TOA

# NX-300W

## Audio Network Adapter




**High quality audio broadcast regardless of distance.**

**We supply sound,** not equipment.
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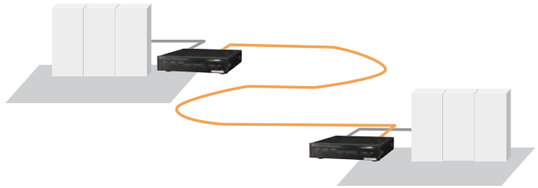
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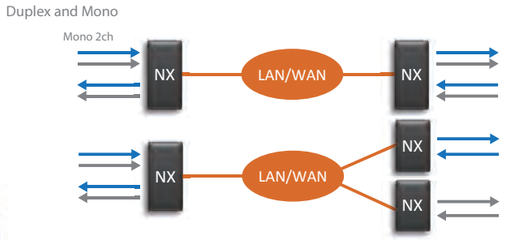
## Audio Network Adapter

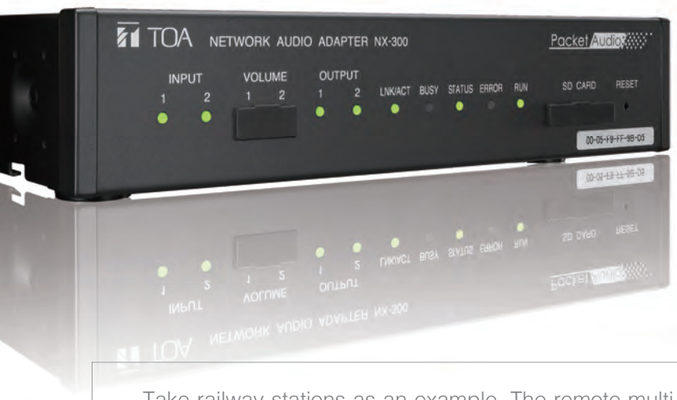
NX-300 Network Audio Adapter can convert audio signals to high quality digital signals. Regardless of the geographical distance, the digital signals can be transmitted simultaneously over the IP networks, such as LAN or Internet. The contact closure can operate the distant devices via the network.

### FEATURES

- Dual-channel is capable of the bi-directional (full-duplex) transmission of mono signals
- Up to 500 NX-300s can be connected to each other via LAN and WAN
- Up to 1,000 links can be established
- 1 input audio signal can be streamed to max. 16 outputs (unicast) or max. 64 outputs (multicast)
- Balanced inputs & outputs with isolated transformer
- The rear panel features a complement of 8 contact inputs and 10 contact outputs






Take railway stations as an example. The remote multi-point broadcast system can be applied among different stations by utilizing the existing networks infrastructure. Even at a great distance, the audio signal can be delivered between the remote sites. Automated announcements can be broadcasted at unattended stations, too.



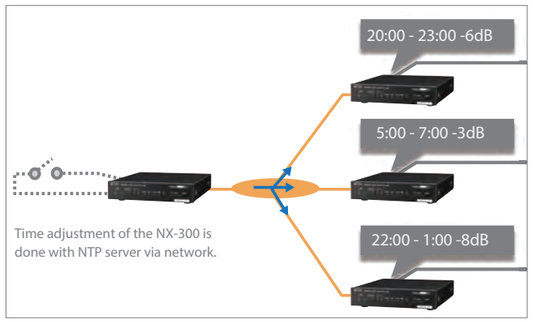

### SIMULTANEOUS AND COST EFFECTIVE TRANSMISSION

Audio signal with better-than-CD quality can be transmitted with minimum latency via IP network. Cost can be saved by reducing the time and installation cost of ground cabling.



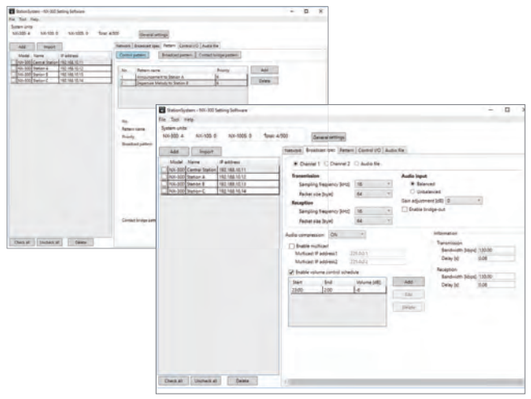

### UNINTERRUPTED CONTINUOUS BROADCASTING

The audio signal can be transmitted without interruption even with shaky or bad network connection. Any audio interruption can be prevented by adjusting the sound quality and the delay time (i.e. the transmission packet size). Together with the high durability that prides continuous operation of 24 hours everyday, uninterrupted continuous broadcasting is possible.




### AUDIO FILES STORABLE FOR MESSAGE PLAYBACK

Up to 8 WAV-files and each up to 2-minutes in length can be stored in a built-in memory and used as broadcasting, such as announcement playback, chime playback. Also the files can be remotely updated via NX-300 setting software or web browser. Adjustable output volume of a broadcast can be set based on a programmed scheduler, which the device time is automatically adjusted by NTP server via the network.



### ASSIGNABLE BROADCAST PRIORITIES

Broadcast patterns can be programmed by using the provided setting software and can be activated by the operation software or the regular contact closures. Broadcast priority can be set with 8 levels and allow that paging overrides the alert  tones or announcements.

