

# **RTS INTERCOM SYSTEMS MATRIX**

**INNOVATING THE FUTURE  
OF GLOBAL COMMUNICATIONS**

***RTS***

Worldwide Connectivity .....3

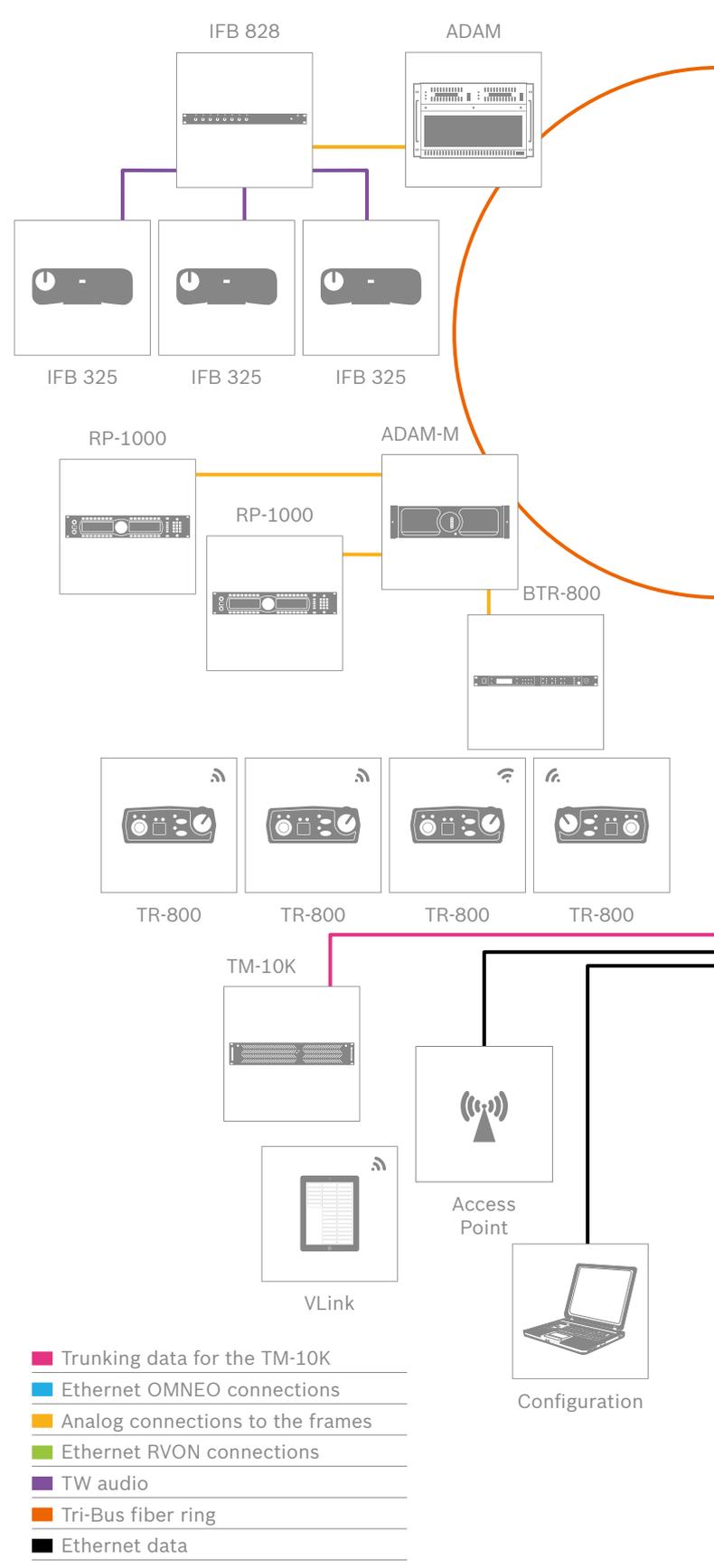
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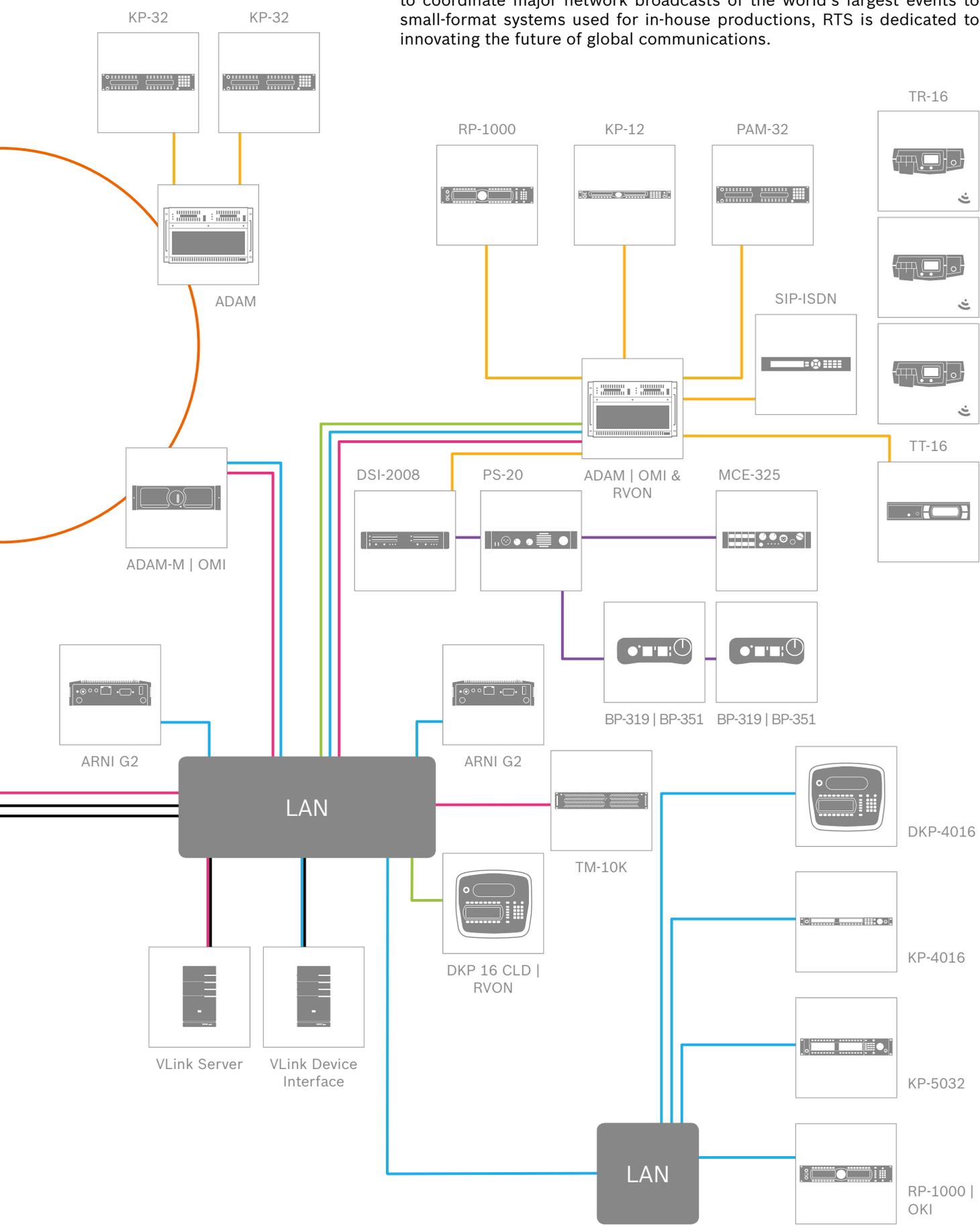
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- Trunking data for the TM-10K
- Ethernet OMNEO connections
- Analog connections to the frames
- Ethernet RVON connections
- TW audio
- Tri-Bus fiber ring
- Ethernet data

RTS is an industry leader in the design and manufacture of intercom solutions. From the Advanced Digital Audio Matrix (ADAM) systems used to coordinate major network broadcasts of the world's largest events to small-format systems used for in-house productions, RTS is dedicated to innovating the future of global communications.





# **DIGITAL MATRIX**

**INTERCOM MATRICES, INTERFACE CARDS,  
KEYPANELS, SOFTWARE & PERIPHERALS**

# INTERCOM MATRICES



The RTS family of digital intercom matrices is the most extensive, widely used line of intercoms in the world. From the top-of-the-line ADAM matrix, available in sizes from 16 to more than 880 users, to the Zeus III LE 16-port matrix, RTS matrices are the standard for reliable, mission-critical communications in broadcast, military, industrial and entertainment applications.

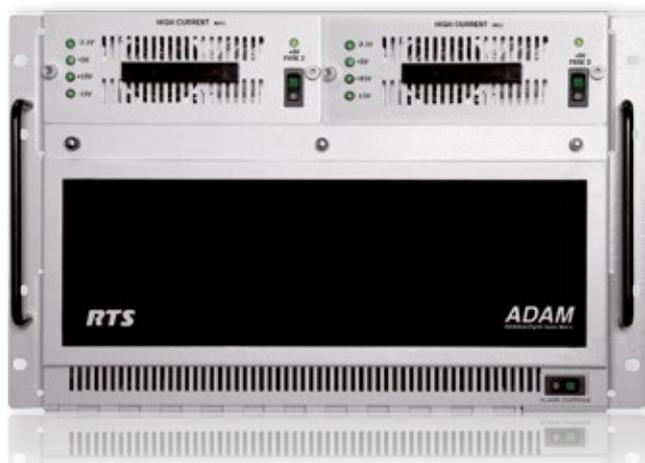
## Intercom matrices at a glance

Attribute	ADAM	ADAM-M	Cronus	Zeus III	Zeus III LE+
Port Capacity: Single Frame	272 <sup>1</sup>	128 <sup>1</sup>	32	32	16
Rack Units	7	3	2	1	1
Redundant Power Supplies	Yes	Yes	Yes	Yes	Yes
Redundant Controllers	Yes	Yes	No	No	No
Bus Expansion	Yes	Yes	Yes, 4x Cronus, linking license required	No	No
Link Method	Single Mode Fiber or Multi Mode Fiber	Single Mode Fiber or Multi Mode Fiber	Coax/Fiber between Cronus Frames	N/A	N/A
Cable Length	TBX fiber single mode 40 km Multi mode 550 m	TBX fiber single mode 40 km Multi mode 550 m	Coax: 90 m Fiber : 15 km Single mode	N/A	N/A
Audio Bits	24	24	24	24	24
VOX on Input	Yes	Yes	Yes	Yes	Yes
OMNEO Audio	Yes	Yes	No	No	No
Trunking Support	Yes	Yes	Yes	Yes	Yes
Matrix PC Connection	Ethernet, Serial	Ethernet, Serial	Ethernet, Serial, USB	Ethernet, Serial, USB	Ethernet, Serial, USB
Non-Destructive Download	Yes	Yes	Yes	Yes	Yes
Integrated Partyline Interface	No	No	No	Yes (2)	Yes (2)
Remote Configuration	Yes	Yes	Yes	Yes	Yes
Relays	External GPIO-16	External GPIO-16	4	2	2

<sup>1</sup> More with 64-Channel MAD1 and OMNEO card(s)

## ADAM

Advanced Digital Audio Matrix



Using a Time Division Multiplex (TDM) technique, ADAM grows linearly as users are added; the system comes standard with newly redesigned, redundant high-current power supplies. The Ethernet master controller, MCII-E, allows for automatic changeover in the event of failure. With the added convenience of Ethernet connectivity between the ADAM intercom and a PC running AZedit matrix control software, it can support 32 simultaneous AZedit sessions via Ethernet and three sessions via serial.

