DGT

NetCRR2

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Digital call recorder

Capacity:
- Maximum number of the recorded channels per one unit - 128.

Operation mode:
- High-impedance – parallel line connection
- Terminal – adjustable impedance
- Regenerator – cutting of line (U interface)
- on dedicated port (i.e. SpanPort, dedicated E1)

Port types:
Digital ports:
- E1 - G.703 (terminal mode), G.704 (terminal tap mode)
- E1 – nx64 kbit/s
- ISDN BRA S0
- U interface to system sets

Analogue ports:
- FXS, FXO, E&M, radio

VoIP ports:
- Ethernet 10/100/1000 Mbit/s

Signaling:
Signaling outside bandwidth:
- DSS1
- Analog
- Non-standard signaling of the following manufacturers: DGT, SIEMENS, AVAYA

Signaling in bandwidth:
- DTMF, FSK, selective dialing

Decoding tones and signals in bandwidth:
- Modem and fax carrier signal (fax visualization)

VoIP signaling:
- H.323, SIP, MGCP, SKINY (SCCP), IPCC

Recording parameters:
Compression:
- G.711 - Alaw
- G.729
- G.722
- G.726 32/16 kbit/s (ADPCM)

Trigger/stop criteria:
- VOX, Signaling, Manual, DTMF, RTP

Trigger times [sec]:
- -20 ÷ +20

Gain – level of recording [dB]:
- -20 ÷ +20

Call buffer:
- from 4 ÷ 70 000 hours of recording with compression, standard 15 000 hours (500 GB disc)

External ports:
- 2 x Ethernet 10/100/1000 Mb/s
- USB 2.0

Operating system:
- Linux

Dimensions:
Physical dimensions [mm]:
- Width 483 mm (19'')
- Depth 357 mm (14,1'')
- Height 88 mm (3,5'')

Net weight:
- up tp 6 kg

Operating conditions:
Power Supply voltage:
- 230 V
- 48 V

Power consumption:
- up to 300W (in full configuration)

Operating temperature:
- +5°C ÷ + 40°C

Humidity:
- up to 80 %

Minimum requirements of operator's computer:
- Celeron 1 GHz processor
- 512 MB RAM
- 100 MB of free space on HDD disc
- Windows XP/Vista/7 32/64 bit operating system
- Sound card and loudspeaker
- 10/100/1000 BaseT network interface controller
- backup disc for archiving purposes (optional)

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Technical specification:

Safety and reliability – high quality components and doubled key elements of the recorder

Remote management - re-configuration possible during the unit's operation

System may be easily expanded by building a network of recorders (distributed and centralized systems)

Integration with external software using CTI and ActiveX mechanisms

NetCRR2 call recorder succeeds the popular NetCRR recorder introduced in 2005. The unit records phone, fax, modem calls and enables saving important technical information related to these calls (i.e. The calling subscriber number) as well as call time and date. Calls may be recorded in various environments - most commonly in telephone exchanges, VoIP systems, GSM gateways, dispatch consoles, radio stations and radiotelephones.

The NetCRR2 recorder is often used by rescue, emergency medical services, crisis centers, law institutions, etc. The recorders are also indispensable in institutions where calls are an important part of their work such as financial institutions, banks, brokerages, poll centers, telemarketing centers, dispatch centers, etc.

Calls are automatically recorded, however some recording parameters have to be configured. Recorder operation me be handled using "NetCRR Center" software packet delivered with the unit and installed on the operator workstations – PC computers with Windows XP/Vista/7 operating system. LAN/MAN/WAN network is used for communication between NetCrr2 and operator workstation. One operator workstation may manage a group of connected recorders.

The recorder has a multi level system of protection ensuring safety of collected recordings and information. These may be accessed from the operator workstation and via encrypted WWW connection. The system administrator defines the operator's rights.

