

## Network Systems

### IP Intercom - TOA N8000 IP Intercom

The newly expanded N-8000 Series IP Network Intercom offers flexible communications for up to 3,072 stations on existing corporate local and wide area data networks. Built on TOA's proven NX100 network audio technology, the new IP Intercom products occupy minimal network bandwidth (130 kbps maximum) for station-to-station calls and can be controlled and monitored through software or web browser. Programmable system functions include 192 paging zones, time-based call forwarding and scan monitoring.

The backbone of the new system is the range of N8000 system exchanges which support 16 stations and occupy only one rack space. Features include a 10/100BaseT port for connection to standard network hardware and, depending on model up to two paging audio outputs.

Larger systems can be easily configured with up to 192 exchanges and 3,072 stations.

A variety of stations are available including two and four wire single button models with weather and vandal resistant options as well as conventional handset models with or without and LCD display. Ethernet stations include the N8500MS and N8510MS IP Multi-function Master Stations, which have a built-in Ethernet connection for direct network connection. Also available is the N8540DS IP Door Station which, also connecting directly to the network, enables a system of up to 192 stations to be realised over a network without the need for an Exchange.



#### TOA N8000EX Exchange

- Sixteen station capacity
- Stations connect to exchange via two-wire twisted pair
- Provides 48 VDC to each station
- Speech links: 4 internal / 8 external
- Two audio and two relay outputs



#### TOA N8010EX Economy Exchange

- Sixteen station capacity
- Stations connect to exchange via two-wire twisted pair
- Provides 48 VDC to each station
- Speech links: 1 internal / 2 external



#### TOA N8000MI Multi Interface Unit

- Tie-line interface for connection to a PABX
- Sixteen contact closure I/O
- Two audio input and output channels



#### TOA N8000AF Audio Interface Unit

- One MIC/LINE audio input, one audio line output
- Eight contact inputs
- Time Synchronization input
- Built-in timer and chime



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#### TOA N8000DI Direct Select I/O Unit

- 32 contact closure I/O
- Provides control interface to CCTV, door access and other external systems.
- Events may be activated by contact closures or master station dialling commands.



#### TOA N8000CO Central Office Unit

- Analogue central office line circuit allowing the stations to make and receive calls to and from a telephone line



#### TOA N8000AL Telephone Interface Unit

- Single telephone line allowing an analogue telephone to be connected
- Allows any analogue telephone to function as a master station.



#### TOA N8000RS Two Wire Sub-Station Interface

- Up to 16 substations connectable using two-core shielded cable
- Speech links: 2



#### TOA N8010RS Two Wire Sub-Station Interface

- Up to 16 substations connectable using two-core shielded cable
- Speech links: 1



#### TOA N8400RS Four Wire Sub-Station Interface

- Up to 16 substations connectable using 2 sets of twisted pair cables
- Speech links: 1
  - 1 Occupies one network node (192 max)
  - 2 Occupies one network node (191 max - at least one node must be a master station or N-8000/8010EX exchange)



#### TOA N8500MS/N8510MS IP Master Station

- Handset or hands-free duplex communication
- PoE compatible or optional power supply
- Alphanumeric LCD display (N8500MS only)
- Eight programmable speed dial keys (N8500MS only)
- External speaker terminal (N8500MS only)



#### TOA N8000MS/N8010MS Master Station

- Handset or hands-free duplex communication
- Two-wire connection to N-8000EX or N-8010EX Exchange
- Alphanumeric LCD display (N8000MS only)
- Eight user-programmable speed dial keys (N8000MS only)
- External speaker terminal (N8000MS only)



#### TOA N8011MS Master Station

- Hands-free duplex communication
- Two-wire connection to N-8000EX or N-8010EX Exchange
- Headset terminal
- External speaker terminal

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#### TOA N8020MS Master Station

- Heavy duty dustproof and waterproof construction (IP54 rating)
- Two-wire connection to N-8000EX or N-8010EX Exchange
- Handset or hands-free duplex communication
- External speaker terminal
- Control output



#### TOA N8031MS Master Station

- Two-wire connection to N-8000EX or N-8010EX Exchange
- Hands-free duplex communication
- External dial inputs (7, 8, 9 and C keys)



#### TOA N8540DS Door Station 1

- Hands-free duplex communication
- PoE compatible or optional power supply
- Hands-free duplex communication
- Control output (open collector)
- IP54 rated



#### TOA N8050DS Door Station

- Two-wire connection to N-8000EX or N-8010EX Exchange
- Hands-free duplex communication
- Control output (open collector)
- IP54 rated



#### TOA RS450/RS460 Sub-Station

- Provides half-duplex communication
- Heavy-duty brushed stainless steel faceplate
- Vandal resistant call button (RS460 only)
- Connects to N-8400RS using two pairs of twisted pair cable



#### TOA RS470/RS480 Sub-Station

- Provides half-duplex communication
- IP54 rated (RS480 only)
- Heavy-duty brushed stainless steel faceplate
- Vandal resistant call button (red on RS480)
- Control output (open collector) (RS480 only)
- Connects to N-8400RS using two pairs of twisted pair cable



#### TOA RS140 Switch Panel

- Call button and privacy button
- Talk back conversation
- Handset conversation available by using with RS-141
- Hands-free conversation with master station by connecting a high impedance speaker
- Connects to N-8000RS/8010RS using two-core shielded cable
- 1 Occupies one network node (192 max)
- 2 Occupies one network node (191 max - at least one node must be a master station or N-8000/8010EX exchange)



## Network Systems

### Audio Transmission

#### TOA NX100 Network Audio Adaptor

The TOA NX-100 is a reliable and easy to use solution for transporting mic or line-level audio signals over IP-based local and wide area networks (LAN/WAN), as well as the Internet. Applications include wide area paging, background music or messaging audio distribution for airports, convention centres, railway stations and transit systems.

The flagship model NX-100 transports variable bandwidth, bi-directional audio (up to 14 kHz) as well as serial RS-232 and contact closure data. Each half-rack sized unit includes a balanced mic/line input and output and a 10/100BaseT Ethernet jack for connection to standard network hardware. The rear panel includes eight programmable trigger inputs to initiate and terminate audio transmissions, eight programmable open collector control outputs and an RS-232 serial port for data transmission/reception. The NX-100 also has a built-in web server to support browser-based programming, control and monitoring from any network-connected PC.

The new streamlined NX-100S includes all of the same features as the NX-100 minus the RS-232 transport and external 24 VDC capabilities. Enhancements include front panel signal and peak LED's plus phantom power for condenser microphones.



#### TOA NX100 Network Audio Adaptor

Model	NX100	NX100S
Audio Input	Yes	Yes
Contact Closure	Yes	Yes
RS-232C	Yes	No
Power source	AC or 24 V DC	AC only
Input Signal LED	No	Yes
Input Peak Level LED	No	Yes
Phantom Power	No	Yes
IPv6 Compatible	Yes	No



EXPI-4



EXPI\_O-2



EXPO-4

#### Biamp EXPI - 4 / EXPO - 4 / EXPI / O-2 / EXPI / EXPO

Biamp's EXPI and EXPO CobraNet Expanders can be used independently of the Audia platform to transmit audio across suitable Ethernet/IP networks. More details on page 73.