

Q-SYS Cinema Core 510c Cinema Core 510c Processor



Q-SYS™

Cinema Core 510c Processor

Features

- Q-SYS Core processing in a flexible chassis featuring 8 onboard I/O card slots
- Install any combination of Q-SYS I/O cards for maximum flexibility
- Audio, video and control processing on a dedicated Linux™ realtime OS
- Built using standard computer industry hardware and IT industry networking protocols
- Control and interface with external devices using TCP/IP, RS232 and GPIO
- Design with powerful and intuitive Q-SYS Designer Software application
- Seamlessly integrates with Q-SYS AV-to-USB bridging peripherals
- Provides simple integration with QSC amplifiers and loudspeakers
- Multiple levels of system redundancy

Introduction

The Q-SYS™ Cinema Core 510c processor is an audio, video, control and monitoring system that leverages Intel™ CPUs and motherboards as well as a dedicated, Linux™ realtime operating system developed by QSC to provide class-leading capabilities for cinema systems of any scale.

The Q-SYS Cinema Core 510c processor offers the most flexible audio I/O of any Core in the Q-SYS catalog, perfect for applications that require a diversity of analog, digital and networked audio connectivity. It features eight onboard I/O card slots that can be populated with any combination of Q-SYS Type-II I/O card allowing diverse connectivity options.

The Core 510c processor provides an abundance of raw processing power for audio, video, control and monitoring processing requirements.

Network

The Q-SYS platform utilizes IEEE networking standards and solutions for audio, control and video distribution over a standard Ethernet / IP network. QSC's Q-LAN limits deterministic system latencies with analog input to analog output to no more than 3.167ms. The Q-SYS platform uses Q-LAN for audio, video and

control connectivity with all Q-SYS peripherals. Additionally, the Q-SYS Core supports VoIP, SIP, LDAP, AES67, TCP/IP and HTTP Web Sockets among many other standard IT networking systems.

Scalable Redundancy

While QSC is dedicated to building the most reliable products, some applications call for additional assurance. Any element on the Q-SYS platform – Cores, networks, I/O-Frames and even amplifiers may be deployed in a redundant configuration. The system designer has the choice of making one or all system elements redundant.

Peripherals

The capabilities of the Q-SYS platform are further enhanced by the ever growing suite of Q-SYS peripheral devices, all of which are compatible with all Q-SYS Core processors, including the Q-SYS Core 510c. The catalog of Q-SYS networked peripheral devices includes amplifiers, touchscreen controllers, paging stations, I/O channel expanders, PTZ-IP cameras for the conference room and AV-to-USB Bridging devices.

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Description	System processor and control engine with integrated I/O
Supported Peripherals	I/O-8 Flex Channel Expander, I/O-USB Bridge, PTZ-IP Camera series, I/O Frame, I/O-Frame 8s, I/O-22, I/O-11 Series, Page Station Series, TSC Series touchscreens

Channel Capacity

Network Channel Capacity	256 x 256
Audio I/O Capacity	8 audio I/O card slots - accommodates up to 128x128 total onboard I/O channels
Multitrack Player Capacity	16 tracks, expandable to 128 tracks
Media Drive Capacity	Approximately 6GB on the default drive

Configure-to-Order Inputs/Outputs Options

Audio I/O Cards	CIAES16: AES3 digital input card (16 channels) COL4: Line output card (4 channels) CODP4: DataPort card (4 channels) CIML4: Mic/line input card (4 channels) CIML4-HP: High Performance mic/line input card (4 channels) CAES4: AES3 digital I/O card (4x4 channels) CCN32: CobraNet network bridge card (up to 32x32 channels) CAN32: AVB network bridge card (up to 32 channels) CDN64: Dante network bridge card (up to 64x64 channels)
Media Drives	MD-S-M2: 128GB MD-M-M2: 256GB MD-L-M2: 512GB
Multitrack Players (MTP):	MTP-32: 32 tracks MTP-64: 64 tracks MTP-128: 128 tracks

Controls and Indicators

Front Panel Controls	NEXT OLED page forward capacitive touch button ID device identification capacitive touch button Clear Network Settings - invoked when NEXT and ID are pressed simultaneously
Front Panel Connectors	AUX USB: USB Host x2 (Type A connectors)
Front Panel Indicators	Blue POWER LED 304x96 monochrome OLED display
Rear Panel Connectors	RS232: Male 9-pin D shell connector (DB-9) Video out: HDMI AUX USB: USB Host x4 (Type A connectors) AUX Network: RJ45 10/100/1000 Mbps GPIO: Female 15-pin D shell connector x2 (DA-15) Media Network LAN A: RJ45 1000 Mbps (QLAN, AES67, VoIP, WAN, Media Streaming, etc) Media Network LAN B: RJ45 1000 Mbps (QLAN, AES67, VoIP, WAN, Media Streaming, etc) AC Mains Power: IEC connector
Rear Panel Indicators	Link, Speed and Activity LEDs on all LAN ports

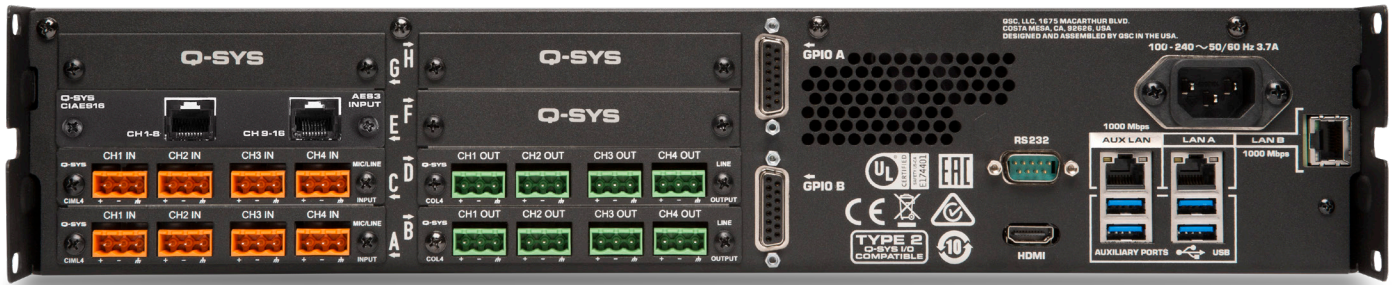
*Preliminary Specifications
subject to change without notice.*

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Miscellaneous

Line Voltage	100 VAC - 240VAC, 50-60 Hz
Current Draw	3.7A Max @100 VAC (actual current draw depends on configuration options such as I/O cards and/or Media Drive, DSP loading and network loading)
Operating Temperature Range	0°C - 50°C
BTU/Hour	600 BTUs (power conversion estimate under typical load)
Humidity	85% RH maximum
Regulatory	FCC 47 CFR Part 15 Class A, IC ICES-003, CE (EN55032, EN55035), EU RoHS directive 2011/65/EU, WEEE directive 2012/19/EU, China RoHS directive GB/T26572, EAC, RTL, UL, C-UL
Product Dimensions	3.5" x 19" x 15" (89mm x 483mm x 381mm)
Shipping Carton Dimensions	23.5" x 20" x 6.5" (597mm x 508mm x 165mm)
Shipping Weight	23 lbs. (10.5 kg) minimum (installation of I/O cards increases shipping weight)
Included Accessories	6' UL/CSA/IEC line cord, installation manual, I/O connectors (included when purchasing I/O cards with Euro style terminal blocks)

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