



Only Instant Information Creates the Knowledge

- Cooperation of VoIP, POTS, GSM and ISDN networks
- VoIP trunk with SIP protocol
- Up to 5 ISDN PRI trunks in one equipment
 - Up to 75 ISDN BRI trunks
 - Up to 72 analog FXO trunks
 - Up to 424 extensions
- Complete range of digital key-phones and IP phones
- WEB CTI services

Wireless
Modules
by Siemens
embedded




2N NETSTAR

2N NetStar

Communication System

Only Instant Information Creates the Knowledge

2N NetStar is an IP PBX of a new generation. It works both like a classic digital switchboard and VoIP softswitch, which allows to utilise such interfaces as analog, ISDN BRI, ISDN PRI, and VoIP ones. These features are not provided as separate telecommunication solutions but as a single integrated compact system. The switching capacity is sufficient for large corporate customers or carrier operators. The transmission between individual networks is solved by the powerful and dynamic Least Cost Router (LCR). The LCR system always chooses the cheapest communication way for the requested end-point interconnection. Thanks to all important Internet protocol integration capacities, the system is able to modify call routing based on information from remote databases. This guarantees number portability between all connected networks. NetStar offers full support of SMS transfer to the IP network using the SMTP. The GPRS function is useful for remote control and diagnostics. Configuration and system administration are easy and familiar to all computer users thanks to the WEB access. A detailed recording of all system activities is a matter of course. All records are interpreted in the form of reports and statistics. User control or communication capacities are not affected by the communication technology applied. Another important benefit is the web based and user friendly configuration. Thanks to the user friendly configuration of the web interface, there are no special knowledge demands for the NetStar Communication System user. The unit is managed via a combination of web access and voice wizards. The key – phone administration is supported by a context menu of available services. Every user can simply change his user profile settings. The profiles can be created by the system administrator or user with the aid of software wizards.



2N NetStar Communication System

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WWW management

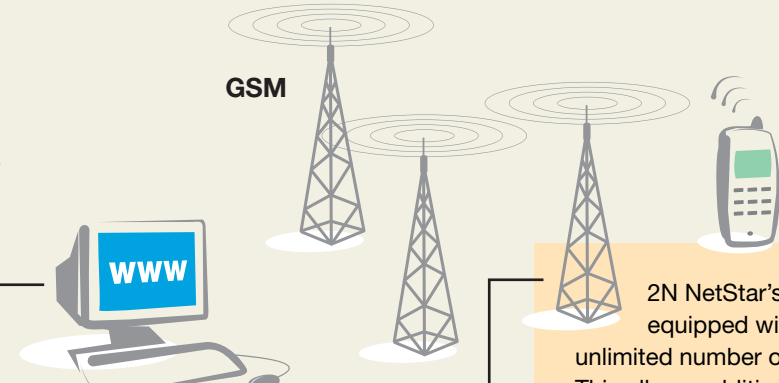
The built-in, full-featured WWW server supports all system maintenance tasks. It is also used for statistics and operative information presentation and for synoptic user account management. The whole system becomes a part of the familiar network equipment, which tends to lower administration costs significantly.

VoIP

The key network function of 2N NetStar is its IP phone support. The number of connected IP phones is mostly limited by the media stream processing power for transition between the IP and TDM parts of the switch. It can be scaled from 4 LBR channels in the basic configuration up to the full system capacity of hundreds of channels with an additional gateway card. The physical quantity of connected IP phones depends only on the software license and data network capacity. Moreover, the cabling of IP devices is much simpler than the TDM as it requires no separate wire from the switch to every phone.

