xIn 4, xIO 4x4, and xOut 4

xln 4

- Audio input (A/D) expander for Symetrix systems that capitalizes on the surplus DSP of a Dante-enabled Symetrix DSP unit to bring overall system costs down.
- 4 mic/line inputs, including +48 VDC phantom power, with the industry leading performance specifications of Radius, Edge, and Prism DSPs.
- Configured with Symetrix Composer. No third-party software, archaic DIP switches, or complicated front panel menus.
- Network audio expansion using Dante protocol over standard IT networks. Ultra-low latency.
- PoE Injector included.
- Optional 1U rack tray and 1/2U surface mount bracket available for separate purchase.

The cost effective xIn 4 increases a system's analog input channel capacity resulting in a reduction in overall price per channel. Designed exclusively for use with Dante-enabled Symetrix DSP units, each of the four analog inputs' parameters (5 gain levels, phantom power), along with bus assignments, are configured using Symetrix Composer open architecture software. xIn 4 set up is logical and fast with no requirement to use third-party software; there are no mechanical switches or circuit board jumpers to set. Systems are simpler, cost less, and have fewer potential points of failure. A half-rack form factor conserves rack space. Optional 1U rack tray and 1/2U surface mount bracket are available for separate purchase.

Electrical Specifications

ANALOG INPUTS	
Frequency Response	20 Hz – 20 kHz, ± 0.5 dB.
Channel Separation	> 111 dB @ 1 kHz, +24 dBu.
Connectors	3.5 mm Phoenix® connectors.
Number of Inputs	Four (4) switchable balanced mic or line level.
Nominal Input Level	+4 dBu with 20 dB of headroom.
Maximum Input Level	+23 dBu.
Mic pre-amp gain	0, 11.8, 24, 44 or 54 dB switchable.
Mic pre-amp EIN	< -127dB with 150 ohm source impedance.
CMRR	> 76 dB @ 1 kHz, unity gain.
Input impedance	8k Ohms balanced, 4k Ohms unbalanced.
Phantom power (per input)	+48 VDC @ 10 mA maximum.
Dynamic range	> 116 dB, A-weighted.
THD + Noise	< -100 dB, unweighted; 1 kHz @ +22 dBu with 0 dB gain.
Latency	0.28 mS.
SYSTEM	
Sampling Rate	48 kHz, ± 100 ppm.
Dante Cable	Standard CAT6, maximum device-to-device length = 100 meters.

1 **Dante (Primary):** 100 Base-T Ethernet port provides 8 (4x4) channels of Dante network audio, Ethernet communications, and power.

2 **Analog Mic/Line Inputs:** Four (4) balanced analog audio inputs, with individually software-controllable pre-amp gains (reference levels of -50 dBu, -40 dBu, -20 dBu, -10 dBV and +4 dBu) and phantom power.

Mechanical Specifications

Items	Specifications	Remarks
Space Required	Half rack unit (WDH: 20.83 cm x 22.86 cm x 4.37 cm / 8.2 in. x 9 in. x 1.72 in.) Depth does not include connector allowance.	Allow at least 3 inches additional clearance for rear panel connections. Additional depth may be required depending upon your specific wiring and connections.
Electrical	PoE IEEE 802.3af Class 0, 10 Watts maximum.	No line voltage switching required (100-250 VAC, 50-60 Hz).
Ventilation	Maximum recommended ambient operating temperature is 30 C / 86 F.	Ensure that the left and right equipment sides are unobstructed (5.08 cm, 2 in minimum clearance). The ventilation should not be impeded by covering the ventilation openings with items such as newspapers, tablecloths, curtains, etc.
Certifications or Compliance	UL 60065, cUL 60065, IEC 60065, FCC 15.109:2015, FCC 15.109(g):2015, FCC 15.107:2015, (CISPR 32), EN 55032:2012, EN 55103-2:2009, EN 61000-3-3:2013, EN 61000-3-2:2006, ICES-003:2012, RoHS.	
Shipping Weight	4.4 lbs. (2.0 kg)	

Architect and Engineer Specifications: xIn 4.

The half rack device shall provide four analog mic/line inputs that are adjustable from line to mic level with coarse gain and phantom power. Levels and phantom power shall be controllable via DSP modules in software. Audio connections shall be accessed via rear panel 3.5 mm Phoenix® connectors.

