

## KP-4016 / KP-4016PB

### OMNEO-Capable Color Display Keypanel



Pushbutton model not shown

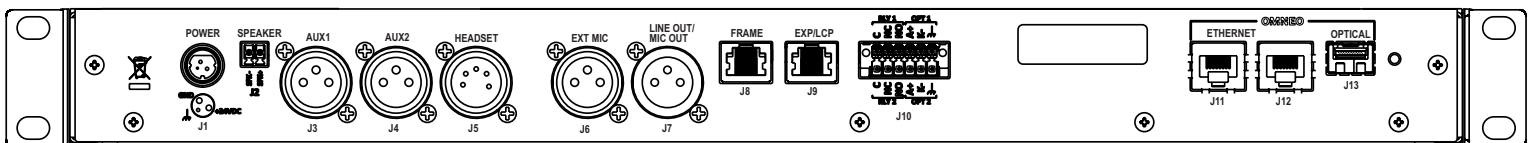
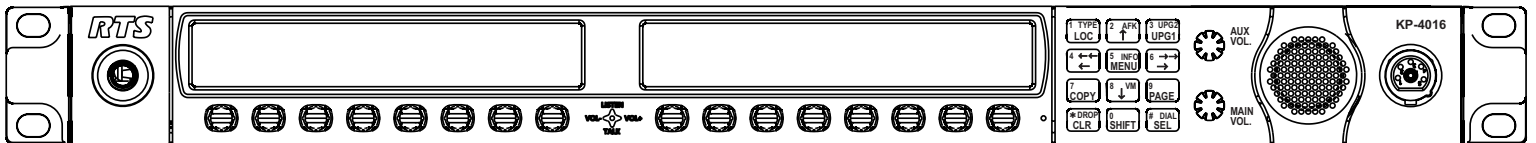
Both the KP-4016 and KP-4016PB keypanels deliver superior high-quality digital audio using the Bosch-branded OMNEO technology with Dante™ by Audinate audio over IP via either copper or fiber. The KP-4016 delivers top-notch audio, free of noise, delay, and other artifacts present in older technology. This family of keypanels 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.

The keypanel models utilize the latest generation of wide angle TFT displays providing superior clarity, resolution, and longer display life, delivering high-quality readability under a variety of lighting conditions.

## Features

- Backward compatible with older technologies such as analog audio in USOC and 568-B connector formats
- All previous options hardware connectors (RC, GPI, and ancillary items) are now standard
- New wide-angle high-definition display
- Enhanced navigation menus optimized for ease of use
- Front panel headset connector is field-swappable, making it simple to change the default 5-pin XLR (6-pin compatible) headset connector with a 4-pin XLR headset connector, as needed

## Line Drawing



# Specifications

## LCD Display:

Active Area: ..... 120.10mm (wide) x 18.77mm (high)  
 Dot Resolution: ..... 576 x 90 pixels  
 Color Resolution ..... 16-bit (64K)RGB color  
 View Angle: ..... 80 degrees (typical; all directions)

## Power Supply:

Type: ..... External DC  
 AC Input: ..... 100–240VAC 50/60Hz


## General Purpose Inputs and Outputs:

### Outputs

Type (relays)..... SPDT  
 Contact Rating..... 1AMP @ 30VDC

### Inputs

Type..... Optically Coupled  
 Input Voltage..... 5-18 VDC on A+

♦A+ is internally pulled to 5VDC. Connect K- to  to activate. ♦

## Inputs:

### Matrix

Type..... Balanced  
 Typical Input Level..... +8dBu  
 Typical Input Impedance..... >10kΩ  
 Maximum Input Level ..... +20dBu  
 Supported Bandwidth ..... 100Hz to 20KHz

### Aux 1 and Aux 2

Type..... Balanced  
 Typical Input Level..... +8dBu  
 Typical Input Impedance..... >10 k Ω

### Front Panel Mic

Type..... Electret  
 Typical Input Level..... -42dBu  
 Typical Input Impedance..... 1kΩ  
 Maximum Input Level ..... -25dBu

