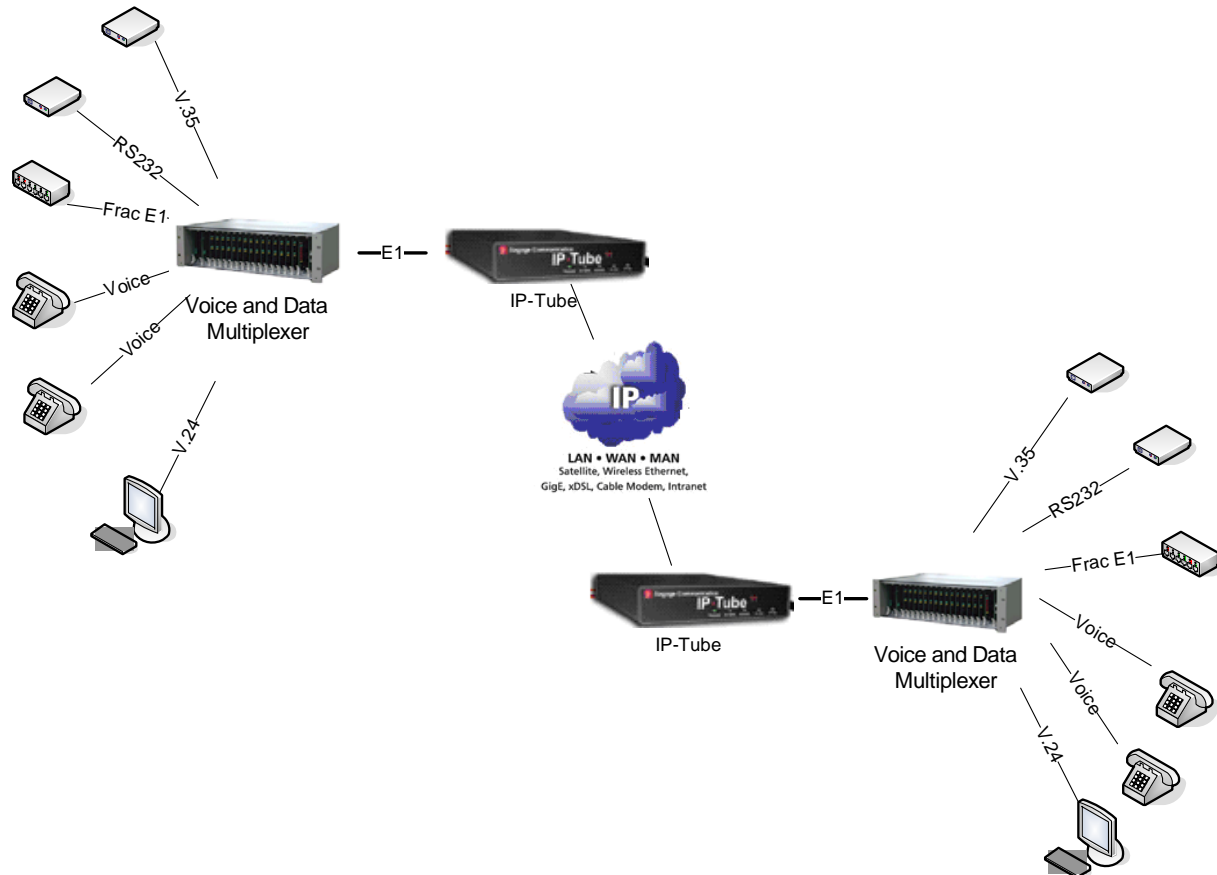
#### **Data Interfaces:**

- RS232
- G.703 @ 64 Kbps, co-directional
- iDSL @ 128 Kbps
- V.35, n X 64 Kbps
- V.36, n X 64 Kbps
- X.21, n X 64 Kbps
- RS530, n X 64 Kbps
- G.SHDSL, n X 64 Kbps
- 10BaseT - Ethernet Bridge
- 10BaseT - Router

#### **Features:**

- Voice and Digital Data services.
- Any combination ("mix-n-match") of Voice and Digital Data services deployed from a single VCL-MX "Smart Shelf".
- Drop and Insert (Add-Drop) applications.
- Powerful Network Management System for monitoring and network control.
- Compliance with all relevant ITU-T (CCITT) recommendations.
- Dual LAN Interfaces; Assured Delivery of IP packets and optional E1 switch (reversion to telco)
- Optional **Lossless Data Compression**

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An example of various voice and data interfaces can be terminated using VCL-MX Voice and Data multiplexer with E1-IP-Tube

### Other VCL-MX (E1 Multiplexer) Applications

- Drop and Insert (Add-Drop) Applications
- Wireless Network Applications
- High speed data ports for digital communication links providing leased lines access to ISPs
- Micro-cellular infrastructure applications for providing cell-switch connectivity
- Wide area networking
- Internet access over POTS lines – All POTS interfaces operate @ 64kpbs and support V.34 dial-up modems
- Real time Voice Conferencing services

### Other IP•Tube Applications

- Cellular backhaul over IP
- T1 / E1 Leased Lines over IP / Ethernet
- Solutions for MSOs; LAN, WAN and MAN carriers
- CLEC PBX Backhaul
- SS7 Signaling/Monitoring over IP / Ethernet
- Serial Data (RS530, V.35, RS232, X.21) over IP / Ethernet
- Toll Bypass over IP / Ethernet
- Encrypted Data over IP / Ethernet
- Wireless Ethernet

To get more information about this solution or to obtain a Data Sheet, Technical Specifications and a Quotation, Please contact Bhumika International Inc. at [info@bhumika.ca](mailto:info@bhumika.ca) or at +1 416 930-2931