

**ADC**

**2010**

**xDSL**

**SDH**

**PDH**

**VoIP**

**Ethernet**

**Perm city, Russia ADC LLC**

# About company ADC LLC



ADC LLC is a Russian company - the developer and manufacturer of wire equipment for copper and optical lines. The team of developers and managers has thirty years experience in the field of digital transmission systems, starting with the PCM-30 systems to the latest generations G.SHDSL.bis systems with encoding TC-PAM 32/64/128 for copper cables, as well as a variety of DTS for optical lines (PDH, SDH, CWDM, GEthernet) and equipment for packet communication network (DSLAM, VoIP, switches).GEthernet) и оборудование для пакетных сетей связи (DSLAM,VoIP,коммутаторы).

Over 80% of employees have higher education. The main thing in our work - a quality product. Quality of manufactured equipment and standards compliance in relation confirms the "Certificate of Compliance" issued by the certification system in the field of communications. To ensure reliability of equipment we are constantly being improved:

- Electronic components products
- Modern methods of assembly of printed circuit boards
- Automatic test equipment methods



The assembly of circuit boards is carried out on equipment manufactured by SIEMENS (Germany). Final assembly of products in the package, programming and testing are carried out only by certified modern devices and instruments by qualified personnel.

If you have any technical questions about installation, operation and monitoring equipment ADC LLC, for connecting to our hardware products produced by other companies, we are always ready to give advice by telephone, fax, E-mail, ICQ, Skype, and when visiting a client of our office. For organizations engaged in the installation of our equipment and start-up operations, leading experts and developers of our company are ready to train technical staff. After completion of the course is issued a certificate confirming that the technician needs to install equipment MC04-DSL.

If necessary, the specialists go to run equipment in order to address emerging technical issues "on the spot." Missions of experts to help resolve consumer issues and developments in these companies "DT" to focus on the proposals and the need for maintenance organizations.

"Feedback" link with specialists serving organizations, the managers of telecommunication companies allows the ADC LLC to provide a high level of technological products, maintain a steady demand for our products and confidently look forward, focusing in the development prospects of the market provision of telecom services.

Large production volumes, product quality, that the equipment needs of customers, constant improvement of products beneficial spin-off companies ADC LLC among competitors. The unique design of the company have advanced technology and data are currently the best and sometimes the only possible technical solution to market DSL-equipment operator.



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# G.SHDSL transmission system - MC04-DSL.bisM 4E1 + Ethernet + 30 subscriber channel

up to 15 Mbps over one copper pair  
up to 30 Mbps over two copper pairs

conformance certificate OC-2-CP-0717



MC04-DSL.bisM is used for transportation of 4E1, subscriber channels and up to 30Mbps Ethernet data and used for build group channel- all over one or two copper pairs (symmetrical or coaxial)

## Application field:

- Used to build links between Exchanges on the electric communication networks (interconnection of LAN and PBX networks)
- Adaptation the existing copper plant, lowering deployment costs
- creation of the conference channels

## Main Futures:

- Line code - TC PAM 16/32/64/128 G.991.2 G.SHDSL
- Data transfer rate - up to 30 Mbps over 2 pairs or up to 15 Mbps over 1 pair
- change the data rate with 64 kbps step
- provides of transmission 4 E1 and Ethernet data - all over one or two copper pairs
- user interfaces:
  - digital- E1, Ethernet, Rs-232
  - subscriber analog interfaces - FX0, FXS
  - four-wire and six-wire circuit E&M
- max number of the analog interfaces - 30
- add/drop subscriber channels and E1 time slots in the interim points
- free switching between digital and analog interfaces
- remote power feeding over one or two pairs (link-to-link or pair-to-pair scheme)
- up to 10 regenerator in the remote feeding section / up to 16 regenerator in the one dsl line
- remote and local managements
- VLAN supports
- lightning protector (in compliance with reference K17 ITU-T)
- two lightning protector levels - built in and external
- SNMP supports

## Hardware Configuration

- modem **MC04-DSLx.bisM-xE1/Eth-60V/RPS/RPD**
- modem-multiplexor **MC04-DSLx.bisM-xE1/Eth-xFX0/FXS/E&M-xRS232-60V/RPS/RPD**
- regenerator - one pair **MC04-1B.bisM** and two pair **MC04-2B.bisM**
- intercom device **Mc04-CC**
- external lightning protector **MC04-MZ**

where x is:

**DSL** - 0 or 2;

**E1** - 0, 1 or 4;

**Eth** (Ethernet) - 0 or 1;

**FX0/FXS/E&M** - 0, 4, 8, 12...30;

**RS** (RS-232) - 0, 2, 4, ...16.

- add/drop modem-multiplexor **MC04-DSL4.bis/ADM-2E1/4Eth-xFX0/FXS/E&M/RS-N-60V/RPS/RPD**

where x is:

**FX0/FXS/E&M** - 0, 4, 8, 12, 16

**RS(RS-232)** - 0, 2, 4, 8;

N is network monitoring module

- add/drop regenerator **MC04-DSLx.bis/ADM-2Eth-xFXS/E&M/RS-H-12V-220V**

where x is: 4, 6\*, 8\* DSL port quantity (\* set up additional dsl ports for dropping); number of FXS/E&M (FXS/E&M - 0, 4, 8; RS(RS232) - 0, 2, 4); 12V - build in 12V converter for feeding of radio/wireless station; H - waterproof package

# 30 Mbps



local and remote feeding:

**60V** – local feeding - 48/60 V DC

– **RPS** – local feeding - 48/60 V DC / transmitter of remote feeding 210/300/370 V

– **RPD** – remote feeding or local feeding 220V/ detector-transducer of remote feeding

**Dimension:**

modem and modem-multiplexer - 1U and 2U, 19".

regenerator - waterproof metallic package - 222\*146\*55 mm.

add/drop regenerator - (300\*210\*360)

**Basic interface parameters :**

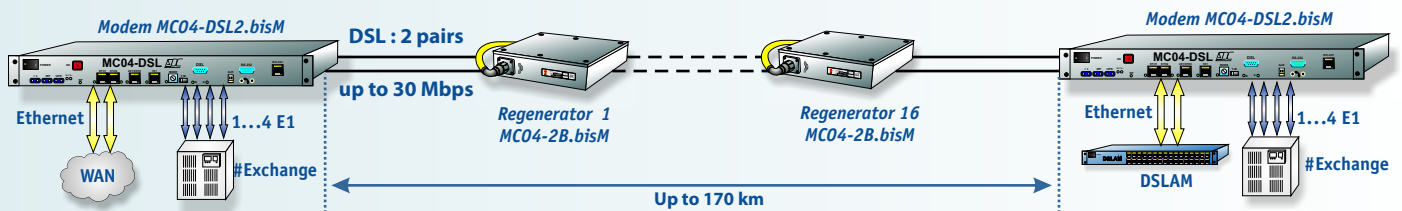
- **E1** – G.703, G.704 ITU-T/ Impedance 120 ohm / AMI/HDB3
- **Ethernet 10/100B-T** – VLAN (max. packet length - 1536 byte) / Auto MDI/MDIX / Switch Layer 2 / 2 ports
- **FXO/FXS** – Ring generator voltage – 50 V / 25 Hz for FXS and 35...110 V / 20...50 Hz for FXO, Nominal subscriber loop current – 22 mA, subscriber loop resistance – 1100 ohm, input/output level – 0 dB / - 3,5 dB
- **E&M** - 4/6 wires, CAS, input/output level 0 dB / -7 dB (4 wires.) and -13 dB / 4 dB (6-wires)
- **RS-232** – DB9, up to 57600 bps