WWW:
 - Management
 - CTI
 - CRM

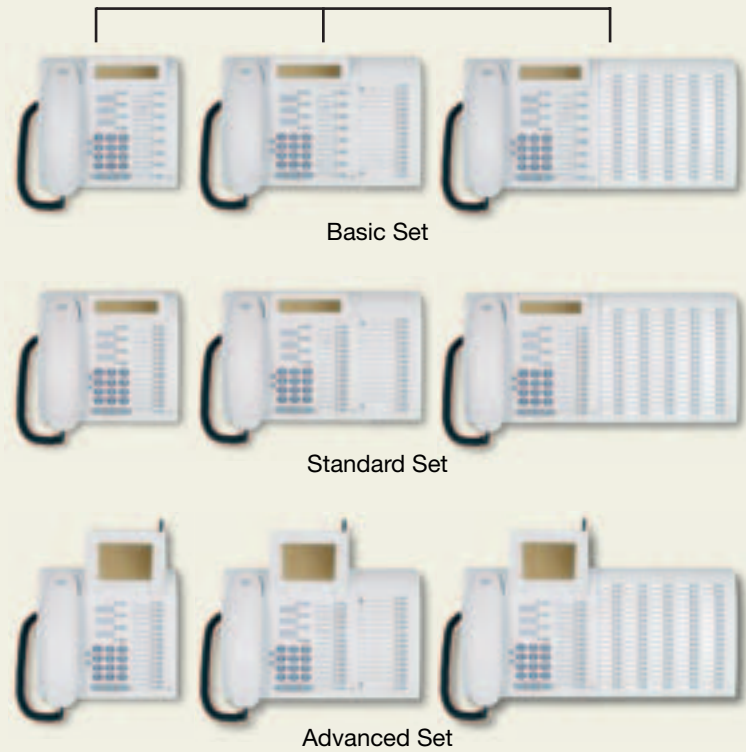
VoIP Phones



2N NetStar's modules can be equipped with an almost unlimited number of GSM cards. This allows additional cost savings and user availability. The incoming call can be routed according to the caller's number or additional digits entered.

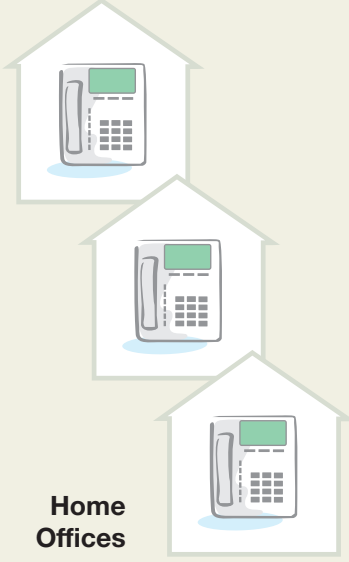
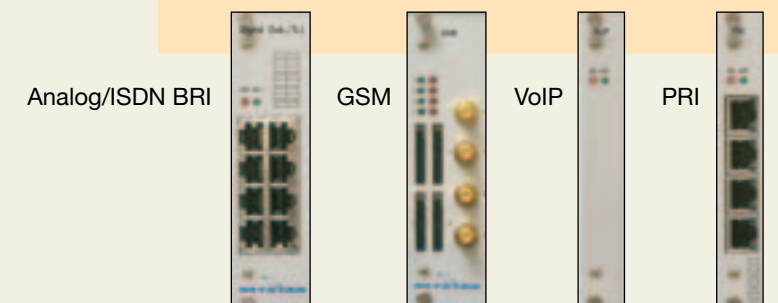
The 2N NetStar switch is not only a standalone product. You can purchase a product line of telephones developed to make use of all functions of the system. These functions are guaranteed for both ISDN and IP/Internet interfaces. This requires proprietary extensions of existing protocols.

