ITX 32m

PRODUCT DOCUMENTATION

CONTENTS

1. PRODUCT OVERVIEW

Type code:

ITX 32M

Product code:

ITX 471 31.5 - Multiplexer E1 / X.21 / Ethernet - (RJ , BNC)

ITX 471 31.7 - Multiplexer D E1 / D X.21 / Ethernet - (RJ)

ITX 471 32.5 - Multiplexer E1 / UDI / Ethernet - (RJ , BNC)

ITX 471 32.7 - Multiplexer D E1 / D UDI / Ethernet - (RJ)
UDI - V.35, V.36, RS 530, V.24

Features:

- Mode E1 framed allows conversion n x 64 kbps (n = 1 to 31timeslots).
- Mode E1 unframed transparently transmits 2.048 Mbps to serial interface X.21 and vice versa
- E1 framed n x 64 kbps (n = 1 to 31timeslots).
- E1 120/75 Ohm.
- Interface X.21 DCE (DTE).
- Intercace UDI (X.21, V.35)
- Interface Ethernet 10/100 BT.
- InterfaceV.24 (RJ 45) for configuration of multiplexer from PC
- Supervision via Ethernet by allocating IP address.
- Configuration and remote control via TCP/ IP, UDP, http, SNMP.
- Multiplexer synchronization from E1 G.703/G704 or synchronous interface.

Functions:

Multifunctional device:

1) **Converter –** *default function* **–** Cross-connect and conversion of synchronous interfaces X.21 to E1. Cross-connect and conversion of E1 interfaces to Ethernet interface.

2) **Cross Connect –** cross-connect of any E1-A timeslot to E1-B timeslot. Cross-connect and conversion of synchronous interfaces X.21 to E1. Cross-connect and conversion of E1 interfaces to Ethernet interface.

3) **E1 over Ethernet - ** 2xE1/Ethernet - transmission of E1 interfaces via Ethernet

   - unframed 2xE1 or 1xE1
   - framed 2xE1,1xE1 or Nx64 TS in E1
   - transmission in local network RAW ETH
   - transmission over IP network
   - identification of devices according to their ID or IP address
   - jitter buffer – optional setting to 2, 5, 10 ms.
   - setting of TOS/DiffServ bits
   - VLAN and 802.1p support
   - Clock recovery /synchronization E1 over Ethernet network / IP network
   - for secure device operation – it is necessary to set QOS in the network, min. delay, min. error rate and min. packets jitter

4) **Inverse mux –** 2xE1/Ethernet - transmit of Ethernet interface through 2 x E1 – VLAN support.

5) **VLAN Router –** routing to E1 according to ID VLAN. Conversion of tagged frame to standard frame is possible.

	ITX 471 31.5	ITX 471 31.7	ITX 471 32.5	ITX 471 32.7
CC Cross Connect / Converter	-	A	-	A
EE E1 over Eth	A	A	A	A
IN Inverse mux	-	A*	-	A*
VR VLAN ROUTER	-	A*	-	A*
N64 n x 64	A	A	A	A

*** - interface X.21 is deactivated**

Ordering:

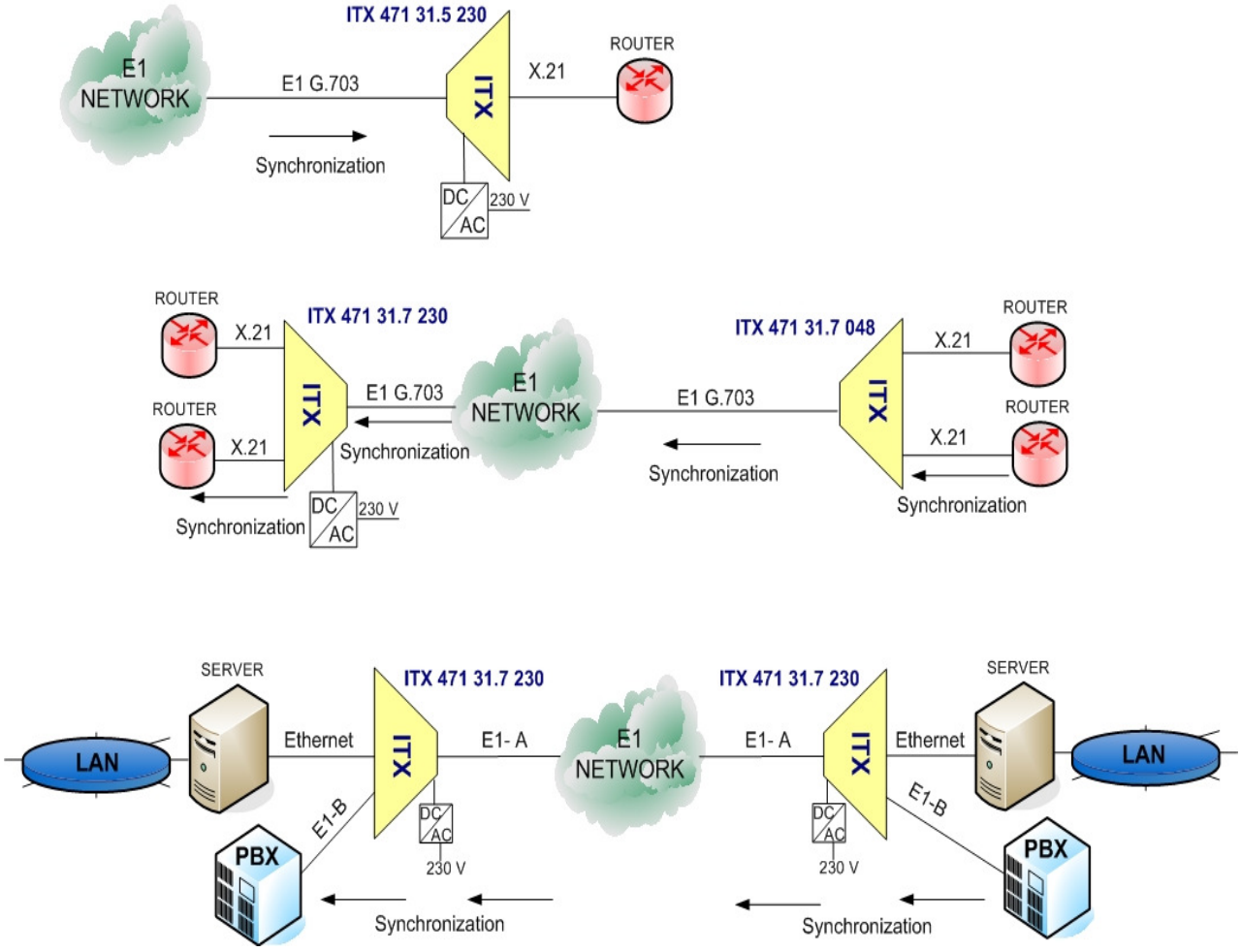
Examples:

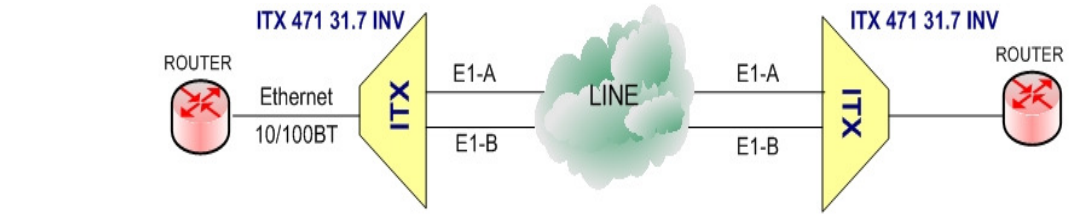
ITX 471 31.7 CC/IN
ITX32M in configuration:2xE1, 2xX.21, Ethernet, enabled functions of Cross Connect and Inverse mux.

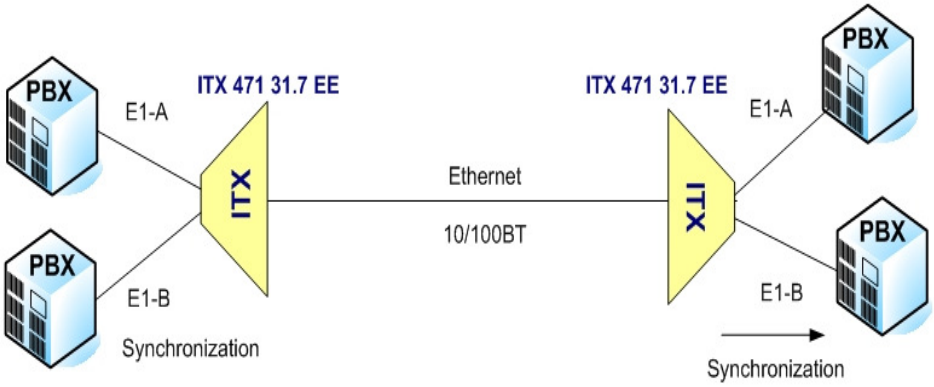
ITX 471 31.5 CC
ITX32M in configuration: 1xE1, 1x X.21, Ethernet, enabled function of Cross Connect

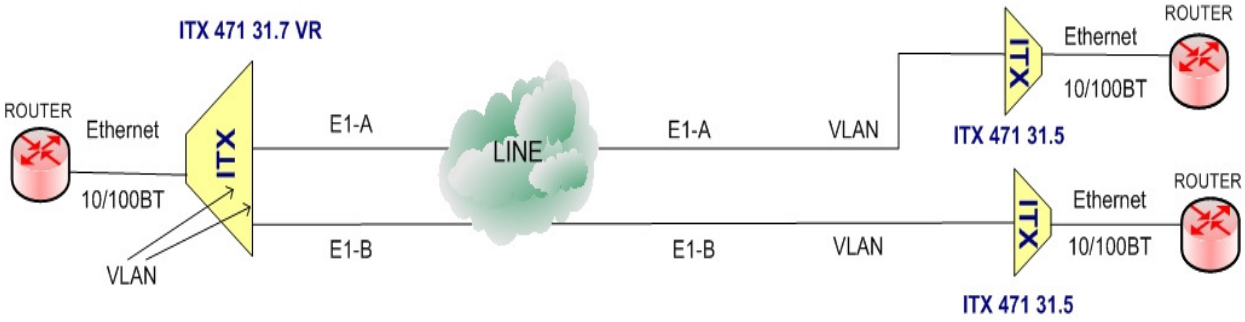
ITX 471 31.7 048 CC/EE/IN/VR
ITX32M in configuration: 2xE1, 2xX.21, Ethernet , power supply DC 48V, enabled functions of Cross Connect, E1 over Ethernet, VLAN Router.