**Environmental:**

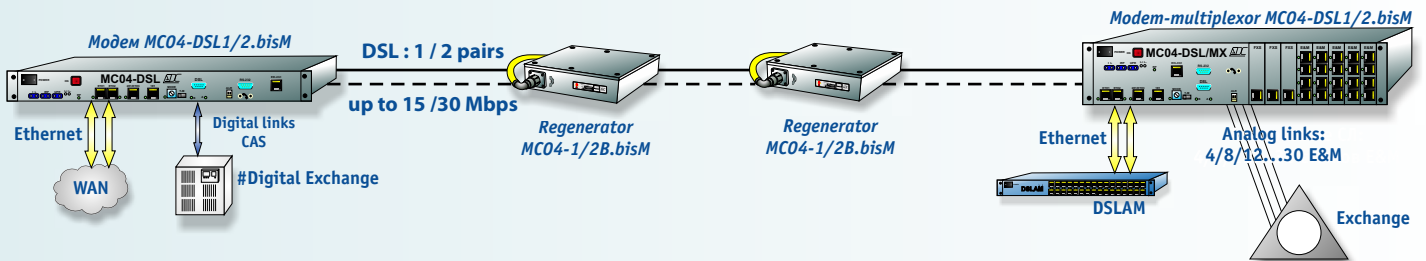
- Central office equipment – temperature +5 to +40 C, Operating Humidity - 90%
- regenerator – temperature - 45 to +55 C

### MC04-DSL.bisM Application

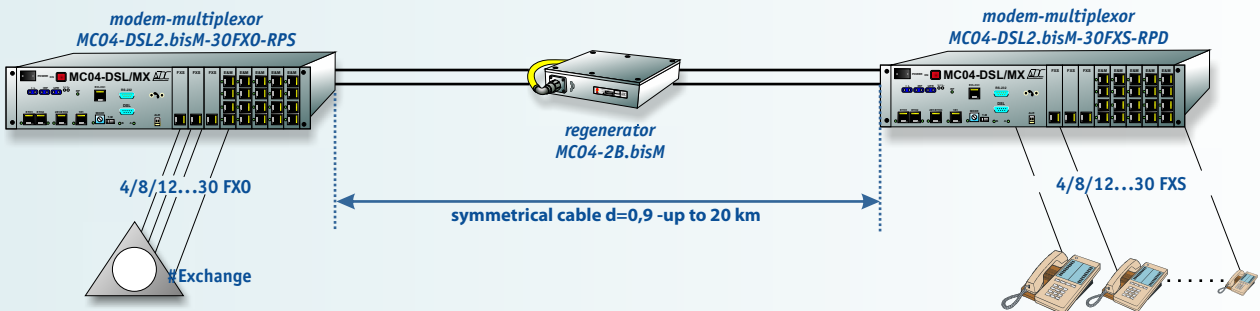
#### Transmission 4E1+Ethernet over two cooper pairs / up to 16 regenerator with remote feeding



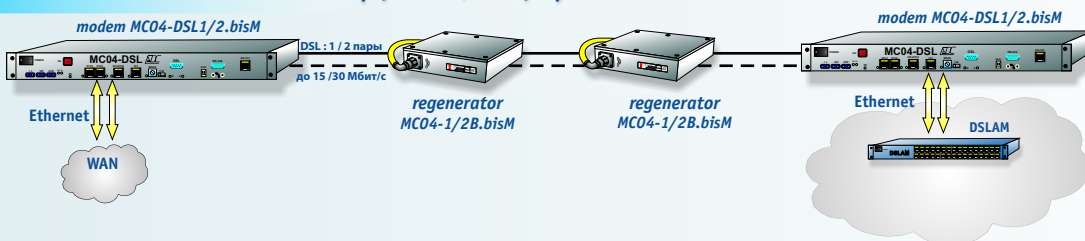
#### Set up connection links between digital and analog Exchanges and Internet Broadband Access



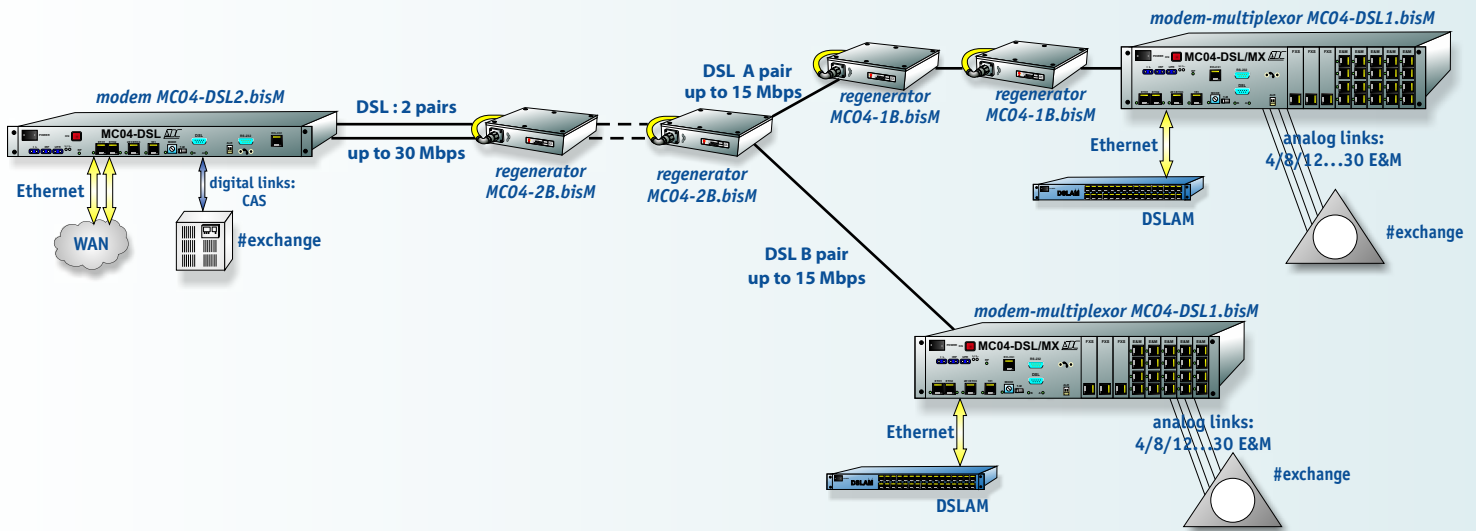
#### Set up subscriber compression wit remote feeding of the remote modem



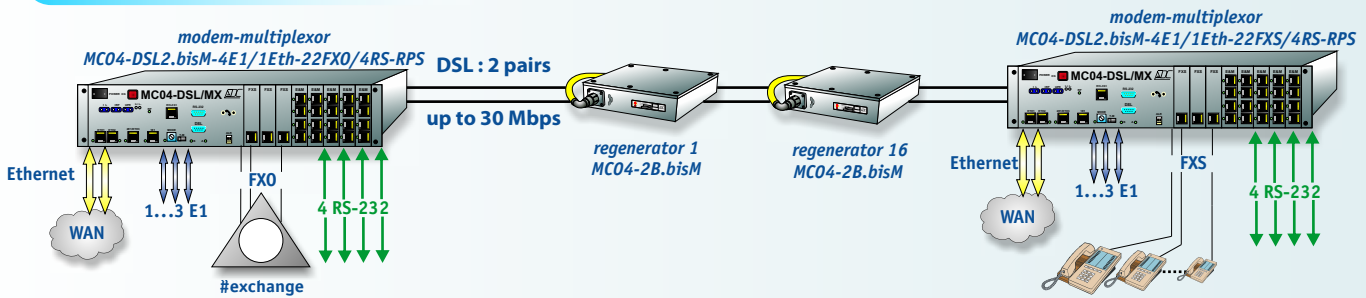
#### Broadband Ethernet data transfer (up to 22,6 Mbps )