### Rear Panel Mic

Type..... Electret  
 Typical Input Level..... -42dBu  
 Typical Input Impedance..... 1kΩ  
 Maximum Input Level ..... -25dBu

### Front and Rear Headset Mic - Electret

Typical Input Level..... -42dBu  
 Typical Input Impedance..... 1kΩ  
 Maximum Input Level ..... -25dBu

### Front and Rear Headset Mic - Dynamic

Typical Input Level..... -50dBu  
 Typical Input Impedance..... 600Ω  
 Maximum Input Level ..... -25dBu

## Outputs:

### Matrix

Type..... Balanced  
 Typical Output Level ..... +8dBu  
 THD+N% ..... <0.20%  
 Typical Output Impedance..... 600Ω  
 Maximum Output Level..... +20dBu

Frequency Response ..... 100Hz to 20KHz

### MIC/LINE Out

Type..... Balanced  
 Typical Output Level ..... +8dBu  
 THD+N% ..... <0.20%  
 Typical Output Impedance..... 600Ω  
 Maximum Output Level..... +20dBu  
 Frequency Response ..... 100Hz to 20KHz

### Headset - Front, Rear, Left, Right

Maximum  
 Output Power..... 125mW for 32Ω load  
 Earphone Impedance ..... 16Ω and above  
 THD+N% ..... <0.20%  
 Frequency Response ..... 100Hz to 20KHz

### Speaker - Rear

Maximum Output Power ..... 5W for 8Ω load  
 Speaker Impedance ..... 4Ω and 8Ω  
 THD+N% ..... <0.20%  
 Frequency Response ..... 100Hz to 20KHz

### Speaker - Front

Front ..... 84dB SPL for 1kHz sine wave @ 1 meter

## Digital:

### OMNEO Channels

Typical OMNEO Latency ..... 1ms  
 Frequency Response ..... 20Hz - 20KHz

### RVON

Compression	Bit Rate	Coding Delay	Playout Delay	Bandwidth	Sample Rate
G.711	64 kbps	125 μs	20-60 ms	160-224 kbps	8 k
G.729AB	8 kbps	10 μs	20-120 ms	32-112 kbps	8 k
G.722	64 kbps	4 μs	20-60 ms	160-224 kbps	16k

\* Data rate depends codec selection

**Note:** The Playout Delay and Bandwidth depend on the configured amount of audio per packet.

## Environmental:

### Dimensions

17.39" W(without rack ears) x 1.72" H x 3.88" D  
 (441.82mm x 43.8mm x 98.5mm  
 [111.11mm including volume knobs and lever keys])

### Weight

KP-4016..... 3.5lb (1.58kg)  
 Power Supply ..... 0.53lb (.24kg)  
 Power Supply  
 Mounting Bracket..... 0.30lbs (.14kg)

### Temperature

Operating..... 0° C to 55° C (32° F to 131° F)  
 Storage ..... -20° C to 70° C (-4° F to 158° F)

### Power Consumption:

Nominal ..... 12 Watts  
 Maximum ..... 15 Watts  
 Maximum Volt Amp..... 48 VA

## Certification:

CE Compliant

UL Certified

PSE Compliant

# Order Information

**KP-4016 • KP4016 A5F**

**KP-4016 • KP4016 A4F**

**KP-4016PB • KP4016PB A5F**

**KP-4016PB • KP4016PB A4F**

**EKP-4016 • EKP 4016 EXPANSION PANEL**

**EKP-4016PB • EKP 4016 EXPANSION PUSHBUTTON PANEL**

**KP\_OEI\_PS\_BRK • KP-OIE2 POWER SUPPLY BRACKET (USE WITH GlobTEK TR9CI2500MLDI30-N(RVB))**

**KP PS BRK LEV VI • KP PWR SUPPLY MNT BRKT LVL 6 (USE WITH GlobTEK TR9CI2500ML3-CIM(R6B))**

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