## ADAM-M

3RU Advanced Digital Audio Matrix



The 3RU matrix frame supports eight interface cards, in addition to redundant master controller cards. In keeping with the RTS principle of backward compatibility, forward thinking, the ADAM-M is fully compatible with all current ADAM cards, including the MADI-2 and OMNEO 16 interface. Users now have the option of configuring a very compact frame with RVON, MADI, OMNEO and analog with full redundancy.

Zeus III LE is a compact intercom matrix providing a wide range of configuration options. Zeus III LE has 16 channels in/out and two additional configurable partyline interface channels. Its compact size is perfect for environments with limited space. With integrated Ethernet, Zeus III LE can be configured from virtually anywhere on the network using AZedit software. Alternatively, Zeus III LE can be directly connected to AZedit via a USB connector on the front panel. The system has 16 standard RJ45 connectors, making it easier to connect the intercom system with audio lines and keypanels by keeping the RTS wiring scheme. The Zeus III LE+ contains all of the same features as the Zeus III LE with the ability to provide the user with redundant AC power supplies for an added level of reliability.

## Cronus

DSP Matrix Intercom



RTS Cronus intercom is a modular, 32-port digital matrix intercom in 2RU that can hold up to four AIO analog or RVON-C VoIP cards with eight ports each, based on advanced DSP architecture. Cronus intercom has the ability to link up to four units into a single 128-port matrix. The Cronus can be preconfigured for fiber with a connection up to 9.3 mi (15 km) or coax for a connection up to 300' (91.4 m). When connected as a single matrix, individual Cronus intercom controls remain autonomous and independent at each matrix for the highest reliability. Cronus is available with an analog card or the RVON-C VoIP card.

## Zeus III

Digital Intercom Matrix



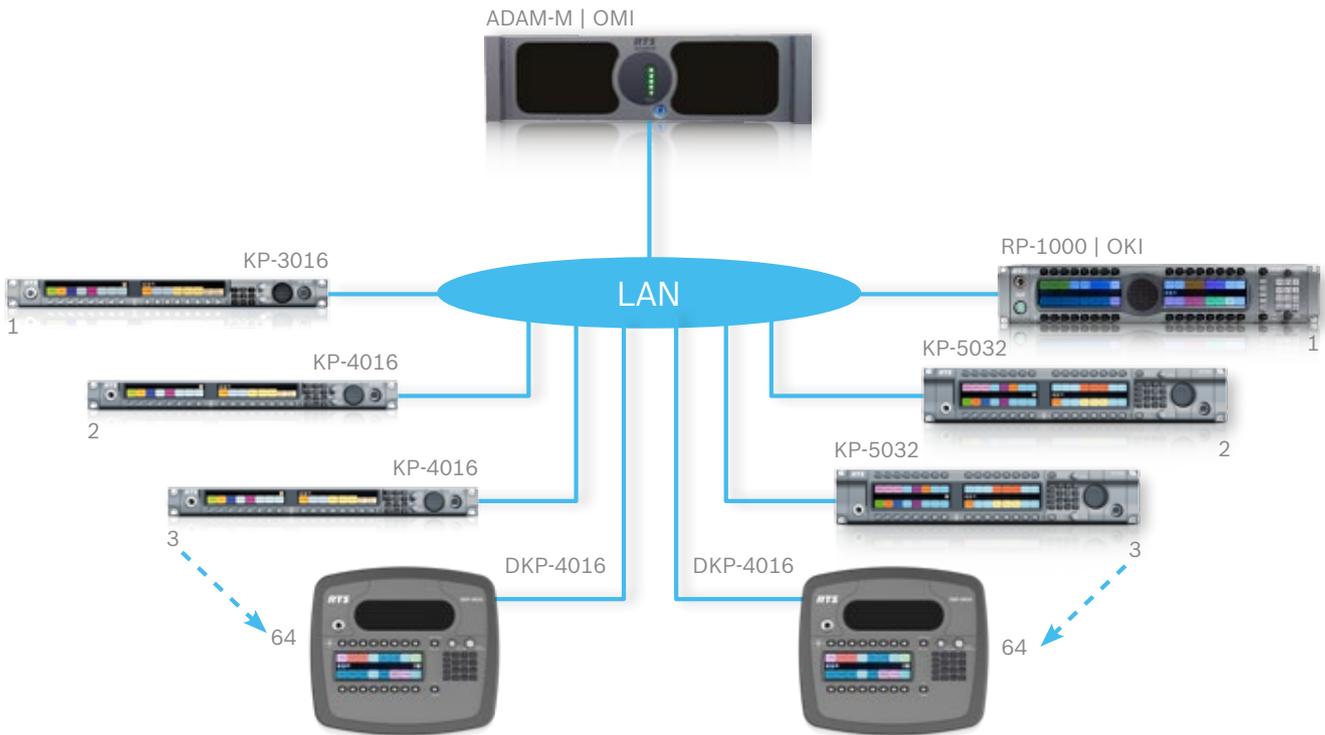
Zeus III is the next generation of compact intercom system units, giving compact systems more options for their intercom configurations. Zeus III has 32 channels in/out and two additional configurable partyline interface channels. Its compact size is perfect for environments with limited space. With integrated Ethernet, Zeus III can be configured from virtually anywhere on the network using AZedit software. Alternatively, Zeus III can be directly connected to AZedit via a USB connector on the front panel. The system has 32 standard RJ45 connectors, making it easier to connect the intercom system with audio lines and keypanels by keeping the RTS wiring scheme.

## Zeus III LE and Zeus III LE+

Digital Intercom Matrix



# OMNEO



## ...WITH PURE IP CONNECTIVITY, ULTRA-LOW LATENCY AND FULL HD AUDIO

OMNEO is a media networking architecture for professional applications. Using standard IP Ethernets, media products that integrate OMNEO can be assembled into networks of 2 to 10,000 cooperating devices that exchange studio-quality synchronized multichannel audio and share common control systems.

OMNEO's media transport technology is Audinate's Dante, a high-performance, standards-based, routable IP media transport system. OMNEO's system control technology is Open Control Architecture, or OCA. OCA is an open public standard for the control and monitoring of professional media networks.

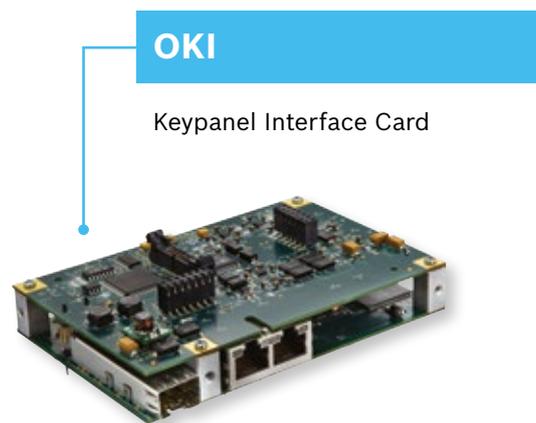
The new RTS ADAM OMNEO interface cards transform the ADAM intercom system into a flexible, IP-based intercom network. OMNEO media networking architecture goes beyond traditional AVB solutions by incorporating both industry standard OCA control and IP audio. OMNEO will interoperate with Dante devices, ensuring future interconnectivity with a growing number of devices. ADAM OMNEO products open the door to deploy ADAM intercom systems over any standard IP-based network. Most importantly, with OMNEO users are not "locked in" to other vendors' proprietary backbone infrastructure. This makes RTS the leading IP open network solution for professional production intercoms.

With OMNEO, such essential tasks as deploying intercom user stations, linking via trunking and interfacing to third party devices has now become easier and more flexible. The addition of ADAM OMNEO cards to any compatible ADAM system means even existing installations can be networked over standard IP hardware with high quality, ultra-low-latency audio.

The product range consists of the ADAM OMNEO card for the ADAM and ADAM-M intercom frames and a user station interface card for select RTS keypanel models. Both these cards fully update the connectivity of these RTS intercom products to be fully IP compatible.

**OMI**

ADAM Matrix Card

**OKI**

Keypanel Interface Card

This card fits into the standard slots of the RTS ADAM or ADAM-M frames and provides a gateway to the world of OMNEO IP-compatible networking. The card consists of the traditional ADAM front and back card components and enhances ADAM systems with the following features:

- The OMI card is available in configurations up to 64 bidirectional ports upgradable in increments of 16 ports on a single card.
- In addition to the standard RJ45 Ethernet connection, fiber connectivity is also supported with the addition of optional single mode or multimode modules.
- A fully configured single compact ADAM-M frame can support up to 256 OMNEO ports, providing a highly compact single frame solution for many system installs.
- The ADAM frame supports an astounding 512 OMNEO ports, making it ideal for larger systems without the need for frame-to-frame linking.

This card fits into select RTS user stations and provides native OMNEO IP connectivity for RJ45 Ethernet connections into the OMNEO network with optional single or multimode fiber modules. The card provides a two-port switch onboard as a pass-thru connection to allow daisy chaining of keypanels if required. It plugs into the existing header in the keypanel and comes with all parts needed to complete the upgrade. The OKI card is available for the RTS KP-32, RP-1000 or KP 12 CLD keypanels.

## Specification Table

	<b>ADAM OMI Card</b>	<b>OKI Keypanel Interface Card</b>
Supporting Products	ADAM, ADAM-M	KP-32, KP 32 CLD, RP-1000, KP 12 CLD
Connections	(2) RJ45 Ethernet Connections (1) LC Type SFP Fiber Connector	
Audio I/O Levels	N/A. See note below*	Input/Output (maximum level): +20 dBu Input/Output (nominal level): +8 dBu
Frequency Response (Input)	within $\pm 1$ dB from 20 Hz – 20 kHz	
THD+N at 1 kHz	better than 0.01% @ 8 dB	—
Network Requirements	< 2 ms typical	
Storage Temperature	-40°F to 158°F (-40°C to 70°C)	KP 12 CLD/KP 32 CLD/RP-1000: -40°F to 158°F (-40°C to 70°C) KP-32: -40°F to 140°F (-40°C to 60°C)
Operating Temperature	32°F to 122°F (0°C to 50°C)	KP 12 CLD/KP 32 CLD/RP-1000: 5°F to 122°F (-15°C to 50°C) KP-32: 14°F to 105.8°F (-10°C to 41°C)
Power Consumption	14.9 W @ 5 V (Front and Back combined)	KP 12 CLD/KP 32 CLD/RP-1000 without Fiber: 5 watts KP 12 CLD/KP 32 CLD/RP-1000 with Fiber: 5.75 watts KP-32 without Fiber: 5.5 watts KP-32 with Fiber: 6.25 watts
Weight	Front Card: 0.65 lb (0.29 kg) Back Card: 0.30 lb (0.14 kg)	4.15 oz (card only)
Card Dimensions (W x D x H)	Front Card: 0.8" x 12.7" x 6.8" (21.04 cm x 322.40 cm x 173.11 cm) Back Card: 0.8" x 6.8" x 6.8" (20.0 cm x 172.56 cm x 172.26 cm)	4.5" x 3.0" x 1.1" (29.03 cm x 19.35 cm x 7.10 cm)

\*OMI card is a digital board with build-in audio mixer for 64 inputs. The audio I/O levels are specific to analog sources such as AIO-16 or keypanel.

## OEI-2 & ARNI



### OEI-2

OMNEO External Interface – 2

The OEI-2 enables connectivity between analog audio sources or legacy RTS keypanels and an OMNEO network. OMNEO sets the standard for the future of audio communications by offering high quality IP compatible audio, ultra low latency, and supports DHCP and Bonjour protocols. OEI-2 supports all RTS analog keypanels.