### Broadband Internet access and connection links between digital exchange and two analog Exchanges



### Transmission of the 3 E1, Ethernet data, data over RS-232, user channels



### Length of the regeneration section by transmission of N-channels 64 kbps, km

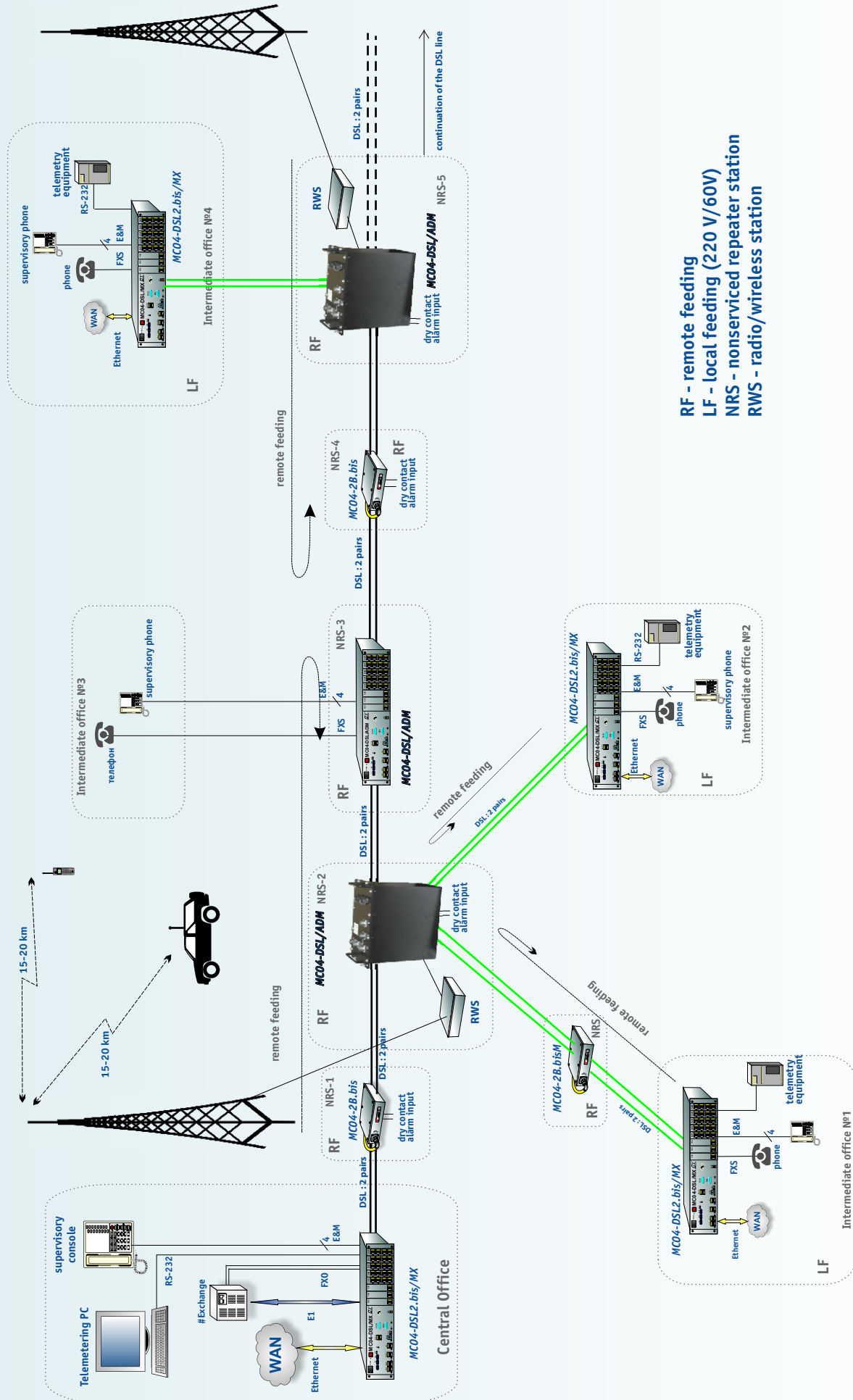
Quantity of channels/bit rate over 2 copper pair	Symmetrical cable d - diameter			
	d-0,4	d-0,5	d-0,9	d-1,2
N=2x16 / 2048 kbps	5,3	7,2	17	30
N=2x32 / 4096 kbps	4,3	6,0	12	21
N=2x64 / 8192 kbps	3,0	4,2	8	13
N=2x88 / 11264 kbps	2,5	3,5	7	11
N=2x177 / 22656 kbps	1,3	1,8	3	5
N=2x239 / 30592 kbps	Don't testing on the cable			

### Max number of the regenerators in the dsl line with remote feeding

Type of regeneration	Remote feeding voltage	Length of the regeneration section								
		d - 0,9 mm			d - 1,2 mm			D - 1,2 mm		
		4 km	8 km	12 km	4,5 km	9 km	13 km	5 km	11 km	21 km
MC04-1B.bisM	210 V	4	3	2	4	3	2	4	3	2
	300 V	4	4	3	4	4	3	4	4	3
MC04-2B.bisM	210 V	4	3	2	5	4	3	4	3	2
	300 V	7	5	4	9	6	5	8	6	4
	370	9	6	5	10	8	6	10	8	6



add/drop multiplexor MC04-DSL.bis/ADM application



- RF - remote feeding
- LF - local feeding (220 V/60V)
- NRS - nonserviced repeater station
- RWS - radio/wireless station



MC04-dsl.F is PDH optical transmission system, used to build one or two optical link for transportation of 4E1, Fast Ethernet and 30 subscriber channel.

### Application Field:

- Used to build optical links between Exchanges on the electric communication networks
- Used in Data Network between section of LAN

### Main Futures:

- point-to-point mode
- data transfer rate - 155Mbps over one (WDM) or two optical links
- length of optical link - 40 km (1310nm), 80 km (1310nm), 120 km (1550 nm) all over two one-mode fibers
- length of optical link - up to 60 km over one fiber (WDM mode, wave-length 1310nm/1550nm), build in splitter exclude appearance of loop
- optical link redundancy, switch to standby link without communication gap
- provides 4 E1 and a 100Mbps Fast Ethernet interface (two ports)
- additional module with 2 Mbps Ethernet port (option)
- user interfaces - E1, Ethernet
- provides up to 30 analog interfaces - FX0, FXS, four-wire and six-wire circuit E&M
- provides two 115,2 kbps transparent RS232 interfaces for user's data links
- add/drop channel-time slot with help built on cross-commutator (120\*64 kbps in 4E1)
- provides free switching between digital and analog interfaces
- remote and local network management
- the Ethernet interface supports VLAN
- SNMP protocol supported

### Hardware Configuration

- modem **MC04-dsl.xFx-xE1-Eth100-xEth2-60/220V**
- modem-multiplexer **MC04-dsl.xFx-xE1-Eth100-xEth2-xFX0/FXS/E&M-60/220V**

where x is type or quantity of interfaces:

**Eth100** – the port is installed permanently

**Eth2** – 0 or 1 (additional module Ethernet - 2Mbps)

**E1** – 0, 1, 2 or 4

**FX0/FXS/E&M** – 0, 4, 8, 12...30.

the type or quantity of optical interfaces

- dsl.**2FS** one optical interface (without redundancy) two fibers TX and RX for 40 km  
 dsl.**2FSR** two optical interfaces (with redundancy) 4 fibers TX\*2 and RX\*2 for 40 km  
 dsl.**2FL** one optical interface (without redundancy) two fibers TX and RX for 80 km  
 dsl.**2FLR** two optical interfaces (with redundancy) 4 fibers TX\*2 and RX\*2 for 80 km  
 dsl.**2FV** one optical interface (without redundancy) two fibers TX and RX for 120 km  
 dsl.**2FVR** two optical interfaces (with redundancy) 4 fibers TX\*2 and RX\*2 for 120 km

WDM optical interfaces (TX and RX all over one fiber)

- dsl.**1FL** one optical interface (without redundancy) one fiber TX (1310 nm) and RX (1550nm) for 60 km  
 dsl.**1FLR** two optical interfaces (with redundancy) two fibers TX\*2 (1310 nm) and RX\*2 (1550nm) for 60 km  
 dsl.**1FV** one optical interface (without redundancy) one fiber TX (1500 nm) and RX (1310nm) for 60 km  
 dsl.**1FVR** two optical interfaces (with redundancy) two fibers TX\*2 (1550 nm) and RX\*2 (1310nm) for 60 km

Type of Power :

– **60V** – 48-60 V

– **220V**

**Dimension**

1U or 2U, 19"

