

P16-I

16-Channel 19" Input Module with Analog and ADAT Optical Inputs



Features

- Converts 16 analog inputs into 24-bit digital audio to be transmitted via standard CAT5e cable
- 2 x 8-channel ADAT optical inputs with auto detect and priority select
- 16 balanced, high-headroom TRS audio inputs
- State-of-the-art 24-bit A/D converters for premium audio quality
- 4-position gain switch per channel
- Digital inputs support 44.1 and 48 kHz sample rates
- Ultra-low system latency of less than 1 millisecond
- Signal Present and Clip LEDs per channel plus ADAT status LEDs
- Standard CAT5e connection delivers power and signals for up to 6 Personal Mixers
- 6 ULTRANET expansion network connectors (RJ45)
- Internal autorange power supply for maximum flexibility (100 – 240 V~), noise-free audio, superior transient response plus low power consumption for energy saving
- Extremely rugged construction ensures long life even under the most demanding conditions
- Conceived and designed by BEHRINGER Germany

Product Overview

The POWERPLAY 16 P16-I Input Module is the primary interface between your mixer and the complete POWERPLAY 16 P16 personal monitor system. The P16-I fits into a single rack space and can convert as many as 16 independent analog signals into 24-bit digital audio that can be distributed over a BEHRINGER ULTRANET network using CAT5e cable. The proprietary ULTRANET system then allows these 16 digital audio channels to be custom-mixed by multiple individual users equipped with POWERPLAY 16 P16-M personal monitor mixers.

The P16-I provides line-level analog connectivity through 16 balanced 1/4" TRS inputs. Each 1/4" TRS input channel has individual signal (SIG) and clip (CLIP) LEDs, as well as dedicated sensitivity switches with +22 dBu, +4 dBu, 0 dBu, and -10 dBV gain settings.

For digital input connectivity, the P16-I provides two ADAT IN inputs (A and B), each with 8-channel capacity, for a total of 16 channels when both ADAT inputs are in use. Each ADAT IN channel uses optical digital cable and can accept 16-, 20-, or 24-bit audio, at 48 kHz sampling rate (standard) or 44.1 kHz sampling rate (if using ADAT with 44.1 kHz). Regardless of the sampling rate or bit depth, the P16-I automatically syncs to the external device's digital clock.

The P16-I offers 6 ULTRANET outputs to distribute low-latency digital audio (<0.9 ms) across the POWERPLAY 16 P16 monitor system using CAT5e cable. Each CAT5e cable carries 16 independently-mixable channels of audio, as well as a power signal to remotely power a P16-M mixer.

The POWERPLAY 16 P16-I seamlessly integrates over ULTRANET with the P16-M and P16-D, as well as the powerful X32 digital mixer, to form a complete personal monitoring solution for live, studio, or installed sound applications.

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Technical Specifications

Input Module

Analog Inputs

- Inputs 16 x ¼" TRS, balanced, line-level
- Input level +4 dBu optimal, +22 dBu maximal
- Input gain -10 dBV / 0 dBu / +4 dBu / +22 dBu, adjustable
- Gain selector 4-position switch (per channel)

Digital Inputs

- Optical inputs 2 x standard TOS-link optical connector
- Input format ADAT, 16 / 20 / 24-bit 48 kHz (standard) / 44.1 kHz
- 8 channels per ADAT connection
- Synchronization From ADAT input A only (external clock)
- Indicators 2 x LED's
- Input selection Auto select for channels 1 – 8 / 9 – 16

Digital Outputs (Ultranet)

- Connectors 6 x RJ45

Power Supply / Voltage (Fuses)

- USA / Canada 120 V~, 60 Hz (T 1 A H 250 V)
- UK / Australia / Europe 220-240 V~, 50/60 Hz (T 1 A H 250 V)
- Korea / China 220-240 V~, 50/60 Hz (T 1 A H 250 V)
- Japan 100 V~, 50/60 Hz (T 1 A H 250 V)

Power consumption max. 40 W

Mains connection Standard IEC receptacle

Dimensions / Weight

- Dimensions (H x W x D) appr. 1.7 x 19 x 7.5"
appr. 44 x 482 x 190 mm (1U)
- Weight appr. 4.6 lbs / 2.1 kg