- Provides an interface between legacy RTS keypanels and the OMI OMNEO interface cards for ADAM and ADAM-M units.
- Provides less than 2 ms of audio latency in typical network installations.
- Provides a frequency response of 20Hz to 20KHz to the keypanel
- Supports DHCP and device discovery for easy set up and network management.
- Supports a fiber connection to the keypanel (multi-mode or single-mode optional).
- Supports CAT-5/5e and CAT-6 with dual Ethernet connectors for device looping.
- Supports compatibility with third-party Dante products.

### ARNI G2

Audio Routed Network Interface



ARNI significantly extends the reach of an OMNEO-based RTS intercom network to function seamlessly across subnets. ARNI enhances the flexibility of system deployments by providing network services and network-wide synchronization for OMNEO traffic. ARNI may also be configured for fully redundant operation to ensure network reliability and stability. ARNI allows the creation of media networks that are able to support up to 10,000 devices across 40 subnets.

Two models are available: the ARNI-S and the ARNI-E. Depending on the size and configuration of the network, multiple ARNI devices can be deployed to achieve the desired network layout and functionality.

- ARNI-S supports up to 450 devices in a single subnet.
- ARNI-E supports up to 10,000 devices across multiple subnets.
- ARNI-E also supports synchronization across subnets.

# TRUNKMASTER SERIES & TRI-BUS MULTI-FRAME TOPOLOGY

## TM-10K

High Capacity Trunkmaster



The RTS TM-10K trunkmaster is a super high capacity intelligent linking system to provide virtually limitless expansion to any RTS intercom network. The TM-10K seamlessly links up to 255 intercom systems, allowing users to communicate with one another instantaneously with all the same presets, scroll lists and tallies available on local matrices. Over 10,000 trunk lines can be interconnected into one network. Whether the systems are located in adjacent studios or on different continents, intelligent trunking unifies your unique communication needs.

The TM-10K can be linked using OMNEO, RVON or analog audio connections providing the ultimate in flexibility and reliability. Using multiple TM-10K units, the system is fail safe, providing redundant linking connections and control of which can be separated over long distances for superior reliability and flexibility.

- Dual redundant power supplies provide fail safe operation.
- Capacity to link up to 255 intercom systems and over 10,000 trunk lines.
- Redundant trunkmasters can be geographically separated.
- Support for dual network interface connections for enhanced reliability.
- Full support for all RTS digital matrix frames.
- Fail safe operation when using multiple trunkmasters.
- Solid-state hard drive for superior operational speed and reliability.

## Tri-Bus Multi-Frame Topology



The RTS systems Tri-Bus technology provides the end user with a wide variety of system expansion options. The Tri-Bus expander supports both a dual fiber ring or a robust mesh architecture for added redundancy. Whether your communication needs call for a distributed topology or centralized design, the Tri-Bus expansion card can meet the challenge.

# INTERFACE CARDS

RTS interface cards are the core of the modular digital matrix intercom concept. An array of features and connectivity options allow users to customize their ADAM matrix to integrate seamlessly into a cohesive communication network. Each new generation provides expanded possibilities for existing ADAM frames, solidifying its investment value for years to come. With features such as hot swap and user allocated ports, the ADAM subassemblies ensure that users can scale their intercom systems to fit their growing needs with peace of mind.



## MCII-E

Ethernet Master Controller  
Card Kit for ADAM

The Ethernet connectivity of the MCII-E enables multiple AZedit sessions and remote peripherals, such as the GPIO-16 (page 22). Adding Ethernet connectivity between the ADAM intercom and a PC running AZedit matrix control software, the new controller can support up to 35 simultaneous AZedit sessions. Using a pair of MCII-E controller cards provides full redundancy with seamless automatic changeover upon failure. The MCII-E also supports SNMP, the IETF standard protocol for monitoring network-attached devices.

## MADI-2

Multichannel Audio  
Digital Interface Card

The MADI-2 card expands the ADAM system configuration capabilities by utilizing MADI (Multichannel Audio Digital Interface) technology to connect any AES-10 compliant devices over coaxial or fiber connections at sampling rates of 44.1 kHz and 48 kHz. Unlike the RVON devices, the MADI-2 has a point-to-point configuration, which provides for little or no delay in the transmission of audio across lines.



## Interface Card Comparison

Card	Frames	Functionality	Backcard Connectors
AIO-16	ADAM Series	16-Port Analog I/O	Provides 16 ports of audio in and out via MDR and 50-pin SCSI, plus individual data drivers
Cronus-AIO	Cronus	8-Port Analog I/O	Provides 8 ports of audio in and out via RJ-12 or MDR
MADI-2	ADAM Series	16–64 Port MADI	Connects any AES-10 compliant devices over coaxial or fiber connections
MCII-E	ADAM Series	Ethernet Master Controller	Connects to AZedit matrix control software via Ethernet
OMI	ADAM Series	16–64 Port IP Audio	Provides 2 RJ45 and one fiber optic connection
RVON-16	ADAM Series	16-Port VoIP	Connects ADAM to panels and/or audio tielines over standard IP networks
RVON-C	Cronus	8-Port VoIP	Connects Cronus to panels and/or audio tielines over standard IP networks
TBX-2	ADAM Series	Triple-Bus Expander	One card Links up to four ADAM frames together

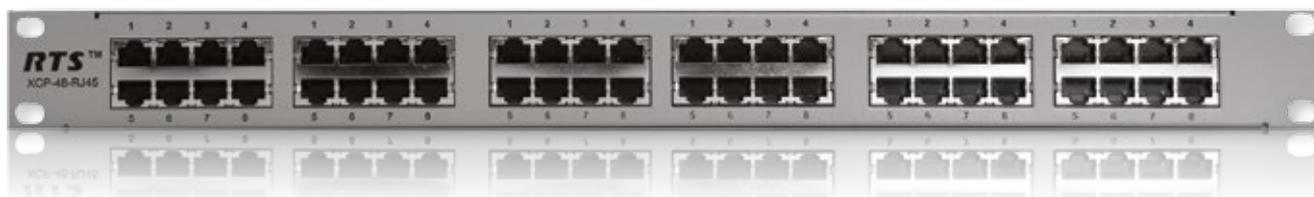
# RVON VOIP DEVICES & BREAKOUT PANELS

## RVON VoIP Devices

The RTS Voice Over Network (RVON) series allows the full integration of our intercom system into your existing data network. It also allows you to create an independent network for your RVON equipment. Our devices are fully IP-compliant with current VoIP standards. All RVON series devices can be monitored via SNMP. The RVON product family supports ancillary data control for use with RTS intelligent trunking. These products enable trunking over IP for local to worldwide connectivity.

VoIP Interface	Device	Functionality
RVON-1	KP-32	Single Channel VoIP Interface
RVON-2	RP-1000 KP 12 CLD DKP 16 CLD	2-Channel VoIP Interface for CLD Keypanel Series
RVON-16	ADAM Series	16-Port VoIP Card Kit
RVON-C	Cronus	8-Port VoIP Card Kit
RVON-I/O	Analog Devices	8-Port VoIP Analog Interface
VKP	PC Client	Virtual Keypanel

## Breakout Panels



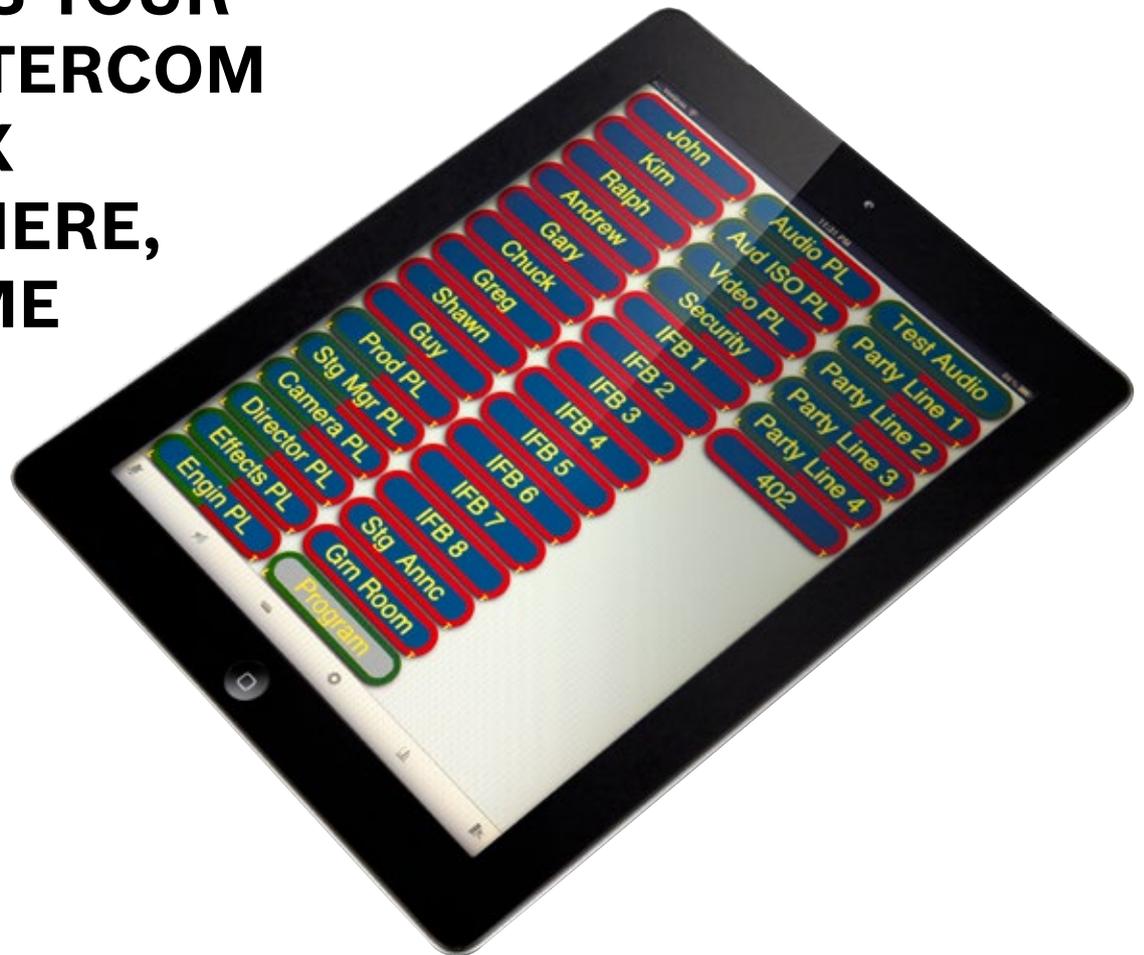
Breakout panels provide a convenient way of expanding the port capacity of ADAM intercom systems. There are eight breakout panels for use with the AIO cards: XCP-32-DB9, XCP-16-DB9-T, XCP-48-RJ45, XCP-48-TELCO, XCP-40-DB9, XCP-40-RJ11, XCP-955 and XCP-24.

