# Products of our professional CCTV system solutions

ypsilon-line

## VNS 102 - MPEG4 "Advanced" Video Codec

- 2 CVBS in- or outputs
- high image quality at low system and memory load
- 1 bidirectional stereosound in- and output, lip synchronously to video channel 1
- 2 RS 485 interfaces
- overvoltage protection ensures safety in operation
- 2 electrically isolated alarm in- and outputs
- 10/100 base-T network
- local recording with 100 Mbyte SDRAM
- flexible power supply: 9... 27V
- only approx. 8 Watt energy requirement
- no fan required
- no moving parts


VNS 102 - MPEG4 "Advanced" Video Codec

## Description

VNS 102 is a video network streamer with 1 DSP and 2 video connections powerfully supporting video surveillance systems via LAN or internet.

When compared to formerly used standards the advanced simple profile MPEG-4 coding offers remarkably improved image quality at dynamic image sequences at identical system load. This is an important advantage for transmission and recording.

The configuration can be made via web browser (HTML) and Funkwerk plettac management system p.o.s.a. In case of alarms MPEG-4 sequences that are configurable in length (also with preliminary events), image rate and image quality can be recorded in the local memory. The alarm releasing event will also be transmitted to a central management system. Live images and recorded sequences are LAN transmitted to the control centre.

Depending on the customer's networking strategy all existing networks from LAN via ISDN to GSM can be used with MPEG 4 "advanced" at full resolution.

Moreover the used solution allows the customer to choose freely scalable minimum image quality at variable image rate per second for net load minimization.



investment safety
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## Hardware Interfaces:

- 2 video inputs or
- 2 video outputs or
- 1 video input and 1 video output
- 1 audio channel stereo in- and output, bidirectional
- 2 RS 485 interfaces
- 2 alarm in, 2 alarm out, electrically isolated
- interfaces with overvoltage protection
- network: 10/100 base-T ethernet
- **LED's:**
  1x power, 1x processor run, 2x video in/out, 2x video sync., 1x 100/10Mbit/s LAN, 1x LAN link activities, 2x2 Rx/Tx RS 485, 2x contacts out.
- **Local memory:**
  approx 100 MB SDRAM
- **Operational safety:**
  no moving parts, no fan, overvoltage protection
- **Type of construction:**
  19": 3 RU, 7 HP, small form factor, Europe size
- **Operating temperature range:**
  0 °C... 50 °C
- **Operating voltage range:**
  9 VDC ... 27 VDC
- **Power consumption:**
  approx. 8 W

## Scalability Video Codec (example PAL)

Image resolutions: Full D1, 2CIF, CIF, QCIF
D1 resolution in interlaced mode with 50 fields/s

- Encoder: 1 channel: D1 at 25pics/s and 4 Mbit/s
  2 channel: D1 at 12,5 pics/s and 2 Mbit/s
  or 2 CIF each at 25 pics/s and 4 Mbit/s
- Decoder: 1 channel: D1 at 25 pics/s and 4 Mbit/s
  2 channel: 2 CIF each at 25 pics/s and 2 Mbit/s

- Codec bidirectional:

  encoder: 1 channel 2 CIF at 25 pics/s and 2 Mbit/s and
  decoder: 1 channel 2 CIF at 25 pics/s and 2 Mbit/s

- **Certificates:**
  CE: EN 55022 Class B, EN 61000-6-2 with EN 61000-4-2 Grad 4, EN 61000-4-3 deg 3, EN 61000-4-4 Grad 4, EN 61000-4-5 deg 4, EN 61000-4-6 deg 4, EN 61000-4-11, EN 61000-4-8
  in connection with power supply TM11:
  EN 61000-3-2, EN 61000-3-3

## Software Functions

- configuration via web server and Funkwerk plettac p.o.s.a. management system
- **variable image rates:** 0.1...25 pics/s (PAL) for bit rate improvement
- **unicast/multicast:** up to 4 different video program streams and 2 audio streams
- No image loss like with multiplex encoders
- **Scalable bit rate:** 4.8 kbit/s up to 4 Mbit/s
  Entire bit rate: up to 10 Mbit/s
- **2 Codec instances** per used image channel
- **CBR mode** für constant bit rates
- **VBR mode** for variable bit rates an control of configurable maximum bit rates in parallel
- **ABR mode** for average bit rates
- **I-frame only** mode
- **scene change detection** with automatic I-frame insertion for improved data rates with high image quality by variable GOP setting
- **realtime encoding** by I, P frames (without B frame) for minimum lag time: < 200 ms with hard-/software decoder
- **efficient compression** methods: optimized for networks: LAN, DSL, UMTS, ISDN, PSTN, GSM
- **network protocols:** UDP, TCP, IP, IGMP, ICMP, ARP, DHCP, HTTP, FTP (detachable), SNMP (traps), SNTP
- local 100 MB RAM memory for up to 4 minutes recording at approx. 3.3 Mbit/s.
- selectable modes for permanent or event-oriented recording with p.o.s.a. management system on posa network video recorder (NVR)
- **SNTP time synchronization** (UTC time)
- **text/time insertion** at encoder and decoder
- information about local events to superior systems via contacts, interface, LAN, SNMP (traps)
- **integral motion detection**
- **recognition of camera sabotage:** video synchronous breakdown detection
  optional: cover-up protection,
  blinding or camera turn protection
- **investment safety** by firmware updates and codec standards

## Codec Standards:

- video: MPEG4 ASP advanced simple profile ISO/IEG 14496-2
- audio 0.3...7 kHz: : IMA ADPCM, 16 kHz-16 Bit-sampling



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