### Basic interface parameters

- **E1** – G.703, G.704 ITU-T
- **10/100Base-T Ethernet** – VLAN transmission (max packet size 1536 byte) / Auto MDI/MDIX / Switch Layer 2 / 2 ports
- **FX0/FXS** – Ring generator voltage – 50 V / 25 Hz for FXS and 35...110 V / 20...50 Hz for FX0, Nominal subscriber loop current – 22 mA, subscriber loop resistance – 1100 ohm, input/output level – 0 dB / -3,5 dB
- **E&M** – four-wire and six-wire circuit signalling – CAS, input/output level – 0 dB / - 7 dB (four-wire) and -13 dB / 4 дБ (six-wire)

### Environmental:

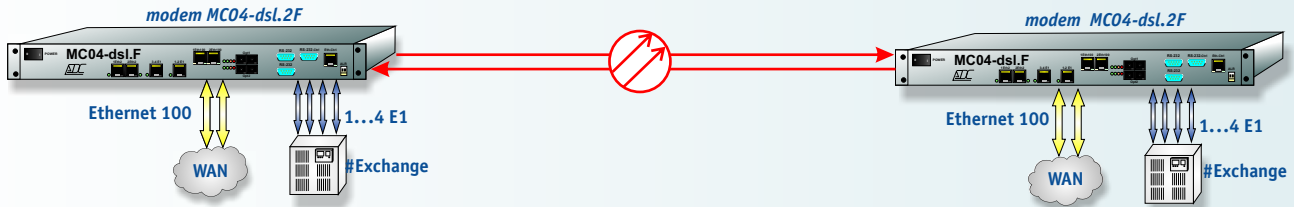
Operating Temperature: +5 to +40 C

Operating Humidity: 90 %.

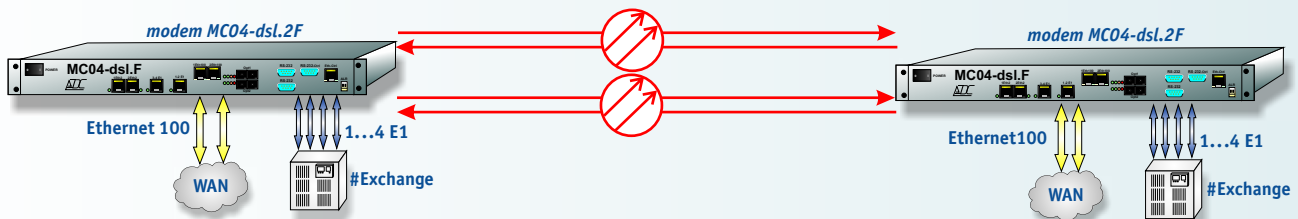
155Mbps

## MC04-DSL.F Applications

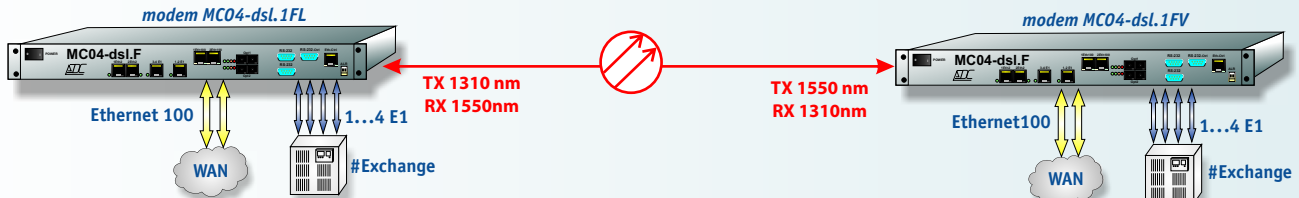
### Transmission 4E1 + 100 Mbps Ethernet all over two fibers



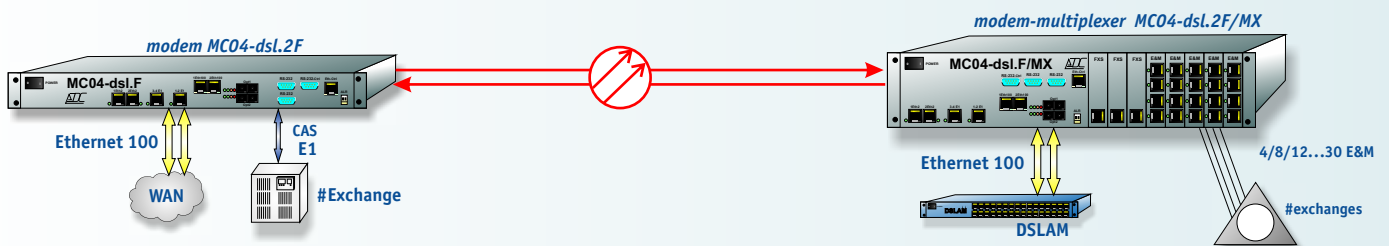
### Transmission 4E1 + 100 Mbps Ethernet with redundant optical link



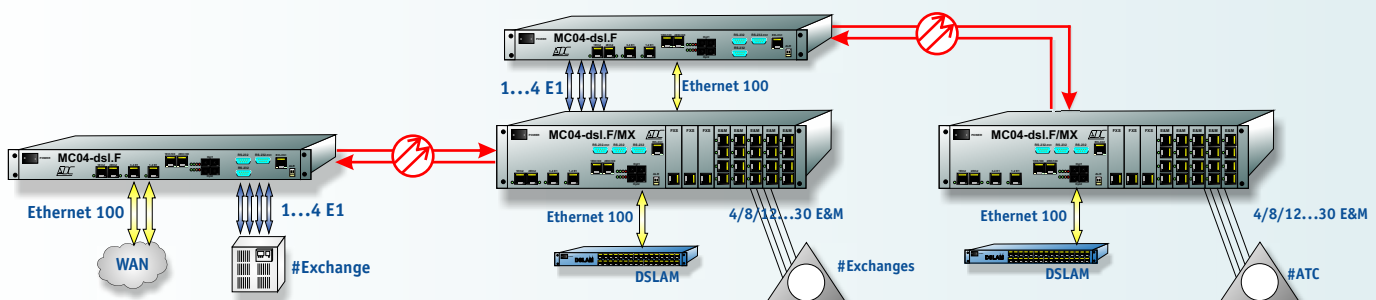
### Transmission 4E1 + 100 Mbps Ethernet all over one fiber (WDM)



### Internet broadband access and setting connecting lines between analog and digital exchanges



### Internet broadband access and setting connecting lines between analog and digital exchanges





MC04-DSL.S is an advanced Broadband copper Multi-Access System based on newest G.SHDSL.bis technology of transmission. The MC04-DSL.S system is the most economical solution for introducing Broadband Internet Access in combination with POTS telephony. MC04-DSL.S provides multiple POTS services in combination with Ethernet-data channels with speeds up to 5,7 Mbps - all over one copper pair or up to 11,4 Mbps all over two copper pairs! It allows the carrier to deploy affordable Broadband solution without major investments in copper infrastructure in a very simple and efficient way.

### Application field

- Connect more POTS subscriber over one/two copper pairs in access network
- Connect more POTS & Broadband-Internet subscribers over one/two copper pairs in access network
- Provide total POTS & Broadband-Internet solution for SOHO customers over single copper pair
- Simply economize the existing copper infrastructure for mass Broadband Internet Access deployment

### Main Futures:

- MC04-DSL.S system consist of two parts: Central office terminal - MC04-DSL.S and Remote Unit - MC04-DSL.S-B
- Line code - TC PAM 16/32
- Medium - 1 or 2 symmetrical copper pair
- Data transfer rate - up to 11,4 Mbps over 2 pairs or up to 5,7 Mbps over 1 pair
- Change of data transmission rate with step 64kbps
- Ethernet 100Base-TX, VLAN, max packet size 1536 byte
- Possibility of transmission the subscriber terminations within E1
- Connect up to 4 Remote Unit to one Central Office Terminal
- There are many variants of Remote Unit - 4/8/12/16 FXS
- Possibility of usage of regenerators (option)
- Remote or local setting and management system via Ethernet or RS-232
- SNMP protocol supported
- MC04-DSL.S power feeding -48...-72V DC
- MC04-DSL.S-B power feeding - remote or 220V local
- lightning protector build in (in compliance with reference K17 ITU-T)

### Features of voice transmissions

- D/A conversion.....ITU-T G.711, A-law
- Voice channel characteristics.....ITU-T G.712

### POTS Exchange and Subscribe interface

- Impedance.....600 ohm
- Input level.....0 dBm
- Output level..... 3,5 dBm
- Ring generator voltage.....40Veff
- Ring frequency .....25±2 Hz
- Nominal subscriber loop current..... 22±2 mA
- subscriber loop resistance..... 1100 ohm

### Dimension:

- Central office terminal: 2U (432x203x86 mm.) 19"
- Remote Unit: 200x220x60 mm.