## Breakout Panel Comparison

Panel	Frame	Back Card	Connectors
XCP-955	ADAM/ADAM-M	Telco	(25x) RJ-12
XCP-954-48	ADAM/ADAM-M	Telco	(48x) DB-9
XCP-32-DB9	ADAM/ADAM-M & Cronus	MDR	(32x) DB-9
XCP-16-DB9-T	ADAM/ADAM-M & Cronus	MDR	(16x) DB-9
XCP-48-RJ45	ADAM/ADAM-M & Cronus	MDR	(48x) RJ-45
XCP-48-Telco	ADAM/ADAM-M & Cronus	MDR/Telco	(6x) Telco
XCP-40-DB9	ADAM/ADAM-M	SCSI	(40x) DB-9
XCP-40-RJ11	ADAM/ADAM-M	SCSI	(40x) RJ-12
XCP-24	ADAM/ADAM-M	SCSI	(3x) Telco
XCP-ADAM-MC	ADAM/ADAM-M	SCSI	(10x) DB-9, (1x) DB25

## RTS VLINK

# ACCESS YOUR RTS INTERCOM MATRIX ANYWHERE, ANYTIME



RTS VLink is a new, fully interconnected software application that enables remote users to interface with RTS matrix intercoms, allowing an unprecedented degree of control and flexibility from anywhere in the world. The RTS VLink system provides intelligent trunking links into an RTS intercom matrix to provide full support for RTS intercom alphas and matrix access for standard communications workflows. RTS VLink represents the only fully interconnected, DHCP-compliant virtual communications solution on the market today for a major hardware-based intercom communications system.

### RTS VLINK FEATURES

- Anywhere, Anytime Access – The perfect solution for users that need secure, intelligent access to their RTS matrix from any location.
- Flexible Configuration – Scale the system to any number of ports (initial system of eight ports with two-port expansions available). Purchase only the capacity you need.
- Full Integration into RTS Matrix Intercom Systems – Allows full mapping of all intercom alphas.
- Fully DHCP Compliant – Operates over open Internet connections. Secure access can be employed with a standard VPN connection.
- SIP Support – Full SIP support, to and from the matrix.
- Flexible Connectivity – Provides a variety of connection methods, including MAD1, analog or Firewire connections.
- True Mobility – Access an RTS matrix via the Internet, using a WiFi/3G/4G connection.

# SOFTWARE

RTS software provides complete control over your intercom system from any standard Windows computer. Configure keypanel settings, assign user rights and even link matrices together that are thousands of miles away.

The RTS VoIP Virtual Keypanel (VKP) is a Windows-based application that allows any user to have a fully functioning RTS digital matrix intercom user station on their PC.



## AZedit

RTS Matrix Control Software

Intercom system configuration has never been easier with the advent of AZedit matrix control software. AZedit is a Windows-based, full-featured configuration software, providing online and offline configuration capabilities. It gives you the ability to manage multiple intercom systems, assign and reassign users to different ports, as well as dynamically add intercom hardware to your system setup without jumper changes, rewiring or taking the system offline. AZedit has the capability to load pre-set configuration files, which means saved configurations can be uploaded to the live application at anytime without interruption. AZedit can be used as a monitor tool to observe the status of features, such as gain and crosspoint settings, keypanel keys activated and other aspects of the system. AZedit can run in multiple sessions using the MCII-E ADAM master controller to allow for remote system configuration. AZedit is updated regularly to provide users with the latest features and innovations available.



## IPedit

Configuration Software  
for RVON & OMNEO  
Devices

IPedit is a Windows-based GUI application for configuring and displaying RVON and OMNEO devices connected to your matrix system. IPedit is to IP products as AZedit is to ADAM, Cronus and Zeus. An enhanced version of IPedit is available, which can configure multiple network devices simultaneously.



## RestrictEdit

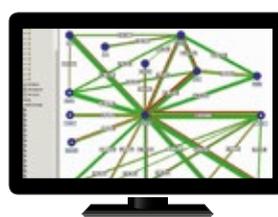
Access Management  
Software

RestrictEdit is a tool to create restriction files for use with AZedit software. Restriction files allow administrators to manage user access to resources and features. AZedit includes support for user restrictions by reading a text file (the restrictions file) and parsing out the set of resources and features available to each user.



## Trunk Edit Software

TES is a GUI for programming TM-2000 or MTM-2000 trunking devices. TES allows the user to set up all necessary parameters required for trunking multiple intercom systems. Each intercom system can be configured to work together as a virtual-integrated, single intercom system while still maintaining each individual system's autonomy.



## Trunk Supervisor Software

TSS is a trunking system management application. The program allows for real-time monitoring of trunk line status information. When used in combination with the RT-2M test set, it allows for fully automated testing of a trunked system. If a trunk line is found to be out of specification, the trunk line can be pulled out of service until the issue is resolved. The program also has the capability of remote notification of user defined alarm events.

# KP-SERIES KEYPANELS



KP-Series keypanels deliver superior digital audio using the Bosch-developed OMNEO which includes Audinate's Dante audio over IP technology, via either copper or fiber. The KP-Series provides top-notch audio quality, free of noise, delay and other artifacts present in older technology. The family includes a rich set of connectors as standard, including GPIO and RC. As with other RTS products, emphasis has been placed on backward compatibility with previous generations of matrices including analog technology.

KP-Series keypanels utilize the latest generation of wide angle TFT displays, providing superior clarity, resolution and longer display life, along with high-quality readability under a variety of lighting conditions.

## KP-SERIES FEATURES

- **OMNEO Open Media Networking Standard** – The new KP-Series is future-proof and so is your communication. The unparalleled flexibility features automatic hardware recognition plus the open source technology of OMNEO, so you get full backward compatibility and easy scalability.
- **Full IP Connectivity and TCP-IP Layer 2 & 3 Compatibility**
- **Out with the old and in with the more intuitive.** The new design and an enhanced user interface enable easier understanding and improved operation. The software provides simple and intuitive navigation of menus, with the most commonly used features easily accessible and compatible with standard IT infrastructure.
- **Advanced Signal Processing and AD/DA** – Get high-quality audio transmission every time. The new keypanel family features two echo cancellation modes, plus quick AD/DA conversion – ensuring ultra-low latency and reducing noise, echo, delay and other malfunctions found in older technologies.
- **User-Friendly, High-Res Color Display** – Get high quality, inside and out. The new KP-Series keypanels feature a unified design, including color, contrast, resolution and viewing angle for complete communication harmony. Plus, multiple controls through ergonomically-designed levers.
- **Backward compatibility** – All KP-Series keypanels are compatible with older technologies such as analog audio in USOC and 568-B connector formats.
- **Standardized connectors** – All previous hardware connector options (RC, GPI, and ancillary items) are now standard.
- **Enhanced navigation menus** – Optimized for ease of use.
- **High-performance Audio and Control Software Packages** for KP-5032 and KP-4016 keypanel models including the DKP-4016 desktop keypanel. Designed for more demanding requirements creating customized audio/control functionality that meets the most challenging requirements.

# KP-SERIES SOFTWARE PACKAGES

RTS offers two software packages for its KP-Series keypanels, designed for high-tech users including large broadcasters and organizations with more demanding requirements for audio-visual performance and remote control. The audio and control software packages represent a completely new way to enhance the functionality and investment value of existing RTS hardware. Each software package can be installed on the KP-5032 and KP-4016 keypanel models, including the DKP-4016 desktop keypanel. A one-time-only fee means there are no recurring payments. Once installed, the two packages create customized audio/control functionality that meets the most challenging requirements.

## HIGHLIGHTS

- The KP-Series Control package includes two supervisor features to make it easy to change the settings on any keypanel, either from a central location using AZ-Edit, or from any panel with Keypanel Mirroring installed.
- The KP-Series Audio package offers the best audio performance of any keypanel on the market. Users can fine-tune the audio to their personal preferences. Multiple audio parameters are available to users.
- The Audio package also has voice mail, to make sure your message reaches its intended recipient. The voice message system will alert users to the presence of messages, as soon as they return to their keypanel.

## CONTROL SOFTWARE PACKAGE <sup>1)</sup>



Configuration upload/download: remotely configure any keypanel and edit/save keypanel configurations in AZ-Edit software



Real-time volume control via AZ-Edit software: ensures that users can always hear verbal instructions, even if their volume is turned to zero



Supervisor mode (keypanel mirroring): remotely configure any keypanel, adjust volumes and other parameters in real-time on target panel from a supervisor panel



Downloadable screensaver: download a screen saver that is specific to you or your organization



Downloadable chimes: download a set of chimes that is specific to you or your organization

## AUDIO SOFTWARE PACKAGE <sup>1) 2)</sup>



Five-band equalizer: adjust volume level within five pre-defined frequency bands; users can fine-tune audio to their individual preferences



Voice messaging: leave messages for other users



Noise gate: adjust as required to reduce fatigue-causing line noise



Additional compression ratios: offer more flexibility. In noisy environments, audio quality can be improved by the amount of compression. This option adds additional compression ratios of 4, 5, and 6 to the standard 1:1, 2:1, and 3:1.

<sup>1)</sup> The Audio and Control Software Packages are optional and can be installed on all KP-5032, KP-4016 and DKP-4016 keypanel models.

<sup>2)</sup> The Audio Software Package also provides four OMNEO AUX inputs in addition to the two standard inputs, giving you more configuration options for your matrix environment.

### KP-5032

32-Position HD Color Display  
Keypanel



Control Software Package\*



Audio Software Package\*



### KP-4016

16-Position HD Color Display  
Keypanel



Control Software Package\*



Audio Software Package\*



### EKP-4016

16-Position HD Color Display  
Expansion Panel



### DKP-4016

16-Position HD Color Display  
Desktop/Wall-Mount Keypanel



Control Software Package\*



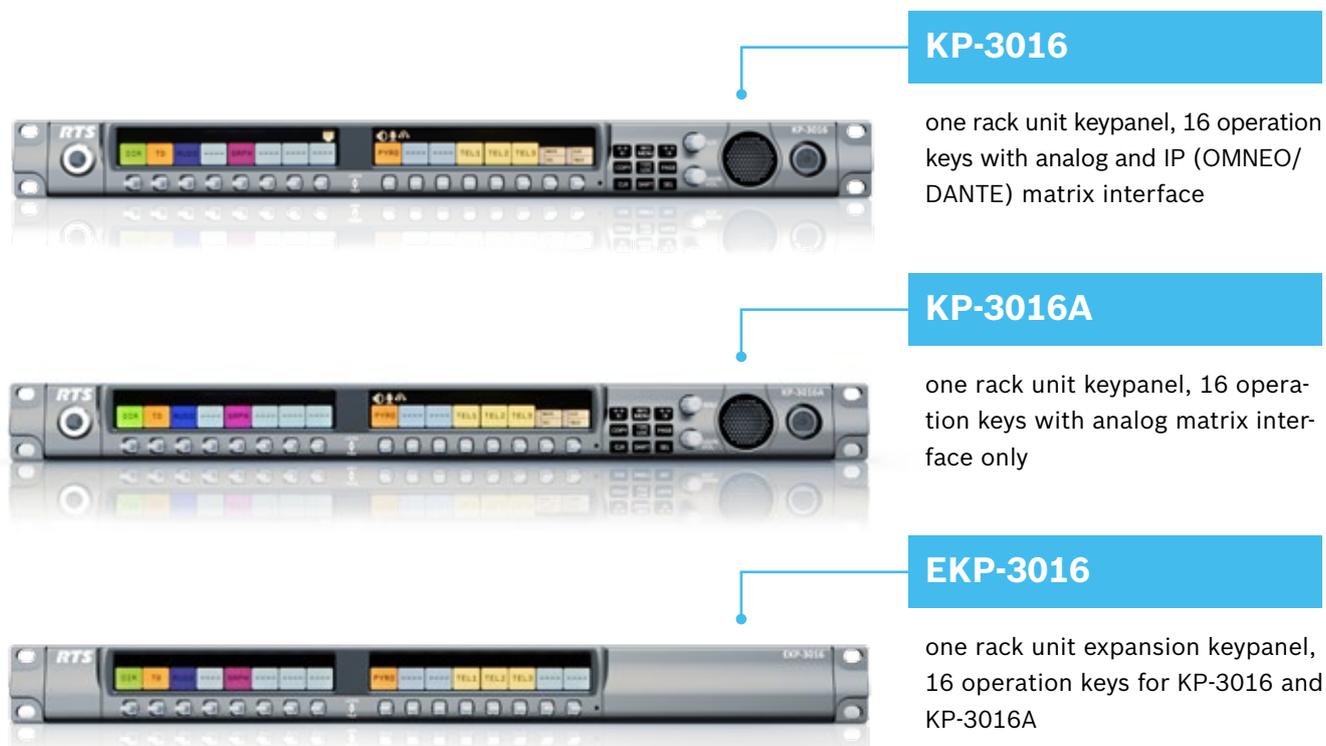
Audio Software Package\*



\* see page 17

# BEST-IN-CLASS SOLUTIONS

Three new KP-Series keypanel models complement the KP-Series keypanels family in the entry level segment. Depending on the intercom environment, these products can be connected to both digital (KP-3016 only) and analog RTS matrices and utilized as entry-level keypanels while still offering the same intuitive, easy handling features. They can also be quickly installed in applications with predefined requirements where the comprehensive connectivity options of the existing KP-series models are not needed, but with the same consistent industrial design, hardware and software platform and high-quality audio performance.