Ultranet Digital Network

Digital Processing

- A/D conversion 24-bit 48 kHz (standard for analog in) 44.1 kHz (if ADAT 44.1 kHz)
- Converter type 24-bit, delta-sigma

System

- Signal 16 channels, plus bus-power for P16-M
- Latency <0.9 ms (from P16-I to P16-M)
- Frequency response 20 Hz to 20 kHz (+0 / -3 dB)
- Dynamic range typical 92 dB

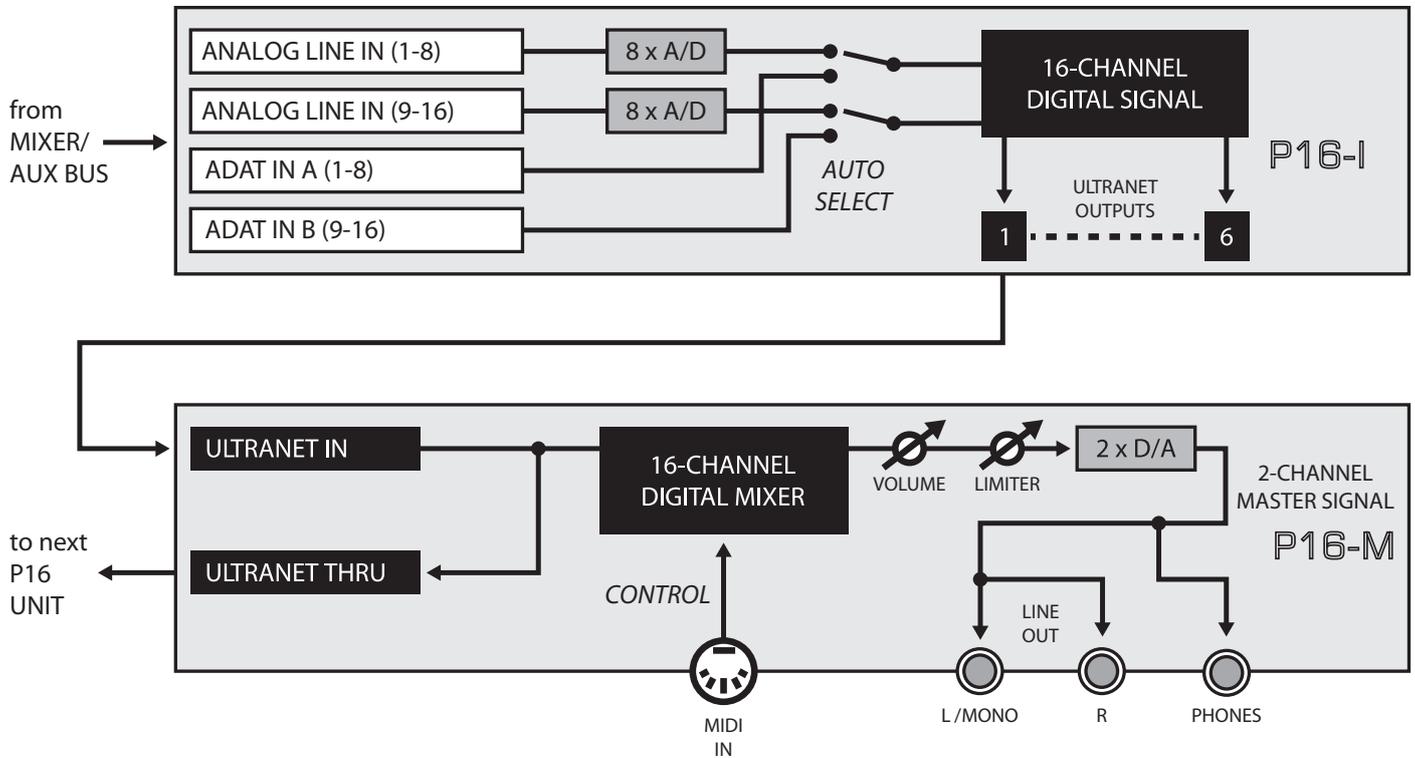
Cabling

- Connectors RJ45
- Cables Shielded CAT5
- Cable length max. 246 ft / 75 m recommended