### Environmental:

- Operating Temperature: Central Office Terminal +5°C to +40°C  
Remote Unit -45°C to +50°C
- Operating Humidity - 90%.

### Power:

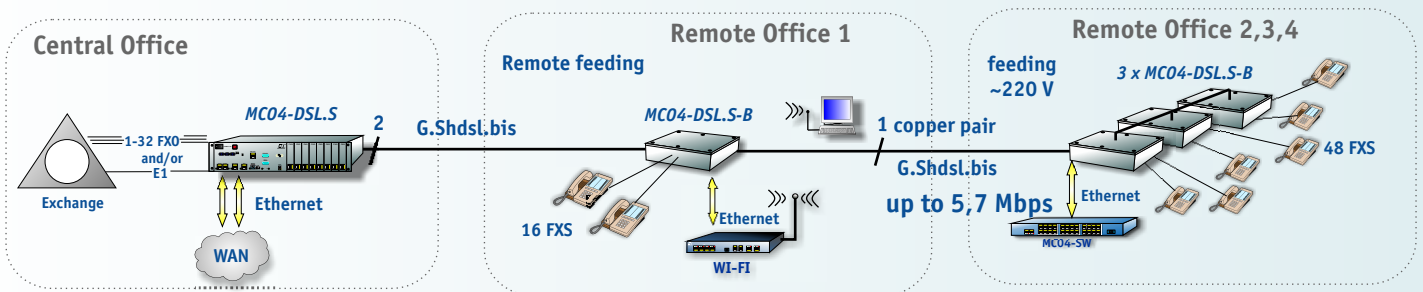
- **Central office terminal:** (-48...-72) VDC; Power Consumption max 60 Watts;
- **Remote Unit:** local ~220 V, 50 Hz or remote 210 / 300V; Power Consumption -max 15 Watts.

**Length of the regeneration section by transmission of N-channels 64 kbps, km.**

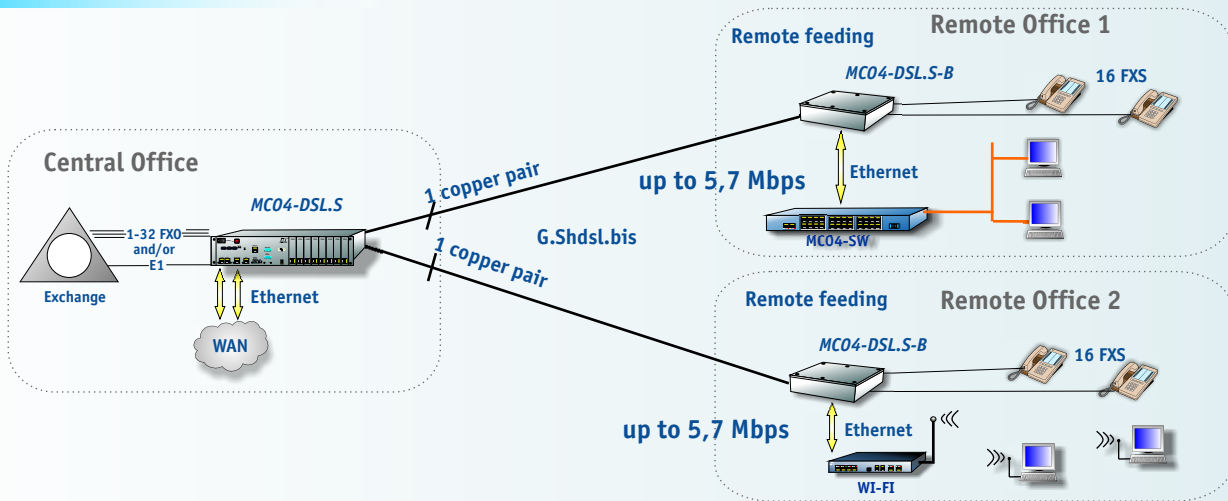
Quantity of channels/bit rate over 2 copper pair	Symmetrical cable d - diameter			
	d=0,4 mm	d=0,5 mm	d=0,9 mm	d=1.2 mm
N=2x16 ( 2048 kbps)	5,3*	7,2*	17	30
N=2x32 ( 4096 kbps)	4,3*	6,0*	12	21
N=2x64 ( 8192 kbps )	3,0*	4,2*	8	13
N=2x88 ( 11264 kbps)	2,5	3,5	7	11

**MC04-DSL.S Applications**

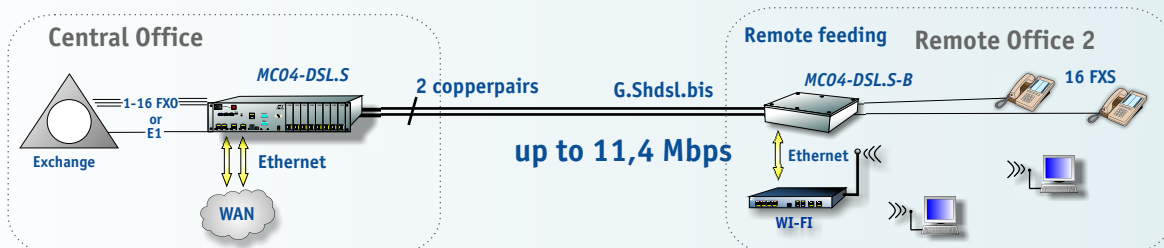
**Set up a multiple Remote Offices with up to 64 subscriber channels**



**Set up two Remote Offices. The Remote Offices have 16 subscriber channels and remote feeding each**



**Set up 16 subscriber channels and up to 11,4 Mbps Ethernet - all over 2 copper pairs**





# Gigabit Optical Multiplexer MC04-dsl.GE

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1250Mbps, optical link - 80km, two direction  
8/16E1 + 1000Base-T Ethernet + 30 subscriber channels



MC04-dsl.GE is used for transportation of 16E1, subscriber channels and Gigabit Ethernet - all over fiber channel with speeds up to 1,25 Gbps.

## Application Field:

in the communication network is build on the fiber-optic channels as:

- terminal multiplexer
- add/drop multiplexer
- subscriber multiplexer for creation of conference channels and telemetering group channels

## Main Futures

- operating modes: point-to-point, line, ring with redundancy
- optical interface - SFP
- simultaneous transmission of 1 to 16 E1 and Gigabit Ethernet in the same fiber
- add/drop multiplexer drops up to 16 E1 and Gigabit Ethernet from any optical direction
- The build in high-performance switch transmits Ethernet data
- User interfaces: digital – E1, Ethernet, analog - FXO, FXS, 4/6-wire E&M (with programmable levels)
- provides transparent RS232 interfaces for user's data links
- creation of conference channels
- max number of the analog interfaces - 30
- provides intercom between multiplexer
- Dimension: 19" rack mounting , 1U or 2U (with FXS/FXO/E&M)
- remote configuration and alarm monitoring
- power: DC 48/60 V or AC220V

## Hardware Configuration:

- modem **MC04-dsl.GE-nE1-SW4-TM/ADM-LTxx/LTyx-xSP-60V/220V**
- modem-multiplexer **MC04-dsl.GE-nE1-SW4-TM/ADM-LTxx/LTyx-xSP-xFXO/FXS/E&M/RS232-60V/220V**

where x is quantity of interfaces:

FXO/FXS/E&M – 0, 4, 8, 12...30;

RS (RS-232) – 0, 2, 4, ...16;

n - quantity of interfaces E1 – 0, 8, 16.

