

UMUX

PRODUCT overview

THIS IS UMUX

Table of Contents

This is UMUX	2
UMUX Components	4
UMUX Applications	6

The UMUX family is a next generation multi-service access system which is currently used in more than 100 countries worldwide by public and private network operators. It covers a wide range of applications from traditional data services to VoIP media gateway functionality.

The UMUX offers multi-service capability without compromise, enabling operators to deliver high revenue-generating traditional and leading edge services out of a single, small-form factor access system.

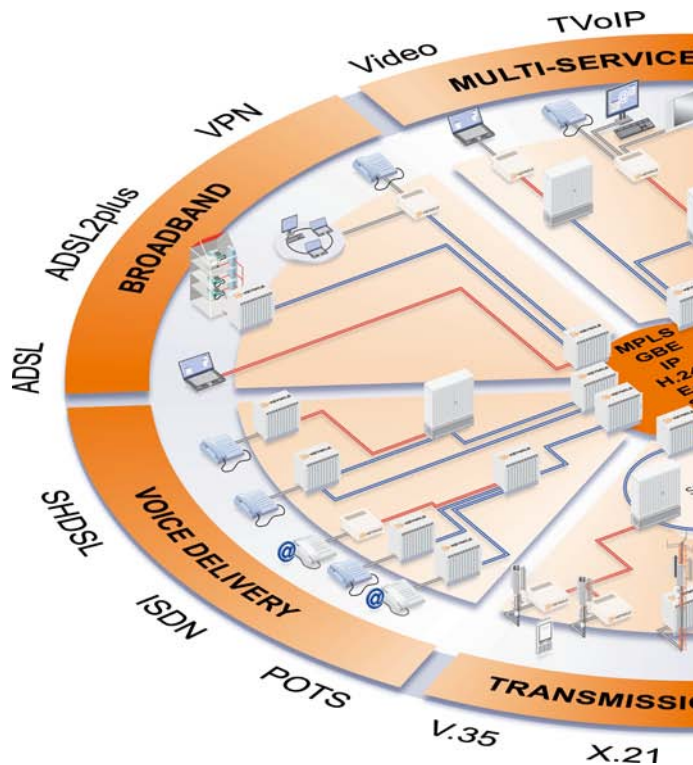
COMPACT AND MULTI-SERVICE

UMUX combines carrier-grade multi-service delivery over copper and fibre with traffic multiplexing and aggregation functions within a single network element. The services offered range from traditional telephony, broadband Internet access and private circuits to new services such as Ethernet Private Lines and Voice over Packet. Built-in SDH, Gigabit Ethernet and ATM functionality for traffic backhaul can make it an integral part of any transport network.

Through the combination of these characteristics with a comprehensive management system and a proven simplicity of use, the UMUX solution ensures lowest cost of ownership.

Multi-Service Access for

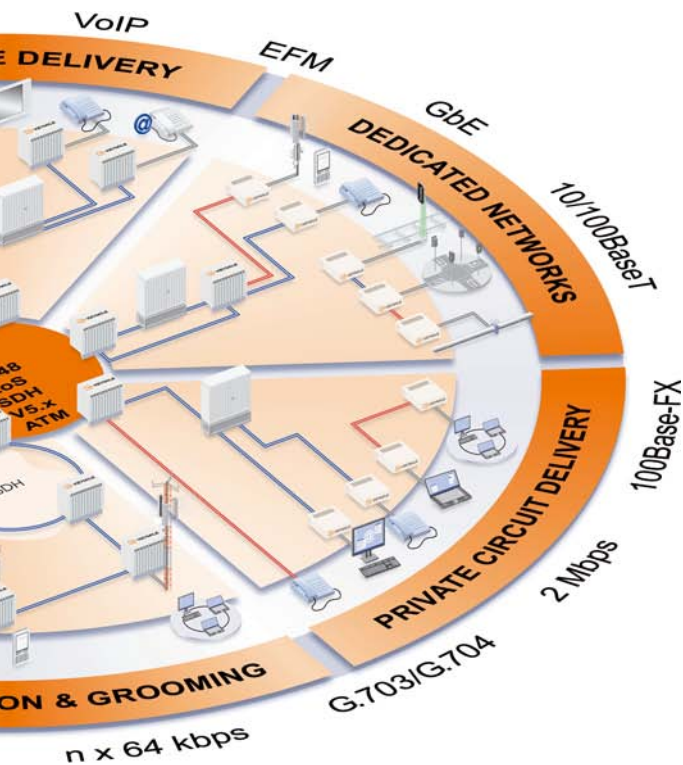
- Public Network Operators
- Broadband and CATV Network Operators
- Mobile Network Operators
- Government and Local Authorities
- Transport and Utilities
- Enterprises



Flexible System Design

With three sizes of network nodes - UMUX 1500, UMUX 1200 and UMUX 900, various desktops and numerous control and interface modules, the UMUX platform can be configured to operate in any network topology to deliver any service.