### SIMPLIFIED SETUP, OPERATION AND MAINTENANCE

System configuration and control can be done easily via the provided GUI setting software or web browser. Maintenance can be done easily among the distant and distributed devices. Operation software is also supplied.

### INTERLOCK WITH OTHER NETWORK CONTROL INPUT

The control output can interlock with other NX's Control Input, including NX-100, NX100S.

### SURVEILLANCE AND ACTIVITY LOGS

Surveillance function is present for any failure or malfunction. With the server-less system, one device's failure will not affect the others. Any accidental power-off will not affect the activity logs recording. Activity logs can be easily archived with inserting SD card from the front panel.

### APPLICATION EXAMPLES



Railway Stations



Airports



Industrial Facilities



Car Parks

## SPECIFICATIONS

| | NX-300 |
|---|---|
| Power Source | Supplied from an external 24V DC (21.6 - 26.4 V) power supply or AC adapter AD-246 (option) or equivalent |
| Power/Current Consumption | 10 W (AC operation), 310 mA (DC operation) |
| Audio Input | 2 channels, balanced (transformer isolated)/unbalanced changeable, 2 kΩ, LINE/MIC changeable, volume adjustable<br>Rated input: -20 dBV (LINE)/-60 dBV (MIC), PAD function (-16 dBV), removable terminal block (6 pins) |
| Audio Output | 2 channels, balanced (transformer isolated), 600 Ω or less<br>Rated output: 0 dBV (unbalanced input) /-2 dBV (balanced input), removable terminal block (6 pins) |
| Frequency Response | 50 Hz - 18 kHz (48 kHz sampling frequency, PCM, 0 to -6 dB deviation referred to 1 kHz) |
| Distortion | 0.2 % or less (1 kHz, LINE signal level, at rated output) |
| Signal to Noise Ratio | 73 dB or more (LINE signal level, at rated output) |
| Separation | 70 dB or more (1 kHz, LINE signal level, BPF) |
| Audio Format | WAV file |
| Number of Storable Audio Files | Max. 8 |
| Storable Time of Audio File | Max. 2 min. per audio file (16 kHz sampling frequency, sub-band-ADPCM, monaural operation) |
| Control Input | 8 channels, no-voltage make contact input, Open voltage: 24V DC, short-circuit current: 2 mA or less,<br>removable terminal block (9 pins) (Only Channel 8 equipped with failure detection.) |
| Control Input Failure Detection Section | Connection resistance to make the function inactive: 20 kohms -/+ 5 %<br>Connection resistance to make the function active: 10 kohms -/+ 5 %<br>Connector cable: Twisted pair cable (shielded type is recommended) |
| Control Output | 8 channels, open collector output (polarized), withstand voltage: 30V DC,<br>control current: 50 mA max., removable terminal block (9 pins)<br>2 channels, relay output (non-polar), withstand voltage: 30V DC,<br>control current: 500 mA max., removable terminal block(4 pins) |
| Network Section | Network I/F: 10BASE-T/100BASE-TX, Full-duplex/half-duplex Auto-negotiation<br>Network Protocol: TCP, UDF, ARP, HTTP, RTP, IGMP, FTP, NTP<br>Audio packet transmission system: unicast (Up to 16 simultaneous transmissions), multicast (Up to 64 simultaneous transmissions)<br>Connector: RJ45 connector<br>Voice sampling frequency: 8 kHz, 16 kHz, 32 kHz, 48 kHz (controllable on the software)<br>Qualifying bit number: 16 bits<br>Voice encoding method: PCM, sub-band ADPCM (controllable on the software)<br>Voice packet loss recovery: Silence insertion<br>Audio delay time: Min. 20 ms |
| Operation | 2 channels, Audio input level control (convertible to Audio output level control) |
| Indicator | 2 channels, audio input, SIGNAL (green)/PEAK (red), 2 channels, audio output, SIGNAL (green)<br>LNK/ACT (green), BUSY (green), STATUS (green), ERROR (yellow), RUN (green) |
| Setting switch | Reset, grand lift changeable, audio input 2 channels PAD changeable, audio input 2 channels LINE/MIC changeable |
| SD Section | For log storage (Max. 10000)<br>Media: SD/SDHC card (Max. 32 GB) (Not compatible with SDXC memory cards)<br>File system: FAT16. FAT32<br>*Use only SD memory cards rated at 100 mA current consumption or less<br>*No SD card provided |
| Installation Method | Rack, Desk, Surface mount |
| Operating Temperature | -10°C to + 50°C, (0°C to + 40°C when AC adapter is in use.) |
| Operating Humidity | 90 % RH or less (no condensation) |
| Finish | Pre-coated steel plate, black, 30% gloss |
| Dimensions (W x H x D) | 210 x 44.3 x 258 mm |
| Weight | 1.7 kg |
| Accessory | Removable terminal block (3 pins) x 1, Removable terminal block (6 pins) x 2, Removable terminal block (9 pins) x 2,<br>Removable terminal block (4 pins) x 1, Plastic foot x 4, Screw for fitting plastic foot x 4 |
| Option | Rack mounting bracket: MB-15B-BK (for rack mounting one NX-300 unit), MB-15B-J (for rack mounting two NX-300 units)<br>Wall mounting bracket: YC-850, AC adapter: AD-246 |

**TOA Electronics Europe GmbH**
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Specifications are subject to change without notice.
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