## KEY FEATURES

- Each keypanel features full-color HD displays offering well-balanced color, contrast and resolution. The keypanels are capable of displaying English, Kanji, Cyrillic, and simplified Chinese characters.
- Intuitive, easy to learn operation with ergonomically designed listen/talk levers. All RTS keypanels have a consistent user interface and operation, which is intuitive and easy to learn.
- Superior sound quality with design assistance provided by the EV speaker engineering R&D group.
- Backward compatible with existing RTS analog matrices and forward compatible with future-proof OMNEO IP architecture.
- OMNEO technology onboard. The KP-3016 incorporates OMNEO media networking without the need for additional cards or add-ons.

## KP-Series Accessories

Accessory	Panel	Functionality	Features
PSU MK	KP-5032 OEI-2/KP-4016	Mounting bracket	Mounting bracket for secure mounting of the external OEI-2/KP-4016, KP-5032 power supply.
PSU KP	RP-5032 KP-4016 EKP-4016	Power supply	spare power supply for RP-5032, KP-4016 and EKP-4016
Hdst Conn 4F	KP-5032 KP-4016	Headset connector	XLR A4F headset connector inlay for KP-5032 and KP-4016 keypanel.
Hdst Conn 5F	KP-5032 KP-4016	Headset connector	XLR A5F headset connector inlay for KP-5032 and KP-4016 keypanel.
Hdst Conn 4M	KP-5032 KP-4016	Headset connector	XLR A4M headset connector inlay for KP-5032 and KP-4016 keypanel.
Hdst Conn 5M	KP-5032 KP-4016	Headset connector	XLR A5M headset connector inlay for KP-5032 and KP-4016 keypanel.
LCP 16 CLD	RP-1000 KP 32 CLD KP-5032 KP-4016	Level Control Panel	Provides direct knob access to the volume levels of AUX, sidetone, speaker, headset and other functions of the RP-1000/KP 32 CLD

# COLOR SERIES KEYPANELS

## RP-1000 Series

32-Position Color Display  
Keypanel



The Color Series keypanels sport advanced features that take flexibility and ease-of-use to the next level. The Color Series feature a revolutionary customizable GUI in integrated full-color TFT displays. The Color Series advanced functionality is wrapped in a sleek, ergonomic design with a contoured bezel that fits flush within a rackmount configuration and looks great on the desktop.

The new RP-1000 features a stunning high-contrast HD TFT display with high-efficiency LED backlighting and enhanced language support for system alphas.

## COLOR SERIES FEATURES

- **Full-Color TFT Display** – The TFT color display hosts a rich and intuitive GUI that allows each type of function to be assigned a unique color.
- **Modern, Modular Design** – The rack-mount Color Series keypanel's flush front panel is ergonomically designed to fit easily into any control room or truck application. The back panels are optimized for future expansion.
- **Multi-Directional Keys** – Multi-directional keys are used for talk, listen and emulation of traditional level control function.
- **Enhanced Features** – The Color Series keypanels support industry leading features, such as up to six auxiliary inputs, three relays, independent digital gain control for microphone sources and configurable audio routing.
- **DSP** – Acoustic Echo Cancellation, Equalization, Mixing, Filtering and Metering.
- **User-Programmable Buttons** – User-programmable buttons provide custom shortcuts to menu functions.
- **Key Sequence Options** – Color Series keypanel can be ordered with the new Color key sequences and button screening, or the classic key sequences and button screening configured for the backlit numeric keypad.
- **Future Expansion** – Designed to allow for an expansion panel and optional connections to the matrix through current and future standard transmission formats.

**RP-1932**

Color Display Expansion Panel

**KP 12 CLD**

12-Position Color Display Keypanel

**DKP 16 CLD**

Color Display Desktop Keypanel

**Color Series Accessories**

Accessory	Panel	Functionality	Features
DKP 16 CLD RC	DKP 16 CLD	Rear Connector Kit	5 AUXs, 3 relays, 4 opto Inputs, headset, 2 OC outputs, foot SW, mic in/out, speaker
KP 12 CLD RC	KP 12 CLD	Rear Connector Panel	3 AUXs, 3 relays, 4 opto inputs, headset, 2 OC outputs, foot SW, mic in/out, LCP, EXP, frame, VoIP
RP-1000 RC	RP-1000 KP 32 CLD	Rear Connector Kit	6 AUXs, 3 relays, 4 opto inputs, headset, foot SW, speaker, 2 OC outputs, mic in/out
LCP 16 CLD	RP-1000 KP 32 CLD	Level Control Panel	Provides direct knob access to the volume levels of AUX, sidetone, speaker, headset and other functions of the RP-1000/KP 32 CLD
OKI	RP-1000 KP 32 CLD KP 12 CLD KP-32	OMNEO Interface	Two channels of audio in and out, Ethernet and fiber compatible
RVON-2	RP-1000 KP 32 CLD DKP 16 CLD KP 12 CLD	VoIP Interface	Two channels of audio in and out, Ethernet compatible

# KP-32 KEYPANEL SERIES

## KP-32

32-Position,  
4-Character Keypanel



The RTS KP-32 family of keypanels offers an unbeatable match of features, options and performance. The RTS KP-32 keypanel fits in a standard 19" rack and is 2RU high. It has 32 lever keys: 30 keys are for intercom talk/listen assignment, one for call waiting response, and one for headset/microphone/program selection and volume setup. KP-32 combines all of the programmable features of the KP-12 keypanel. The KP-32 features DSP and binaural headset operation with left/right assignment of audio signals. It also has large, super-bright, long-life fluorescent displays with adjustable brightness control, making it suitable for all types of ambient lighting. The KP-32 RC audio board with GPI option is available for KP-32 series keypanels.

## KP-32/16

16-Position,  
4-Character Keypanel



## EKP-32

32-Position,  
4-Character Expansion Panel



## KP-32 Series Accessories

Accessory	Panel	Functionality	Features
KP-32 RC	KP-32	Rear Connector Kit	2 line-level audio inputs, unswitched balanced microphone preamplifier output, headset, speaker output, foot switch input, GPIO, 4 opto-isolated inputs, 2 open-collector outputs, 2 SPDT relay outputs
LCP-32/16	KP-32 Series	16-Position Control Panel	Provides direct knob access to individual listen level controls for operator convenience.
OKI	RP-1000 KP 12 CLD KP-32	OMNEO Interface	Two channels of audio in and out, Ethernet and fiber compatible
RVON-1	KP-32	VoIP Interface	One channel of audio in and out, Ethernet compatible

# KP-12 KEYPANEL SERIES

## KP-12

12-Position Keypanel



The KP-12 modular series of keypanels represents compact, fully-programmable user stations. Based on a common set of internal modules (modules also available separately for custom designs), the KP-12 series has a common set of very powerful features, which makes each model attractive in mobile applications and in other situations where space is limited. Available in lever-key and pushbutton versions, the basic KP-12 provides a menu-driven, fully programmable, 12-key user station in 1RU of space. Expansion panels and level control panels round out the offerings in the rackmount form factor. Desktop and Tektronix WFM 3RU form factor units are also available.

The extremely compact modular circuit boards used in the KP-12 line of products are available in kits including the circuit boards, interconnect wiring, switches, etc. for those applications where a custom enclosure or mounting is required.

## KP-12 KEYPANEL FEATURES

- Extremely long-life, high-visibility, green alphanumeric LEDs.
- Fully programmable menus selected via front-panel shaft encoder.
- Lever-key versions provide individual talk/listen functions on each key.
- Pushbutton versions provide individually assignable talk, listen or talk/listen function on each button.
- All keys assignable for all functions (point to point, IFB, ISO, PL, SL, relay, GPI).
- Removable, optional MCP-90 series gooseneck microphone.
- Universal power supply for 100–240 VAC, 50/60 Hz operations.
- Optional rear connector and GPI options available for rackmount panels.
- Wide range of keypanels and expansion panels for specific applications.

## EKP-20

20-Position Expansion Panel



## DKP-12

12-Position Desktop Keypanel



## DKP-8

8-Position Desktop Keypanel



## KP-12 Series Accessories

Accessory	Panel	Functionality	Features
KPM-CK	KP-12	Rear Connector Kit	Mic in/out, EXT line in, headset, speaker
KPM-I/O	KP-12	GPI Option Kit	4 optos, 2 OCs, 2 relays



## VALUE KEYPANEL SERIES

### MKP-12

12-Position Rackmount  
Keypanel



The RTS value keypanel series is ideal where simplicity of operation and cost are paramount. The keypanels share a common set of features across the entire family. The alphanumeric call waiting window is used for scrollable access to all ports, PLs, ISOs, IFBs, etc. and to check and make key assignments. Keys may be assigned to any intercom function including talk, listen, talk/listen, relay, PL, ISO, IFB and SL. All models use the optional RTS MCP-90 series gooseneck microphones. These keypanels are ideal for use with the Zeus series intercom matrices, but (like all RTS digital matrix intercom keypanels) are compatible with all RTS matrices, past and present. The RTS value keypanel series provides a scribble strip for key identification.

**MKP-4**

4-Position Rackmount/  
Desktop Keypanel

**BKP-4**

4-Position Desktop Keypanel

**WKP-1**

1-Position Wall Keypanel

**WKP-4**

4-Position Wall Keypanel



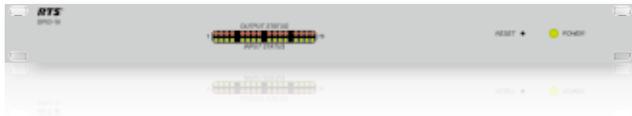
### Value Keypanel Comparison

Feature	MKP-12	MKP-4	BKP-4	WKP-4	WKP-1
Keys	12	4	4	4	1
Mounting	Rackmount or Desktop	Rackmount (with MCP mounting kit) or Desktop	Desktop	Wallmount	Wallmount
Call Waiting Window	4 Characters	4 Characters	4 Characters	4 Characters	N/A
Cost Effective	Yes	Yes	Yes	Yes	Yes
Headset Jack	XLR-4F	XLR-4F	XLR-4F	XLR-4F	N/A
Mic Jack	¼" TRS	¼" TRS	¼" TRS	¼" TRS	Integrated Mic
Speaker	Integrated	Optional MCS-325	Integrated	Integrated	Integrated

# SYSTEM PERIPHERALS

## GPIO-16

General Purpose Interface



The GPIO-16 interface provides 16 opto-isolated inputs and 16 relay outputs. It connects to the matrix via serial or Ethernet for remote operations.