Applications:




ITX 471 31.7 INV
ROUTER
Ethernet
10/100BT
ITX
E1-A
E1-B
LINE
E1-A
E1-B
ITX 471 31.7 INV
ITX
ROUTER


PBX
PBX
ITX 471 31.7 EE
E1-A
E1-B
Synchronization
ITX
Ethernet
10/100BT
ITX 471 31.7 EE
ITX
E1-A
E1-B
Synchronization
PBX
PBX

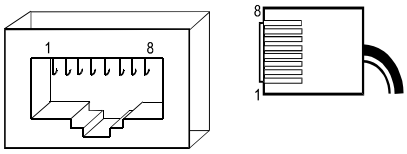

ITX 471 31.7 VR
ROUTER
Ethernet
10/100BT
VLAN
ITX
E1-A
E1-B
LINE
E1-A
E1-B
VLAN
VLAN
ITX
ITX 471 31.5
ITX
ITX 471 31.5
ROUTER
Ethernet
10/100BT
ROUTER
Ethernet
10/100BT

2.SPECIFICATIONS

E1 INTERFACE

- E1 unframed G.703 2048 kb/s
- E1 framed G.704 PCM 30, PCM 31
- Line code HDB 3
- Connectors: RJ 45 (120 Ohm) / BNC (75 Ohm)

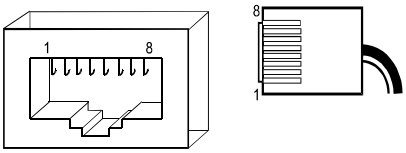
Connector RJ 45



1 – receive to device ------- RX -
2 – receive device ------- RX+
3 –
4 – transmit from device ------- TX -
5 – transmit from device ------- TX+
6 –
7 –
8 –

ETHERNET INTERFACE

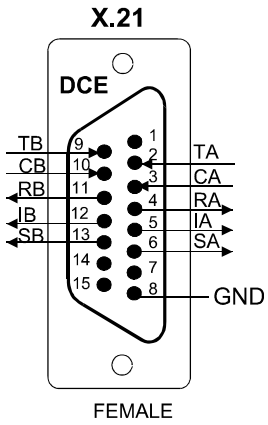
- Ethernet 10/100BT FD
- Connector RJ 45



1 – transmit from device Tx +
2 – transmit from device Tx -
3 – receive to device Rx+
4 –
5 –
6 – receive to device Rx-
7 –
8 –

X.21 INTERFACE

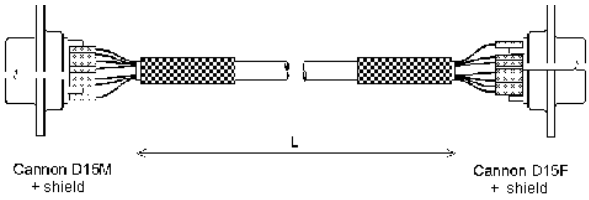
- Connector 15 pin D15 F



IA – Indication A
IB – Indication B
TA – Transmit A
TB – Transmit B
RA – Receive A
RB – Receive B
CA – Control A
CB – Control B
SA – Signal Timing A
SB – Signal Timing B

DTE interface is determined by cable:
ITK 522 07 X.21 DCE – extension cable
ITK 522 19 X.21 DTE – cable reduction

Cable ITK 522 07 – extension cable for X.21 DCE

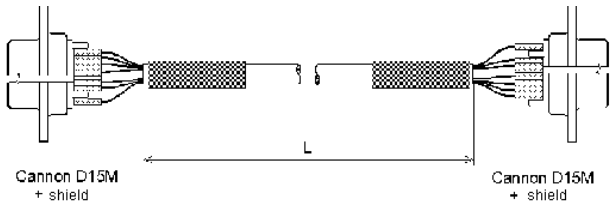


CANNON - D15 M	Signal	Pairing	Colour designation of the wires	Signal	Cannon - D15 F
1	-		-	-	1
2	TXA		W (o)	TXA	2
3	CSA		W (g)	CSA	3
4	RXA		W (m)	RXA	4
5	RCA		W (b)	RCA	5
6	TCA		W (s)	TCA	6
7					7
8	-		-	-	8
9	TXB		O (w)	TXB	9
10	SCB		G (w)	SCB	10
11	RXB		M (w)	RXB	11
12	RCB		B (w)	RCB	12
13	TCB		S (w)	TCB	13
14	-		-	-	-
15	-		-	-	-
shield	-	-	shielding	-	shield

↕ - Paired wires

Supplied cables have standard length of 1m. Different lengths are available upon request.

Cable ITK 522 19 – reduction for X.21 DTE



CANNON D15 M	Signal	Pairing	Colour designation of the wires	Signal	Cannon D15 M
1	-		-	-	1
2	TXA		W (o)	TXA	4
3	CSA		W (g)	CSA	5
4	RXA		W (m)	RXA	2
5	RCA		W (b)	RCA	3
6	TCA		W (s)	TCA	7
7	RTCA		W (r)	RTCA	6
8	GND		Y	GND	8
9	TXB		O	TXB	11
10	SCB		G	SCB	12
11	RXB		M	RXB	9
12	RCB		B	RCB	10
13	TCB		S	TCB	14
14	RTCB		R	RTCB	13
15	-		-	-	-
shield	-		shielding	-	shield

- Paired wires

Supplied cables have standard length of 1m. Different lengths are available upon request.

UDI INTERFACE

- The required interface is achieved with cable reduction.

ITK 522 08 Cable UDI / X.21 DCE
ITK 522 09 Cable UDI / X.21 DTE
ITK 522 10 Cable UDI / V.35 DCE
ITK 522 11 Cable UDI / V.35 DTE
ITK 522 12 Cable UDI / V.36 DCE
ITK 522 13 Cable UDI / V.36 DTE
ITK 522 14 Cable UDI / V.24 DCE
ITK 522 15 Cable UDI / V.24 DTE
ITK 522 16 Cable UDI / RS 530 DCE
ITK 522 17 Cable UDI / RS 530 DTE

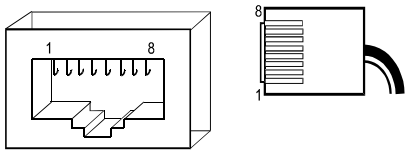
Supplied cables have standard length of 1m. Different lengths can be specified in the order.

Warning:

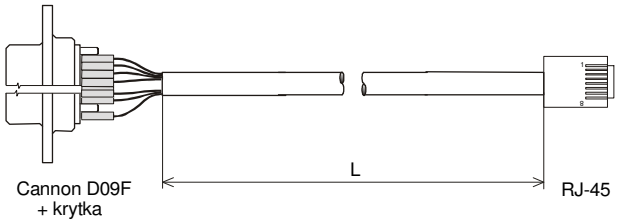
For proper functioning of the device and conformation with the warranty conditions, we recommend the use of the standard cables supplied with the device.

CONTROL V.24

- Connector RJ 45



1 –
2 –
3 –
4 – transmit from device Tx +
5 – receive to device Rx+
6 –
7 –
8 – GND



CANNON - Female for D09F cable	RJ - 45
-	1
-	2
-	3
2	4
3	5
-	6
-	7
5	8
-	-

L – cable length – standard 1 m

INDICATORS

- **Front panel LEDs:**

  E1 line - Orange - E1 interface is not connected
  - Green – SLIP alarm
  - Green and orange – AIS alarm

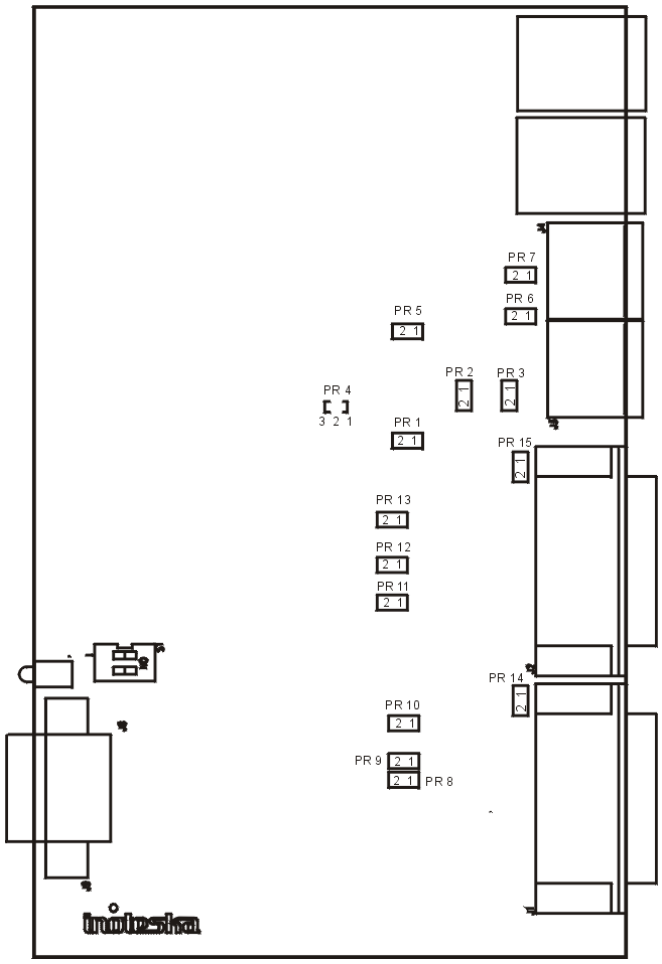
  Ethernet - yellow – flashes during receive and transmit
  green – ON – Ethernet line is active

  - green and yellow - OFF – Ethernet line is not connected

- **Back panel LED:**

  PWR - Power is ON

HW JUMPERS



PR 4, PR14, PR 15 – HW jumpers – always Off
SW 1 – HW switch – always Off

E1-A	**120 Ohm**	**75 Ohm**	**E1-B**	**120 Ohm**	**75 Ohm**
PR 1	Off	On	PR 5	Off	On
PR 2	Off	On	PR 6	Off	On
PR 3	Off	On	PR 7	Off	On

	TI 150 Ohm	**TI** > 6 k Ohm		**TI** 150 Ohm	**TI** > 6 k Ohm	
X.21-A			**X.21-B**			
PR 8	1-2	rozp.	PR 11	1-2	rozp.	**R**
PR 9	1-2.	rozp.	PR 12	1-2	rozp.	**I**
PR 10	1-2	rozp.	PR 13	1-2	rozp.	**S**

R – Data Receive
S – Synchronisation Receive
I – Control signal

TI – Termination Impedance

SYNCHRONIZATION

- User defined:
  - from G.703
  - from X.21
  - internal clock

POWER

- adapter 230 V / 50Hz , ± 10%, max. 5VA
- DC 48 V, -40V to -65 V, max. 0,2 A, fuse 1,5 A
  Device must use only adapter supplied by manufacturer.

INPUT

- Max. 5VA

DIMENSIONS

- 39 x 165 x 100 mm (h x w x d)

WEIGHT

- 0,8 kg

OPERATING ENVIRONMENT

- Operating temperature: 0^{o} C to 55^{o} C
- Storage temperature: -10^{o} C to 60^{o} C
- Humidity: up 75%, non-condensing

3. MANAGEMENT SW

There are several type show to access **ITX 32M**:

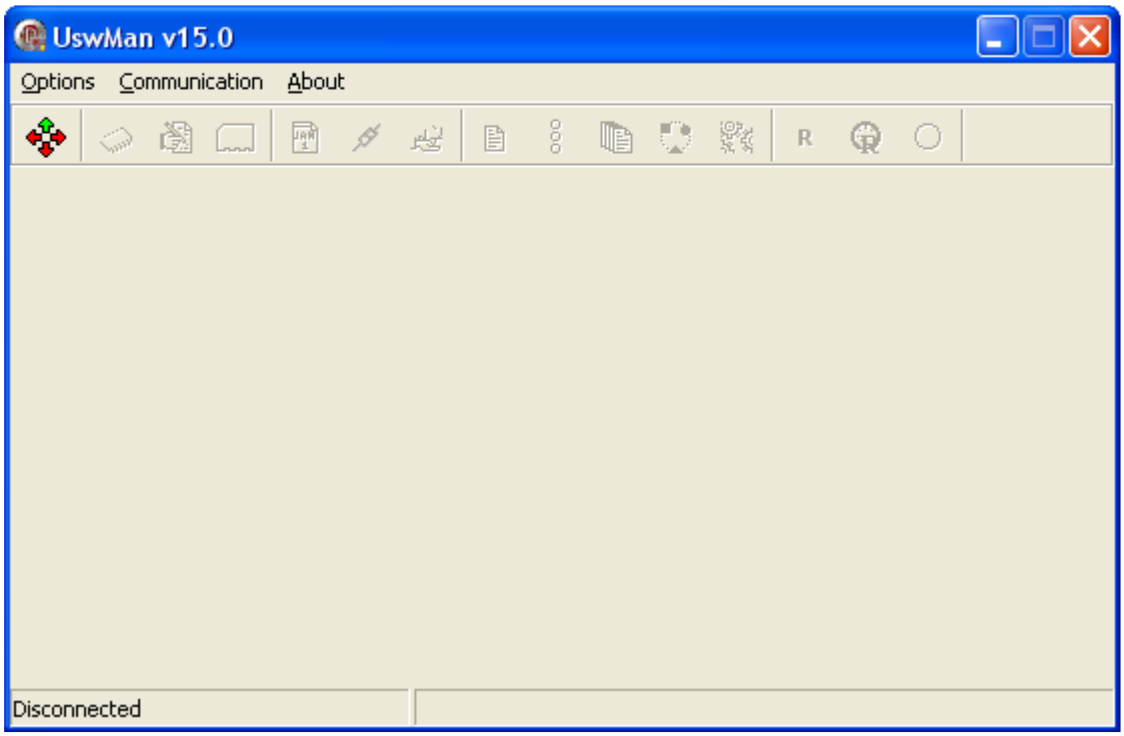
- **Uniman**
- **Web -** device IP address must be set
- **SNMP –** only for device supervision (diagnostic, ...), not for device configuration

UniMan is universal SW used for communication with Inoteska equipment which support TCP / IP. SW operates under OS Windows XP, 2000. UniMan provides text or graphical mode for configuration of device.

