DIGITAL AUDIO DSP PROCESSOR & MULTI-ROOM SOUND SYSTEM

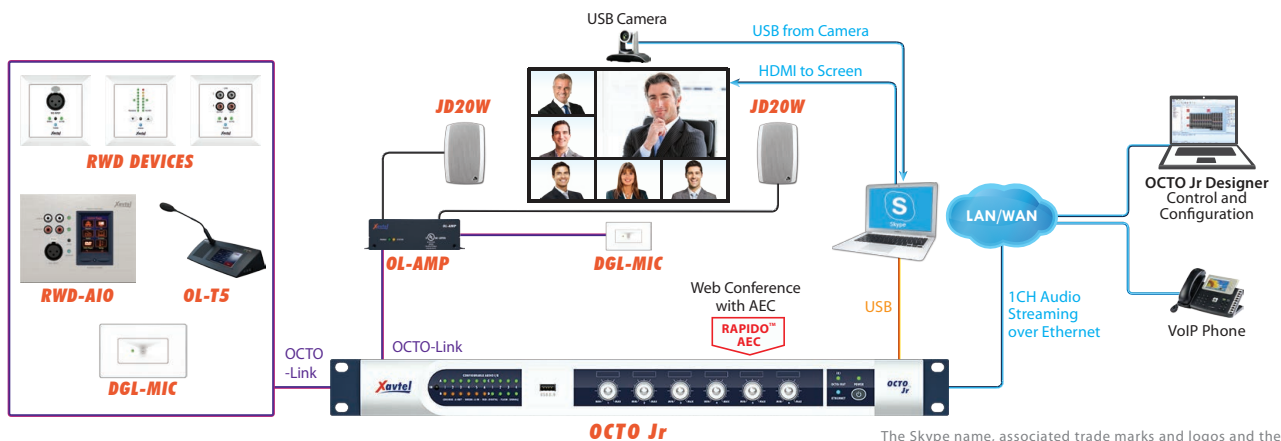# OCTO Jr™

DSP AUDIO PROCESSOR — OCTO Jr

The OCTO Jr is a full blown stand-alone DSP audio processor which comes with 6 fixed analog in, and 6 fixed analog out, plus 3 additional I/O card slots (C slot, D slot and E slot), and the E-card slot is for specialty I/O card which can be installed as either 4 channel digital OCTO-Link card or 2 channel analog audio output card. These three configurable card slots allow the OCTO Jr to be easily expanded its I/O for different kinds of applications. The PC/Laptop based OCTO Jr Designer software provides a variety of pre-defined I/O configuration, making the entire system easy to setup, program and control.

The 4 channel digital OCTO-Link card (2 channel per port) allows to transmit the digital audio and control through 2 channel inputs and 2 channel outputs per port, providing an easy connection to OL-AMP (Low-Z digital amplifier), OL-T5 (LCD touch screen paging console), DGL-MIC (ceiling mount microphone) and various RWD remote devices. The connection between OCTO Jr and remotes is using STP CAT5/6/7 cable with metal shielded RJ45 connector in a max. distance length of 820 ft/250m.

The OCTO Jr features 6 knobs, each knob can be programmed in custom DSP parameter for directly control without operating on the software. As our state of the art DSP processor, the OCTO Jr also incorporates a powerful DSP library and functionality such as AGC, Ducker, Compressor, PEQ, Feedback, Hi/Lo Pass, AEC, message player, mixer, scheduler, audio/message routing, paging, event management, In/Out streaming, VoIP and SIP client, level control, 3rd party command etc..

The OCTO Jr also equips with a USB interface for music playing and recording on the front panel; whilst on the rear panel, a Mini-USB interface can be connected to PC/Laptop for distance conferencing via Skype, QQ, WeChat, WhatsApp etc.. The OCTO Jr can be integrated with various remote inputs, outputs or controllers for Home & Office Automation. Logic I/O, RS485 and Ethernet is also available for 3rd party control.

HUDDLE ROOM REMOTE CONFERENCING

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DSP AUDIO PROCESSOR — *OCTO Jr*

FEATURES

- 18x10 I/O, 14x14 I/O and 10x18 I/O by using OCTO-Link on E-slot or 14x8 I/O, 10x14 I/O and 6x16 I/O by using ELO Card on E-slot (2CH analog audio output)

- 25 different pre-defined I/O configurations on OCTO Jr Designer software

- Excellent sound quality (24 bits and 48 kHz sampling)

- 6 knobs for direct DSP parameter control on the front panel

- USB 2.0 interface for music playing and recording

- Mini-USB interface to connect to PC/Laptop for remote conferencing by Skype, QQ, WeChat, WhatsApp, etc.

