QSC™

Digital Cinema Processor

DCP 300

Features

- Digital Input for up to 16-Channels of audio

- Can be combined with QSC's DXP (Digital Expansion Processor) to create the most powerful networked audio solution for cinema

- Networked audio I/O via CobraNet™ - supports behind-the-screen mounting of DXP processor for screen channel and subwoofer DCA amplifier

- Network control and monitoring via SNMP

- Serial automation control via RS-232

- Analog Inputs for film processors, non-sync and Mic/line

- Master volume and full 1/3 Octave Graphic EQ on all channels (except subwoofer)

- Booth Monitor with touch screen control for easy operation

- Digital Loudspeaker Crossovers for three or five screen channels — Passive and 2, 3 or 4-way

- Compatible with all existing DCA amplifiers — thousands of DCA equipped screens are ready for full network monitoring and control

- Dual power supplies with load sharing for seamless operation in the event of failure

- SD Memory card for quick unit swap — restores all settings

- Multiple Bypass modes routes audio around failed components to insure that the show will go on

- DSP presets for DCS speakers for great "out of box" performance and reduced set-up time

- QSControl and QSCreator allow for the creation of custom control screens and remote access for fault reporting and diagnosis

- Easily integrates with existing film processors for dual film/digital projection systems

- CobraNet offers digital non-sync routing and future expansion capability

- Continued development of software and firmware will add new capabilities to the existing hardware with easy firmware updates

- The DCP 300 is part of a new generation of QSC products designed expressly for the needs of D-Cinema sound systems

A Cinema Processor, Booth Monitor and Digital Crossover along with network control and monitoring of DSP, amplifiers and speakers in one integrated package.

Everything you need between server and amps.

QSC's Digital Cinema Processor, the DCP 300, builds on the legacy of DCM and Basis to provide all signal processing and monitoring functions for Digital Cinema in a single integrated system. Designed to be used with QSC's Digital Cinema Amplifiers (DCA) and featuring advanced DSP presets for QSC's Digital Cinema Speakers (DCS), the DCP 300 optimizes loudspeaker performance while simplifying cinema sound system wiring and configuration. The DCP 300 covers cinema systems ranging from three to five screen channels, and are configurable for passive, bi-amp, tri-amp or quad-amp operation. The DCP 300 is also compatible with all analog cinema processor formats including Dolby® Digital Surround-EX and DTS-ES and features a 10-channel analog input for integration with 35 mm audio systems.

Digital Signal Processing

The DCP 300 digital signal processing capability outperforms traditional analog crossovers and equalizers for optimized speaker performance. Crossover frequency, 1/3 octave graphic EQ, parametric equalization, polarity, delay and gain can be precisely adjusted for each speaker in your system. Active 2-way, 3-way and 4-way crossovers are available. Advanced crossover presets for QSC DCS speakers speeds system set-up and insures maximum performance.

Less Wiring, Faster Set-up

DCPs greatly simplify system wiring and set-up, significantly reducing installation time and labor cost. Input to the DCP is provided via standard DB-25 cables from the D-Cinema server and/or 35 mm cinema

processor. Connections to DCA amplifiers for input and monitor signals are made through a single QSC DataPort/VGA-style cable. All traditional XLR and barrier strip terminations are eliminated. DCPs simplify set-up by using a menu-driven, PC-based software program for configuration. The program includes a speaker data file that lists default parameters for popular cinema speaker models. Commonly used configurations can also be saved on a disk, allowing you to quickly load them on other DCPs. All system configuration data is saved to an SD memory card, allowing easy transfer of settings to a new DCP, should replacement ever be required.

Advanced Monitor Functions

In addition to audio monitoring of amplifier inputs and outputs, DCPs include QSC's exclusive "load fault" detection. DCPs monitor all amplifier outputs and indicate opens and shorts in the speaker system, providing confirmation that all amplifier outputs are functioning properly. In addition, the DCP detects all amplifier clipping, protect modes and heat sink temperature for reporting via SNMP or a QSControl Ethernet monitoring system. QSControl and QSCreator allow for the creation of custom control screens and remote access for fault reporting and diagnosis. The NAC 100 Ethernet remote control panel provides remote operation in a multiplex from anywhere on the local network.