Network audio expansion shall be provided by the Dante protocol. The connector shall be 100 Base-T RJ45 utilizing CAT6 cable.

A designer software application shall be provided that operates on a Windows computer, with network interface installed, running Windows® 7 or higher operating system. Computer connection for configuration shall be via a hosting DSP unit's rear panel Ethernet connector that communicates with the devices via Dante.

The front panel shall include indicators for POWER, ETHERNET, and DANTE.

Audio conversion shall be 24-bit, 48 kHz and the dynamic range shall not be lower than 115 dB, A-weighted with a maximum input level of +23 dBu.

The device shall be powered over Ethernet (PoE) by an included 802.3af Class 0 PoE injector. The device shall meet UL/CSA and CE safety requirements and comply with CE and FCC Part 15 emissions limits. The device shall be RoHS compliant. The chassis shall be constructed of cold rolled steel, and may be surface mounted or mount into a standard 19" 1U EIA rack using available mounting kits. The device shall be a **Symetrix xIn 4**.

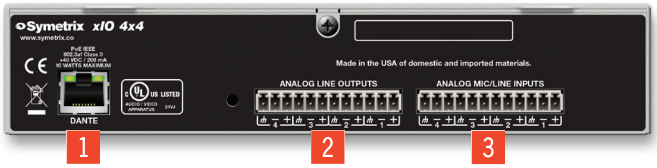
xIO 4x4

- Audio input (A/D), output (D/A) expander for Symetrix systems that capitalizes on the surplus DSP of a Dante-enabled Symetrix DSP unit to bring overall system costs down.
- 4 mic/line inputs, including +48 VDC phantom power, and 4 line outputs with the industry leading performance specifications of Radius, Edge, and Prism DSPs.
- Configured with Symetrix Composer. No third-party software, archaic DIP switches, or complicated front panel menus.
- Network audio expansion using Dante protocol over standard IT networks. Ultra-low latency.
- PoE Injector included.
- Optional 1U rack tray and 1/2U surface mount bracket available for separate purchase.

The cost effective xIO 4x4 increases a system's analog input and output channel capacity resulting in a reduction in overall price per channel. Designed exclusively for use with Dante-enabled Symetrix DSP units, each of the four analog inputs' parameters (5 gain levels, phantom power) and four analog outputs' parameters (mute), along with bus assignments, are configured using Symetrix Composer open architecture software. xIO 4x4 set up is logical and fast with no requirement to use third-party software; there are no mechanical switches or circuit board jumpers to set. Systems are simpler, cost less, and have fewer potential points of failure. A half-rack form factor conserves rack space. Optional 1U rack tray and 1/2U surface mount bracket are available for separate purchase.

Electrical Specifications

ANALOG INPUTS	
Frequency Response	20 Hz – 20 kHz, ± 0.5 dB.
Channel Separation	> 111 dB @ 1 kHz, +24 dBu.
Connectors	3.5 mm Phoenix® connectors.
Number of Inputs	Four (4) switchable balanced mic or line level.
Nominal Input Level	+4 dBu with 20 dB of headroom.
Maximum Input Level	+23 dBu.
Mic pre-amp gain	0, 11.8, 24, 44 or 54 dB switchable.
Mic pre-amp EIN	< -127dB with 150 ohm source impedance.
CMRR	> 76 dB @ 1 kHz, unity gain.
Input impedance	8k Ohms balanced, 4k Ohms unbalanced.
Phantom power (per input)	+48 VDC @ 10 mA maximum.
Dynamic range	> 116 dB, A-weighted.
THD + Noise	< -100 dB, unweighted; 1 kHz @ +22 dBu with 0 dB gain.
Latency	0.28 mS.
ANALOG OUTPUTS	
Frequency Response	20 Hz – 20 kHz, ± 0.5 dB.
Channel Separation	> 111 dB @ 1 kHz, +24 dBu.
Connectors	3.5 mm Phoenix® connectors.
Number of outputs	Four (4) balanced line level.
Nominal output level	+4 dBu with 20 dB of headroom.
Maximum output level	+24 dBu (+22.8 dBu into a 2k Ohm minimum load).
Output impedance	300 Ohms balanced, 150 Ohms unbalanced.
Dynamic range	> 118 dB, A-weighted.
THD + Noise	< -105 dB, unweighted; 1 kHz @ +22 dBu with 0 dB gain.
Latency	0.60 mS.
SYSTEM	
Sampling Rate	48 kHz, ± 100 ppm.
Dante Cable	Standard CAT6, maximum device-to-device length = 100 meters.