LT10 module - SFP, duplex , 10 km

LT20 module - SFP, duplex , 20 km

LT30 module - SFP, duplex , 30 km

LT40 module - SFP, duplex , 40 km

LT50 module - SFP, duplex , 50 km

LW10A module - SFP bidirectional Tx:1310nm Rx:1550nm, 10 km

LW10B module - SFP bidirectional Tx:1550nm Rx:1310nm, 10 km

LW20A module - SFP bidirectional Tx:1310nm Rx:1550nm, 20 km

LW20B module - SFP bidirectional Tx:1550nm Rx:1310nm, 20 km

LW40A module - SFP bidirectional Tx:1310nm Rx:1550nm, 40 km

LW40B module - SFP bidirectional Tx:1550nm Rx:1310nm, 40km

SW4 (option) - build in switch with 4 Gigabit Ethernet ports

ADM (option)... add/drop xE1 function

SP (option) - build in passive WDM-splitter 1310/1550 (for telemechanics needs 2 SP, for add\drop - 4SP) provides two 115,2 kbps transparent RS232 interfaces for user's data links

1250 Mbps



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# Optical Multiplexer MC04-dsl.GE

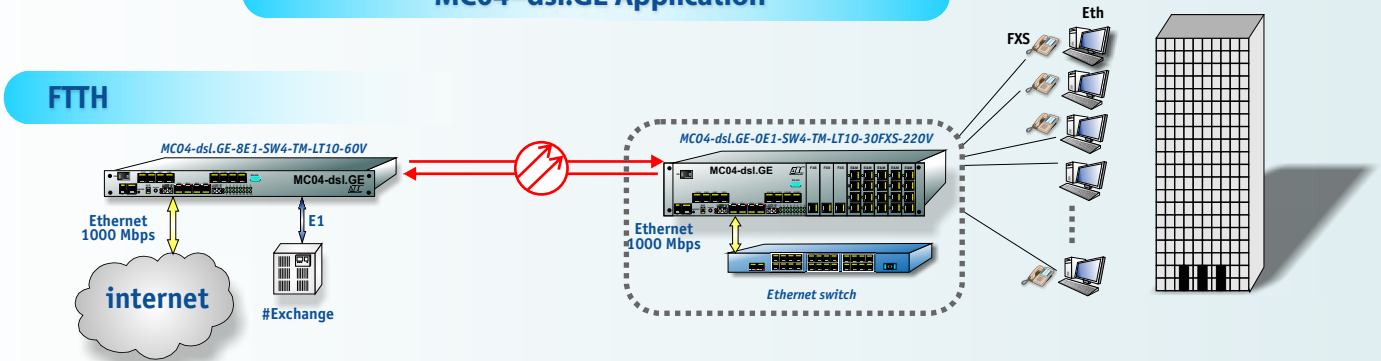
1250Mbps, optical link - 80km, two direction

8/16E1 + 1000Base-T Ethernet + 30 subscriber channels

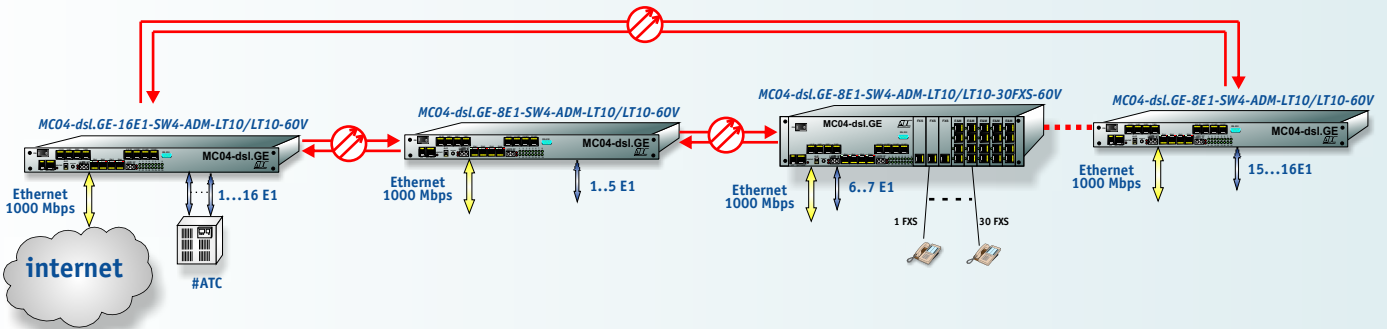
## Basic interface parameters:

- **Optical interface** - bit rate - 1,25 Gbps; code 8B/10B;
- **E1** - G.703 ITU-T
- **Ethernet 10/ 100Base-TX/ 1000Base-T** - IEEE Std 802.3ab; 1000 Mbps; quantity- 4; Auto MDI/MDIX
- **FXO/FXS** - Ring generator voltage - 50 V / 25 Hz for FXS and 35...110 V / 20...50 Hz for FXO, Nominal subscriber loop current - 22 mA, subscriber loop resistance - 1100 ohm, input/output level - 0 dB / -3,5 dB
- **E&M** - four-wire and six-wire circuit signalling - CAS, programmable input/output levels
- **RS-232** - bit rate- 57600 bps, number of ports on the one card - 2, DB-9,

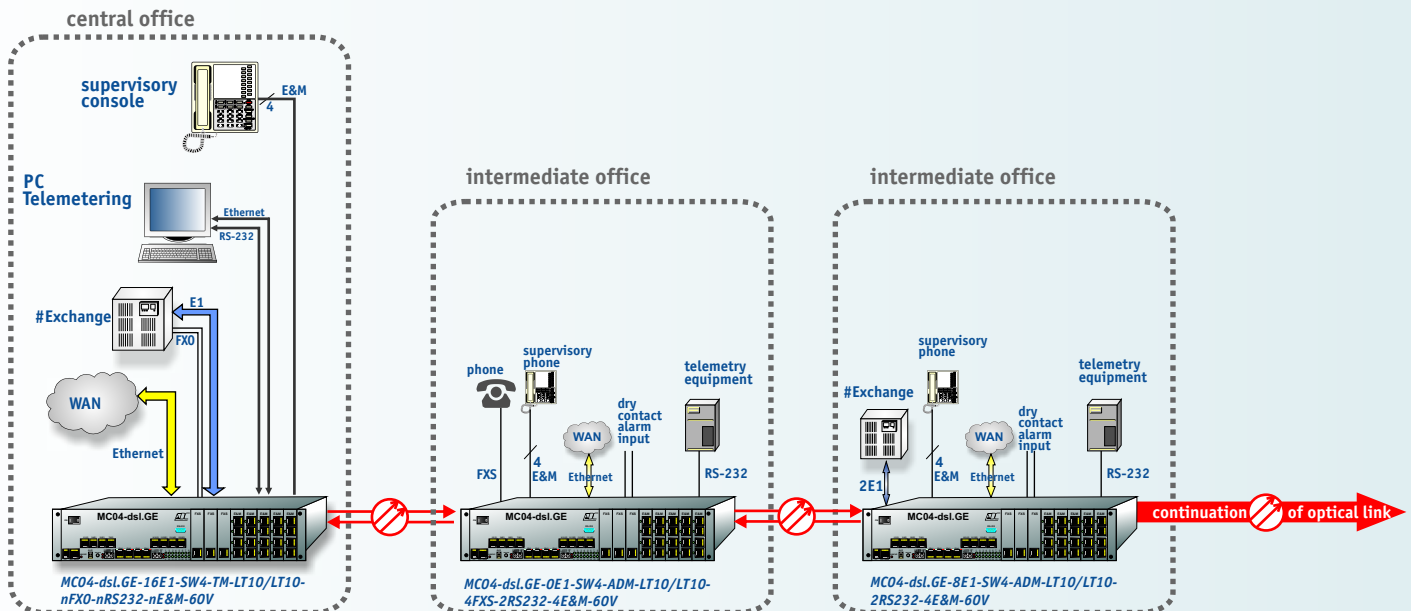
## MC04-dsl.GE Application



## Transmission 16 E1 and Ethernet data with redundant ring



## Provides conference channel and telemetering group channels



Providing the best possible service to end customer is only possible when operator has all relevant information about the status of his access network always available. If some failure occurs, operator is the one who should know it first, not the customer. Failure has to be removed before customer even could detect it. This is the reason why we have developed Management and Monitoring Program System: to support effortless supervision and management of all our equipment. It is all in one system, easy to use, with prompt response and with tracking possibility. MC04-DSL Supervisor is a universal tool for local or remote management of all ADC equipment.