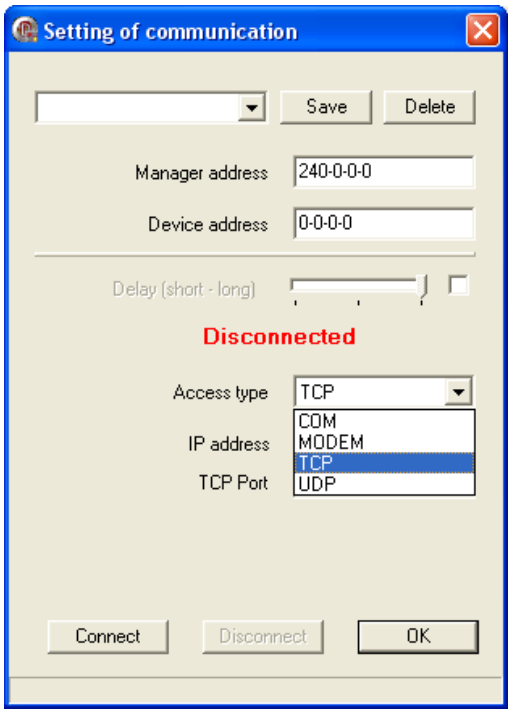
Note:
Latest firmware and management software for ITX32M is available on Inoteska website – www.inoteska.sk.

Run UniMan vxx.exe (xx is SW version)

After running the management software, initial window is displayed:



First, it is necessry to set the communication with device. Click on speed button  . Following window will be displayed:



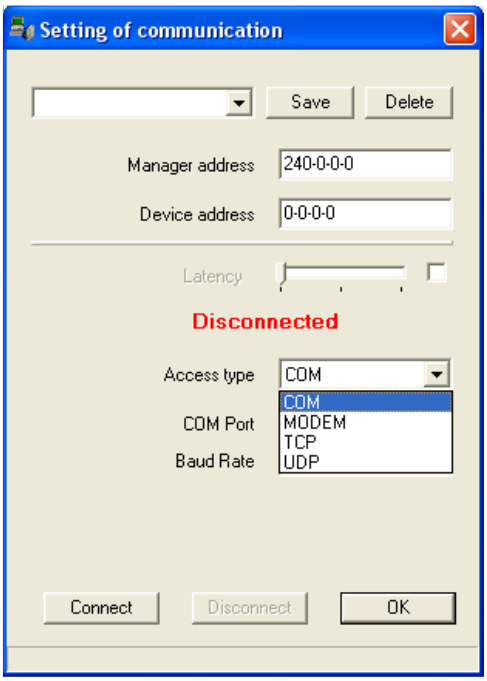
Manager address – 240-0-0-0 (this address can be changed: first number from interval 240-254, other three numbers from interval 0-255)

Device address - 0-0-0-0 – local connection (this address can be changed: first number from interval 0 - 239, other three numbers from interval 0-255)

Connection - COM

Local access to device via device address in format X-X-X.X .

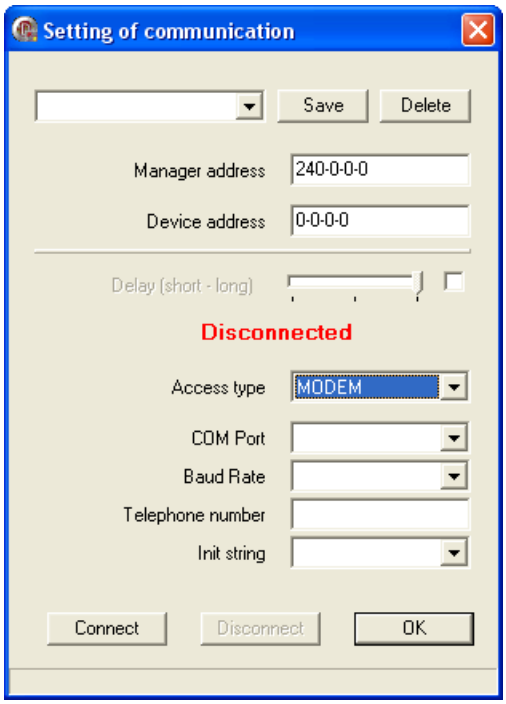
1) Set **Access type – COM**.
2) Select **COM port** (communication port) and set **Baud Rate** (115200 Bd).
3) Click on Connect. If connection is successful, **Connected** is displayed.
4) Click OK.



Connection - MODEM

Remote access via modem. Connect the PC serial port to modem.

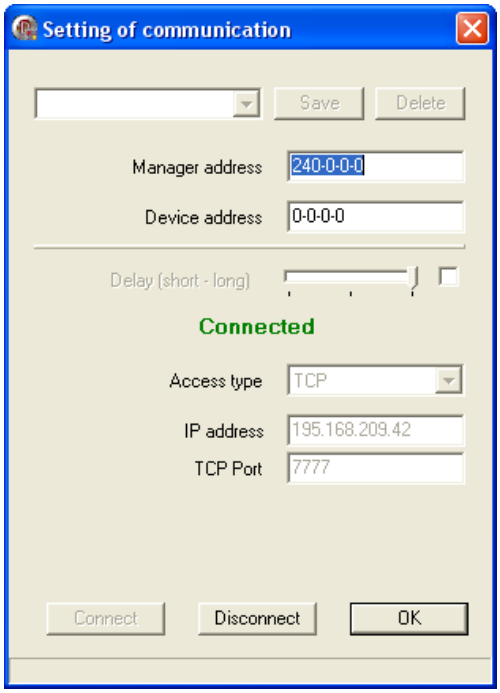
1) Set **Access type – MODEM**.
2) Select **COM port** (communication port) and set **Baud Rate** (115200 Bd), **Phone number** and **Init string** (according to the type of modem connected).
3) Click on Connect. If connection is successful, **Connected** is displayed.
4) Click OK.



Connection - TCP

Remote access using IP address and device address.

1) Set **Access type – TCP**.
2) Set **IP Address** and **TCP Port**.
3) Click on Connect. If connection is successful, **Connected** is displayed.
4) Click OK.



Connection - UDP

SW transmits broadcast and finds all „Inoteska“ devices connected in the network.

This access type can be used only if the conditions stated below are met.

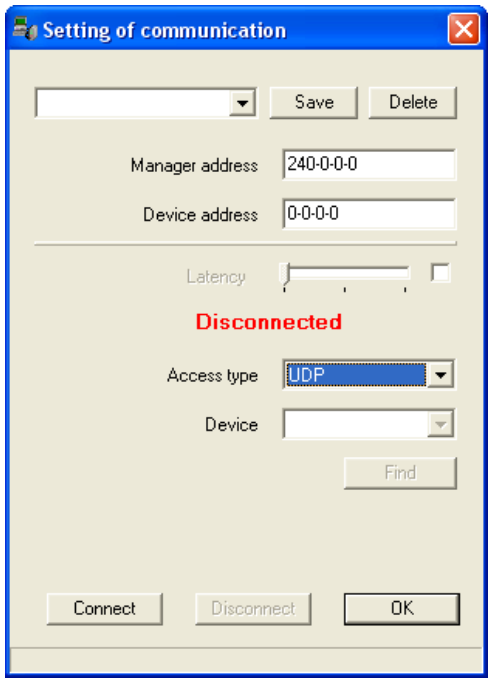
If device is connected in network

- Device and PC must be connected in the same local network
- Network must transmit *broadcast*
- PC must have IP address allocated

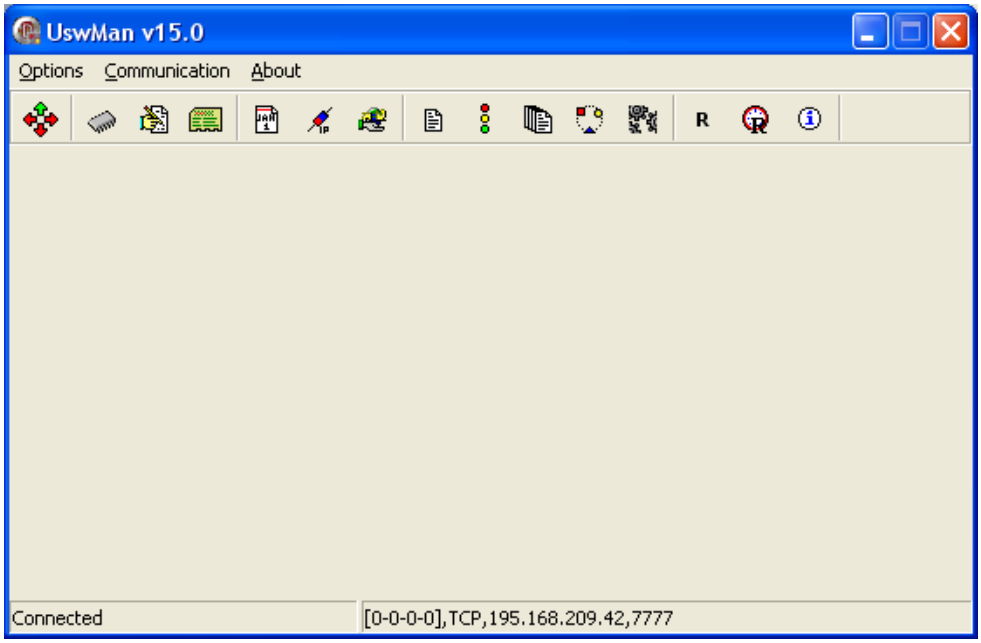
If device is connected to PC locally

- PC must have arbitrary IP address allocated (it is necesary to disable DHCP and set static IP address, e.g. 192.168.1.2)
- Receive/Transmit of *broadcast* packets must be enabled on PC
- UDP port 3864 must be enabled on PC

1) Set **Access type – UDP**.
2) Click **Find.**
3) Select the device from the list and click on Connect. If connection is successful, **Connected** is displayed.
4) Click OK.



Note:
In case of successful connection, device address, type and parameters of access are displayed in the line at the bottom of main management SW window.



In case of error, please check:

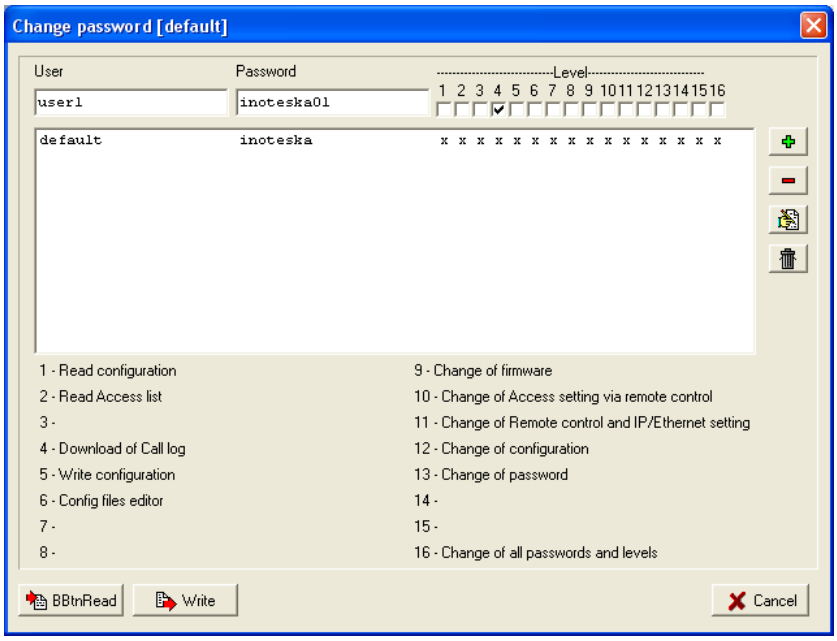
- System power source
- Device address 0-0-0-0 – local connection (this address can be changed: first number from interval 0 - 239, other three numbers from interval 0-255)
- Manager address 240-0-0-0 (this address can be changed: first number from interval 240 –254, other three numbers from interval 0-255)
- Password correctness
- Serial port connection
- Cable between device and PC
- Baud Rate between device and PC set to 115200 Bd.