1 **Dante (Primary):** 100 Base-T Ethernet port provides 8 (4x4) channels of Dante network audio, Ethernet communications, and power.

2 **Analog Line Outputs:** Four (4) balanced analog line level audio outputs with emergency mute.

3 **Analog Mic/Line Inputs:** Four (4) balanced analog audio inputs, with individually software-controllable pre-amp gains (reference levels of -50 dBu, -40 dBu, -20 dBu, -10 dBV and +4 dBu), and phantom power.

Mechanical Specifications

Items	Specifications	Remarks
Space Required	Half rack unit (WDH: 20.83 cm x 22.86 cm x 4.37 cm / 8.2 in. x 9 in. x 1.72 in.) Depth does not include connector allowance.	Allow at least 3 inches additional clearance for rear panel connections. Additional depth may be required depending upon your specific wiring and connections.
Electrical	PoE IEEE 802.3af Class 0, 10 Watts maximum.	No line voltage switching required (100-250 VAC, 50-60 Hz).
Ventilation	Maximum recommended ambient operating temperature is 30 C / 86 F.	Ensure that the left and right equipment sides are unobstructed (5.08 cm, 2 in minimum clearance). The ventilation should not be impeded by covering the ventilation openings with items such as newspapers, tablecloths, curtains, etc.
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Shipping Weight	4.4 lbs. (2.0 kg)	

Architect and Engineer Specifications: xIO 4x4.

The half rack device shall provide four analog mic/line inputs that are adjustable from line to mic level with coarse gain and phantom power and four analog line outputs. Levels and phantom power shall be controllable via DSP modules in software. Audio connections shall be accessed via rear panel 3.5 mm Phoenix® connectors.

Network audio expansion shall be provided by the Dante protocol. The connector shall be 100 Base-T RJ45 utilizing CAT6 cable.

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The front panel shall include indicators for POWER, ETHERNET, and DANTE.

Audio conversion shall be 24-bit, 48 kHz and the dynamic range shall not be lower than 115 dB, A-weighted with a maximum input level of +23 dBu and maximum output level of +24 dBu.

The device shall be powered over Ethernet (PoE) by an included 802.3af Class 0 PoE injector. The device shall meet UL/CSA and CE safety requirements and comply with CE and FCC Part 15 emissions limits. The device shall be RoHS compliant. The chassis shall be constructed of cold rolled steel, and may be surface mounted or mount into a standard 19" 1U EIA rack using available mounting kits. The device shall be a **Symetrix xIO 4x4**.

xOut 4

- Audio output (D/A) expander for Symetrix systems that capitalizes on the surplus DSP of a Dante-enabled Symetrix DSP unit to bring overall system costs down.
- 4 line outputs with the industry leading performance specifications of Radius, Edge, and Prism DSPs.
- Configured with Symetrix Composer. No third-party software, archaic DIP switches, or complicated front panel menus.
- Network audio expansion using Dante protocol over standard IT networks. Ultra-low latency.
- PoE Injector included.
- Optional 1U rack tray and 1/2U surface mount bracket available for separate purchase.

The cost effective xOut 4 increases a system's analog output channel capacity resulting in a reduction in overall price per channel. Designed exclusively for use with Dante-enabled Symetrix DSP units, each of the four analog outputs' parameters (mute), along with bus assignments, are configured using Symetrix Composer open architecture software. xOut 4 set up is logical and fast with no requirement to use third-party software; there are no mechanical switches or circuit board jumpers to set. Systems are simpler, cost less, and have fewer potential points of failure. A half-rack form factor conserves rack space. Optional 1U rack tray and 1/2U surface mount bracket are available for separate purchase.

Electrical Specifications

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Maximum output level	+24 dBu (+22.8 dBu into a 2k Ohm minimum load).
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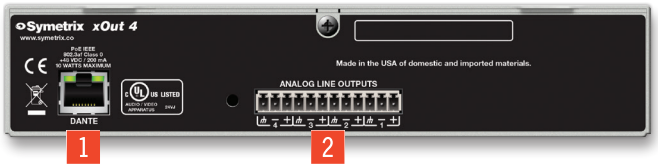

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