

System component: DANTE BRIDGE



- Ethernet-based multi-channel PA system for alarming, evacuation, music and broadcasting
- Simultaneous transmission of up to 64 digital audio channels in studio quality (48 kHz / 24 bit), with a constant latency period of 1.33 ms (digital)
- Distributed audio system no „single point of failure“
- Real-time configuration with ITEC-NET - NET-DESIGN: Allows system configuration changes during normal operation of the system.
- Real-time audio transmission: Constant latency of 4.6 ms analog-in/analog-out
- Up to 4000 devices can work simultaneously together in a network
- Up to 16,000 output zones in one audio network
- Integrated 2 GB memory card for alarm texts and music files. Recording Capacity 256 files, total time about 3 hours!
- Integrated real-time recorder for delayed announcements
- Speaker impedance and line monitoring during program mode
- AVC: automatic volume control
- ITEC-NET application interface (TCP / IP) for connecting to security management systems
- Remote maintenance, remote control, various interfaces for fire alarm systems
- 24VDC power for supply using EN54-4-certified energy supply equipment.
- Backup concept conforming to standard, with option to switch to redundant amplifier output stage
- System certified according to EN 54-16

In the future, safety PA systems are going to replace the classic siren alarm. The reason for this is that these days only few people react to siren alarms, and alarms, evacuation signals, alarm cancellations, etc. can no longer be differentiated. In contrast, using clear voice instructions a building can be very efficiently evacuated in the event of fire or an emergency. The larger a building, and the more people there are in this building, the more important it is to install a modern safety PA system.

Our ITEC-NET Development team has considered these requirements from the very beginning. Complete system monitoring, surveillance of emergency microphones, amplifiers, speech memories, speaker lines, and of the energy supply. Thanks to the decentralised concept, ITEC-NET also allows for fully redundant systems at the highest safety level, and there is no single point of failure. A multitude of standards regulate planning, installation, operation and production of so-called safety PA systems. With ITEC-NET we did our part to meet the manufacturer requirements for EN 54-16 certification, and in many areas we even exceeded them.

DANTE BRIDGE

The Dante Bridge in 19"/1U design is equipped with a Dante board from Audinate to transfer 8 digital Dante channels each. 2 network connections for the Dante module and 4 network connections for ITECNET enable the two networks to be separated. Communication takes place internally via a digital audio interface.

Weitere Anschlussmöglichkeiten:

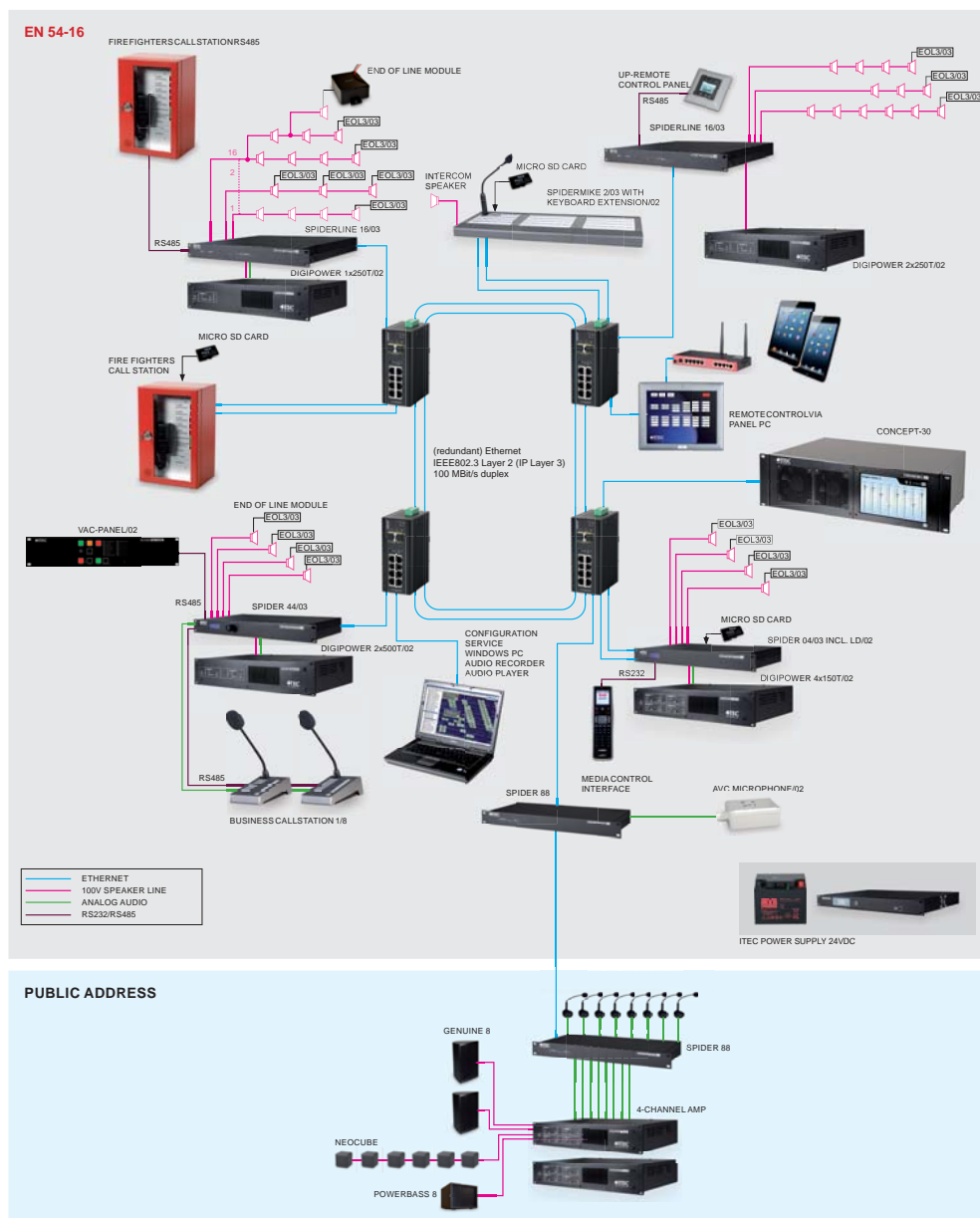
Other connection options: 1 serial port (RS-232/RS-485) for control tasks, 8 analog inputs, 8 digital inputs, integrated 2 GB Micro SD Card Flash memory card as a voice mail. Online/realtime system-configuration with free ITEC PC-software NETDESIGN from every network accesspoint. Multiple access, realtime configuration of all system parameters including audion-functionalities!