## MDA-100

Mixing & Distribution Amplifier



The MDA-100 contains an 8 x 1-summing amplifier (mixer) and a 1 x 8 distribution amplifier.

## DSI-2008

Digital System Interface



The DSI-2008 interfaces two 2-wire intercom lines to two 4-wire lines, and also interfaces balanced and unbalanced 2-wire lines. Digital hybrids eliminate all nulling and ducking adjustments. It puts an end to concerns about echo and feedback when interfacing 2-wire lines.

## SSA-324

System-to-System Adapter



The SSA-324 interfaces two 2-wire intercom lines to two 4-wire lines, and also interfaces balanced and unbalanced 2-wire lines. The SSA-324 is ideal for steady load applications.

## TIF-2000A

Single-Line Telephone Interface



The TIF-2000A provides bidirectional communication between the intercom matrix and a standard analog telephone line.

## TIF-4000

12 Line Telephone Interface



The TIF-4000 provides bidirectional communication between the intercom matrix and up to 12 standard analog telephone lines. The unit operates with 2 redundant power supplies.

**LCP-102**

Level Control Panel



The LCP-102 functions as an analog trim panel, used to either adjust input/output gains, partyline assignments or program assignments for IFBs.

**PAP-32**

Program Assignment Panel



The PAP-32 enables routing of program sources to IFB destinations.

**PAM-32**

Program Assignment Monitor



The PAM-32 has 30 keys for monitoring inputs, one key for scrolling alpha assignments and one for headset/speaker selection.

**PAM-16**

Production Audio Monitor



The PAM-16 has 16 keys for monitoring audio inputs.

**SIP-ISDN**

SIP Telephone Interface



The SIP-ISDN has support for the SIP protocol and incorporates an ISDN basic rate interface (1x S0/2 Lines) and a LAN interface.

**MCP-90-x****MCP-90** Electret Gooseneck Microphone**MCP-90-0** 0" Gooseneck Microphone**MCP-90-8** 8" Gooseneck Microphone**MCP-90-12** 12" Gooseneck Microphone**MCP-90-18** 18" Gooseneck Microphone

The MCP-90-x gooseneck microphones is the standard gooseneck intercom microphone for all RTS keypanels. Available in different length from 0" till 18". All versions use a electret microphone element.

**PS-20\***

Power Supply



The PS-20 features 2- and 4-channel operation, RTS monitoring, 2-channel program input, audio linking and 3-mode operation: RTS 2-channel, RTS 4-channel and Clear-Com mode.

**BP-325\***

Dual-Channel Binaural Programmable Beltpack



The BP-325 is a portable beltpack for use with RTS two-wire intercom systems. The BP-325 is a binaural (stereo), programmable 2-channel beltpack with program-input capability. For use with a dynamic microphone only. The BP-325 consumes 65 to 85 mA of power.

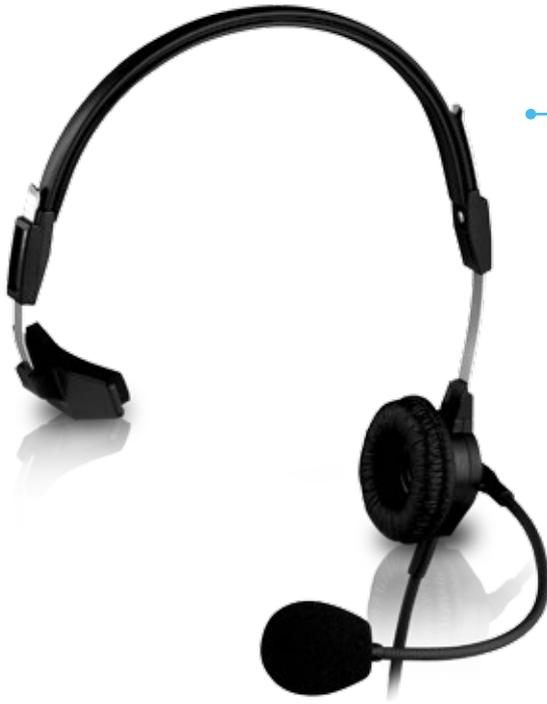


# HEADSETS

**HEADSETS, HEADPHONES,  
EARSETS & ACCESSORIES**

## LIGHTWEIGHT HEADSETS | PH LIGHTWEIGHT SERIES

The RTS lightweight headsets provide users with an ideal combination of functionality and comfort. The PH-44 and PH-88 models offer users an efficient and durable standard headset while the MH models accommodate the needs of those who are looking for the added features of a premium headset.



### PH-88

Single-sided Headset with Flexible Dynamic Boom Mic

The PH-88 headset is a super lightweight, single-sided headset for the ultimate in daylong comfort. The PH-88 features high quality dynamic earphones with a dynamic-noise cancelling microphone with a semi-rigid, fully adjustable boom for precise positioning. The high-quality wide band dynamic earphones offer a better fit, isolation and frequency response. Additional versions are available including 4- or 5-pin male or female XLR connectors.



### PH-44

Dual-sided Headset with Flexible Dynamic Boom Mic

The PH-44 headset is a super lightweight, dual-sided headset for the ultimate in daylong comfort. The PH-44 features high quality dynamic earphones with a dynamic noise-cancelling microphone with a semi-rigid, fully adjustable boom for precise positioning. The high-quality wide band dynamic earphones offer a better fit, isolation and frequency response. Additional versions are available including 4- or 5-pin male or female XLR connectors.

## PREMIUM LIGHTWEIGHT HEADSETS | MH SERIES

### MH-300

Single-sided Headset/Headphone



The MH-300 single-sided headset provides the newest design from RTS. It features a rugged, modular design, lightweight construction, installation options and multiple functions beyond the live studio or theater venue. The modular design allows you to interchange modules to allow for the best headset configuration for any environment. The noise-cancelling microphone, combined with the headphone transducers, provide clear and precise communication in noisy environments. Finally, by installing the appropriate module, you can connect to any audio device. Expanded frequency response ensures clear communications and enhanced audio performance.

### MH-302

Dual-sided Headset/Headphone



The MH-302 is designed with you, the user, in mind. The headset features a durable modular design, lightweight construction, installation options and multi-functional use. The modular design allows you to interchange modules for any environment. The noise-cancelling microphone, combined with the headphone transducers, provide clear communication in noisy environments. Finally, this headset is not limited to live studio or venue communications. By installing the appropriate module, you can connect to an MP3 player or many other types of audio devices. The MH Series headsets provide clear communications for professional applications including live remote or studio broadcasting, film, TV or theater intercom communications. Expanded frequency response ensures clear communications and enhanced audio performance.

## MEDIUM WEIGHT HEADSETS | PH SERIES

The PH Series of medium-weight intercom headsets is considered the industry standard by many users in all different applications. The PH Series features both durability and functionality. With weights between 11–13 oz, these headsets offers the ultimate in daylong comfort.



### PH-1

Single-sided Headset with Flexible Dynamic Boom Mic

The PH-1 is a medium weight, single-sided headset with foam-filled cushions that offer a light feel with moderate isolation from ambient noise. The dynamic noise-cancelling microphone is easily positioned with a unique ball joint for continuous adjustability. Available with 4- or 5-pin male or female XLR connectors.



### PH-2

Dual-sided Headset with Flexible Dynamic Boom Mic

The PH-2 headset is a medium weight, full cushion, dual-sided headset for the ultimate in daylong comfort. The headset has foam-filled cushions that offer a light feel with moderate isolation from ambient noise. The PH-2 features a high quality monaural dynamic earphone with a dynamic noise-cancelling microphone on an adjustable ball joint boom that can be positioned on either side of the head. Versions are available with 4-pin male or female connectors.



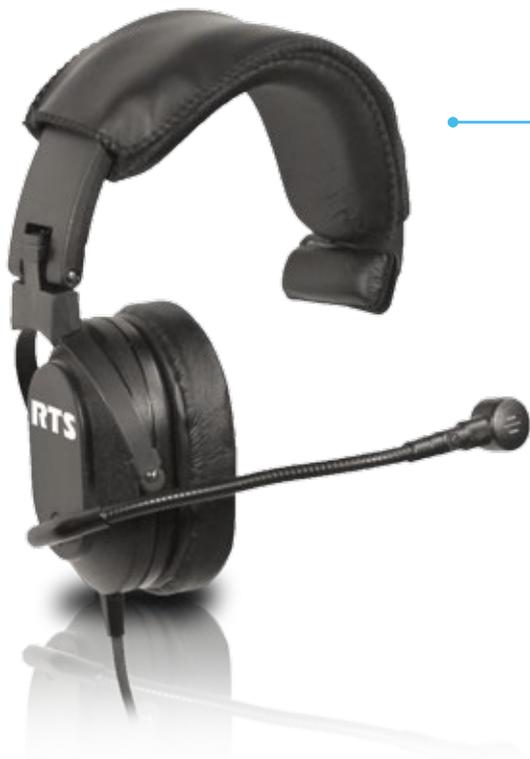
### PH-3

Dual-sided Headset with Flexible Dynamic Boom Mic

The PH-3 is a medium weight, dual-sided stereo headset with foam-filled cushions that offer a light feel with moderate isolation from ambient noise. The dynamic noise-cancelling microphone is easily positioned with a unique ball joint for continuous adjustability. Versions are available with 5-pin male or female connectors.

## MEDIUM WEIGHT HEADSETS | HR SERIES

The HR Series of medium-weight intercom headsets features a unique design that is both comfortable and functional. The HR Series provides users with a premium headset option loaded with features. The earcup and ergonomically designed headband provide added comfort through 3 unique pressure settings. This design also provides 21 dB of passive hearing protection. The cord comes terminated in either 4- or 5-pin XLR, male or female and can also be purchased unterminated for custom applications.



### HR-1

Single-sided Headset with Flexible Dynamic Boom Mic

The HR-1 is a single muff, medium-weight passive noise reduction headset with a dynamic noise-cancelling microphone. The ergonomic headband design distributes the ear cushion pressure evenly over the entire ear with no pressure points, ensuring hours of comfortable wear. An added advantage of this headset design is that it folds into compact form for ease of transport and storage. Additional versions are available including 4- or 5-pin male or female XLR connectors.



### HR-2

Dual-sided Headset with Flexible Dynamic Boom Mic

The HR-2 is a dual-sided, medium-weight passive noise reduction headset with a dynamic noise-cancelling microphone. The headset has a noise reduction rating of 21 dB; suitable for use in a moderately noisy environment. The HR-2 features our unique, soft padded headband for daylong comfort. Our ergonomic headset design distributes ear cushion pressure evenly over the entire ear with no pressure points, unlike conventional headsets. An added advantage of this headset design is that it folds into compact form for ease of transport and storage. Additional versions are available including 4- or 5-pin male or female XLR connectors.

## MONITOR HEADPHONES | LISTEN-ONLY HEADPHONES



### HR-1L & HR-2L

Medium-Weight, Listen-only Headphones

The HR-1L & HR-2L are medium-weight, noise reduction headphones with a noise reduction rating of 21 dB. The HR-1L is a single-sided headset while the HR-2L is a dual-sided headset. The headsets effectively reduce noise and are suitable for use in moderately noisy environments. All models feature a unique, soft padded headband design that distributes ear cushion pressure evenly over the entire ear with no pressure points, unlike conventional designs which apply more pressure on the bottom of the ear than the top. An added advantage of this design is that the headset folds into an extremely compact shape.