In comparison to its predecessor, NetCRR2 have been modified on both the hardware and software levels. The most important changes introduced along with the new platform include:

- recording of VoIP channels with H.323, SIP, MGCP, SKINY (SCCP) or IPCC signaling
- expanding the number of the recorded channels per unit to 128
- integrating VoIP and TDM recording in one unit – apart from recording VoIP calls, the new platform keeps all the features of recording standard TDM interfaces used in NetCRR
- using FLASH drives as a standard solution for the installation of NetCRR2 operating system proves additional safety of the recorded calls
- Possibility to use discs of different capacity depending on the client's needs – recording more than 60 thousand hours of calls is possible on 2TB discs
- mirroring – calls are recorded on two independent hard drives - thus the safety of the archived calls is higher. Additionally, the discs are located in HotSwap type HDD sled and thus they may be quickly replaced while the system's operation is continued
- built-in DVD recorder – a user may automatically archive calls from the level of the unit
- NetCRR2 hardware platform may be easily and quickly modified to meet the client's individual needs or updated along with the introduction of new technologies. The unit's efficiency can be tailored by installing different capacity hard drives, redundant power supplies or performing CPU upgrades without the need to update the entire platform.
- Installed power supplies depend on the client's needs – they may support 230VAC or 48VDC
- redundant power supply may also be installed
- management and play-back of the recorded calls can be performed via WWW user interface.

Recording phone calls, fax and modem on analogue FXS, FXO, E&M lines, digital ISDN 2B+D, ISDN 30B+D, digital lines of different manufacturers, radiostations and radiotelephones, plus VoIP channels. Each channel is recorded independently.

Selectable recording trigger point criteria:

- volume (VOX)
- signaling
- continuous recording
- RTP (VoIP)

Identification and Archiving of calling subscriber numbers, called subscribers and subscribers reached on ISDN 2B+D, ISDN 30B+D, Up0 digital lines, plus FXS, FXO, E&M analogue lines.

Identification of selective dialing signals for EAA, CCIR radio subscribers.

Identification and archiving of the selected number, MAC address and IP address of VoIP subscriber.

- tapping of currently recorded phone calls
- pre-recording of calls
- gain control of the recorded channels, for ISDN 30B+D – separate for each direction
- recording the time and date of call
- channel aggregation (TDM)
- support for recording DTMF tones transmitted during the call
- recording calls without compression or with a selected level of compression

Changes in technology

Key features:

The recording features:

Advanced software

NetCRR Centrum, software for the recording system management is now equipped with a new, more intuitive, graphic interface and new functionality. Its key features include:

- integration of NetCRR i NetCRR2 recorder support from NetCRR Centrum
- support for the recording system and recording playback via WWW web page
- NetCRR Statistics module– provides the user with tools to analyze the statistics related to the operation of the entire system. The user may generate reports according to the criteria presented below:
  - a list of all calls
  - a list of calls saved in an incorrect way
  - a list of outgoing calls
  - a list of incoming calls
  - a number of calls meeting the defined criteria (time, date, telephone number, IP, MAC, etc.)
  - average time of call duration
  - a list of the called numbers
  - a list of calls from a particular phone number
  - a number of calls divided into periods
- NetCRR Scheduler module – software for recording archiving management. It enables planning and automatic archiving from one unit or a recording system. The user may program such operations as copying, archiving, deleting or exporting to WAV or MP3
- surveillance over a network of recorders using SNMP – the administrator may quickly check the operation status of all recorders in the system. Creating reports for typical information (i.e. HDD occupation) and for various alarm events

Play-back and archiving:

- **archiving of recordings** and related data to a database (date, duration time, numbers of the calling, called and reached subscribers, DTMF code digits, connection type, the encryption tag, compression type, comments, etc.)
- searching of recorded calls using data related to the call
- play-back from more than one workstation in LAN/WAN network (TCP/IP protocol)
- recording archiving onto external storage
- it is possible to attach text labels to each recording
- it is possible to set tags in each recording
- it is possible to present the recorded fax messages in a graphic form

Management:

- **remote system administration** in LAN/WAN network (TCP/IP protocol),
- multi-level system of protection and rights,
- hardware authorization using chip cards,
- viewing port status,
- possibility to re-configure particular channels during the system operation with no need to reboot,
- dynamic licenses for the number of the recorded channels.