To meet today's broadband delivery needs, the range of services on UMUX includes optical Ethernet, ADSL, ADSL2plus and SHDSL. Together with the integrated and highly flexible V5 and MEGACO signalling interfaces, the UMUX is ideal for building traditional voice or Next-Generation multi-service access networks.



UMUX Components

UMUX 1500

Can be used as a network node in a Central Office or as a subscriber access node. The UMUX 1500 uses a 19" chassis with a height of 8 HU and 21 card position slots. It can support up to 480 POTS subscribers or up to 384 ADSL2plus subscribers and provides a cross-connect capacity of 128 x 2 Mbps as 1/0 and 1/1 digital cross connect system.

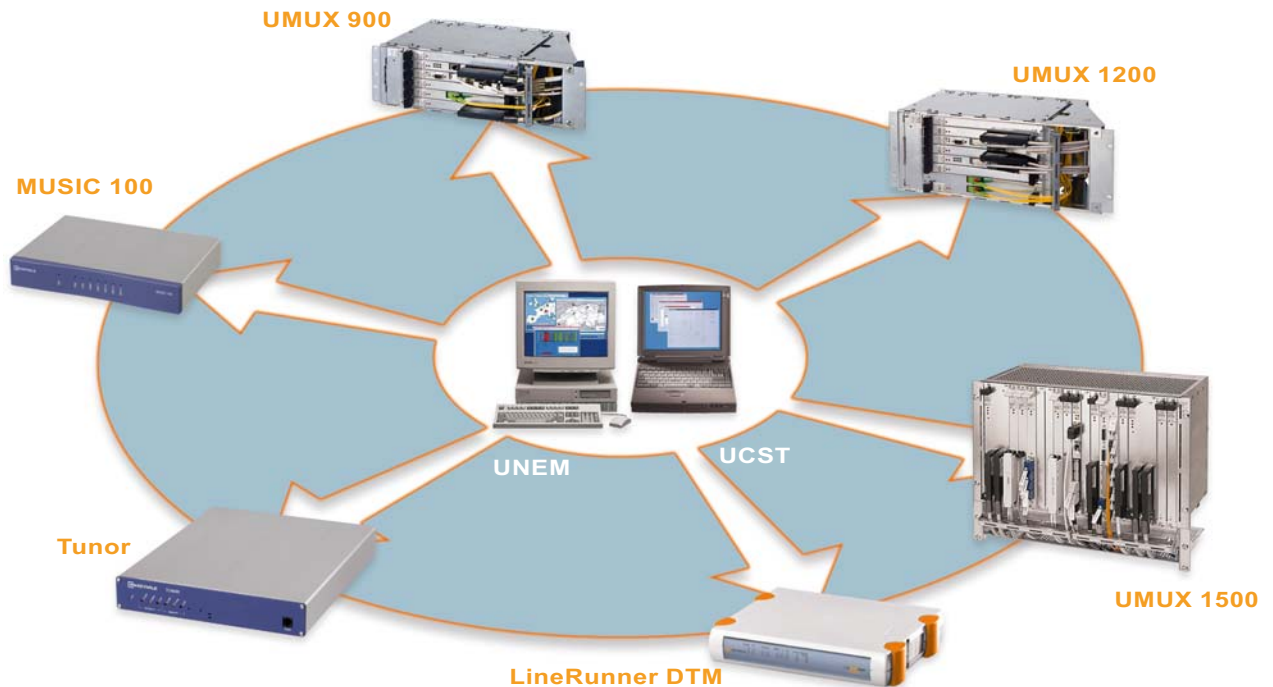
UMUX 1200

Is a compact version of the UMUX1500 and offers the same range of interface types. Typical applications include a subscriber access node in multi-tenant buildings and deployment as a remote node in rural areas. It can also be used for the connection of base stations in mobile access networks (e.g. GSM, UMTS). It uses a 19" chassis and features 8 card position slots. Thus the system supports up to 150 POTS or up to 144 ADSL2plus subscribers. The UMUX 1200 provides a cross-connect capacity of 48 x 2 Mbps.

UMUX 900

Is designed for the use where there are extreme space limitations such as in base stations of GSM or UMTS-networks. With a height of only 3 HU it features 6 slots and offers cross-connect, SDH and ATM functionality.