- Optional 4CH input and 4CH output OCTO-Link card to connect to OL-AMP, RWD devices, OL-T5, DGL-MIC etc. for paging and remote control

- Integrated AEC function with less tail length (OLA-Card is needed)

- Third party control via RS485, Ethernet, 4CH logic I/O and 2CH control inputs

- Enhanced DSP functions such as AGC, AEC, Ducker, Compressor PEQ, Feedback, Hi/Lo Pass, message player, mixer etc.

- Special features include scheduler, recording audio/message routing, paging, event management, IGMP audio streaming over IP, VoIP and SIP client for teleconferencing, level control, 3rd party command etc..
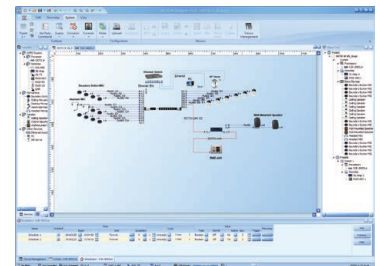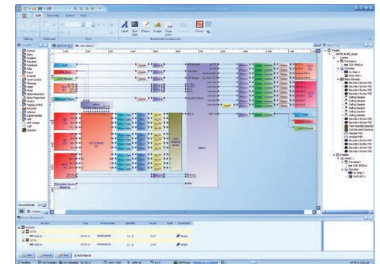
Electrical	
DC power input	24 VDC
Power consumption	36W
Audio characteristics	
Frequency response	20 ~ 20 kHz (± 0.25 dB) @ 0 dBu
THD+N	< 0.006 % @ 4 dB in, 0 dBu (1 kHz) gain
A/D-D/A bit resolution	24 Bit
Sampling rate	48 kHz
EIN	<-125 dBra @ 60 dB gain
Dynamic range	> 98 dBu
Crosstalk	< -70 dB @ 54 dBu gain,-54 dBu In (1 kHz)
CMRR	<-90 dBu @ 36 dB gain (1 kHz)
Maximum input level	16 dBu
Maximum output level	16 dBu
Maximum gain	66 dBu
Input impedance (balanced)	8k ohm
Output impedance (balanced)	77 ohm
Phantom power	48 VDC, 15 mA
Network (OCTO-Link)	
Max. distance between units	STP CAT5/6/7 with metal shielded RJ45 connector (250 m/820 ft)
Max. OCTO-Link units	2 OL-T5, OL-AMP, RWD or DGL-MIC
The connected OL-AMP can be cascaded with up to 16 units or one RWD device/DGL-MIC mic at the end of bus	
Front panel	
IR receiver LED	
12 fixed I/O LEDs	
8 configurable I/O LEDs	
6 scalable knobs	
USB 2.0 interface	
Digi-link LED, Power LED, Ethernet LED	
Standby mode button (on/off)	

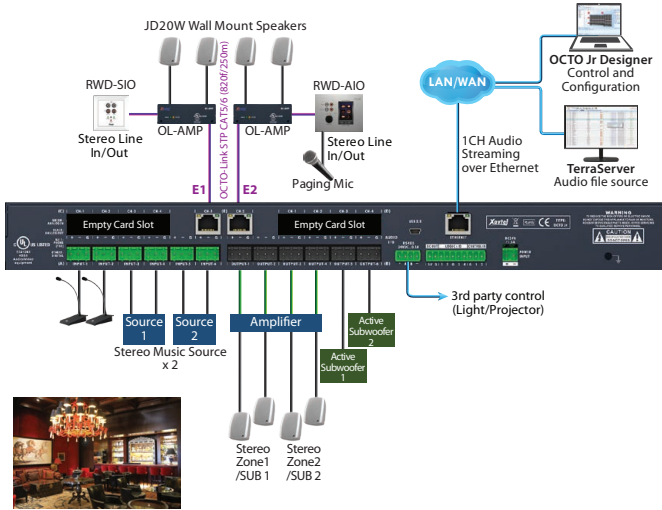| Rear panel	
6 fixed analog input (A slot)	
6 fixed analog output (B slot)	
4 configurable I/O (C slot)	
4 configurable I/O (D slot)	
2 configurable I/O (E slot)	
Mini-USB (2.0 format) interface for remote conferencing	
RS485 for 3rd party control	
Ethernet port (RJ45 plug)	
24VDC power input connector (1.5A)	
DC output connector (5V)	
4 channel logic I/O	
2 channel control input	
Mechanical	
Dimension (WxHxD)	17.2" x 1.73" x 8.7" (436 x 44 x 221 mm)
Weight	5.9 lbs (2.7 kg)
Color	
Front panel	Silver-painted plastic & PANTONE 432C
Metal case	PANTONE 7546C
Environmental	
Operating temperature	23ºF ~ 131ºF (-5ºC ~ 55ºC)
Storage temperature	-40°F ~ 158°F (-40°C ~ 70°C)
Relative humidity	20 % to 95 % non-condensing
Certification	
CE marked, UL listed, RoHS compliant	