There are two types of management software:

- detailed monitoring and management one tract device - **MC04-DSL Monitor**
- Network monitoring of failures of a great number network devices - **MC04-DSL Supervisor**.

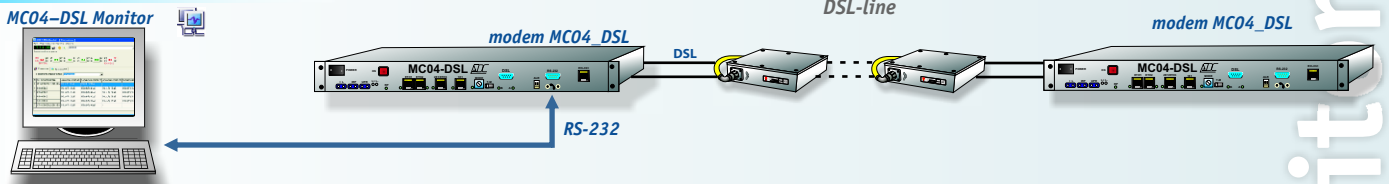
Program MC04-DSL Monitor is intended for detailed monitoring and control of devices, which located on the one DSL line. MC04-DSL Monitor use separate DSL service channel (EOC). There are two connection type:

- Local. Connect PC (COM port) to the any modem.
- Network connection. Connect **Eth-Ctrl** port of the modem to the operator IP-Network, in which is connected management PC.

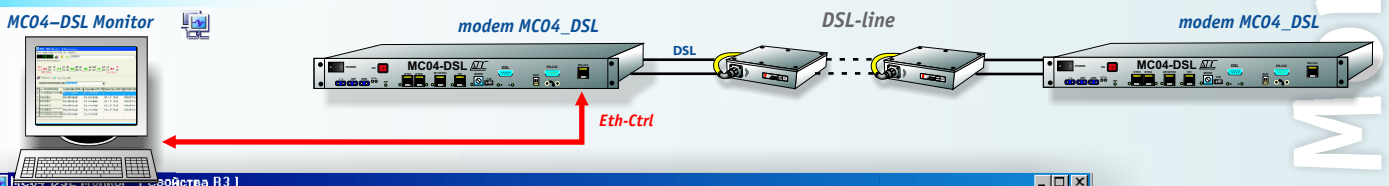
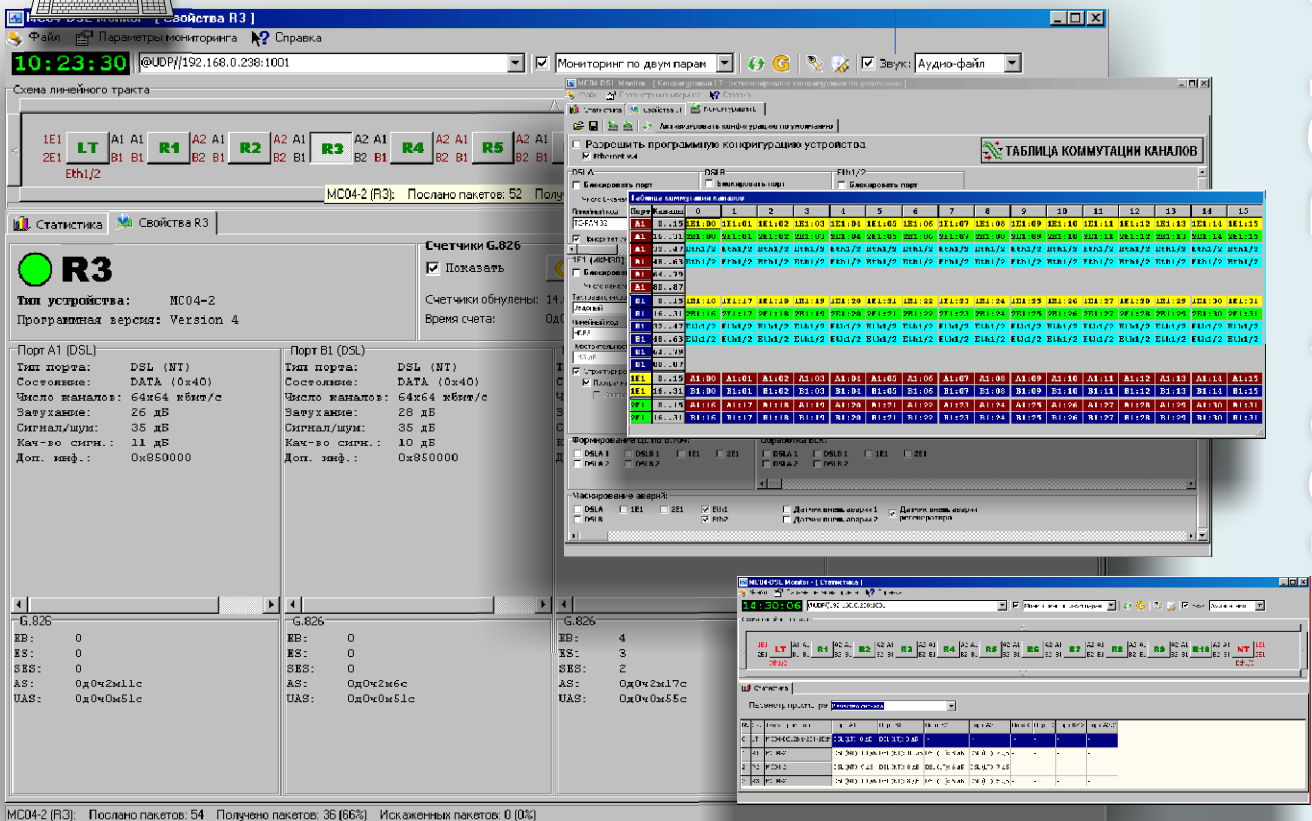
MC04-DSL Monitor provides:

- Monitoring of all parameters of DSL, E1, Ethernet and signaling links of subscriber channels (in the modem-multiplexer);
- Configuring of all parameters of DSL, E1, Ethernet;

## Local connection



## Remote network connection

MC04-DSL Monitor



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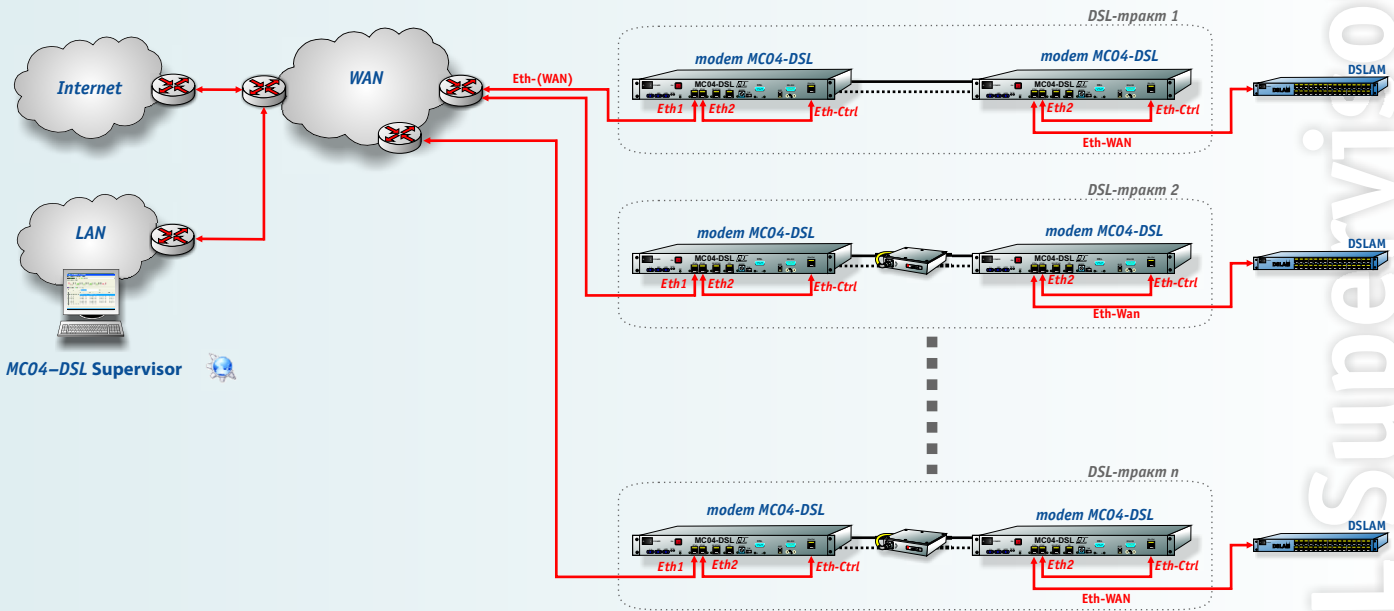
# Management and Monitoring Program System

