Q-SYS I/O-8 Flex

KEY FEATURES

- Networked I/O expander peripheral
- 8 software-definable Flex channels (mic/line input with phantom power, or line level output)
- Audio-to-USB Bridging for audio integration with soft codec applications
- Control connectivity via GPIO and RS232
- Microphone fault detection
- Dual redundant networking with PoE+ support
- Class-leading mounting accessories included for various mounting configurations

Q-SYS I/O-8 Flex

Channel expander

INTRODUCTION

The Q-SYS™ I/O-8 Flex channel expander adds a multitude of expansion capabilities to the Q-SYS Platform in a compact, PoE+ capable networked peripheral that can be remotely located wherever the I/O is required. The I/O-8 Flex Channel Expander features eight "Flex channels" (a QSC exclusive technology), which allows each channel to be configured via software as either a mic/line input with phantom power, or a line level output. Additionally, the I/O-8 Flex channel expander offers audio-to-USB bridging for integration with soft-codec applications running on any host PC as well as control connectivity via GPIO and RS232.

APPLICATIONS – MEETING ROOMS AND CONFERENCE SPACES

When deployed under the table, the I/O-8 Flex channel expander provides a single network cable solution with sufficient analog I/O to accommodate up to eight phantom powered microphones around the table. In addition to that, the onboard GPIO can be used to provide Push-to-Talk or Push-to-Mute functionality as well as microphone LED status. For situations where laptop PC's are being used for soft-codec conferencing using applications such as Microsoft Teams, Zoom, WebEx, etc., the onboard USB device port can be used to provide USB-to-audio bridging direct to the PC via driverless USB connectivity.

APPLICATIONS - RACK MOUNT I/O EXPANDER

For those situations where unexpected inputs and outputs are required late in the design phase, the I/O-8 Flex channel expander is a perfect solution. The eight Flex channels can be reconfigured via software at design or run-time to behave as either a fully balanced mic/line input offering phantom power or as a line level output. Single channel granularity allows the user to configure any combination of inputs / outputs from 8 x 0 through to 0 x 8. Additionally, when used as mic/line Inputs, the eight Flex channels offer microphone fault detection. The onboard RS232 port allows any serial control device to be interfaced with Q-SYS for complete control and monitoring integration.

NETWORK AND POWER

The Q-SYS Platform utilizes IEEE networking standards and solutions for audio, control and video distribution over a standard Ethernet / IP network. Q-LAN provides deterministic system latencies with analog input to analog output guaranteed at 3.167 ms. The Q-SYS Platform uses Q-LAN for audio, video and control connectivity with all Q-SYS peripherals. Additionally, all Q-SYS Cores support VoIP, SIP, LDAP, AES67, TCP/IP and HTTP Web Sockets among many other standard IT and industry protocols. The I/O-8 Flex channel expander offers PoE+ capability for single cable applications.

REDUNDANCY

The Q-SYS I/O-8 Flex channel expander offers dual network ports for redundancy with the ability to send and receive on both ports simultaneously for glitch-free switchover in the event of a network failure.

PERIPHERALS

The I/O-8 Flex channel expander is a Q-SYS peripheral that can be used as part of a Q-SYS system utilizing any Q-SYS Core processor and all other Q-SYS peripheral types including the new Q-SYS AV-to-USB bridging devices. However, the USB device port on the I/O-8 Flex channel expander offers audio bridging.

Inputs/Outputs

Audio Flex Channel Capacity	8
Audio Flex Channel Assignments	Each channel can be configured as a mic/line input or as a line output (configured through Q-SYS Designer Software)
Rear Panel Indicators	"Link", "Speed" and "Activity" LEDs on all LAN ports

USB inputs/outputs

USB Audio Bridging	Up to 8 x 8 channels of digital audio in/out via software definable USB instances advertised to the USB Host operating system.
USB B (device port):	
Bit depth	16-bit, 24-bit (configured in Q-SYS Designer software)
USB channel capacity	8 x 8
Sample rate	48 kHz

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 304 x 96 monochrome OLED display

GPIO

General purpose inputs	0-24 VDC analog input or contact closure
General purpose outputs	Open collector, 24 VDC at 200 mA max, internal pull-up to 3.3 V
GPIO 12VDC Power Pins	12 VDC out at 100 mA max

Miscellaneous

PoE+ Power Input	IEEE 802.3at compliant powered device, PoE+ power supplied through LAN A port
External Power Input	24 VDC, 1.2 A supplied via the external power input, may be used as the primary power source or as a backup to the PoE+ source
Operating Temperature Range	0° C - 50° C
Power Consumption	25.5 W maximum
BTU/Hour	70 BTUs (power conversion estimate under typical load)
Humidity	5% to 85% RH
Storage temp	-20 C - +85 C
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, RCM, UL/cUL/CB, E174401-A18, EFUP: 10 years, Expected Product Life Cycle: 20 years.
Product Dimensions	8.66 x 9.43 x 1.75 in (220 x 240 x 44 mm), 1RU half rack
Shipping Carton Dimensions	20 x 12 x 4 in (508 x 305 x 102 mm)
Shipping Weight	6 lb (2.72 kg)
Included Accessories	Connector kit, rack ears, surface mount kit, safety instructions, regulatory statements, USB cable (Type A to Type B)