

# CM-100 Compact-IB

CM-100-compact-IB -48/220



## Description

The **CM-100-Compact-IB** media converters allow, by a couple of cards, extending the access optical span from the switch/router of the client to the aggregation node of the central. The card performs electro-optical conversion of the signal and acts as a network termination point between the customer and the operator, allowing the definition of responsibility for problems or failures of the link.

**CM-100-Compact-IB** cards are used for the deployment of broadband services over MPLS/IP: supporting monitoring of quality of service parameters in L2: packet loss, measures of jitter and frame latency.

### In-Band Management

These converters are installed in pairs configured as master/slave. The in-band management of the link is made from the master card in the central.

The particular design of these cards allows management traffic not to decrease the bandwidth of the customer traffic, ensuring at anytime 100% of the FastEthernet link capacity.

The management of **CM-100-Compact-IB** is compatible with SNMP IIc standard content in the RFCs 2578/2863/1231/2579. Each unit is supplied with its corresponding MIB to be compiled by the main SNMP managers.

The cards implement complete management features, including SNMP traps.

CM-100-compact-IB



## Features

### Media Converter for broadband services over MPLS/IP networks

Media converter card capable of extending through optical fiber an electrical 10/100 Ethernet connection a distance up to 120Km.

### Network Termination

CM-100-Compact-IB acts as a network termination point and service demarcation point between the operator's access network and the customer.

### In-Band management

The CM-100-Compact-IB media converters implement a in-band management procedure that does not lessen the bandwidth of the customer's traffic.

### Fixed 1x9 Transceivers / SFP

SC/PC connectorization for the 1x9 optical interface. LC/PC connectorization for the optional SFP interface.

### Level 2 measures

They allow full level 2 measures of the link (packet loss, throughput, jitter, latency) to help to detect the origin of the shortcomings of the service in case of failure.

### Test of Latency, Packet Loss, Jitter and Throughput

CM-100-Compact-IB has available features to characterize the existing Ethernet / Fast Ethernet.

Implements tests of Latency, Packet Loss, Jitter and Throughput. TEST execution via SNMP. TELNET-RI has developed a proprietary application for the configuration/monitor of the execution of these tests (see Figure).

Implementation of the Test must be conducted between CM-100-Compact-IB cards or between other families of TELNET cards implementing these TEST.

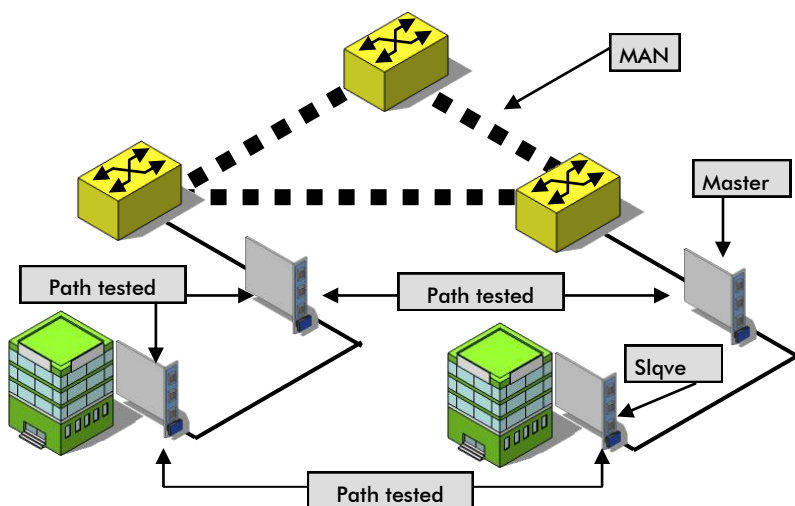
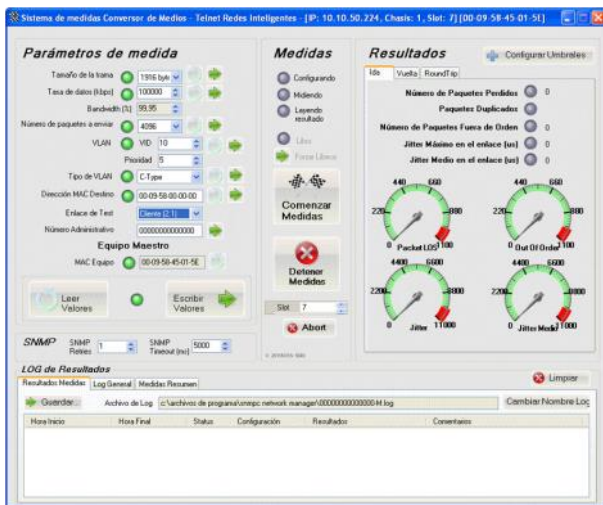
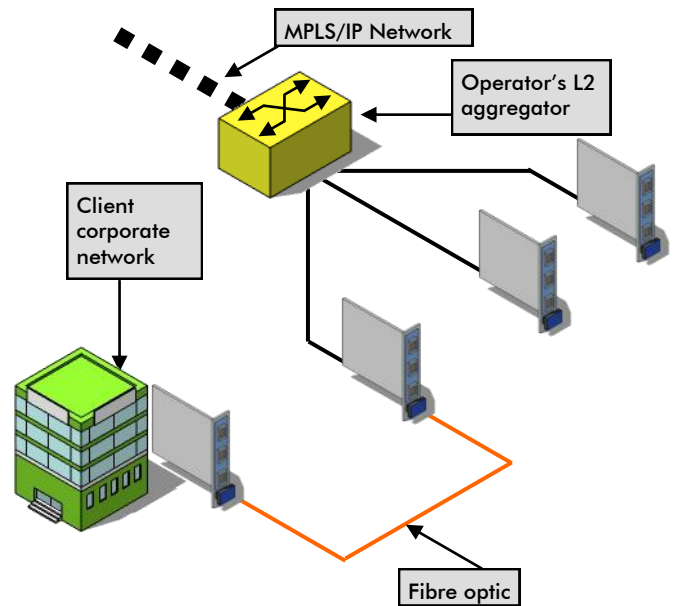
TEST Parameters to be defined by user:

- Frame length (bytes)
- Data rate for the Test Execution (Kbps)
- Length (N° packets)
- VLAN ID/ Priority/ VLAN label
- MAC address of Test Source/Destination

From the TELNET Application, you can run TEST in Mode Single, Continuous or timed. Measures reports are generated in files .log (exportable to other formats. Xls). Graphical representation of results.

### Ethernet / Fast Ethernet network termination

Team CM-100-Compact-IB card acts as a network termination point and services, allowing to ease the operation and maintenance activities on the network by isolating possible external events that could affect the MPLS/IP network of the operator.



## Technical Specifications

### General Features

- Optical-electrical media converter.
- Extends through optical fiber en electrical 10/100 Ethernet connection a distance of up to 120Km.
- QoS measures in layer 2: packet loss, jitter and latency of frames.
- Equipment used in pairs in configurations master/slave.
- Acts as a network termination and service demarcation point.
- Process 100% unicast, multicast, broadcast, VLAN traffic, PAUSE frames, LACP frames and supports loop configurations in VLAN level.
- MTU is 1916b(regardless if VLAN tagging or not).
- Automatic TX cutting in loss of signal (LOS) events.
- In-Band management does not affect the bandwidth of the customer traffic.
- Supports SNMP Ilc management content in RFCs 2578/2863/1231/2579.
- Own application "TELNET RI Advanced Measures Tool" for configuration-control of TESTs.
- Chassis supported by the card in plant: MicroSAE, TriSAE, MiniSAE and 4UA. Recommended chassis with fan unit.

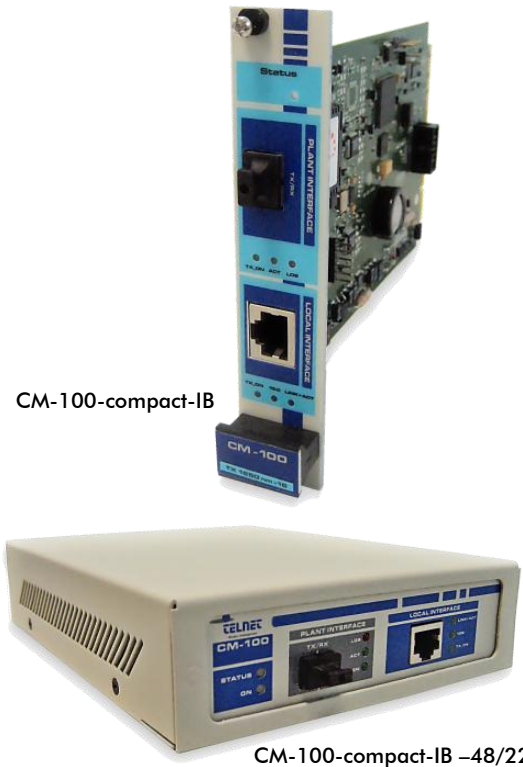
### Interfaces

- Customer's interface (LOCAL) electrical RJ45.
- Operator's inetface (PLANTA) optical through fixed optical transceivers 1x9 SC/PC. Optional SFP with LC/PC connectorization .
- Customer's interface Configuration mode FORCED (Full 10Mbps, 10Mbps Half, 100Mbps Full, Half 100Mbps) or auto-negotiates (auto).
- Customer's card: Double power supply -48VDC/220V.

### SNMP Features

- Real-time counter reading in ports (traffic dispatched by the customer).
- Received traffic counters (Packets/Bytes), Broadcast, Multicast, CRC Errors, Drops, per interface (input/output).
- Manual TX Cuts by user.
- Management of mode of alarms' transmission (enabled/enqueued/discarded)INDIVIDUAL for each Ethernet/Fast Ethernet link.
- Alarm "Traps Disabled/Traps Enabled".
- Alarm per card/interface "LOS/End of LOS", "Auto Cut of TX/End of Auto Cut TX".
- Alarm "CM-100-Compact-IB -48/220", "Last Gasp" CdM REMOTE OFF.
- Remote update and reset.

Module	POUT min. (dBm)	POUT max. (dBm)	Sens (dBm)	Max. Reach	Fibre/Cable
LX	-15	-8	-34	30Km	1310nm
LHX	-5	0	-35	60Km	1310nm
ZX	-5	0	-35	120Km	1550nm
MF-LX	-14	-8	-32	20Km	TX1550/RX1310 TX1310/RX 1550
MF-LX40	-8	0	-34	40Km	TX1550/RX1310 TX1310/RX 1550
MF-LX60	-5	0	-34	60Km	TX1550/RX1310 TX1310/RX 1550
MF-LX80 TX1550	-5	0	-35	80Km	TX1550/ RX1310
MF-LX80 TX1310	0	+5	-34	80Km	TX1310/RX 1550



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