CTs 4200USP/CN
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CTs SERIES

Input module on back panel

The Crown® CTs 4200USP/CN and CTs 8200USP/CN power amplifiers have an integrated 3rd generation, DSP-based PIP™ (Programmable Input Processor) input module. It connects the amplifier to a 100 Mbps Ethernet network allowing it to be remotely controlled and monitored via System Architect™ software. In addition, the input module allows the transport of real-time digital audio via CobraNet™ over the same Ethernet network.

The CTs 4200USP/CN and CTs 8200USP/CN amplifiers connect to a HiQnet™ audio control/monitor network using standard 100 Mbps Ethernet hardware (switches, Network Interface Cards, and cables). CobraNet™ audio is available over the same 100 Mbps Ethernet network, providing a simple-to-install, single-plug solution for audio distribution, control, and monitoring.

The input module's SHARC DSP processors give the user an enormous amount of digital signal processing. Audio routing, faders, meters, polarity & mute, input compressors, filters, delays, multimode output limiters, error reporting, and load monitoring are all available. A built in noise generator and sine-wave generator provide noise masking and test capabilities. The enhanced AUX port capability allows the user to interface with the amplifier to provide external manual control and monitoring.

These amplifiers require Harman Pro System Architect software available from www.crownaudio/forums.

For more details about the Crown CTs 4200USP/CN and CTs 8200USP/CN, contact the Crown Technical Support Group at 800-342-6939 or 574-294-8200. Also, visit the Crown Audio website at www.crownaudio.com.

Input Module Features   (For amplifier features, see the CTs multichannel amplifier datasheet.)

- 100 Mbps Ethernet single-plug solution for CobraNet audio, and HiQnet control and monitoring
- Analog audio inputs allow CobraNet network audio input, CobraNet audio backup, or a hard-wire emergency override of CobraNet audio
- 24 bit digital to analog conversion with 32 bit, floating point DSP processing
- Up to 18 assignable filters per channel with 9 different filter types including all-pass filters
- Over 2 seconds of delay available per channel
- Input compressors and output limiters for each channel

- Dual, uncorrelated noise generators for noise masking
- Sine generator
- Load supervision
- Full error reporting
- Firmware upgrades via the network
- 10 user selectable presets
- Reliable FLASH memory backup of all parameters
- Three Year, No-Fault, Fully Transferable Warranty completely protects your investment and guarantees its specifications

Input Module Specifications

Connectors:

AUX Connector

Configurable for AUX input, AUX output and Listen Bus. Listen Bus is also supported through CobraNet.

Network Connector

The dual RJ45 CobraNet connectors allow a Primary & Secondary connection to the 100Mb Ethernet network. Should the Primary connection lose link activity with the network, the input module will automatically switch to the Secondary connection to ensure uninterrupted audio and control. The indicators on the RJ45 connectors display network information concerning the Ethernet and CobraNet connections.

Indicators:

Preset Indicator

Signals the number of the current preset, if active, by flashing a series of flashes equal to the current preset number.

IQ Data Indicator

Flashes when the module receives a valid command that is addressed to the CTs 4200 USP/CN and CTs 8200USP/CN.

Switches:

Reset/Preset Switch

Used to change presets, restore settings to factory default or restore all the presets to the factory defaults. During operation of the switch, the Data indicator flashes as an aid to the user. Accessible with a straightened paper clip through the rear panel, the switch selects the next user preset if pressed for less than 2 seconds, resets the module to preset "0" if pressed for more than 2 seconds.

General:

Memory Backup: Non-volatile FLASH memories for backup of run-time parameters, presets, and program storage.

Communications: 100Mb Fast Ethernet conforming to IEEE 802.3.

Overall Audio Performance:

DSP Processing: Two processors, 32 bit, Floating Point, 724 µs latency.

D/A and A/D Conversion: 24 bit.

Latency:
DSP processing: 1 ms or 1000 µs.
Digital-to-analog conversion: 250 µs.
Analog-to-digital conversion: 250 µs.
Amplifier: 100 µs.
Total: 1.6 ms or 1000 µs.

Dynamic Range: 103 dB typical (A-weighted, 20Hz–20kHz, audio sourced from muted CobraNet channel).

Distortion: < 0.1% THD+N, 20Hz–20kHz.

Frequency Response: ± 0.5 dB, 20Hz–20kHz.

Input/Output Monitor Accuracy: Typically ±1dB.

Maximum Input Level: + 20 dBu.

Amplifier Specifications

(For more detail, refer to the CTs multichannel amplifier datasheet)

Minimum Guaranteed Power: See power charts at right.

Frequency Response (at 1 watt, 20 Hz - 20 kHz): ±0.5 dB.

Phase Response (at 1 watt, 10 Hz - 20 kHz): ±35°.

Signal to Noise Ratio below rated power (20 Hz to 20 kHz): 100 dB unweighted.

Total Harmonic Distortion (THD) at 1 watt, from 20 Hz to 20 kHz: < 0.05%.