The Dante Bridge has an integrated and monitored voice alarm text memory with a recording capacity of up to 3 hours. Alarm announcements are automatically controlled by the fire alarm system or can also be triggered manually.

Other features: Automatic volume control (AVC), DSP functionality for all outputs and inputs, compressor limiter, delay of up to 24.5 seconds (acoustically corresponds to 8 km delay time), TCP/IP interface, serial interface for control systems, 8x8 audio matrix, Automixer, Ethernet switch, up to 192kHz/24Bit, Backup outputs, FFT

The ITEC-NET components are networked via our standardised and certified network switch in accordance with Ethernet standard IEEE802.3u. Up to 4000 devices can be linked in a LAN.

SYSTEM OVERVIEW:



INPUTS AND OUTPUTS

General:

up to 64 digital audio channels (default)
 IEEE802.3 Ethernet - based network with
 100Mbit/s duplex
 8 digital Dante audio inputs and 8 digital Dante audio
 outputs
 lowest latency times due to high-performance DSPs
 Power supply: 24 VDC

Interfaces / IOs:

8 digital control inputs, 8 digital control outputs
 1x RS232 / RS485
 4x ETHERNET RJ45 socket ITECNET (switch)
 2x ETHERNET RJ45 socket Dante

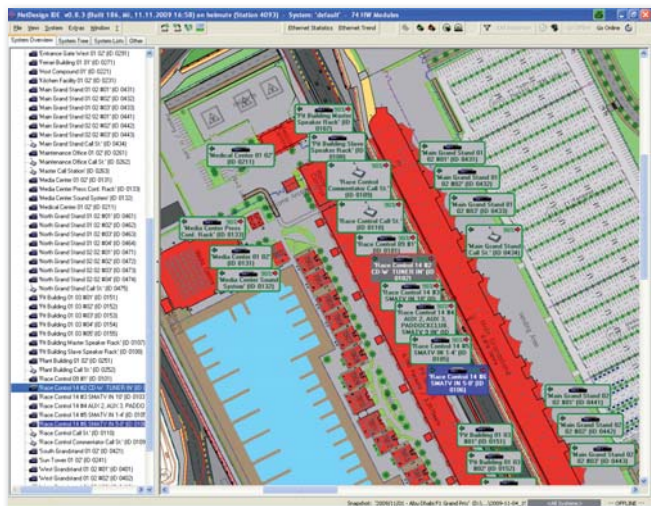
Audio Features:

16/24 or 32-bit Digital Audio
 Sample rate: 48 or 96 kHz
 Adjustable latency: 1.3 / 2.6 ms

