**XMC20 SUPM1**

POTS line card with 16 POTS (FXS) interfaces with extended voltage protection for dedicated networks

The PSTN line card SUPM1 supports 16 ports for traditional POTS services.

Its wide range of configurable modes ensure interoperation with a large variety of exchange protocols.

- 16-port FXS 2-wire interfaces unit
- DTMF and pulse dialling
- CLIP support
- 1+1 path protection supported
- Extended line test functions
- Extended voltage protection for dedicated networks
- All functions from one network management system

**Overview**

The SUPM1 provides 16 POTS interfaces that connect traditional telephone subscribers to the telecommunication networks. This universal line card supports the POTS requirements of different countries worldwide. The SUPM1 is compatible for voice delivery in the access network of dedicated networks and public switched telephone network (PSTN).

**POTS in dedicated networks and PSTN**

With the available VoIP media gateways in XMC20, POTS services can be directly integrated in VoIP network architectures. In order to achieve maximum interoperability, XMC20 also provides a SIP-based VoIP media gateway, where the protocol can be changed with a software download.

Others like MELCAS, phone-exchange or phone-phone are completing the vast set of operation modes.

This allows network operators to choose the optimum solution for their network or to migrate to other standards if required in the future.

**Enhanced line test functions**

The integrated line test function on the SUPM1 is a powerful tool used by operators to pre-qualify a subscriber line remotely as well as to perform fault isolation.

The line tests can be launched remotely from the network operation centre.

This simplifies the operation processes and reduces operational cost in the whole sales lifecycle of a POTS service. They can be activated either automatically (cyclic test) or manually (on-demand test), giving operators the freedom to test as required.

**Management**

The management of the SUPM1 is integrated in the ECST/UNEM management system. By having one element manager for all types of services, operators will accelerate the provisioning process. This element manager ensures more efficient OAM&P (Operation, Administration, Maintenance and Provisioning) and lower operational costs.
## Technical Data

### POTS Interface
- **Number of POTS ports**: 16

### Mode of Operation
- **Softswitches**: SIP (via VOIP1)
- **Other modes**: MELCAS (MCAS), phone-exchange, phone-phone automatic ring down

### Services
- **Analog voice**: Supported
- **Fax/Modem**: Supported

### Analog Line Parameters
- **Line impedance**: Configurable
- **Voice encoding**: A-law
- **Ringing**: Supported; on-board ringer
- **Dialling**: DTMF and Pulse
- **Offhook loop current**: 15 to 45 mA
- **Pulse metering**: 12/16 kHz
- **Polarity reversal**: Supported
- **Call progress tones**: Supported in conjunction with VOIP1
- **Maximum cable length (Ø 0.6 mm)**: 11.3 km

### Integrated Line Tests
- **Isolation tests**: Supported
- **Foreign AC/DC voltage tests**: Supported
- **Noise tests**: Supported
- **Capacity tests**: Supported
- **Test execution**: Cyclic or on-demand

### Protection
- **1+1 path protection**: Supported
- **SNCP/I**: Supported

### Management
- **ECST**: For local management
- **UNEM**: For central management

### Power Supply
- **Input voltage nominal (min/max)**: ~48/–60 V DC (~–40.5 V DC … –72 V DC)

### Operation Environment
- **Temperature range and humidity**: According to XMC20 environmental specifications
- **Emission/Imission**: Supports extended requirements for dedicated networks