APPLICATIONS

Restaurant/Bar — BGM/DJ — OCTO JR-03

JD20W Wall Mount Speakers
RWD-SIO
Stereo Line In/Out
OL-AMP
OCTO-Link STP CAT5/6 (82m/250m)
RWD-AIO
Stereo Line In/Out
Paging Mic
E1 E2
LAN/WAN
OCTO Jr Designer — Control and Configuration
1CH Audio Streaming over Ethernet
TerraServer — Audio file source
Empty Card Slot
Empty Card Slot
3rd party control (Light/Projector)
Source 1
Source 2
Amplifier
Active Subwoofer 2
Stereo Music Source x 2
Active Subwoofer 1
Stereo Zone1 /SUB 1
Stereo Zone2 /SUB 2

Equipment List
- OCTO Jr 03 x 1
- OL-AMP x 2
- RWD-AIO x 1
- RWD-SIO x 1
- JD20W x 8

Additional
- Amplifier (60W x 4CH) x 1
- Mics x 3
- Active subwoofers x 2

Function
- Message player
- Event scheduler
- 1CH audio streaming
- Source selection, volume adjustment and stereo line I/O (RWD-AIO)

Conference/Presentation Room — OCTO JR-02

Ceiling Speakers (CCS4 or CCS6)
Amplifier
LAN/WAN
OCTO Jr Designer — Control and Configuration
1CH Audio Streaming over Ethernet
TerraServer — Audio file source
Empty Card Slot
Empty Card Slot
3rd party control (Light/Projector)
Source 1
Amplifier
Record Out
Stereo Music Source x 1
JD20W Wall Mount Speakers

Equipment List
- OCTO Jr 02 x 1
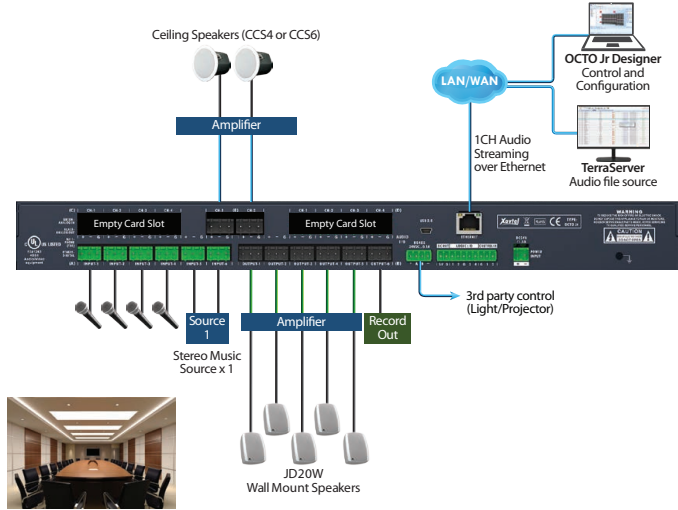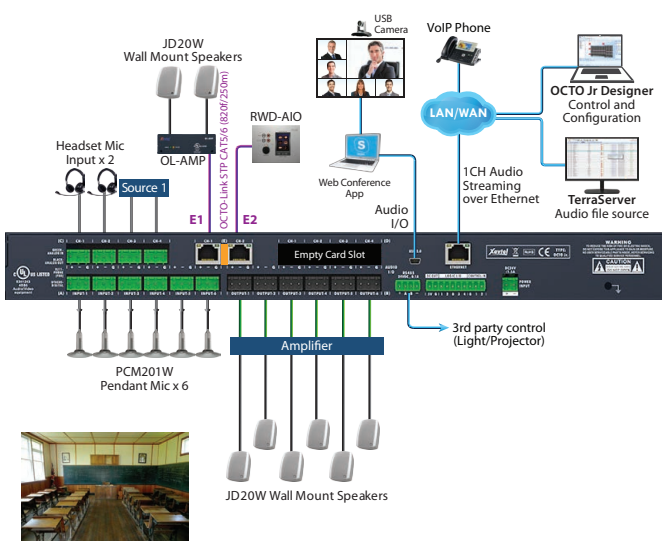- JD20W x 5
- CCS4 or CCS6 x 2