Password setting

After setting the communication parameters and successful connection, it is necessary to set password. Choose from main menu **Options – Password**.

Change password of device

Default password is **inoteska.** It can be changed in menu **Options – Password – Change password of device.**



Here it is possible to edit the list of passwords for different users and set the level of their rights for access to device (1 to 16). There are notes below explaining each access level. List of passwords can be edited using the buttons on the right side of list.

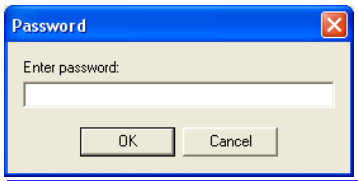
- read settings from device

- write new password settings to device

- quit window

New login

Main menu **Options – Password – New login** using new password. After setting the correct password, main window will all available SW options be displayed.

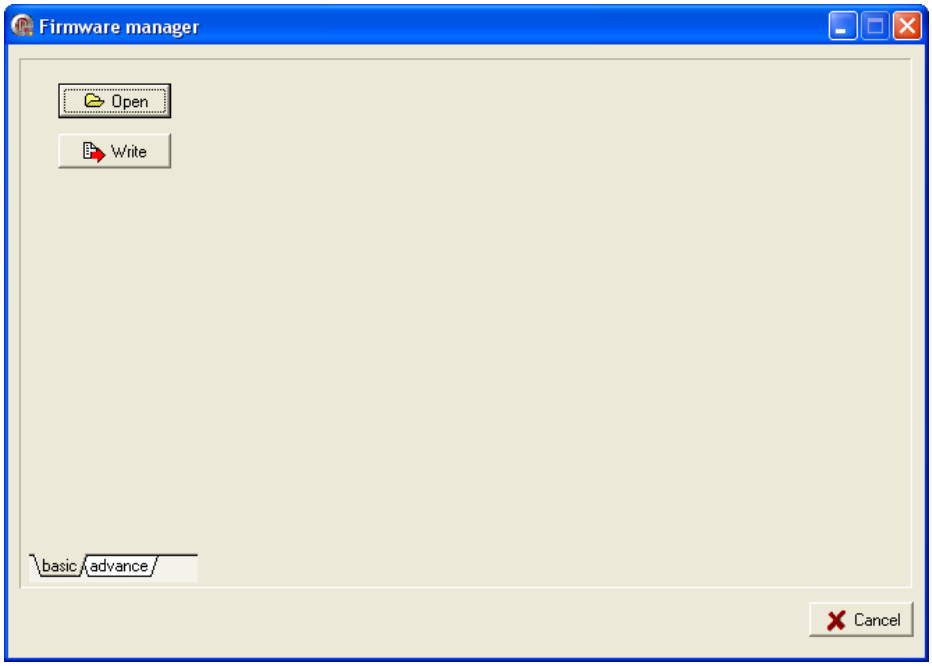


Change language

User can choose the language which will be used while working with management software. Main menu **Options – Language - Slovak / English.**

Firmware manager

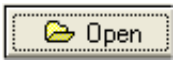
Main menu **Communication – Programmer** or click on speed button  . Following window is diplayed:



Here it is possible to change the device firmware.

How to proceed:

Basic

Click 

and find appropriate *.txt (batch file). Then click 

and new firmware will be written do device flash memory.

- quit window

Advance

Extended options for firmware upgrade.

Firmware – you can choose firmware version from the list of available versions

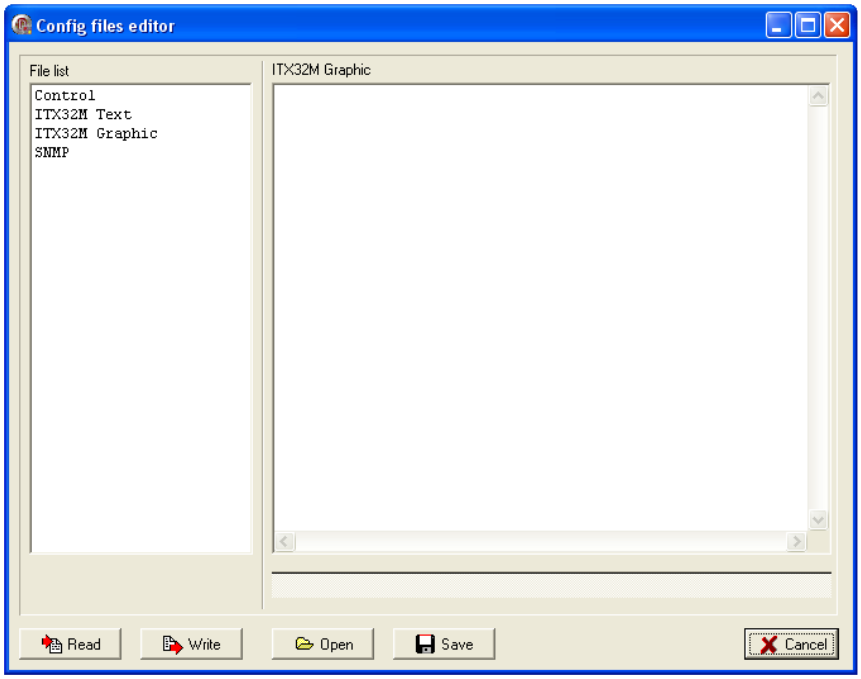
Field-programmable gate arrays – you can also also change the version of field-programmable array

Other files

Note:Latest firmware and management software for ITX32M is available on Inoteska website – www.inoteska.sk.

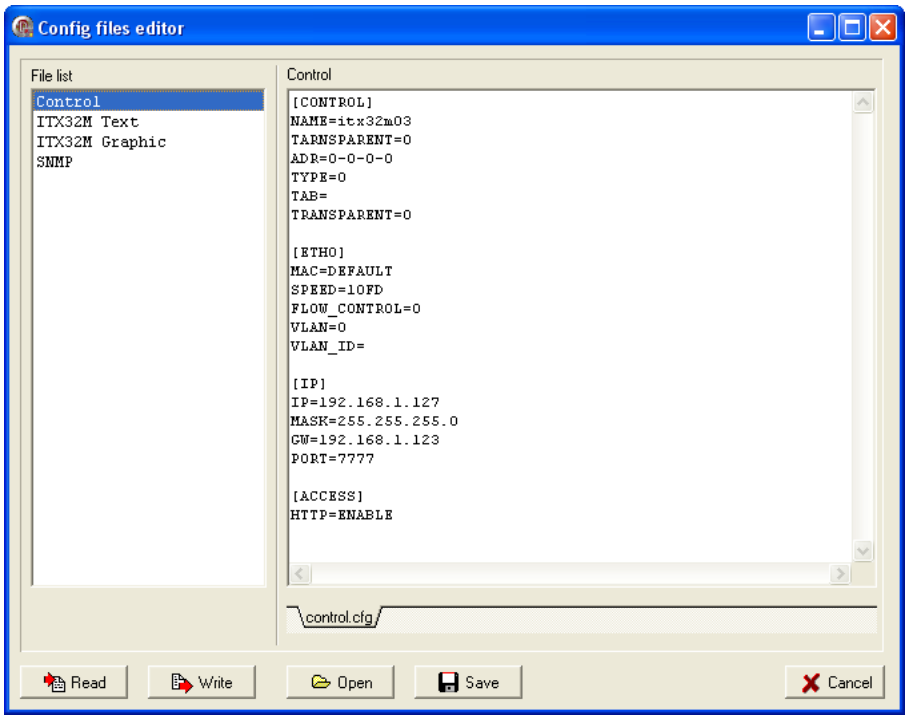
Config files editor

From main menu choose **Communication – Config files editor** or click on speed button  . There is a window displayed:



Here you can configure the device.

Control – double-click on Control displays **Remote control and IP/Ethernet settings**



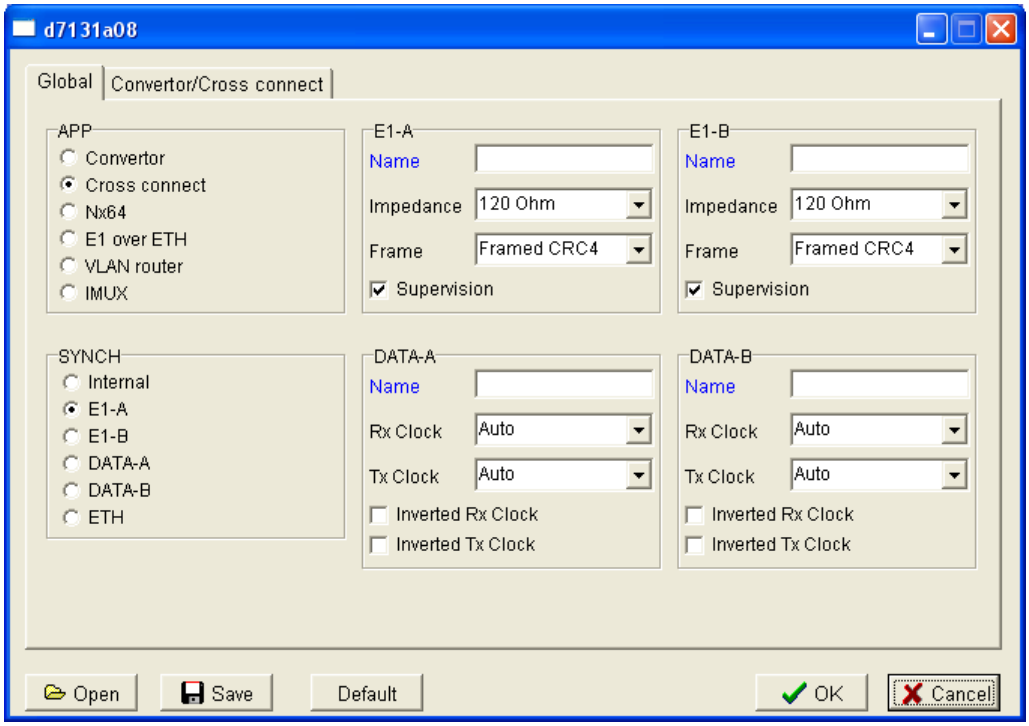
ITX 32 M Text – ITX32M settings in text form

```
#------------------ Configuration File for ITX32M ----------------------
# ITX47131.7
#-----------------------------------------------------------------------
[APP]
# TYPE - Type of Application
# CONVERTOR      (E1 - X21),  (E1HDLC - ETH)
# CROSS_CONNECT (E1/A - E1/B),  (E1 - X21),  (E1HDLC - ETH)
# NX64           (GE1/A   GE1/B   DATA1) -> DATA0(X21-Nx64)
# E1_OVER_ETH    (E1/A   E1/B) -> ETH
# VLAN_ROUTER    G_VLAN_A(ETH) -> HDLC_E1/A, G_VLAN_B(ETH) -> HDLC_E1/B
# IMUX           ETH -> E1/A   E1/B
#
```

For more information about available ITX32M functions/applications, please read the information in chapter 1. Product overview.

