 FOX615 LESU1
POTS line card with 16 POTS (FXS) interfaces with extended voltage protection for dedicated networks

Voice communication is one of the most important applications for reliable operation of power grids. Especially during blackout conditions voice communication between control center and substations as well as between substations is required. Typically a limited amount of subscribers (often legacy technology) exist in substations, often configured as remote subscribers.

FOX 615 offer communication to such applications with the PSTN line card LESU1 offering 16 ports for traditional POTS services. Its wide range of configurable modes ensure inter operation with a large variety of exchange protocols:

- 16-port FXS 2-wire interfaces unit
- DTMF and pulse dialing
- CLIP support
- 1+1 path protection supported
- Extended line test functions
- Extended voltage protection for dedicated networks
- All functions from one network management system
- Inter-operable with FOX515 EXLAN for remote subscriber configuration or SUBH and PHLCx for hotline configuration

Overview
The LESU1 provides 16 POTS interfaces that connect traditional telephone subscribers to the telecommunication networks. This universal line card supports the POTS requirements of different countries world wide. The LESU1 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 availability of COSI1 VoIP media gateways in FOX615, POTS services can be directly integrated in VoIP network architectures.

Enhanced line test functions
The integrated line test function on the LESU1 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 life cycle 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 LESU1 is integrated in the FOXMAN-UN / FOXCST 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 COSI1)
- 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
- Dialing: 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 COSI1
- 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**
- FOXCST: For local management
- FOXMAN-UN: 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 FOX615 environmental specifications
- Emission/Immission: Supports extended requirements for dedicated networks

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