UMUX COMPONENTS



System overview of the UMUX multi-service access platform

MUSIC 100

Combines a xDSL modem, a bridge/router and a four port Ethernet hub in a very compact desktop. Along with its protocol capabilities, MUSIC 100 allows the delivery of IP based services such as high speed internet/intranet access, fast LAN interconnection, VoIP or VPN to small offices (also branch offices) and home offices.

TUNOR

Is an optical transmission system which has been designed for the transmission of four 2 Mbps signals via multi-mode or mono-mode optical fibres. This makes the TUNOR ideally suited for the connection of remote switching systems, PBXs, routers and base stations of mobile networks.

LineRunner DTM

Is a SHDSL based TDM transmission system providing scalable data rates and offering termination on a number of interfaces. To increase reach regenerators are available. LineRunner DTM is the ideal CPE for the implementation of a broad range of leased line services from 600 bps up to 2 Mbps.

UCST

Is a basic local craft device designed mainly for commissioning, configuration & fault management of single UMUX systems and small networks.

The UCST application provides a very comprehensive graphical user interface and runs on a PC platform using a MS Windows operating system.

UNEM

Is the network manager for large UMUX networks. At an element level UNEM provides comprehensive configuration, fault, performance and software management functions.

At a network level it provides graphical network views as well as trail and circuit management functions. The UNEM application operates on a UNIX based workstation platform.

Voice Interfaces

UMUX provides various subscriber and exchange side interfaces for PSTN and NGN voice (VoIP) in addition to supporting E&M telephony.

Data Interfaces

A wide range of data interfaces are available for example G.703, V.11, V.24, V.35, 10/100BT and Gigabit Ethernet supporting transmission capacities from 600 bps up to 1 Gbps.

xDSL Line Interfaces

Various ADSL, ADSL2, ADSL2plus and SHDSL line interfaces are available supporting TDM or ATM based transmission. In conjunction with various NTUs, flexible broadband services can be provided to subscribers at remote locations.

SDH & PDH Interfaces

2 Mbps, 34/45 Mbps and electrical and optical STM-1 interfaces are available supporting transmission in SDH and PDH networks.

V5.x Interfaces

With V5.x signalling interfacemodules, the UMUX is able to provide V5.1 and V5.2 based voice transmission to local exchanges.

H.248/MEGACO Interfaces

UMUX can provide a compact and cost effective Media Gateway solution. This functionality enables the delivery of native voice (POTS and ISDN-BA) over the last mile with the conversion of signalling to the H.248 protocol and VoIP to a core IP network.

ATM Units

UMUX provides a complete range of ATM units featuring ADSL/SHDSL interfaces, circuit emulation, IMA function and STM-1 interfaces supporting the ATM protocol.

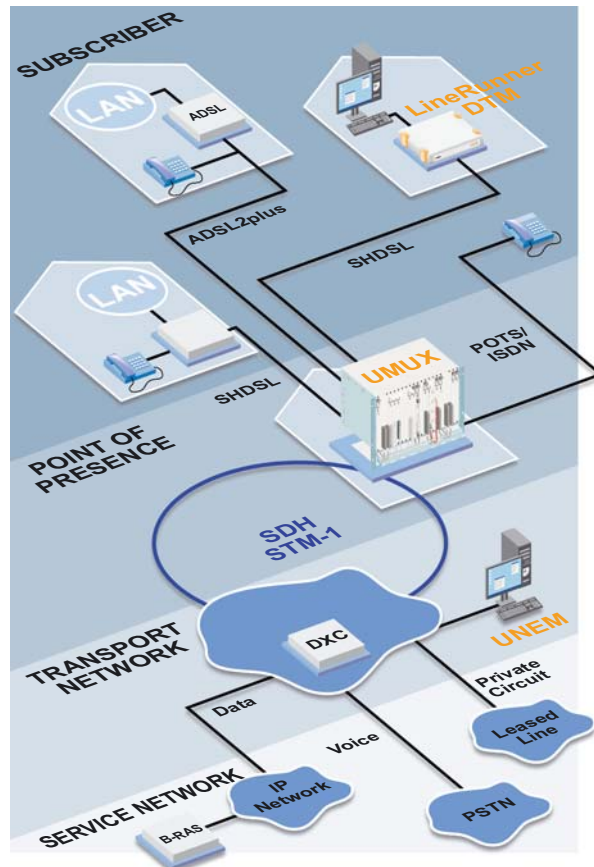
UMUX APPLICATIONS

The versatility of UMUX allows a broad range of applications in public and private telecommunication networks. We only show a few examples, so please contact us for more information on how UMUX could help to solve your individual access challenge.