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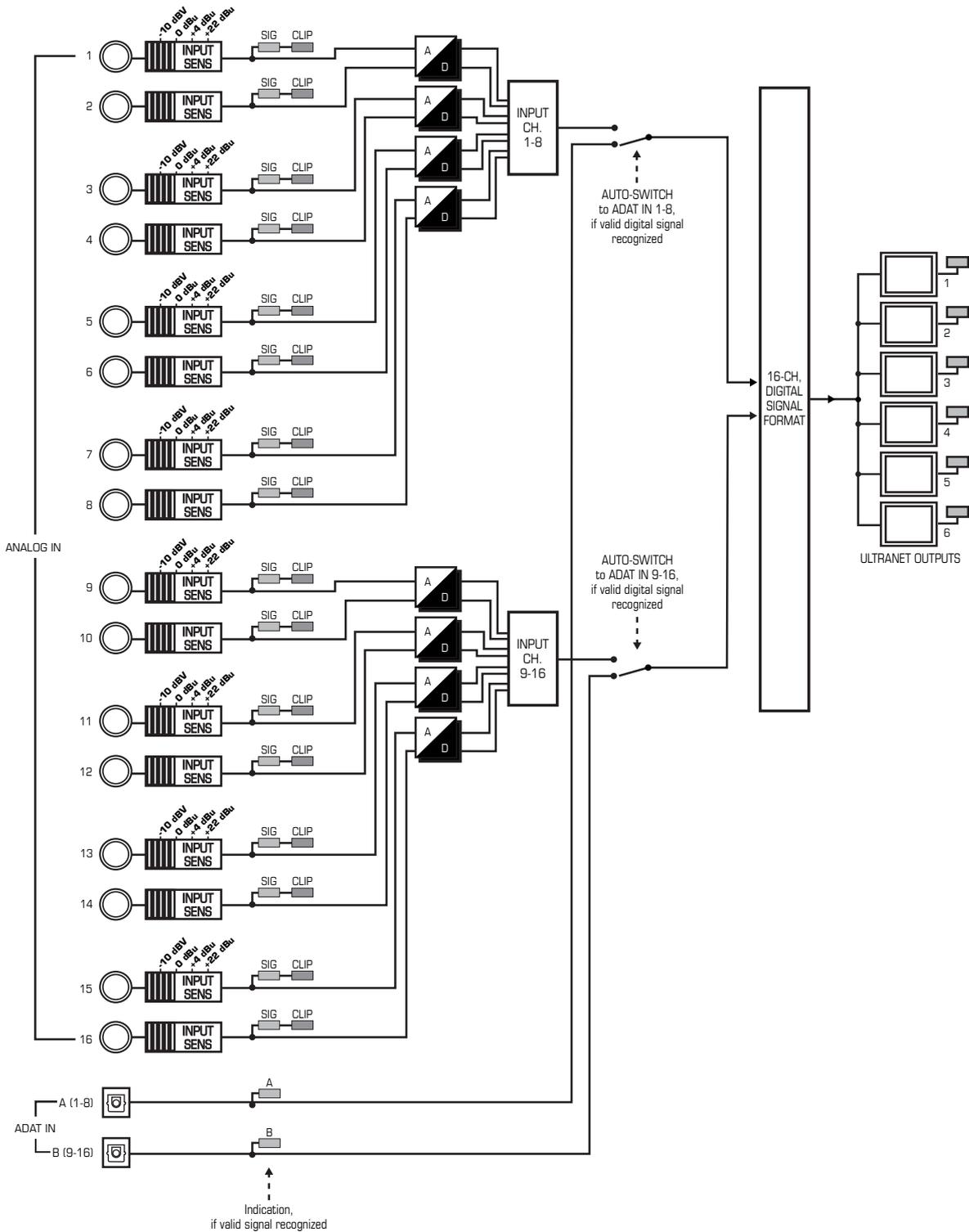
Simplified Routing Diagram



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Full Block Diagram



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Block Diagram