MC04-DSL Monitor  
MC04-DSL Supervisor

MC04-DSL Supervisor is intended for the continuous durable Great number alarm statuses monitoring of the (up to 1000) MC04 network devices. The modem of a DSL-line or the unit MC04-SR are connected by the Eth-Ctrl port in IP-network. Thus simultaneously It is supported N UDP-connections with network devices and status scan is carried out Failure/norm of each device.

For each network device three states are displayed: norm, failure, inaccessible. In the protocol of failures, the failure decryption is resulted. Emergency messages are saved in archive.

For more detailed monitoring from application MC04-DSL Supervisor are launched MC04-DSL Monitor with adjusted UDP connections.



MC04-DSL Supervisor 2.4 build007

10:54:36  
14.03.2008

Состояние	Название	Тип соединения	Тип устройства	Время обновления	Комментарий
норма	Кочevo - Нечкино	192.168.0.238:1001	M	10:54:36	M-R-R-R-R-R-R-R-R-R-M
норма	Нечкино - Кочevo	192.168.0.239:1001	M	10:54:36	M-R-R-R-R-R-R-R-R-R-M
!!!АВАРИЯ!!!	Казанка-Андреевка	192.168.0.237:1001	M	10:54:36	M-R-R-R-R-R-R-R-R-R-M
!!!АВАРИЯ!!!	Андреевка-Казанка	192.168.0.240:1001	M	10:54:35	M-R-R-R-R-R-R-R-R-R-M
!!!АВАРИЯ!!!	Деревня Черная	192.168.0.221:1001	SR-M	10:54:35	SR-MX
норма	Зюкайка - Казанка	192.168.0.7:6001	M	10:54:34	M-M
норма	Казанка - Зюкайка	192.168.0.7:6002	M	10:54:35	M-M
норма	Сергеево - Казанка	192.168.0.7:6003	M	10:54:35	M-R-M
норма	Казанка - Сергеево	192.168.0.7:6004	M	10:54:35	M-R-M
норма	Васюки	192.168.0.7:6005	M	10:54:35	MX
норма	MX	192.168.0.7:6006	M	10:54:35	Глушата

14.03.2008 10:53:12	Деревня Черная	192.168.0.221:1001	!!!АВАРИЯ!!!	SR[охрана объекта, I-M(O)
14.03.2008 10:51:52	MX	192.168.0.7:6006	норма	M(O)
14.03.2008 10:51:24	Васюки	192.168.0.7:6005	норма	M(O)
14.03.2008 10:51:00	Казанка - Сергеево	192.168.0.7:6004	норма	M(O)
14.03.2008 10:50:30	Сергеево - Казанка	192.168.0.7:6003	норма	M(O)
14.03.2008 10:49:01	Казанка - Зюкайка	192.168.0.7:6002	норма	M(O)
14.03.2008 10:48:32	Зюкайка - Казанка	192.168.0.7:6001	норма	M(O)
14.03.2008 10:47:02	Андреевка-Казанка	192.168.0.240:1001	!!!АВАРИЯ!!!	M(1)
14.03.2008 10:46:50	Казанка-Андреевка	192.168.0.237:1001	!!!АВАРИЯ!!!	M(1)
14.03.2008 10:46:31	Нечкино - Кочevo	192.168.0.239:1001	норма	M(O)
14.03.2008 10:45:24	Кочevo - Нечкино	192.168.0.238:1001	норма	M(O)
14.03.2008 10:45:09	Нечкино - Кочevo	192.168.0.239:1001	!!!АВАРИЯ!!!	M(1)

MC04-DSL Monitor | Статусы

10:54:36

Состояние:

№	Сл.	Тип устройства	Порт А:	Порт В:	Порт С:	Порт D:	Порт E:	Порт F:	Порт G:	Порт H:	Порт I:	Порт J:	Порт K:	Порт L:	Порт M:	Порт N:	Порт O:	Порт P:	Порт Q:	Порт R:	Порт S:	Порт T:	Порт U:	Порт V:	Порт W:	Порт X:	Порт Y:	Порт Z:
0	LT	DSL2e 2E1 IEM	CS, 0.1x 8.4x	CS, 0.1x 8.4x																								
1	R1	MC04 2	USL 0.1x 8.4x	USL 0.1x 8.4x	USL 0.1x 8.4x	USL 0.1x 8.4x	USL 0.1x 8.4x	USL 0.1x 8.4x	USL 0.1x 8.4x	USL 0.1x 8.4x	USL 0.1x 8.4x	USL 0.1x 8.4x	USL 0.1x 8.4x	USL 0.1x 8.4x	USL 0.1x 8.4x	USL 0.1x 8.4x	USL 0.1x 8.4x	USL 0.1x 8.4x	USL 0.1x 8.4x	USL 0.1x 8.4x	USL 0.1x 8.4x	USL 0.1x 8.4x	USL 0.1x 8.4x	USL 0.1x 8.4x	USL 0.1x 8.4x	USL 0.1x 8.4x	USL 0.1x 8.4x	
2	R2	MC04 2	USL 0.1x 8.4x	USL 0.1x 8.4x	USL 0.1x 8.4x	USL 0.1x 8.4x	USL 0.1x 8.4x	USL 0.1x 8.4x	USL 0.1x 8.4x	USL 0.1x 8.4x	USL 0.1x 8.4x	USL 0.1x 8.4x	USL 0.1x 8.4x	USL 0.1x 8.4x	USL 0.1x 8.4x	USL 0.1x 8.4x	USL 0.1x 8.4x	USL 0.1x 8.4x	USL 0.1x 8.4x	USL 0.1x 8.4x	USL 0.1x 8.4x	USL 0.1x 8.4x	USL 0.1x 8.4x	USL 0.1x 8.4x	USL 0.1x 8.4x	USL 0.1x 8.4x	USL 0.1x 8.4x	
3	R3	MC04 2	USL 0.1x 8.4x	USL 0.1x 8.4x	USL 0.1x 8.4x	USL 0.1x 8.4x	USL 0.1x 8.4x	USL 0.1x 8.4x	USL 0.1x 8.4x	USL 0.1x 8.4x	USL 0.1x 8.4x	USL 0.1x 8.4x	USL 0.1x 8.4x	USL 0.1x 8.4x	USL 0.1x 8.4x	USL 0.1x 8.4x	USL 0.1x 8.4x	USL 0.1x 8.4x	USL 0.1x 8.4x	USL 0.1x 8.4x	USL 0.1x 8.4x	USL 0.1x 8.4x	USL 0.1x 8.4x	USL 0.1x 8.4x	USL 0.1x 8.4x	USL 0.1x 8.4x	USL 0.1x 8.4x	

MC04-DSL Supervisor

in the MC04-DSL Supervisor implement SNMP gateway. Therefore any SNMP-manager with support SNMP v.1 can rule all MC-04 devices

SNMP-gateway features:

- SNMP v.1 protocol
- MIB (ASN.1) for MC04 devices
- Get – Response mode
- Trap messages
- up to 1000 interrogate devices
- protection of information

# SNMP

