



P&XM- 48L system

P&XM- 48L system Overview:

Our P&XM-48L allows the automatic provisioning of (V)DSL services, hence minimizing the OPEX (e.g. truck rolls) and enables a set of tests, alarms and troubleshooting functionality. Our flexible and expandable system is managed by an automatic remote controller!

No presence of any technical staff is needed anymore at the local CO or street cabinet. Our compact equipment can be placed without distinction in a building with FTtx architectures or in a small FTtx street cabinet. It is easily upgradable from 8 up to 48 lines. A maximum of six INT8L cards can be hosted in our P&XM_48L system. For each customer line it is possible to mix xDSL and POTS services. The xDSL termination at the P&XM-48L is done through a D-Sub connector interface. For troubleshooting identification the system can execute manual or automatic electrical tests for each customer line.

System Benefits:

With P&XM-48L equipment network providers can react quickly and easily to the clients requirements.

It gives the following advantages:

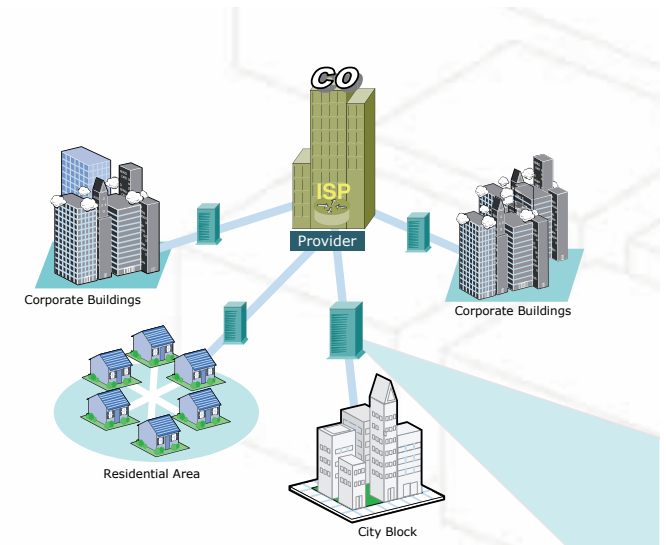
- **Easy Interconnection**
Voice and data connectivity is provided to customer over the existing twisted pair wires.
- **Resilient Architecture**
The switch matrix is implemented with "latching switch relays" so any failure on xDSL services does not create any problem on the POTS line.
- **System flexibility**
The system is based on two different types of cards:
 - Switch Relay Card "INT8L"
 - Power and Control Card "PCU"
 All that reduces the number of spare parts that operators need to stock and, on the other hand, it's possible to increase the managed customer lines by adding relay cards.

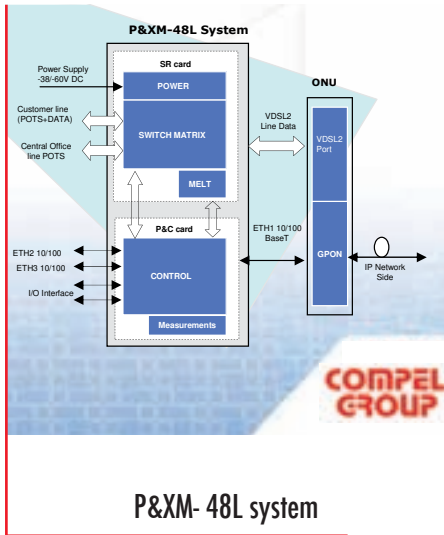
- **Testing**
The equipment executes simple electrical test on each customer line such as AC and DC voltages, resistance and capacitance on each line.
- **Management**
The system is managed by a dedicated Ethernet 10/100 BaseT interface with SNMP V2 protocol.

Main Features:

The system allows a flexible configuration in terms of services availability on each customer lines.

- **Services configurations.**
 - POTS+VDSL
 - VDSL only
 - POTS only
 - Customer disconnected
- **Diagnostic and alarms.**
 - MELT "Metallic Link Test"
 - Monitoring functionalities related to FTtb cabinet system's security, environmental diagnostic and alarms.
- **Configuration Management and Alarms dispatcher including communication with the OSS and the other devices in the cabinet.**





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Switch Relay Card:

- Electrical Protection
- Switching

Protection I/O

The equipment in accordance with recommendation K.44 and K.45 on Customer and Central Office. The customer and CO line connections are realized by IDC (Insulation Displacement Connection) connectors. These connectors can accommodate a solid copper conductor with a diameter in the range of 0.4÷0.6mm.

Switching

For each line the following operating states are independently available:
Pass Through : direct connection between the customer port and the incoming signal from the Central Office port POTS + **Data** : the customer port receives the POTS signal coming from the Central Office port combined at the POTS Splitter with the broadband signal coming from the xDSL port interface at the ONU.

xDSL Only : the customer port receives the broadband signal coming directly from the xDSL port interface at the ONU. The Central Office port is disconnected.

User disconnected : the customer port is isolated from the network.

Power and Control card:

Management System

The P&XM-48L can be remotely managed through a dedicated Ethernet 10/100 BaseT interface by a SNMP V2 protocol. The system also provides two additional Ethernet 10/100 BaseT interfaces to allow the local management. The Ethernet interfaces are connected all together by an switch.

Alarms

The system provides the monitoring of the following signals:

- P&XM-48L internal temperature
- DC power feeding (48V);

The system is also able to manage, up to 10 alarm inputs and 2 dry contact outputs. The alarms and dry outputs physical interfaces are available on a High Density D-SUB connector.

MELT Testing (one line at a time)

The system is able to execute simple electrical test for troubleshooting purposes on each customer line. The customer port is connected to a test head performing some metallic line testing for troubleshooting purposes.

Configurations

The system can be configured line by line or all together with a single command. The P&XM-48L configuration will be maintained also during the system fault.

P&XM-48L	System Features
Mechanical Subrack dimension (mm)	250 (H) x 200 (W) x 125 (D)
Subrack configuration - slots	7
Switch Relay card	6
Power and Control card	1
Maximum Capacity	48 Lines (xDSL)
Maximum Capacity single Switch Relay Card	8 Lines (xDSL)
Maintenance Alarms	
Connector type	RJ45
Power supply voltage	Power supply voltage -48/-60 V DC nominal
Connector type	Male 3W3 D-SUB
Operating temperature	-25°C to 65°C
SNMP and WEB interface	Yes
1 x Ethernet Interface ETH1	Remote control
2 x Ethernet Interface ETH2,ETH3	Local control
LED Alarms Urgent/In service	Yes
ROHS and WEEE Compliant	Yes
TAG - RFID (13.56 MHZ)	ISO 15693 compliant