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DCP 300 Details

Front Panel Controls		CobraNet™ RJ45s	100 Mbps primary/backup network audio
Power switch	Rocker switch	SD card receptacle	Configuration memory card (1 GB min)
Mute control	Push button	**H.I. and V.I. impaired outputs**	
Auditorium fader	Rotary encoder	Output stage type	Single ended (balanced Z)
Monitor volume/parameter adjust	Rotary encoder	Output impedance	50 Ohms
Menu-driven LCD	Touch control LCD	Nominal output level	-11.8 dBu (200 mVrms)
Rear Panel Connectors		Loading requirements	Rmin = 2k Ohms, Cmax = 4nF
D-Cinema input group 1	DB-25 — AES3/EBU channels 1-8	**Audio network**	
D-Cinema input group 2	DB-25 — AES3/EBU channels 9-16	Protocol	CobraNet version 2 protocol
Main analog input	DB-25 — Analog audio channels 1-8	Data rate	100 Mbps (Fast Ethernet)
Extended surround input	DB-25 — DB-25 - Surround and Le/Re Channels	Ports	1 Primary, 1 Backup (auto-failover)
Universal Mic/Line input	XLR — Mic (+ phantom pwr) or line level	Connection requirements	Cat-5 UTP cable or better (100m maximum length), direct connection to wired network switch ports only, dedicated LAN or VLAN
S/PDIF input	RCA — Stereo digital audio interface and Lt/Rt Matrix	**QSControl™ network/ SNMP**	
RCA (L/R) inputs	RCA (2) — Stereo Left and Right and Lt/Rt Matrix	Protocol	Standard TCP/IP implementation over Ethernet or Fast Ethernet
DataPort outputs	HD-15 (14) — QSC amplifier interface	Data rate	10/100 Mbps
Automation inputs	2-pin Euro-style (x6) – 8-bit resolution	Connection requirements	Cat-5 UTP cable or better (100m maximum length), direct connection to wired network switch ports only, dedicated LAN or VLAN
Logic output	2-pin Euro-style (x2) – CMOS levels		
Relay outputs	3-pin Euro-style (x2) – max 30 VDC	Dimensions (H/W/D):	5.25" x 19" x 15"
Serial Control	DB-9 RS-232 Serial Interface	Line voltage requirements	100 VAC – 240 VAC, 50/60 Hz
USB Type B port	Config and management interface	Weight	16.6 lb (7.5 kg)
QSControl RJ45	10/100 Mbps network management		
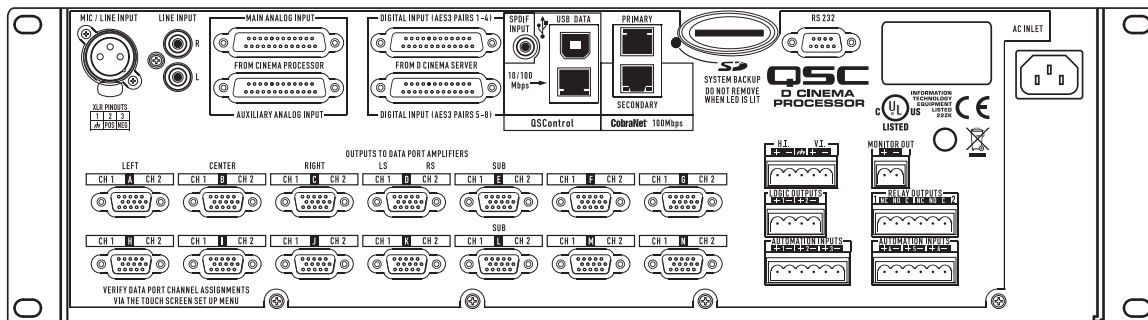
All specifications are subject to change without notice.

1675 MacArthur Boulevard • Costa Mesa, CA 92626 • Ph: 800/854-4079 or 714/957-7100 • Fax: 714/754-6174

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