Intermodulation Distortion (IMD) 60 Hz and 7 kHz at 4:1, from 163 milliwatts to full bandwidth power: < 0.05% (typical).

Damping Factor: 10 Hz to 400 Hz: >180.

Crosstalk (below rated power, 20 Hz to 1 kHz): > 80 dB.

Common Mode Rejection (CMR) (20 Hz to 1 kHz): > 50 dB.

DC Output Offset (shorted input): < ±5 mV.

Input Impedance (nominal): 20 kilohms balanced, 10 kilohms unbalanced.

Maximum Input Level (before input compression): + 20 dBu.

Load Impedance: (Note: Safe with all types of loads)

Stereo: 4/8 and 25 ohms (70V)
Bridge Mono: 8/16 and 50 ohms (100V)

Voltage Gain (at maximum level setting), 1.4V sensitivity,

4/8 Ohm Operation: 20:1 (26 dB);
70V Operation: 50:1 (34 dB)
100V Operation: 71.4:1 (37 dB)

Required AC Mains: 120V 60 Hz, 220/230/240V/50 Hz.

Power Draw at Idle (120VAC mains, all channels in 4/8 ohm mode): 58W.

Power Draw at Idle (120VAC mains, all channels in 70V mode): 77W.

Cooling: Continuously variable speed forced air, front-to-back airflow.

Dimensions (Width, Height, Depth):

CTs 4200USP/CN: 19 in. (48.3 cm) W x 3.5 in. (8.9 cm) H x 16.25 in. (41.3 cm) D.

CTs 8200USP/CN: 19 in. (48.3 cm) W x 5.25 in. (13.3 cm) H x 16.25 in. (41.3 cm) D.

Front Panel Indicators
Bridge mode
Ready
Signal
Clip
Thermal
Fault
Data
Power

Front Panel Controls
Power switch

Back Panel Controls
Channel level controls
Dual/bridge-mono mode switch

Back Panel Connectors

Output Connectors: One four-pole terminal strip for every two channels with touch-proof cover. Accepts up to 10 AWG terminal forks.

Input Connectors: Removable Phoenix-style barrier connectors for balanced input. Also can be used as a CobraNet input or a backup for CobraNet.

Protection Systems
Thermal Level Control
Fault Isolation Topology
Fault
Highpass filter
AC under/over voltage protection
Power fuse
Inrush limiting
Variable speed fan

CTs 4200USP/CN

Maximum Average Power in watts with 0.1% THD.

Dual

4 Channels Driven	1 kHz	20 Hz–20 kHz
4-ohm (per ch.)	260W	215W
8-ohm (per ch.)	180W	190W
70V (per ch.)	220W	220W*

1 Channel Driven	1 kHz	20 Hz–20 kHz
4-ohm (per ch.)	270W	225W
8-ohm (per ch.)	220W	210W
70V (per ch.)	250W	245W*

Bridge-Mono

2 Channel-Pairs Driven	1 kHz	20 Hz–20 kHz
8-ohm (per ch. pair)	520W	430W
16-ohm (per ch. pair)	400W	380W
100V (per ch. pair)	220W	220W*

1 Channel-Pair Driven	1 kHz	20 Hz–20 kHz
8-ohm (per ch. pair)	560W	450W
16-ohm (per ch. pair)	440W	420W
100V (per ch. pair)	250W	245W*

* Constant Voltage full bandwidth power ratings support 100Hz - 20kHz due to automatic High-Pass Filters.

CTs 8200USP/CN

Maximum Average Power in watts with 0.1% THD.

Dual

8 Channels Driven	1 kHz	20 Hz–20 kHz
4-ohm (per ch.)	200W	175W
8-ohm (per ch.)	160W	155W
70V (per ch.)	200W	185W*

1 Channel Driven	1 kHz	20 Hz–20 kHz
4-ohm (per ch.)	270W	230W
8-ohm (per ch.)	220W	220W
70V (per ch.)	250W	230W*

Bridge-Mono

4 Channel-Pairs Driven	1 kHz	20 Hz–20 kHz
8-ohm (per ch. pair)	400W	350W
16-ohm (per ch. pair)	320W	310W
100V (per ch. pair)	200W	185W*

1 Channel-Pair Driven	1 kHz	20 Hz–20 kHz
8-ohm (per ch. pair)	540W	460W
16-ohm (per ch. pair)	440W	440W
100V (per ch. pair)	250W	230W*

* Constant Voltage full bandwidth power ratings support 100Hz - 20kHz due to automatic High-Pass Filters.

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

Crown offers a Three-Year, No-Fault, Fully Transferable Warranty for every new Crown amplifier—an unsurpassed industry standard. With this unprecedented No-Fault protection, your new Crown amplifier is warranted to meet or exceed original specifications for the first three years of ownership. During this time, if your unit 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 cuased by intentional abuse. And the coverage is transferable, should you sell your amplifier.

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 574-294-8200.