Digital Terminals (IP, ISDN, Key Phones)

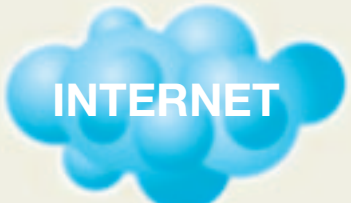


TRUNKS

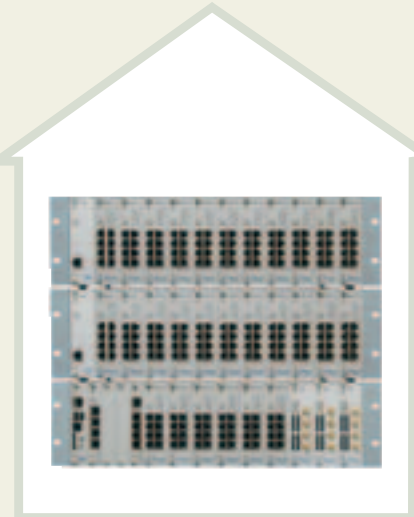
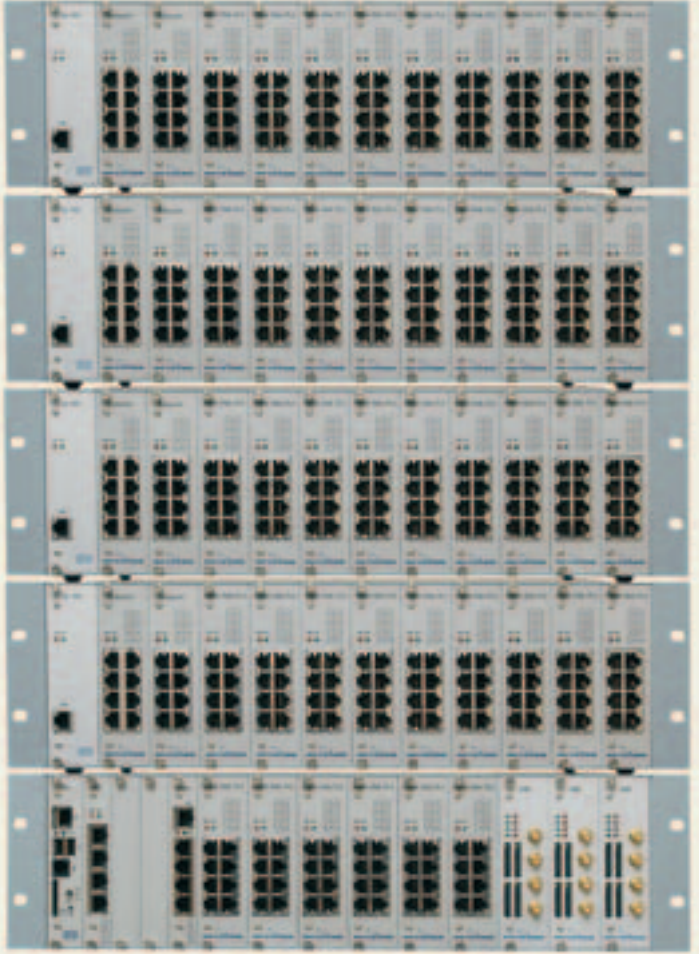
As an interface to public switched networks (PSTN), NetStar offers up to **5 ISDN PRI** ports. You can also use up to **72 ISDN BRI** or up to **72 analog FXO** ports with an emergency backup switch to FXS.