Additional
- Amplifier (60W x 5CH) x 1
- Mics x 4
- Active subwoofer x 1

Function
- Message player
- Event scheduler
- 1CH audio streaming
- Stereo music source

Classroom — RAPIDO™ AEC — OCTO JR-24

USB Camera
VoIP Phone
JD20W Wall Mount Speakers
OCTO-Link STP CAT5/6 (82m/250m)
RWD-AIO
Headset Mic Input x 2
OL-AMP
Source 1
E1 E2
Web Conference App
Audio I/O
LAN/WAN
OCTO Jr Designer — Control and Configuration
1CH Audio Streaming over Ethernet
TerraServer — Audio file source
Empty Card Slot
3rd party control (Light/Projector)
Amplifier
PCM201W Pendant Mic x 6

JD20W Wall Mount Speakers

Equipment List
- OCTO Jr 24 x 1
- OL-AMP x 1
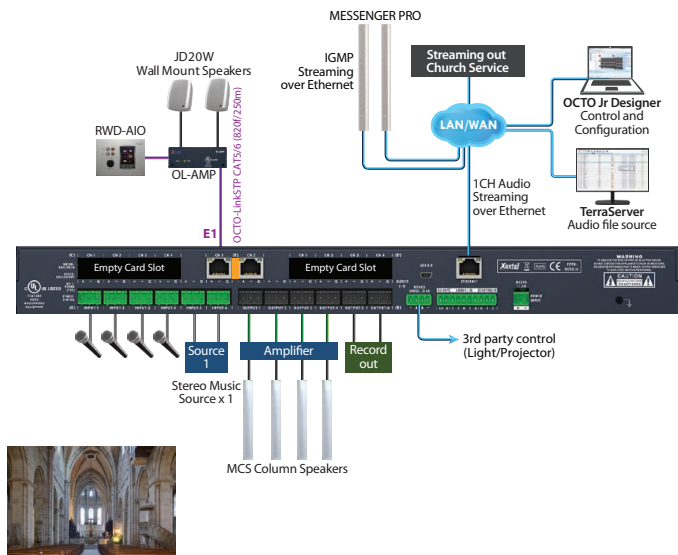- RWD-AIO x 1
- JD20W x 8
- PCM201W mic x 6

Additional
- USB camera x 1
- Wireless headset mics x 2
- Amplifier (60W x 6CH) x 1

Function
- AEC web & distance conferencing
- USB audio I/O
- Message player
- Event scheduler
- 1CH audio streaming

House of Worship/Church — AEC/AV-Streaming — RAPIDO™ AEC — OCTO JR-05

MESSENGER PRO
JD20W Wall Mount Speakers
IGMP Streaming over Ethernet
Streaming out Church Service
RWD-AIO
OL-AMP
OCTO-Link STP CAT5/6 (82m/250m)
E1
LAN/WAN
OCTO Jr Designer — Control and Configuration
1CH Audio Streaming over Ethernet
TerraServer — Audio file source
Empty Card Slot
Empty Card Slot
3rd party control (Light/Projector)
Source 1
Amplifier
Record out
Stereo Music Source x 1
MCS Column Speakers

Equipment List
- OCTO Jr 05 x 1
- OL-AMP x 1
- RWD-AIO x 1
- JD20W x 2
- MCS x 4
- MESSENGER PRO x 2

Additional
- Amplifier (60W x 4CH) x 1
- USB camera x 1
- Mic x 4

Function
- Message player
- Event scheduler
- 1CH In/Out streaming
- Source selection, volume adjustment and stereo line I/O (RWD-AIO)