Multi-Service Networks

Platforms for use in Multi-service networks have to support cost optimised voice & data services from a range of different types of locations, from the Central Office to the rural location.

The UMUX product family is able to meet these requirements for any type of network architecture to provide any type of service over any infrastructure.



Voice and data services can be combined flexibly to be delivered directly into the customer premises. Broadband data services can be supported on all relevant standards: SDH, ATM and IP.

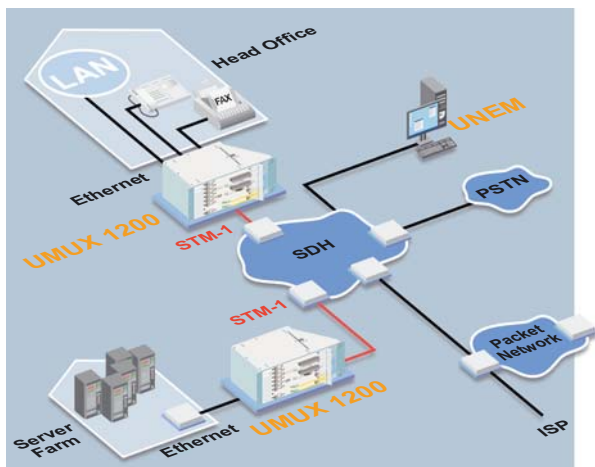
Voice Delivery Networks/Migration to VoIP

Network operators planning to migrate from circuit switched telephony to a VoIP architecture need a cost optimised solution which can support existing subscribers with their classical POTS and ISDN services. A typical migration scenario would be the installation of VoIP soft switches in the core of a network with media gateways to interconnect to the existing subscriber base. A key strength of the UMUX is the ability to handle both V5.x and MEGACO signalling functionality at the same time. This ensures that a migration towards these new services can be carried out smoothly.



Rollout of Ethernet-Services over SDH-Networks

With the growing success of VPN services and the increased bandwidth requirements of business internet access/transit services, network operators need an efficient solution to roll out high speed access lines with Ethernet termination. As the density of this type of service is growing, but is in many regions still very low, an overlay Ethernet network is often not justifiable. With its Ethernet-over-SDH implementation (NEBRO/NEBRA modules) UMUX provides a very cost effective transmission of Ethernet services using the existing SDH network infrastructure.

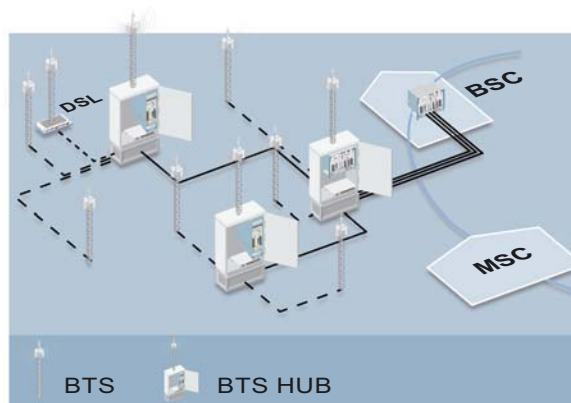


Terrestrial Transmission in Mobile Networks

Mobile access networks are a major cost factor for mobile network operators. Cost optimisation is therefore a priority requiring optimal use of the transmission capacity per access link and the use of any available transmission media.

Using the cross-connect capability of the UMUX, grooming of mobile traffic at each hub in the access network can be achieved in order to increase the fill grade of each access link.

The availability of xDSL, optical interfaces and G.703 interfaces on the UMUX allows any available transmission media (copper, fibre, radio relay) to be used. With its integrated ATM support UMUX even supports the migration to UMTS networks using the same access platform. In order to cope with the limited space availability in the BTS environment, the UMUX 900 was developed as an extremely compact node.



With subsidiaries worldwide and a global network of partners, we serve customers in over 100 countries.



**AUSTRALIA ▪ AUSTRIA ▪ BRAZIL ▪ CHINA ▪ CZECH REPUBLIC
FRANCE ▪ GERMANY ▪ HUNGARY ▪ POLAND ▪ RUSSIA
SWITZERLAND ▪ THE NETHERLANDS ▪ UNITED KINGDOM**

Find your local contact on www.keymile.com

Headquarters
Austria

KEYMILE AG
Richard-Strauss-Strasse 43
1230 Vienna
Phone +43 1 610 20-0
Fax +43 1 610 20-2356