ITX 32 M Graphic – ITX32M settings in graphic form

Global – graphic form for settings of global parameters (for all applications)



APP - list of all functions/applications enabled for the specific device

SYNCH – synchronization
Internal – ITX32M is source of synchronization
E1-A/B, DATA-A/B, ETH – ITX32M will be synchronized to external source of synchronization

E1-A/B
Name – user-defined „names“ for E1 interfaces

Impedance – balanced 120 Ohm
- unbalanced 75 Ohm

Frame – unframed – transparent transport 2.048 Mbps
- framed - 31 optional timeslots, 16th timeslot is transparently transfered
- framed CRC4 – set in case „cooperative“ device requires it. CRC4 parameter can be set for each interface.

DATA-A/B

Name — user-defined „names“ for DATA interfaces

Rx clock – source of receiving clock
- Auto – external clock autodetection – data interface standard setting. If there is external clock, data will be received by external clock; otherwise data will be received by internal clock.
- Internal – data are received by internal data clock

Tx clock - source of transmitting clock
- Auto - external clock autodetection - data interface standard setting. If there is external clock, data will be transmitted by external clock; otherwise data will be transmitted by internal clock.
- Internal - data are transmitted by internal data clock

Inverted Rx clock – type of receiving clock, most often used for Long haul or substantial data delay

Inverted Tx clock – type of transmitting clock, most often used for Long haul or substantial data delay

Global – text form

```
[GLOBAL_PARAM]
# Global Parameters
# SYNCH - synchronization  [INTERNAL, E1A, E1B, DATA0, DATA1, ETH]
#
                //ETH only E1_OVER_ETH
# IMPEDANCE_E1A   - [75,120] Impedance E1/A
# FRAME_E1A       - [UNFRAMED, FRAMED, FRAMED_CRC4]
#
# RX_CLOCK_DATA0  - [AUTO,INTERNAL]
# INVERTED_RX_CLOCK_DATA0 - [ENABLE, DISABLE]
#
#

SYNCH=E1A

#---- E1/A ----
NAME_E1A=
IMPEDANCE_E1A=120
FRAME_E1A=FRAMED_CRC4
```

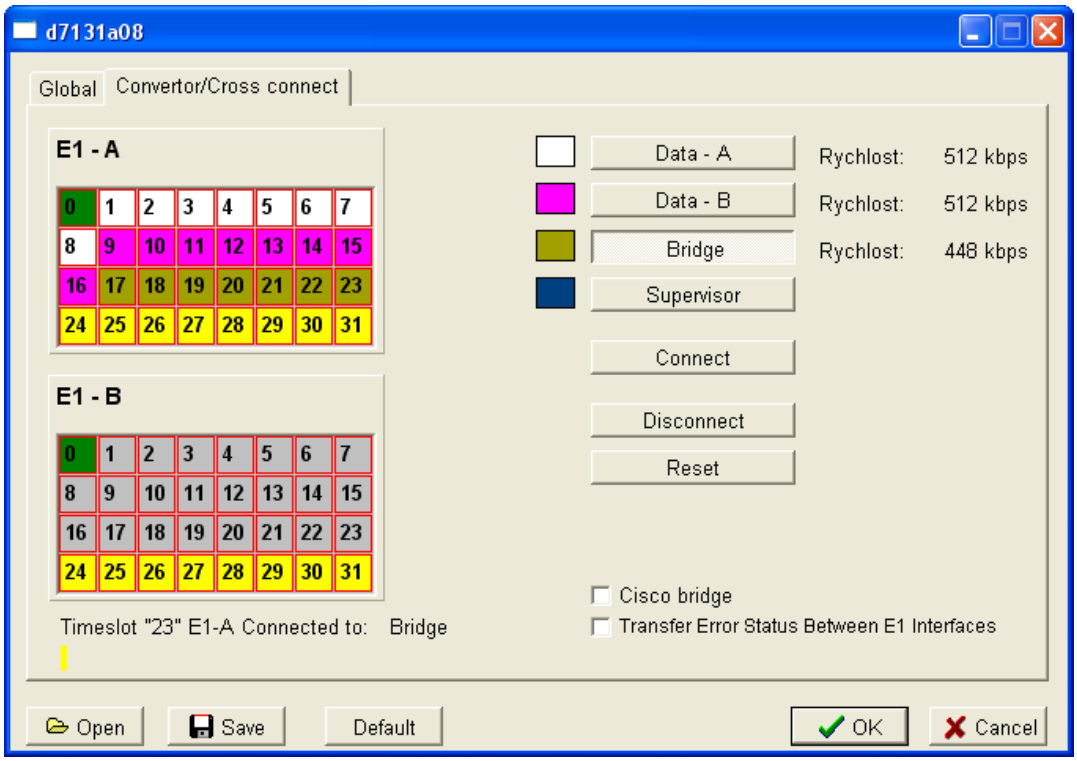
SUPERVISION_E1A=ENABLE

#---- E1/B ----
NAME_E1B=
IMPEDANCE_E1B=120
FRAME_E1B=FRAMED_CRC4
SUPERVISION_E1B=ENABLE

#---- DATA/A ----
NAME_DATA0=
RX_CLOCK_DATA0=AUTO
TX_CLOCK_DATA0=AUTO
INVERTED_RX_CLOCK_DATA0=DISABLE
INVERTED_TX_CLOCK_DATA0=DISABLE

#---- DATA/B ----
NAME_DATA1=
RX_CLOCK_DATA1=AUTO
TX_CLOCK_DATA1=AUTO
INVERTED_RX_CLOCK_DATA1=DISABLE
INVERTED_TX_CLOCK_DATA1=DISABLE
CISCO_BRIDGE=DISABLE

Cross Connect – graphic form



Data – A (Data –B)
How to assign data timeslots to E1 interfaces - click on **Data - A (Data – B),** then click on the target timeslots of target E1 (E1 – A or E1 – B) - data connection from data interface to the specific E1 interface will be set. Data transfer rate is displayed on the right, next to Data - A (Data – B) and is increased by the number of marked

timeslots in the crossconnection field. It is not possible to assign the same data timeslots to both E1 interfaces.

Bridge
Click on **Bridge,** then click on target timeslots of E1 – A or E1 – B interface – timeslots will be connected. Data transfer rate is displayed on the right, next to Bridge.

Supervisor
For device supervision it is necessary to set Supervisor timeslot by click on **Supervisor** and selected E1 timeslot.

Connect
Click on this button and then on timeslot in E1 – A (or E1 – B) and on target timeslot of E1 interface – these two timeslots will be crossconnected.

Disconnect
Click on selected timeslot to disconnect the connection which was already set.

Reset
All settings will be removed.

Timeslots are standardly differed by colour:

White – Data - A
Purple – Data – B
Khaki – Bridge
Blue - Supervisor
Yellow – crossconnected timeslots
Grey – unspecified timeslot

Cross connect – text form

```
CROSS_CONNECT CONVERTOR
[CROSS_CONNECT]
# GA0,GA1,GA2,GA_HDLC Groups for E1/A
# GB0,GB1,GB2,GB_HDLC Groups for E1/B
# DATA0 DATA/A
# DATA1 DATA/B
#
# CHANNELS 0..31
# SYNTAX: GA0=1,2,3,16  or GA0=<1-3>,16
#
# CON0,CON1,CON2  CONNECTIONS
# SYNTAX: CONx=GA0-GB0 or CONx=GA0-DATA0
#
# TRANSFER_ERR - [ENABLE, DISABLE] Tranfer Error Status Between E1

#--E1/A--
```

GA0=<1-8>
GA1=<9-16>
GA2=
GA_HDLC=

#--E1/B--
GB0=
GB1=
GB2=
GB_HDLC=

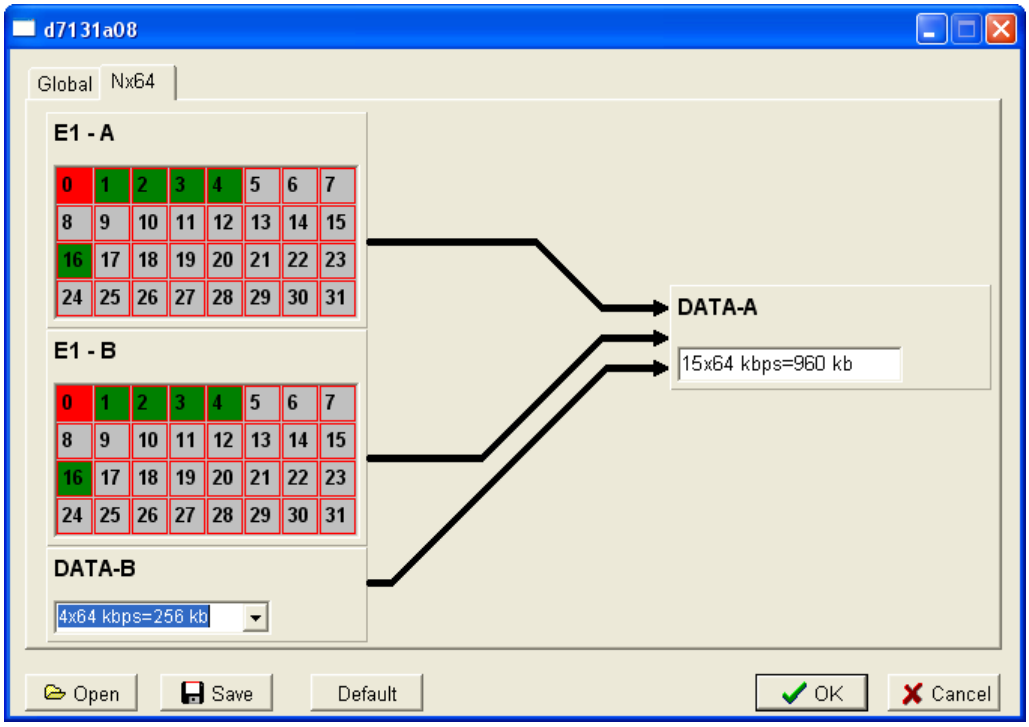
CON0=GA0-DATA0
CON1=GA1-DATA1
CON2=

TRANSFER_ERR=DISABLE

Note :
Graphic form does not allow user to set the groups of timeslots in E1 interface. To create the groups, use text form to set them. .

```
#--E1/A--
GA0=<1>
GA1=<2>

#--E1/B--
GB0=<1>
GB1=<2>
```

Nx64 – graphic form



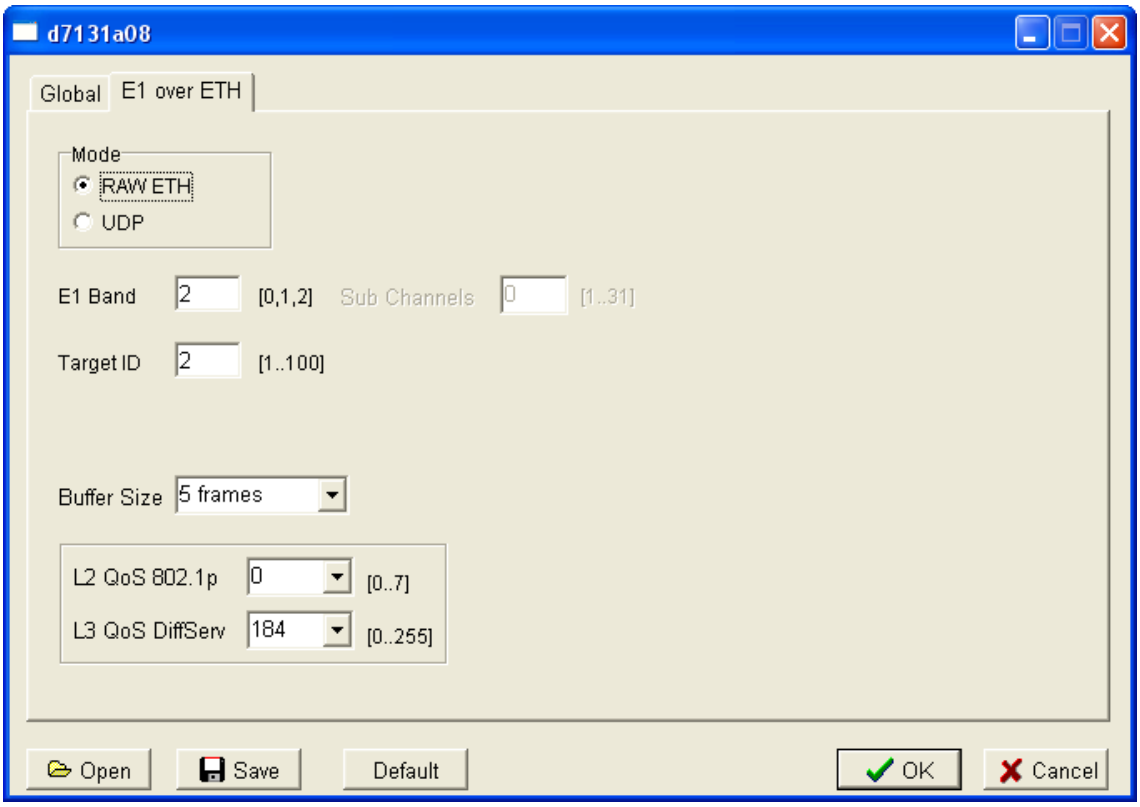
In this application, ITX32M is used for connection of two devices via synchronous interface. ITX 471 31.7 can be connected only via X.21-A interface. X.21-A port is limited by max. transfer capacity 31x 64kbps (1x 64 kbps is always assigned for transfer of synchronization data).