ORDERING INFOTMATION *OCTO Jr*

Model ID	Model No.	Description of Model	Mic Line In	Line In	Line Out	Remote Enable	AEC Enable
OCTO Jr 01	OJR	Fixed 6I6O Stand-Alone Processor	6	0	6	-	-
OCTO Jr 02	OJR-ELO	Fixed 6I6O Plus 2Out Stand-Alone Processor	6	0	6	-	-
OCTO Jr 03	OJR-OL	Fixed 6I6O Plus 4I4O OCTOLINK Digital Audio Stand-Alone Processor	6	0	6	x	-
OCTO Jr 04	OJR-MIOOL	Fixed 6I6O Plus 2Mic In and 2Out and 4I4O OCTOLINK Digital Audio with AEC Stand-Alone Processor	8	0	8	x	-
OCTO Jr 05	OJR-OLA	Fixed 6I6O Plus 4I4O OCTOLINK Digital with AEC Stand-Alone Processor	6	0	6	x	x
OCTO Jr 06	OJR-MIOL	Fixed 6I6O Plus 4Mic In and 4I4O Digital Audio Stand-Alone Processor	10	0	6	x	-
OCTO Jr 07	OJR-2MIOL	Fixed 6I6O Plus 8Mic In and 4I4O Digital Audio Stand-Alone Processor	14	0	6	x	-
OCTO Jr 08	OJR-MI	Fixed 6I6O Plus 4Mic In Stand-Alone Processor	10	0	6	-	-
OCTO Jr 09	OJR-MIMIO	Fixed 6I6O Plus 6Mic In and 2Out Stand-Alone Processor	12	0	6	-	-
OCTO Jr 10	OJR-LIOL	Fixed 6I6O Plus 4In and 4I4O Digital Audio Stand-Alone Processor	6	4	6	x	-
OCTO Jr 11	OJR-2LIOL	Fixed 6I6O Plus 8In and 4I4O Digital Audio Stand-Alone Processor	6	8	6	x	-
OCTO Jr 12	OJR-LOOL	Fixed 6I6O Plus 4Out and 4I4O Digital Audio Stand-Alone Processor	6	0	10	x	-
OCTO Jr 13	OJR-2LOOL	Fixed 6I6O Plus 8Out and 4I4O Digital Audio Stand-Alone Processor	6	0	14	x	-
OCTO Jr 14	OJR-LI	Fixed 6I6O Plus 4In Stand-Alone Processor	6	4	6	-	-
OCTO Jr 15	OJR-2LI	Fixed 6I6O Plus 8In Stand-Alone Processor	6	8	6	-	-
OCTO Jr 16	OJR-LO	Fixed 6I6O Plus 4Out Stand-Alone Processor	6	0	10	-	-
OCTO Jr 17	OJR-2LO	Fixed 6I6O Plus 8Out Stand-Alone Processor	6	0	14	-	-
OCTO Jr 18	OJR-LOMIOOL	Fixed 6I6O Plus 2Mic In and 6Out and 4I4O Digital Audio Stand-Alone Processor	8	0	12	x	-
OCTO Jr 19	OJR-MILO	Fixed 6I6O Plus 4Mic In and 4Out Stand-Alone Processor	10	0	10	-	-
OCTO Jr 20	OJR-MILOOL	Fixed 6I6O Plus 4Mic In and 4Out and 4I4O Digital Audio Stand-Alone Processor	10	0	10	x	-
OCTO Jr 21	OJR-MIO	Fixed 6I6O Plus 2Mic In and 2Out Stand-Alone Processor	8	0	8	-	-
OCTO Jr 22	OJR-LIOLA	Fixed 6I6O Plus 4In and 4I4O OCTOLINK Digital Audio with 2CH AEC Stand-Alone Processor	6	4	6	x	x
OCTO Jr 23	OJR-MIMIOOLA	Fixed 6I6O Plus 6Mic In and 2Out and 4I4O OCTOLINK Digital Audio with 2CH AEC Stand-Alone Processor	12	0	8	x	x
OCTO Jr 24	OJR-MIOLA	Fixed 6I6O Plus 4Mic In and 4I4O OCTOLINK Digital Audio with 2CH AEC Stand-Alone Processor	10	0	6	x	x
OCTO Jr 25	OJR-2MIOLA	Fixed 6I6O Plus 8Mic In and 4I4O OCTOLINK Digital Audio with 2CH AEC Stand-Alone Processor	14	0	6	x	x
OCTO Jr 26	OJR-MIELO	Fixed 6I6O Plus 4Mic In and 2Out Stand-Alone Processor	10	0	8	-	-

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