NET-DESIGN CONFIGURATION, MAINTENANCE, CONTROL, AND INTERFACE SOFTWARE

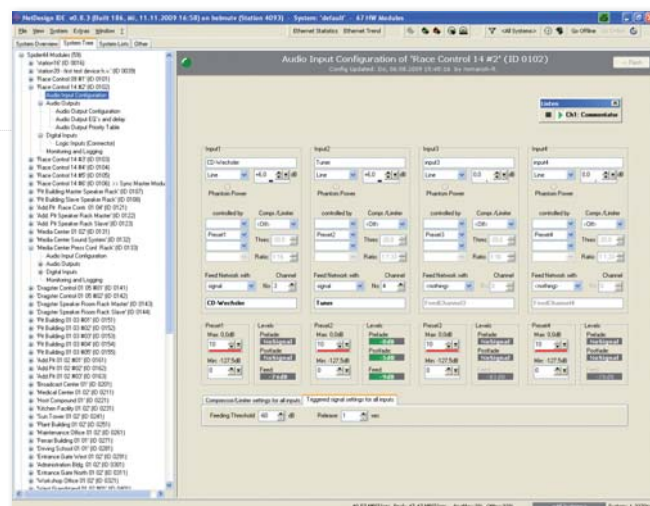
ITEC NET-DESIGN is a Windows-based application for configuring and monitoring the entire ITEC-NET network. Included is a TCP/IP interface (ITEC-NET API) allowing a direct link to other control systems, such as media control or security management systems. In addition NET-DESIGN offers the possibility to update the DSP- and control software from any point of the network. The huge number of monitoring and logging capabilities ensures a safe operation within this large audio and data distribution system.

Example:



System Overview

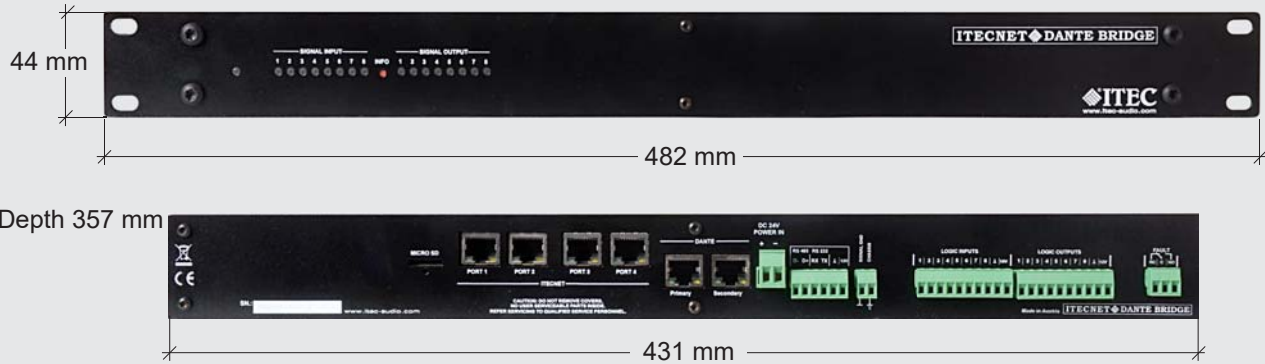
In this window you will find all ITEC-NET components plus the connected configuration PCs. Photos or sketches of the system floor plan can be used as background information with a free arrangement of all components. The „jump to“ function quickly finds all devices with direct access to the configuration pages.



System Tree Audio Input Config

Each audio input has the following settings:
 Mic / Line
 Gain in dB steps
 Compressor / Limiter
 Various level controls
 Network channel assignment

DANTE BRIDGE - SPECIFICATIONS



General	
EXTERNAL POWER SUPPLY	24 VDC (18 V < U < 32 V)
Current	ca. 250 mA without applied load on the 10 V DC Voltage
OPERATING TEMPERATURE	0° C bis +40° C
DIMENSIONS	482 mm x 44 mm x 357 mm (W x H x D), 19" / 1RU
WEIGHT	2,6 kg
Audio	
DANTE RJ45 CONNECTORS	100 Mbit/s, 1Gbit/s The data format is DANTE audio over IP technology. (up to 8 channels in each direction)
ITECNET RJ45 CONNECTORS	100 Mbit/s, The data format is ITECNET Audio over Ethernet technology (up to 64 channels)
Sound Processing	
PER INPUT	2-band fully parametric equalizer ± 15 dB, Q=0,1-70 1 low/high pass 1st order
PER OUTPUT	4-band fully parametric equalizer ± 15 dB, delay: 0.023 ms-24.5 s bandpassfilter: 1st – 4th order
	Compressor/limiter
Filter quality	selectable from 0.1 to 70
SERIAL INTERFACES	
RS 232/RS 485	9600, 19200, 57600, 115.200 baud
DIGITAL INPUTS	8 schmitt-trigger inputs on plug in-terminal strip
INPUT VOLTAGE	Low < 1,6 V / High > 8 V
MAX. ALLOWABLE VOLTAGE	36 V
INPUT CURRENT (@10 V)	ca. 4,5 mA
DIGITAL OUTPUTS	8 open-collector outputs on plug in-terminal strip
MAXIMUM VOLTAGE	36 V
MAXIMUM CURRENT	200 mA per output / total 500 mA (sum of all outputs switched))
DRY CONTACT ALARM RELAY	
MAX. VOLTAGE / MAX. SWITCHING POWER	48 V AC/DC / 500 mA
NETWORK	Ethernet 100 Base-TX, IEEE 802.3u

No responsibility is taken for the correctness of this information - Specifications subject to change