NX64 – text form

```
[NX64]
#
# GA0 Group for E1/A
# GB0 Group for E1/B
# SPEED_DATA1 [n=0..31] Speed=n*64 kbps
# DATA0 DATA/A Nx64 Interface
# DATA1 DATA/B Standard Data Interface
# GA0 GB0 DATA1 <= 31 Channels

GA0=<1-4>,16
GB0=<1-4>,16
SPEED_DATA1=4
```

E1 over Ethernet – graphic form

In this application, ITX32M allows transparent connection of E1 interfaces over Ethernet.



Mode
RAW ETH – used in local network or if VLAN tunnel is made. Devices are detected according to their ID.
UDP – this application can be used also in broad network and for routing to specified IP address.

E1 Band – number of active E1 interfaces

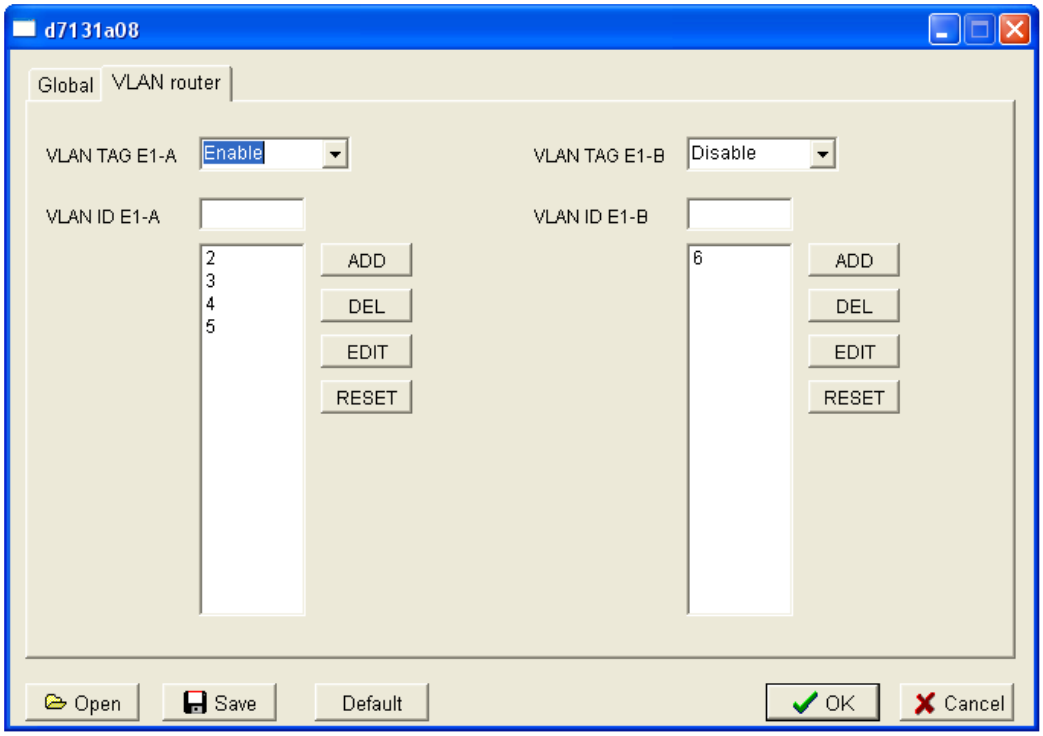
Target ID – ID number of a pair of devices (both devices of one pair have the same ID)

Buffer size – possibility to adjust buffer size (2, 5, 10 frames). For voice transfer, it is recommended to use 5 frames or less.

E1 over Ethernet – text form

```
[E1_OVER_ETH]
# MODE      [RAW_ETH,UDP]
# TARGET_ID [1..100] ID for Two Equipments  (MODE=RAW_ETH)
# E1_BAND   [0,1,2] No of E1 Interfaces
# SUBCH (If E1_BAND=0) SUBCH=(1..31)
FRAME_E1A=FRAMED/FRAMED_CRC4
# TARGET_IP (IP address x.x.x.x)  (MODE=UDP)
# BUFFER_SIZE (2,5,10 Frames) default 5
# L2QOS [0..7] Layer 2 QoS 802.1p priority value (default 0)
# L3QOS [0..255] Layer 3 QoS DiffServ (default 184)

MODE=UDP
E1_BAND=2
TARGET_ID=2
SUBCH=0
TARGET_IP=10.10.4.2
BUFFER_SIZE=5
L2QOS=0
L3QOS=184
```

VLAN Router – graphic form



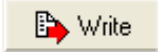
In this application, device is used for routing from Ethernet interface to E1-A or E1-B interface based on VLAN ID.

VLAN TAG E1-A/B – enable/disable to transfer VLAN tag.
VLAN ID E1-A/B – list of ID VLAN which are routed to E1-A/B

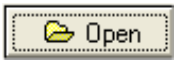
VLAN Router – text form

```
[VLAN_ROUTER]
# VLAN_TAG_E1A  [ENABLE,DISABLE]
# VLAN_ID   if VLAN_TAG_E1A=ENABLE  [1,2,..,16]  max 16 Vlans ID (1..4094)
#          if VLAN_TAG_E1A=DISABLE VLAN ID = one Vlan (1..4094)
#

VLAN_TAG_E1A=ENABLE
VLAN_ID_E1A=2,3,4,5

VLAN_TAG_E1B=DISABLE
VLAN_ID_E1B=6
```

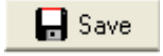
- read config files from device



- write modified config files to device



- open existing config file

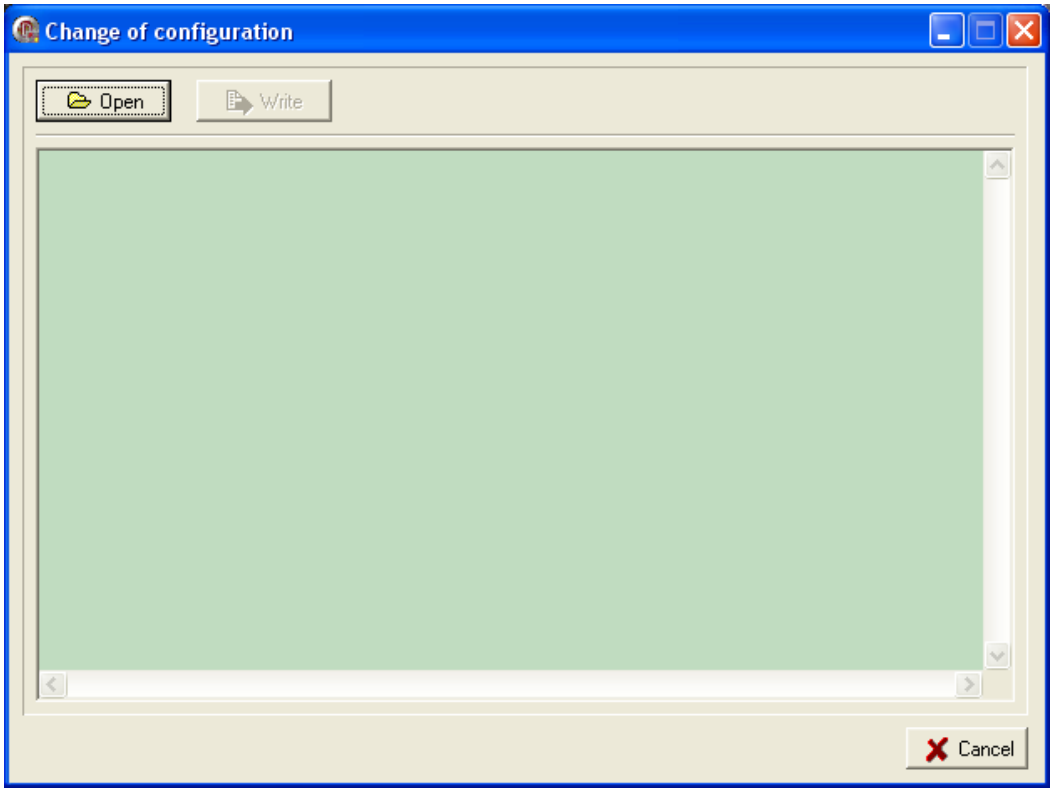


- save config files to *.txt file

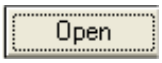
- quit window

Change of configuration

Main menu **Communication – Change of configuration** or click on speed button  . This window will be displayed:



It is possible to enable/disable the functions of ITX32M (for each function, a licence is necessary). This operation can be performed with *.zkf file generated by producer Inoteska s.r.o.

Click on 

to find a file for changing the configuration and then 

to write new configuration to device. New device configuration will be displayed in **Identification** window. Click 

to quit the window.

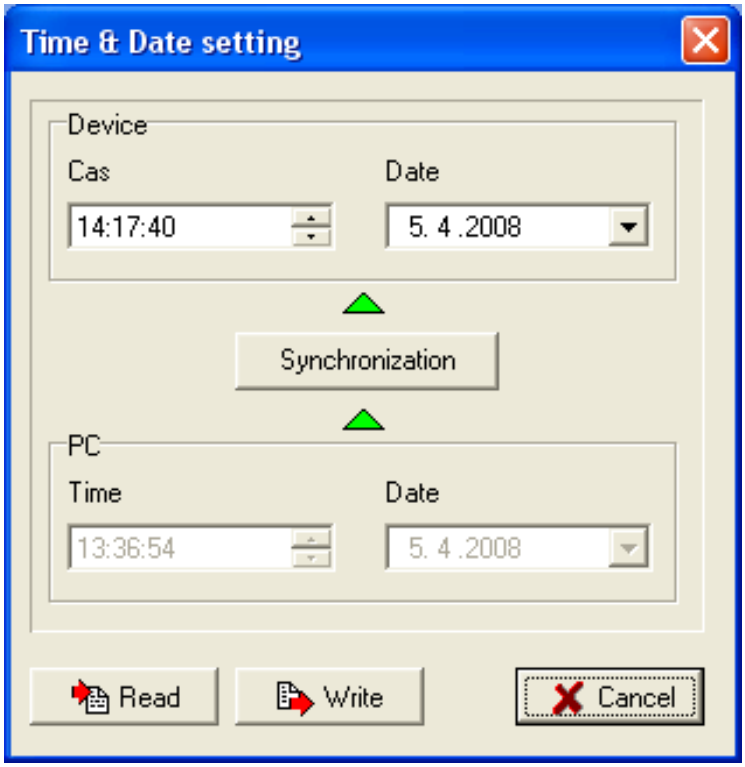
How to order:

The device's basic configuration can be changed by ordering a new configuration from Inoteska.

