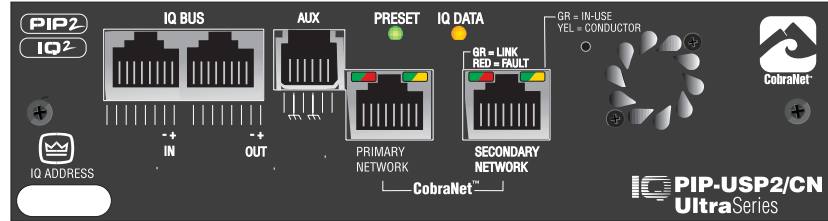


IQ-PIP- USP2/CN

IQ ULTRA SERIES



When installed in Crown's Com-Tech 10 Series and Macro-Tech Q2 Series amplifiers, the IQ-PIP-USP2/CN creates the industry's first CobraNet™ compatible amplifier. The module integrates the latest CobraNet™ audio-networking technology and a full complement of audio signal processing in a package that requires ZERO rack space! In addition, the IQ-PIP-USP2/CN connects the amplifier to the IQ Bus of an IQ System, allowing the amplifier to be controlled and monitored via IQ.

The IQ-PIP-USP2/CN offers an extensive list of features, including output signal delay for precise acoustic alignment, auto standby for reduced energy costs, plus eight independent, fully adjustable filters per channel.

The IQ-PIP-USP2/CN also provides on-screen error reporting of fault, high temperature, and excessive distortion, so you can know quickly if any changes occur in your amplifier's status. Meanwhile, the IQ-PIP-USP2/CN's real-time load supervision feature ensures you will be notified immediately of any changes to the load.

Offering crisp, clear sound and the wide dynamic range possible with full 24-bit converters, the IQ-PIP-USP2/CN provides unprecedented power and flexibility in one compact—and very affordable—module.

For more details about the Crown IQ-PIP-USP2/CN, contact the Crown Technical Support Group at 800-342-6939 or 219-294-8200. Also, visit the Crown Audio website at www.crownaudio.com.

* You must have a PIP2-compatible amplifier to use the IQ-PIP-USP2/CN. To determine if your amplifier is PIP2-compatible, look for the PIP2 logo on the back of the amplifier. The IQ-PIP-USP2/CN is NOT compatible with older Crown PIP amplifiers.

Specifications

General

Internal Controls: An 8-segment DIP switch sets the IQ address (decimal range: 1–250). * A Reset/Preset switch, accessible with a straightened paper clip through the PIP panel, selects the next user preset if pressed for less than 2 seconds, resets the PIP to preset “0” if pressed for more than 2 seconds.

* If address “0” is selected, the IQ-PIP-USP2/CN will operate in stand-alone mode. In this mode, the IQ Bus port is deactivated.

Connectors: IQ Bus: RJ-45 connector for input/output, RJ-45 connector for daisy output. AUX In/Aux Out: RJ-11 connector. CobraNet™ Audio Input and Output: RJ-45 connector for Primary Network, RJ-45 connector for Secondary Network.

Features

- Receives any two of 64 channels on a repeater-based CobraNet™ network, or any two of up to 3000 channels on a switch-based CobraNet™ network.
- Transmit channels are user-selectable from 16 bit to 24 bit.
- Sends “Listen-Bus” amplifier output monitor signals via CobraNet™.
- Implements dual-redundant network ports for the ultimate in robust audio networking.
- 24 bit analog to digital conversion, and 24 bit, 48 kHz DSP processing.
- Free IQ for Windows software provides easy

setup and monitoring of all IQ-PIP-USP2/CN parameters.

- Up to seven different filter types are available for a total of 16 filters on-board.
- Signal delay and compressor/limiter for each channel.
- User-selectable presets for easy recall of settings.
- Load supervision for real-time warning of load problems.
- Reliable FLASH memory backs up all parameters.
- The best three-year “No-Fault” full warranty in the business!

Indicators: A yellow DATA indicator flashes when a valid IQ command is received from the IQ System via the IQ Bus. A green PRESET indicator flashes to indicate the user preset number currently selected in memory (if the PRESET indicator does not flash the preset number when selected, this indicates the preset has been modified by the user). Two dual-color indicators provide status of the CobraNet™ network. The left indicator on the Primary and Secondary RJ-45 connectors flashes green if the network link is connected and operating normally, and flashes red if the port is in a “Fault” condition. The right indicator on the Primary and Secondary RJ-45 connectors is ON green if the port is “in-use,” and is ON orange if the port is operating as the CobraNet™ “Conductor.”

Memory Backup: 1 Mbyte non-volatile FLASH memory for backup of run-time parameters, presets, and program storage. Capable of greater than 10 year data retention and estimated 20+ year life-cycle.

Power Requirements: Power draw: 410 mA @ +24 VDC and 40 mA @ –24 VDC. When installed into a Crown PIP2-compatible amplifier, the unit receives ±24 VDC from the amplifier. No external power is required.

Total Power Dissipation: 10.5 watts.

IQ Bus Data Communication

Protection: If communication is lost, the unit will continue to function with the last commands received.

Data Rate: 38.4 K BAUD.

Data Format: Serial, binary, asynchronous; 1 start bit; 1 stop bit; 8 data bits; no parity.

IQ Bus Interface Type: Optically isolated 20 milliamp serial loop.

Operation: Half duplex.

Transmission Distance: Variable from 200 to 3000 feet (61 to 914 m), depending upon wire capacitance. Typically 1000 feet (305 M) using shielded twisted-pair wire, #26 AWG or larger. Can be extended with an IQ Repeater.

Audio

Please note: The audio specifications are referenced to 0.775 V (0 dBu). Measurements were made at the output of the IQ-PIP-USP2/CN module, itself.