## UNDER HELMET



### PH-16

Dual-sided Headset with 24 dB, Flexible Dynamic Boom Mic

The PH-16 is a monaural headset with a noise-cancelling dynamic microphone. The PH-16 is designed to fit under a helmet with an environmental protection agency noise reduction rating (NRR) of 24 dB. The headset cord is terminated with a 4-pin XLR female connector. The dynamic receivers have special mounting which resist shock, vibration and acoustic feedback. The PH-16 ear cups are foam lined for added noise attenuation. The vented, foam-filled ear cushions combine comfort with good acoustic seal. For convenience and economy, the receivers and ear cushions are field repairable.

## ACCESSORIES

### HS-6A

Telephone-style PTT Handset with Metal Hanger Bracket

The HS-6A is a telephone-style handset that offers a push-to-talk switch, dynamic earphone and dynamic microphone. It is supplied with a metal hanger bracket for vertical storage and is compatible with most user stations. The HS-6A is terminated with an A4F plug. Available in white or black.



### Headsets Accessories

Model	Description
CC-1	Cover Cushion
C3	Ear Cushion, Black for PH-1, -2, -3
C-8	Ear Cushion for PH-44, -88
C-9	Ear Cushion for HR-1, -2
WS-2B	Windscreen for PH-44, -88
PT-400	PTT Kit Locking
AEF-3B	Nylon Earloop, Clear
ET-1B	Eartip, Clear
HE-15	Extension Cable
HE-30	Extension Cable

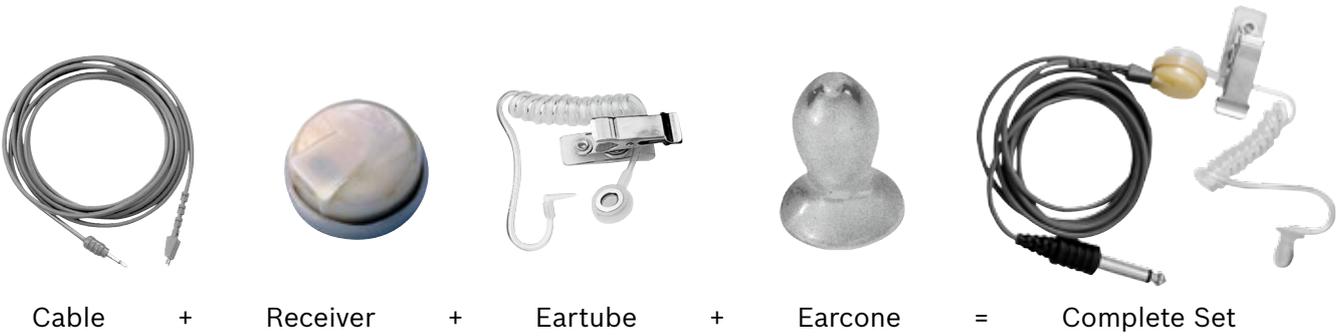
### MH Headsets Accessories

Model	Description
MH-EC	MH ACC Ear Cushion
MH-WC	MH ACC Dyn Mic Windscreen
MH-HBP+	MH ACC Headband and Side Pads
MH-AAM	MH ACC Aux Audio Module
MH-FM	MH ACC Filler Module
MH-TP	MH ACC Temple Pad
MH-CC	MH ACC Carry Case
MH-DM-A4M	MH ACC Dyn Module – A4M
MH-DM-A4F	MH ACC Dyn Module – A4F
MH-DM-A5M	MH ACC Dyn Module – A5M
MH-DM-A5F	MH ACC Dyn Module – A5F

# EARSETS

The popular RTS earsets are precisely designed for inconspicuous listening while on camera. Used by nearly all major television networks and stations, we have surpassed industry standards. The extremely efficient miniature driver element requires only nominal operating power and enables the announcer to hear program cues while working with a live microphone. The units are also suitable for many other applications such as live theater script prompting.

## TYPICAL SET-UP



To provide optimum versatility, the announcer's earset is made up of interchangeable components that simply snap together. Users can construct a version of the announcer's earset that best suits their particular needs. Some popular combinations are available as a standard configuration; these are listed below.

### Complete Earsets



**EMV-2** includes: RTV-04, CMT-2, AEF-3B



**CES-1** includes: RTV-04, CMT-2, ET-4



**CES-2** includes: RTV-04, CMT-98, ET-4

### Telethin Magnetic Receivers



- RTR-04** 15 Ω
- RTV-04** 125 Ω
- RTW-04** 500 Ω
- RTX-04** 1000 Ω
- RTY-04** 2000 Ω

Telethin Magnetic Receivers, available in 5 different impedances, permits choice of impedance for any application. For inconspicuous use, the receiver is extremely small and lightweight.

## Standard Telethin® Cord Sets

The standard earset system comes equipped with a 5', low luster gray or beige cord with a 1/4" connector. A variety of other cords with or without volume controls are available as components.



**CMT-95**  
Straight cord with sub-miniature straight connector



**CMT-98**  
Straight cord with straight miniature connector



**CMT-2**  
Straight cord with sub-miniature straight connector



**CMT-92**  
Straight cord with right angle miniature connector



**CCX-2**  
Coiled cord with right angle miniature connector



**CCT-2**  
Coiled extended cord with 1/4" connector

## Earmolds/Earcones/ Eartips

For maximum comfort and convenience, three pliable earmolds (S, M & L) are available for either the left or right ear. The Telethin receiver easily attaches into the earpiece directing sound into the ear canal and limiting ambient noise.

### Earmolds



**EML-1R**  
Large, right ear  
**EML-2L**  
Large, left ear



**EMM-1R**  
Medium, right ear  
**EMM-2L**  
Medium, left ear



**EMS-1R**  
Small, right ear  
**EMS-2L**  
Small, left ear

### Eartips



**ET-1B**  
Eartip, soft silicone tip, clear colored, with metal plug

### Earcones



**BT-4**  
Bag of 5 large earcones for use with ET-4



**BT-3**  
Bag of 5 medium earcones for use with ET-4



**BT-2**  
Bag of 5 small earcones for use with ET-4



**BT-1**  
Bag of 25 replacement eartips, clear colored, for use with ET-1B

## Eartubes

These inconspicuous clear plastic tubes carry the sound effectively from a RTS Telethin receiver to the talent's ear without revealing the cord to the camera. The clear tubes are available in 3 versions. All connect easily to a RTS eartip, earcone or any size earmold and have a handy clothing clip to secure the system in place.



**ET2**  
Coiled acoustic eartube with clothing clip for use with earmolds or eartip



**ET4**  
Coiled acoustic eartube with clothing clip for use with earcones — comes with one each — S, M & L earcones



**ET3**  
Straight acoustic eartube with clothing clip for use with earmolds or eartip

## Cords

The cords with in-line volume control are equipped with clothing clips for out of sight, waist-level positioning. To avoid loss of cues, the volume control will not shut off completely.



**VXT-3**  
500 Ω volume control with 1/4" connector



**VYT-3**  
2000 Ω volume control with 1/4" connector

## Earloops

The nylon or plastic covered metal earloop holds the eartip or receiver in place on the ear.



**AEF-3B**  
Nylon earloop



**AEF-2**  
Plastic covered metal earloop

**AFC-1** Under-chin tube and foam cushion

## 19" Rackmount Products

Product	Height	Depth	Weight	Color
4010	1RU	15" (38.1 cm)	10.74 lb (4.87 kg)	Grey
ADAM	7RU	21" (53.34 cm)	48 lb (21.77 kg)	Grey
ADAM-M	3RU	21" (53.34 cm)	22.05 lb (10.00 kg)	Duotone
Cronus	2RU	13.25" (33.66 cm)	14.15 lb (6.41 kg)	Grey
CSI-200	1RU	8.25" (20.96 cm)	2.2 lb (1 kg)	Grey
DSI-2008	1RU	8.25" (20.96 cm)	2.9 lb (1.32 kg)	Grey
EKP-20	1RU	7.13" (18.1 cm)	4.6 lb (2.09 kg)	Black or Grey
EKP-32	2RU	5" (12.7 cm)	5.6 lb (2.54 kg)	Black or Grey
EKP-3016	1RU	3.25" (9.85 cm)	3.00 lb (1.36 kg)	Duotone
EKP-4016	1RU	3.25" (9.85 cm)	2.95 lb (1.34 kg)	Duotone
GPIO-16	1RU	7" (17.78 cm)	5.48 lb (2.49 kg)	Grey
ICP-2000	1RU	0.75" (1.91 cm)	0.89 lb (0.4 kg)	Black
KP 12 CLD	1RU	4.28" (10.87 cm)	3.76 lb (1.71 kg)	Duotone
KP-12	1RU	5.5" (14 cm)	5.1 lb (2.31 kg)	Black
KP-3016	1RU	3.25" (9.85 cm)	3.35 lb (1.52 kg)	Duotone
KP-3016A	1RU	3.25" (9.85 cm)	3.35 lb (1.52 kg)	Duotone
KP-32	2RU	5" (12.7 cm)	6.4 lb (2.9 kg)	Black
KP-32/16	2RU	5" (12.7 cm)	5.9 lb (2.68 kg)	Black or Grey
KP-5032	2RU	3.25" (9.85 cm)	4.89 lb (2.22 kg)	Duotone
KP-4016	1RU	3.25" (9.85 cm)	3.5 lb (1.58 kg)	Duotone
LCP-102	2RU	7.13" (18.1 cm)	8.28 lb (3.76 kg)	Black or Grey
LCP-32/16	1RU	1.75" (4.45 cm)	3 lb (1.36 kg)	Black or Grey
MCS-325	1RU	8.25" (21 cm)	2.52 lb (1.14 kg)	Grey
MDA-100	1RU	8.5" (21.59 cm)	7.38 lb (3.35 kg)	Grey
MKP-12	1RU	8" (20.3 cm)	4.96 lb (2.25 kg)	Black or Grey
MKP-4	1RU	8.25" (21 cm)	2.82 lb (1.28 kg)	Grey
PAM-16	1RU	5" (12.7 cm)	4.5 lb (2.04 kg)	Black
PAM-32	2RU	3.5" (9 cm)	3.86 lb (1.75 kg)	Black or Grey
PAP-32	2RU	4.5" (11.43 cm)	5.58 lb (2.53 kg)	Black or Grey
PS-20	1RU	8.56" (21.75 cm)	5 lb (2.27 kg)	Grey
RP-1932	2RU	3.25" (8.26 cm)	6.3 lb (2.86 kg)	Duotone
RVON-I/O	1RU	8" (20.32 cm)	3.7 lb (1.67 kg)	Grey
SIP-ISDN	1RU	8.5" (21.59 cm)	3 lb (1.36 kg)	Duotone
SSA-324	1RU	8.25" (20.96 cm)	2.7 lb (1.22 kg)	Grey
SWP-2000	1RU	5.75" (14.61 cm)	4.6 lb (2.09 kg)	Black
TIF-2000A	1RU	8.25" (20.96 cm)	2.25 lb (1.13 kg)	Grey
TIF-4000	4RU	13" (33.02 cm)	28.45 lb (12.9 kg)	Grey
TM-10K	2RU	12" (30.48 cm)	26.78 lb (12.15 kg)	Black
Zeus III	1RU	15" (38.1 cm)	7 lb (3.18 kg)	Duotone
Zeus III LE/LE+	1RU	15" (38.1 cm)	7 lb (3.18 kg)	Duotone

