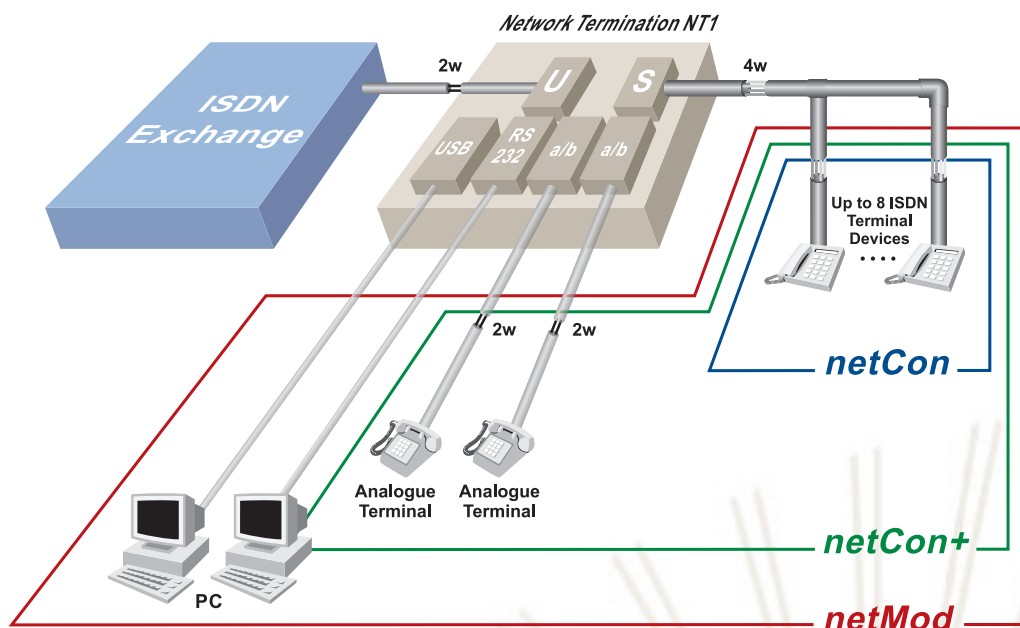**INTRACOM**

ISDN
NETWORK
TERMINAL

netMod

Network access products have been developed by INTRACOM in order to provide high quality ISDN services and high-speed Internet access, allowing also existing analogue devices to work over an ISDN connection. A Network Termination Management System guarantees the high performance of the NTs providing remote management, configuration and firmware upgrade.

The network access products series consists of the following products:

◆ netCon which provides S-Bus interface (up to 8 ISDN sets),

◆ netCon+ which provides S-Bus interface (up to 8 ISDN sets) and 2 analogue (a/b) interfaces providing all the ISDN services,

◆ netMod, an enhanced version of netCon+ providing also two data ports for high speed data communication through PC connection.

Network Termination NT1

2w

U   S

4w

ISDN
Exchange

USB   RS
232   a/b   a/b

Up to 8 ISDN
Terminal
Devices
• • • •

2w   2w

netCon

Analogue
Terminal   Analogue
Terminal

netCon+

netMod

PC

netMod is an advanced type of ISDN NT, which provides an S-Bus (offering connection to up to eight ISDN terminals), two analogue (a/b) interfaces and two data ports for high-speed data communication through an RS-232 and/or a USB connection. The data protocols supported are PPP and ML-PPP, providing dynamic allocation from 64Kbit/sec to 128 Kbit/sec. Updated services, customer's specific requirements and new features, such as AO/DI, can be implemented even after the on site installation via remote or local firmware download.

Features

- ISDN Basic Access Provision
- Two analogue (a/b) interfaces available
- Up to eight ISDN terminals connected to the S-bus
- Data communication (up to 128 Kbit/sec) through an RS-232 and /or USB connection
- Emergency operation mode for an ISDN or POTS or data port remotely powered from the local exchange via the U-line
- BAP/BACP protocols supported
- AO/DI functionality for "always-on" connection through D-channel with dynamic bandwidth allocation according to services
- Network Management System capability

netMod

Technical Specifications

U-Interface

Requirements	according to ETSI ETR 080
Carrier	copper twisted pair
Line code	2B1Q
Bit rate	160 kbps
Net bit rate	144 kbps
Range	according to ETSI ETR 080
Bit error rate	$<10^{-7}$

S-Interface

Requirements	According to ETSI 300 012 and ITU- I.430
Carrier	4-wire passive bus
Line code	AMI
Bit Rate	192 kbps
Range	1km (point to point) 200m (short passive bus)

Analogue Interfaces

Transmission	According to ITU-T Q.552
Metering	12/16 kHz or reverse polarity (optional)
Dialing	DTMF
Voice encoding	A-law
VF output level	-7 dBr
VF input level	0 dBr
Line Termination Impedance	600 Ohm (complex optional)
Subscriber loop current	≥20 mA
Subscriber loop range (including telephone set)	600 Ohm
Ringing Voltage	≥40 VRMS
Ringing Frequency	25 Hz (50 Hz optional)
CLIP service according to	ETS 300 089,ETS 300 659-1, V.23 signalling

Data Interfaces

RS-232 Interface	V.24
USB Interface	USB 1.1

Indicators

LED Indicators (depending on model)	M.P., R.P., LINK, B1, B2, USB

Power Requirements

Normal Operation	Local from 230 VAC, 50 Hz
Emergency Operation	Remote power feeding via U-line for one ISDN or a/b or data port
U-line input Voltage	30V to 115V
S-bus output Voltage	35,6V typical
Power feeding to S-bus	4,5W in normal operation, 420mW in emergency mode

Environmental

Operating Temperature	-5°C to 45°C ETS 300 019-2-3 Class 3.2
Humidity	Up to 95% RH,0°C to 45°C
Safety and Protection	In compliance with EN 60950 +A1/A2/A3/A4, ITU-T K22, ITU-T K41, ETS 300 047

Electromagnetic Compatibility and Interference (EMC/EMI)

Emission	En 550 22 Class B
Immunity	EN 500 82-1 and ETS 300 386-2

Specifications are subject to change without any prior notice.

INTRACOM

INTRACOM S.A. HELLENIC TELECOMMUNICATIONS & ELECTRONICS INDUSTRY

Markopoulo Ave., 190 02 Peania, Athens, Greece ● Tel: +30 210 6679000 ● Fax: +30 210 6679001 ● www.intracom.gr

BVQi
ISO 9001