Home Offices



LAN



Remote Office



Remote Management

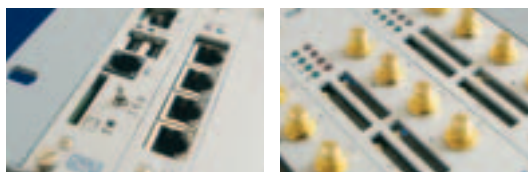
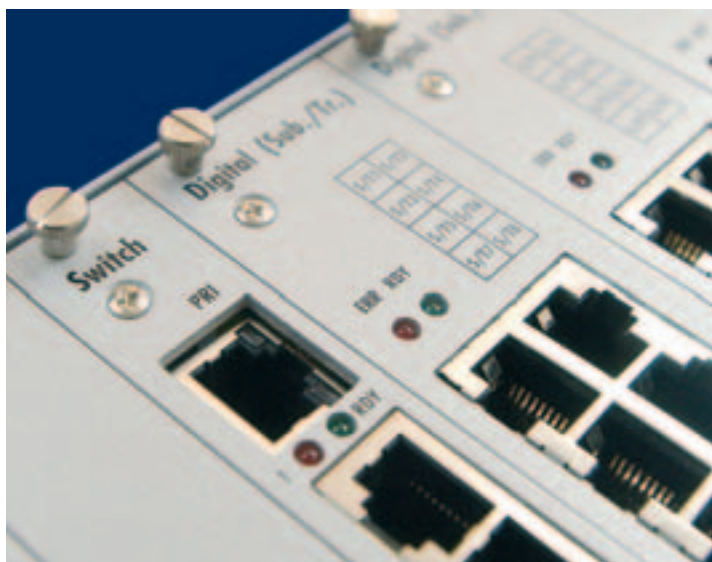


2N NetStar

Communication System

Features:

- Up to 5 ISDN PRI interfaces
- Up to 72 ISDN BRI trunks
- Up to 72 analog FXO trunks
- Up to 424 analog extensions with CLIP displays
- SIP protocol for VoIP
- VoIP board
- Powerful and efficient Least Cost Routing (LCR)
- External support of number portability database
- Almost unlimited number of GSM channels with shut down function
- Direct SMS support via SMTP protocol
- 100BaseT LAN interface
- Call detail records/statistics with large storage capacity and WEB access for summary support
- GPRS for remote control support
- Secure WEB based configuration and maintenance with integrated SNMP agent
- Easy and quick installation



This project was implemented with the aid of public funds through the Ministry of Industry and Trade.

Technical Parameters

ISDN PRI	
Number of ports	1 to 5 NT or TE
Synchronisation	master/slave
Connection	RJ-45
Signalling	DSS1 (Q.931)
ISDN BRI	
Number of ports	8 to 72 ports (step 8) extendable by 4x 24 ports in each additional box
Type of ports	selectable S0 LT-T/LT-S, or UPN
Connection	RJ-45
Signalling	DSS1 (Q.931), Q-SIG
Analog	
Number of ports	8 to 72 ports (step 8) extendable by 4x88 ports in each additional box up to full line card capacity
Type of ports	4 FXO with back-up to FXS (step 4+4) 8 FXS with CLIP display
Connection	RJ-45
Signalling	loop start, DTMF/P-dec., CLIP (DTMF, FSK Bellcore, or BT V.23), back-up to FXS in the case of system failure
GSM	
Number of ports	up to full line card capacity (step 4)
Network type	GSM phase II 900/1800 MHz or 850/1900 MHz
Transmitted power	2 W
Receiver sensitivity	-104 dBm
SIM card	Small plug-in, 3 V
Data transfer	GPRS for remote maintenance (1 channel)
Antenna connection	FME (male) Impedance 50 W
Antenna	small dual band discreet antennas or high gain YAGI with optional splitter

LAN	
Number of ports	1 or 2
Standard	100baseTx (100 Mb), 802.2
Connection	RJ-45
Protocols	IP, UDP, RTP, RTCP, TCP, TFTP, SNMP HTTP, HTTPS, SMTP SIP, SCP XML, SQL, TAPI
Remote/local control	
Ports	2x USB1.1, RS232 115k2, LAN, GPRS
Protocols	SNMP, HTTPS on LAN or GPRS
Mains	
Power supply	90-260 V 50-60 Hz /150 W each box
Back-up	standard line sensitive UPS
Dimensions	
System	19" rack mounted 4x extendable box with 3U step, or free standing box
Basic unit	482x133x310 mm (84HPx3U)
Extension unit	482x133x310 mm
Weight	12.5 kg
Environmental conditions	+5 °C to +50 °C, relative humidity max 95 % at 40 °C no condensing
Certification	
CE	EN 60 950:2000, EN 55 024, EN 55 022 Class B