Specify:
- Device's serial number
- Requested configuration

Time & Date setting

Choose from main menu **Communication – Time & Date setting** or click on speed button  . Following window will be displayed:



Here you can set **Device** and **PC** time&date or click 

to synchronize these settings.

Click on 

to read settings from device and 

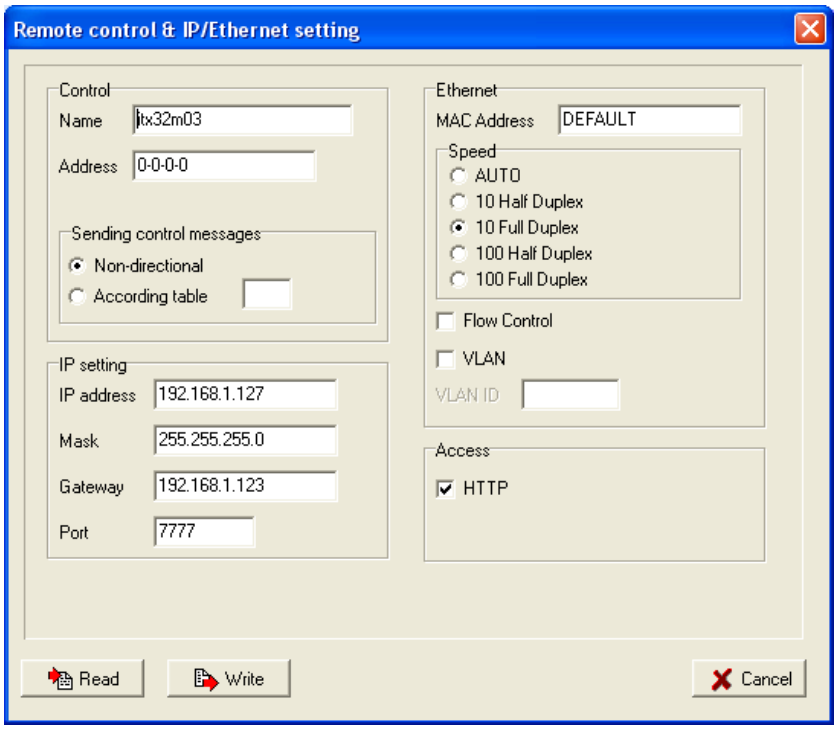
to write new settings to device.

Click 

to quit the window.

Remote control and IP/Ethernet setting

Main menu **Communication – Remote control_IP/Ethernet setting** or click on speed button  . There will be a window displayed where you can set TCP/IP parameters for communication with device.



Control
Name, Address – device name and address
Sending control messages
Non-directional
According table

Ethernet
MAC address, Speed – ethernet settings
Flow Control – control frames transmit when device buffers are overflowed
VLAN – VLAN ID – device will expect remote control through VLAN set

IP setting
IP address, Mask, Gateway, Port – IP settings

Access
HTTP – allow/disalow of HTTP access

Click on 

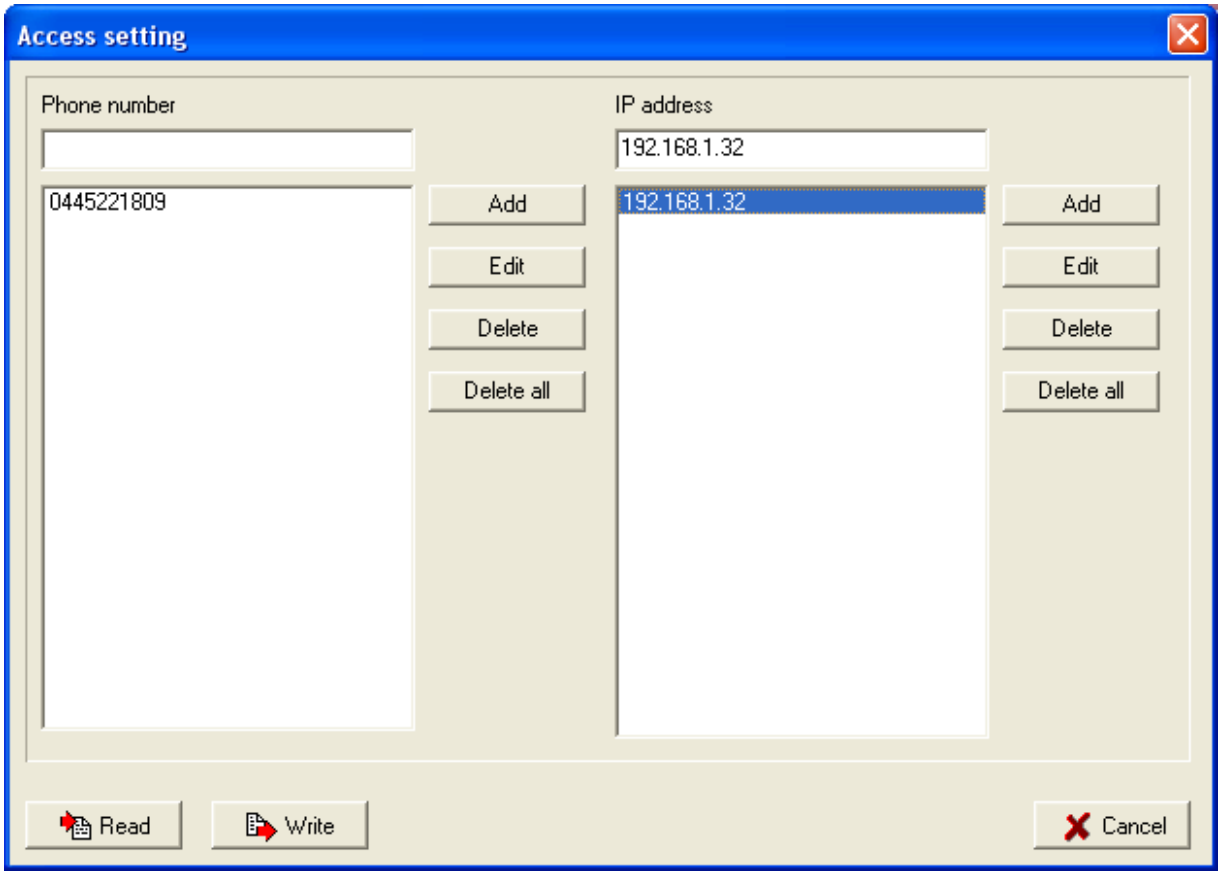
to read settings from device and 

to write new settings to device. Click 

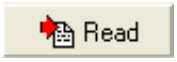
to quit the window.

Access setting

From main menu choose **Communication – Access setting via remote control** or click on speed button  .



These settings allow to set the access parameters for remote control – **Phone number** and **IP address** authorized to communicate with device.

To edit the list of phone numbers/IP addresses, use the buttons on the right side of each list. Click on 

to read access setting via remote control from device and 

to write new settings to device. Click 

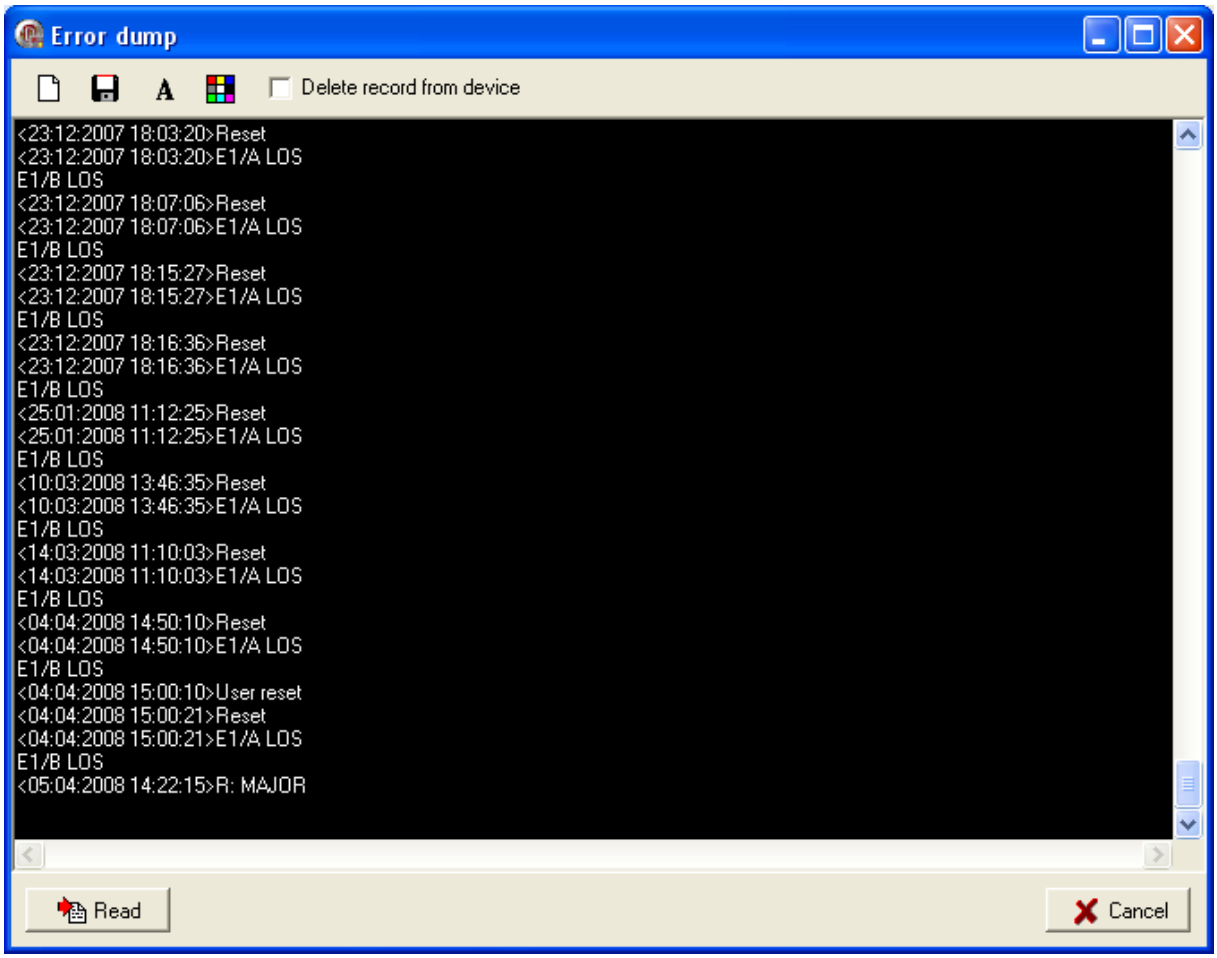
to quit this window.

Error dump

Choose from main menu **Communication – Error dump** or click on speed button . History of device main errors will be displayed – reset, drop-outs, ...

If you wish to clear the window, click on and then click on Read to read data from device. User can define text format and background color . Data can be saved to a file by click on .

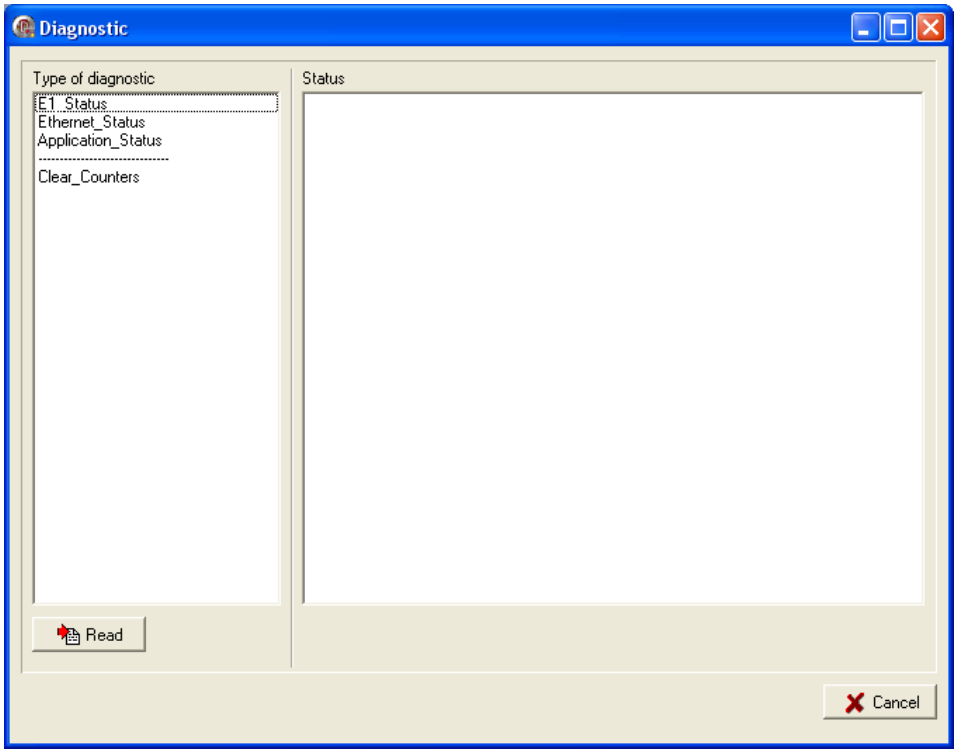
To **delete record from device,** activate this option in the top part of window.