## Non-Rackmount Products

Product	Form Factor	Height	Width	Depth	Weight	Color
ARNI G2	Other*	1.7" (4.31 cm)	5.27" (13.38 cm)	3.71" (9.42 cm)	1.30 lb (0.45 kg)	Silver
BKP-4	Desktop	5.06" (12.86 cm)	9.25" (23.5 cm)	8" (20.32 cm)	3.2 lb (1.45 kg)	Grey
DKP 16 CLD	Desktop	3.2" (8.13 cm)	10.1" (25.65 cm)	9.2" (23.37 cm)	3.78 lb (1.71 kg)	Duotone

\*separate shelf available for rackmount application

## Non-Rackmount Products

Product	Form Factor	Height	Width	Depth	Weight	Color
<b>DKP-8, 12</b>	Desktop	3.75" (9.53 cm)	9" (22.86 cm)	7.25" (18.42 cm)	4.58 lb (2.08 kg)	Grey
<b>DKP-4016</b>	Desktop	3.60" (9.15 cm)	10.63" (27.01 cm)	9.35" (23.76 cm)	3.70 lb (1.68 kg)	Duotone
<b>DKP-4016W</b>	Wallmount	3.60" (9.15 cm)	10.63" (27.01 cm)	9.35" (23.76 cm)	3.70 lb (1.68 kg)	Duotone
<b>KP-8T</b>	Tektronix WFM	5.2" (13.21 cm)	8.38" (21.29 cm)	9" (22.86 cm)	10.9 lb (4.94 kg)	Grey
<b>WKP-1</b>	Wallmount	4.5" (11.43 cm)	4.5" (11.43 cm)	2.75" (7 cm)	0.79 lb (0.36 kg)	Grey
<b>WKP-4</b>	Wallmount	6.5" (16.51 cm)	9" (22.9 cm)	2.5" (6.35 cm)	1.32 lb (0.6 kg)	Grey

## Headsets

Model Name	Type	Mic Sensitivity	Mic Frequency Range	Mic Impedance	Speaker Sensitivity SPL @1kHz, 1mW	Speaker Frequency Range	Speaker Impedance	Connector Termination	Cord Length	Weight (not including cord)
<b>PH-88</b>	Single-sided	-65dBV/Pa @1cm	200 Hz-10 kHz	200 Ω	109 dB	100 Hz-7 kHz	300 Ω	XLR 4-pin Female	5.5'/1.6m	2.5oz/70.8g
<b>PH-88R</b>	Single-sided	-65dBV/Pa @1cm	200 Hz-10 kHz	200 Ω	109 dB	100 Hz-7 kHz	300 Ω	XLR 4-pin Male	5.5'/1.6m	2.5oz/70.8g
<b>PH-88R5</b>	Single-sided	-65dBV/Pa @1cm	200 Hz-10 kHz	200 Ω	109 dB	100 Hz-7 kHz	300 Ω	XLR 5-pin Male	5.5'/1.6m	2.5oz/70.8g
<b>PH-88E</b>	Single-sided	-65dBV/Pa @1cm	200 Hz-10 kHz	200 Ω	109 dB	100 Hz-7 kHz	300 Ω	XLR 4-pin Female coiled cord	2'/0.6m 12'/3.6 extended	2.5oz/70.8g
<b>PH-8S</b>	Single-sided	-65dBV/Pa @1cm	200 Hz-10 kHz	200 Ω	109 dB	100 Hz-7 kHz	300 Ω	3.5mm 4-conductor	9'/2.7m	2.5oz/70.8g
<b>PH-44</b>	Dual-sided Mono	-65dBV/Pa @1cm	200 Hz-10 kHz	200 Ω	109 dB	100 Hz-7 kHz	150 Ω	XLR 4-pin Female	5.5'/1.6m	3oz/85g
<b>PH-44R</b>	Dual-sided Mono	-65dBV/Pa @1cm	200 Hz-10 kHz	200 Ω	109 dB	100 Hz-7 kHz	150 Ω	XLR 4-pin Male	5.5'/1.6m	3oz/85g
<b>PH-44A5</b>	Dual-sided Stereo	-65dBV/Pa @1cm	200 Hz-10 kHz	200 Ω	109 dB	100 Hz-7 kHz	300 Ω per side	XLR 5-pin Female	5.5'/1.6m	3oz/85g
<b>PH-44R5</b>	Dual-sided Stereo	-65dBV/Pa @1cm	200 Hz-10 kHz	200 Ω	109 dB	100 Hz-7 kHz	300 Ω per side	XLR 5-pin Male	5.5'/1.6m	3oz/85g
<b>PH-44R6</b>	Dual-sided Stereo	-65dBV/Pa @1cm	200 Hz-10 kHz	200 Ω	109 dB	100 Hz-7 kHz	300 Ω per side	XLR 6-pin Male	5.5'/1.6m	3oz/85g
<b>PH-44PT</b>	Dual-sided	-65dBV/Pa @1cm	200 Hz-10 kHz	200 Ω	109 dB	100 Hz-7 kHz	300 Ω per side	Stripped wire	5.5'/1.6m	3oz/85g
<b>PH-88-IC3</b>	Single-sided	-65dBV/Pa @1cm	200 Hz-10 kHz	200 Ω	109 dB	100 Hz-7 kHz	300 Ω	Dual 3.5mm	9'/2.7m	2.5oz/70.8g
<b>PH-44-IC3</b>	Dual-sided Mono	-65dBV/Pa @1cm	200 Hz-10 kHz	200 Ω	109 dB	100 Hz-7 kHz	150 Ω	Dual 3.5mm	9'/2.7m	3oz/85g
<b>MH-300</b>	Single-sided	-65dBV/Pa @1cm	200 Hz-10 kHz	200 Ω	100 dB	100 Hz-10 kHz	150 Ω	MH Series headsets are available in 4 or 5 pin, male or female	5.9'/1.7m	8oz/226.7g
<b>MH-302</b>	Dual-sided	-65dBV/Pa @1cm	200 Hz-10 kHz	200 Ω	100 dB	100 Hz-10 kHz	150 Ω	MH Series headsets are available in 4 or 5 pin, male or female	5.9'/1.7m	10oz/283.5g
<b>PH-1</b>	Single-sided	-65dBV/Pa @1cm	200 Hz-6 kHz	150 Ω	95 dB	100 Hz-10 kHz	300 Ω	XLR 4-pin Female	5.5'/1.6m	11oz/311.8g
<b>PH-1R</b>	Single-sided	-65dBV/Pa @1cm	200 Hz-6 kHz	150 Ω	95 dB	100 Hz-10 kHz	300 Ω	XLR 4-pin Male	5.5'/1.6m	11oz/311.8g
<b>PH1-R5</b>	Single Sided	-65dBV/Pa @1cm	200 Hz-6 kHz	150 Ω	95 dB	100 Hz-10 kHz	300 Ω	XLR 5-pin Male	5.5'/1.6m	11oz/311.8g
<b>PH1-1PT</b>	Single Sided	-65dBV/Pa @1cm	200 Hz-6 kHz	150 Ω	95 dB	100 Hz-10 kHz	300 Ω	Stripped wire	5.5'/1.6m	11oz/311.8g
<b>PH-2</b>	Dual-sided Mono	-65dBV/Pa @1cm	200 Hz-6 kHz	150 Ω	95 dB	100 Hz-10 kHz	150 Ω	XLR 4-pin Female	5.5'/1.6m	13oz/368.5g
<b>PH-2R</b>	Dual-sided Mono	-65dBV/Pa @1cm	200 Hz-6 kHz	150 Ω	95 dB	100 Hz-10 kHz	150 Ω	XLR 4-pin Male	5.5'/1.6m	13oz/368.5g
<b>PH-2PT</b>	Dual-sided	-65dBV/Pa @1cm	200 Hz-6 kHz	150 Ω	95 dB	100 Hz-10 kHz	300 Ω per side	Stripped wire	5.5'/1.6m	13oz/368.5g
<b>PH-3</b>	Dual-sided Stereo	-65dBV/Pa @1cm	200 Hz-6 kHz	150 Ω	95 dB	100 Hz-10 kHz	300 Ω per side	XLR 5-pin Female	5.5'/1.6m	13oz/368.5g
<b>PH-3R5</b>	Dual-sided Stereo	-65dBV/Pa @1cm	200 Hz-6 kHz	150 Ω	95 dB	100 Hz-10 kHz	300 Ω per side	XLR 5-pin Male	5.5'/1.6m	13oz/368.5g
<b>HR-1</b>	Single-sided	-65dBV/Pa @1cm	150 Hz-8 kHz	200 Ω	95 dB	100 Hz-3 kHz	300 Ω	XLR 4-pin Female	5'/1.5m	11oz/311.8g
<b>HR-1R</b>	Single-sided	-65dBV/Pa @1cm	150 Hz-8 kHz	200 Ω	95 dB	100 Hz-3 kHz	300 Ω	XLR 4-pin Male	5'/1.5m	11oz/311.8g
<b>HR-1R5</b>	Single-sided	-65dBV/Pa @1cm	150 Hz-8 kHz	200 Ω	95 dB	100 Hz-3 kHz	300 Ω	XLR 5-pin Male	5'/1.5m	11oz/311.8g
<b>HR-1PT</b>	Single-sided	-65dBV/Pa @1cm	150 Hz-8 kHz	200 Ω	95 dB	100 Hz-3 kHz	300 Ω	Stripped wire	5'/1.5m	11oz/311.8g
<b>HR-2</b>	Dual-sided Mono	-65dBV/Pa @1cm	150 Hz-8 kHz	200 Ω	95 dB	100 Hz-3 kHz	150 Ω	XLR 4-pin Female	5'/1.5m	15oz/425.2g
<b>HR-2R</b>	Dual-sided Mono	-65dBV/Pa @1cm	150 Hz-8 kHz	200 Ω	95 dB	100 Hz-3 kHz	150 Ω	XLR 4-pin Male	5'/1.5m	15oz/425.2g
<b>HR-2R5</b>	Dual-sided Stereo	-65dBV/Pa @1cm	150 Hz-8 kHz	200 Ω	95 dB	100 Hz-3 kHz	300 Ω per side	XLR 5-pin Male	5'/1.5m	15oz/425.2g
<b>HR-2A5</b>	Dual-sided Stereo	-65dBV/Pa @1cm	150 Hz-8 kHz	200 Ω	95 dB	100 Hz-3 kHz	300 Ω per side	XLR 5-pin Female	5'/1.5m	15oz/425.2g
<b>HR-2PT</b>	Dual-sided	-65dBV/Pa @1cm	150 Hz-8 kHz	200 Ω	95 dB	100 Hz-3 kHz	300 Ω per side	Stripped wire	5'/1.5m	15oz/425.2g
<b>HR-1L</b>	Single-sided	N/A	N/A	N/A	95 dB	100 Hz-3 kHz	300 Ω	Stripped wire	5'/1.5m	15oz/425.2g
<b>HR-2L</b>	Dual-sided	N/A	N/A	N/A	95 dB	100 Hz-3 kHz	300 Ω per side	Stripped wire	5'/1.5m	15oz/425.2g
<b>PH-16</b>	Dual-sided Mono	-65dBV/Pa @1cm	200 Hz-6 kHz	150 Ω	93 dB	100 Hz-3 kHz	150 Ω	XLR 4-pin Female	5.5'/1.6m	15oz/425.2g
<b>PH-16R</b>	Dual-sided Mono	-65dBV/Pa @1cm	200 Hz-6 kHz	150 Ω	93 dB	100 Hz-3 kHz	150 Ω	XLR 4-pin Male	5.5'/1.6m	15oz/425.2g

All products except Monitor Headphones feature a dynamic noise-cancelling microphone.

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