Digital Signal Processor (DSP): 60 MHz Motorola 56002 DSP processor provides 30 million operations per second.

Analog to Digital Conversion (ADC): 24-bit, 48 kHz sample rate, Delta-Sigma converter.

Digital to Analog Conversion (DAC): 24-bit, 48 kHz sample rate, Delta-Sigma converter.

Signal to Noise Ratio: Greater than 100 dB (A-weighted, 20 Hz to 20 kHz, audio sourced from muted CobraNet™ channels).

Frequency Response: ±0.5 dB, 20 Hz to 20 kHz (referenced to 1 kHz, 0 dBu input signal).

Distortion: Less than 0.05% THD+N, 20 Hz to 20 kHz (referenced to 1 kHz, 0 dBu input signal).

Crosstalk: better than –80 dB, full-scale input level, 20 Hz to 20 kHz input frequency sweep, 20 Hz to 20 kHz bandwidth.

Listen Bus Distortion: 0.1% THD+N, 20 Hz to 20 kHz bandwidth (1 kHz, 0 dB full scale input signal at the active PIP2 AO1 or AO2 input).

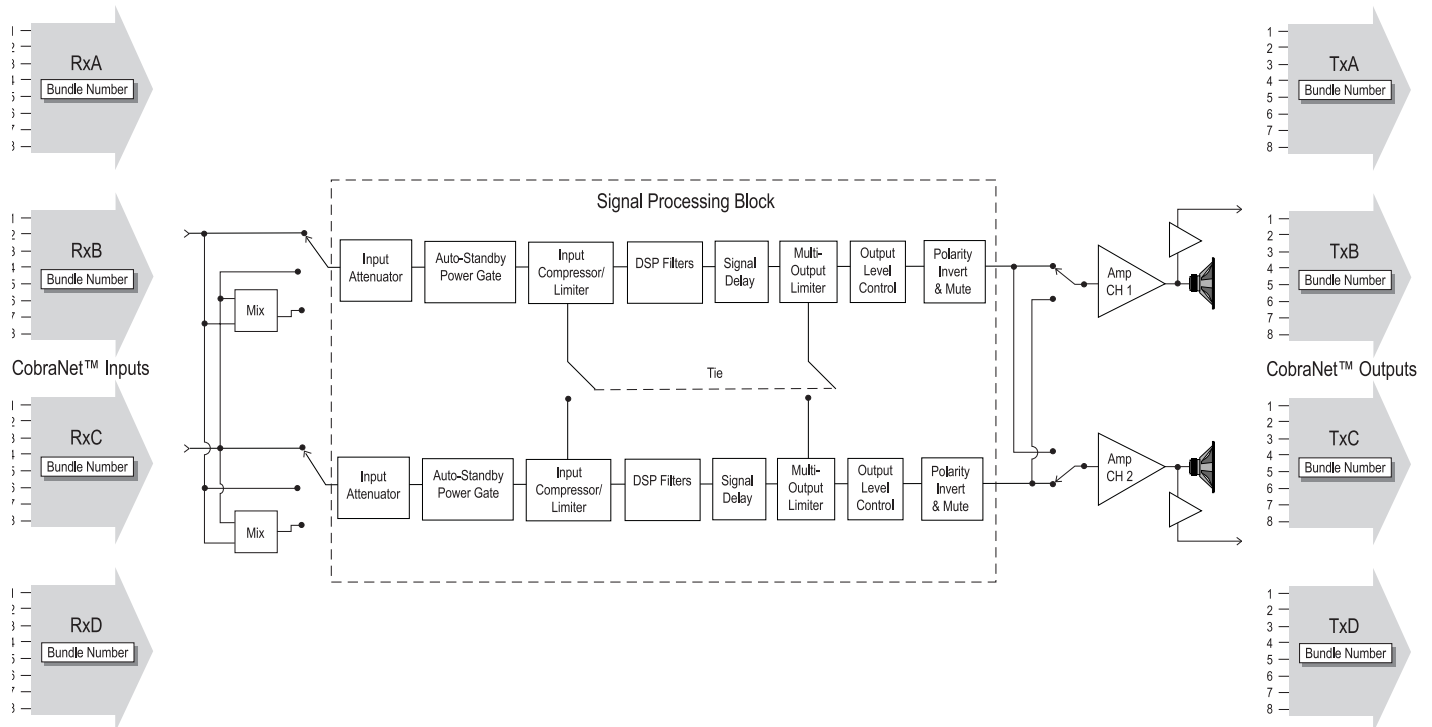
Listen Bus Signal to Noise: Greater than 80 dB, 20 Hz to 20 kHz bandwidth (audio sourced from muter amplifier channels. Measured at receiving CobraNet™ node outputs).

Maximum Output Level: +20 dBu.

IQ System Data Acquisition

Input/Output Monitor Accuracy: Typically ±1 dB.

IQ-PIP- USP2/CN



IQ-PIP-USP2/CN Signal Flow Block Diagram

Crown's Three-Year, No-Fault, Fully Transferrable Warranty

Crown offers a Three-Year, No-Fault, Full Warranty for every new Crown IQ component—an unsurpassed industry standard. With this unprecedented No-Fault protection, your new Crown IQ component is warranted to meet or exceed original specifications for the first three years of ownership. During this time, if your IQ component fails, or does not perform to original specifications, it will be repaired or replaced at our expense. About the only things not covered by this warranty are those losses normally covered by insurance and those caused by intentional abuse. And the coverage is transferable, should you sell your IQ component.

See your authorized Crown dealer for full warranty disclosure and details. For customers outside of the USA, please contact your authorized Crown distributor for warranty information or call 219-294-8200..



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