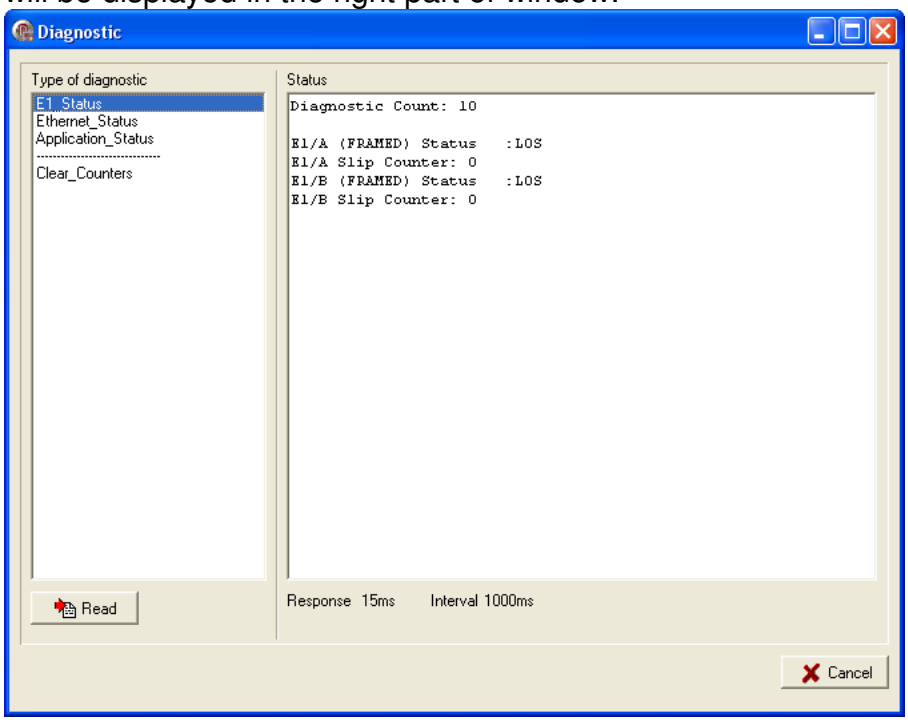
Click Cancel to quit this window.

Diagnostic

There is a real status of each interface displayed. From main menu choose **Communication – Diagnostic** or click on speed button  .



Then double click on the item from the list in the left part of window – its diagnostic will be displayed in the right part of window.



E1 status

Loss of Signal LOS – detects loss of signal on link level - E1 interface is not connected.

Alarm Indication Signal AIS – transmitted signal is constant and data contain value Log1.

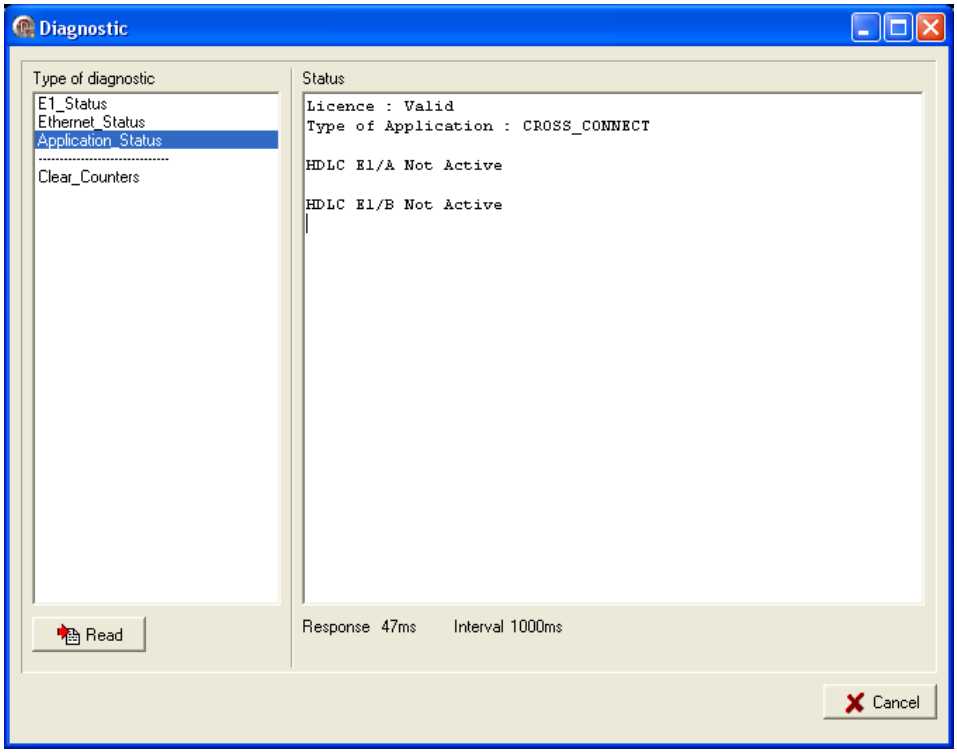
Loss of Frame Alignment LFA – indicates synchronization error in 0^{th} timeslot.

Receive Remote Alarm RRA – indicates remote device alarm (error - loss of signal).

Slip Detection Indicator SDI – indicates positive slip if device clock has higher frequency than the clock signal received, and negative slip if device has lower frequency clock .

Ethernet status – status of Ethernet interface

Application status – displays the information about Type of application (device function) which is currently used



Clear counters – clears the counters in diagnostic

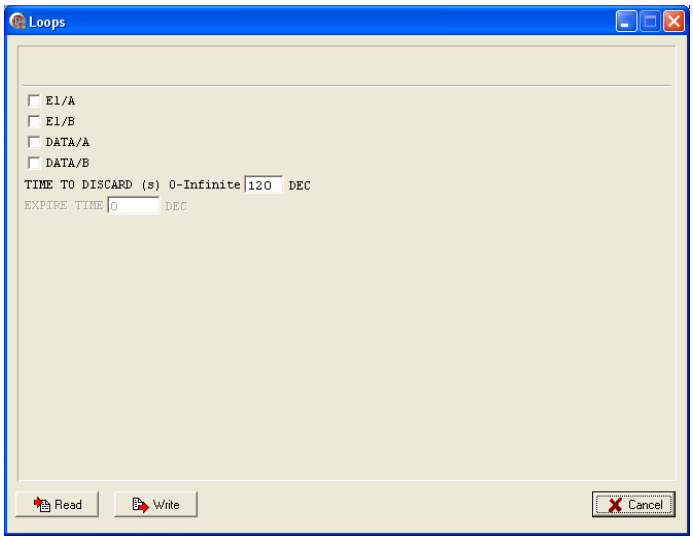
Click Cancel to quit Diagnostic window.

Listing messages

Device does not support this function.

Loops

Click on speed button  .



It is possible to create SW loop for each E1/DATA interface (SW connection of receive with transmit).

Time to discard and **Expire time** can be set.

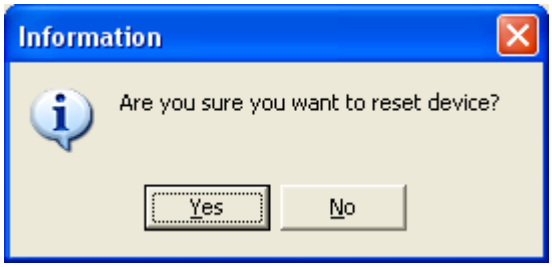
Service functions

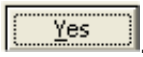
Device does not support this function.

Reset

If you want to reset the device, then choose from main menu **Communication – Reset** or click on speed button 

. Prompt is displayed:



For device reset, confirm by click on 

.

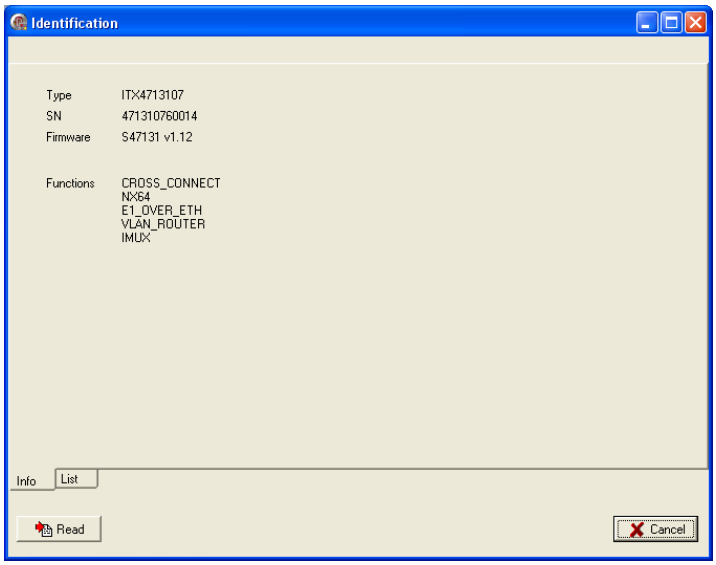
Delayed reset

Device does not support this function.

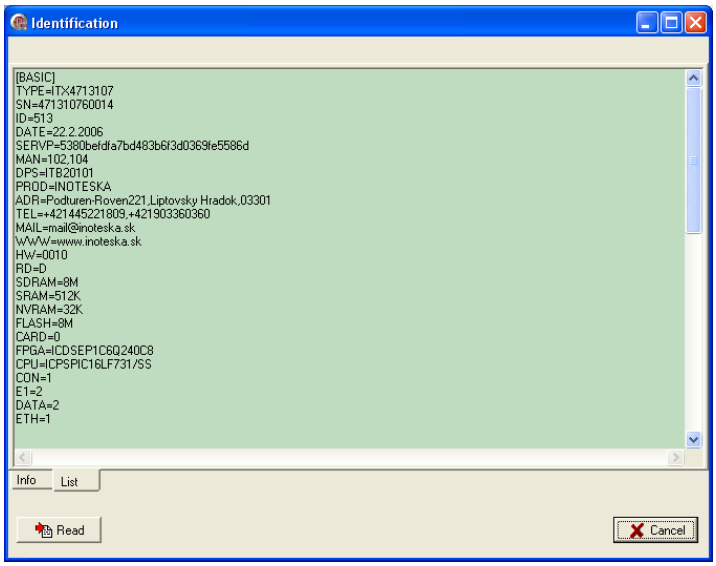
Identification

To find out HW information about device, choose from main menu **Communication–Identification** or click on speed button  .

Info



List



Note:
Configuration SW does not allow to change HW configuration (e.g. number of activated E1/x.21, UDI interfaces, activation of multiplexer functions, ...).

About configuration SW

Main menu **About** - information about configuration software will be displayed.

4. SALES CONDITIONS

Warranty:
Product warranty period is 24 months from the date of delivery or installation. Warranty does not apply in case of an accident, handling by a non-professional or improper use or force majeur.

Delivery:
Standard delivery time is max. 6 weeks from the signing of the purchase order or after mutual agreement.

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