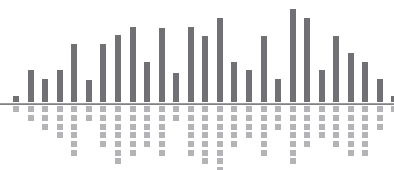


# Solus NX: 4x4 8x8 16x8



Designed to serve in standalone DSP applications, those not requiring Dante network audio, the Solus NX series features the same DSP power and delay memory as Symetrix' Radius, Prism, and Edge DSPs.

Solus NX is ideally suited for a large range of installed sound applications, delivering DSP-intensive processing, routing and delay in systems requiring sophisticated loudspeaker management, auto-mixing, paging, routing and distribution, mic/line processing, AGC, room combining and more.

### Three audio input/output options.

Solus NX 4x4 (4 in, 4 out), Solus NX 8x8 (8 in, 8 out), Solus NX 16x8 (16 in, 8 out). All three models feature a front panel LCD that provides system status and audio level information. A single push-button is used to navigate menus.

### Powerful, efficient DSP configured using award winning Composer CAD design software.

Route, process, and control audio in nearly unlimited ways serving countless applications. Eliminating the need for multiple software applications, all Symetrix open-architecture DSPs, including Solus NX, are programmed using Composer.

### Multiple end user control options.

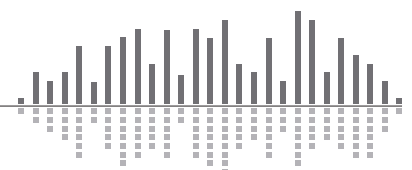
Solus NX DSPs can be controlled from Symetrix ARC wall panels including the universal mount ARC-3, the virtual ARC-WEB, Symvue - a custom Windows® runtime control interface, third-party Ethernet equipped touch panels, or a combination of any or all of the above.

### Transparency.

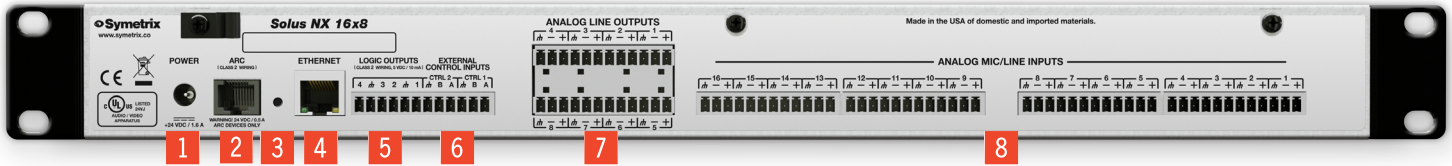
Solus NX' embedded web server displays analog I/O levels, diagnostics, and hosts the ARC-WEB control interface. The server is accessible from any networked smart phone, tablet, or computer by simply entering into the browser's address field Solus NX' local LAN or publicly accessible IP address, or its fully qualified domain name.

**Symetrix Installed Sound DSP Quick Comparison**

	Mic/Line Inputs	Line Only Inputs	AEC Channels	Line Outputs	Expansion Slots	ARC Port	Control Inputs	Logic Outputs	Design Software	Dante	RS-232	10/100 Base-T Ethernet Ports	1000 Base-T Ethernet Ports	Power Supply	Form Factor
Edge	Up to 16	-	Up to 16	Up to 16	4	Yes	8 Closures 4 Pots	8	Composer	Yes	Yes	2	2	Internal and/or External	1U Full Rack
Radius 12x8 EX	12	-	-	8	1	Yes	8 Closures 4 Pots	8	Composer	Yes	Yes	2	2	Internal	1U Full Rack
Radius AEC	8	4	8	8	1	Yes	8 Closures 4 Pots	8	Composer	Yes	Yes	2	2	Internal	1U Full Rack
Prism 4x4	4	-	-	4	-	Yes	4 Closures 2 Pots	4	Composer	Yes	No	1	1	PoE+	1U Half Rack
Prism 8x8	8	-	-	8	-	Yes	8 Closures 4 Pots	8	Composer	Yes	No	1	1	External	1U Full Rack
Prism 12x12	12	-	-	12	-	Yes	8 Closures 4 Pots	8	Composer	Yes	No	1	1	External	1U Full Rack
Prism 16x16	16	-	-	16	-	Yes	8 Closures 4 Pots	8	Composer	Yes	No	1	1	External	1U Full Rack
Solus NX 4x4	4	-	-	4	-	Yes	4 Closures 2 Pots	4	Composer	No	No	1	-	External	1U Full Rack
Solus NX 8x8	8	-	-	8	-	Yes	4 Closures 2 Pots	4	Composer	No	No	1	-	External	1U Full Rack
Solus NX 16x8	16	-	-	8	-	Yes	4 Closures 2 Pots	4	Composer	No	No	1	-	External	1U Full Rack
Jupiter 4	4	-	-	4	-	Yes	4 Closures 2 Pots	4	Jupiter	No	No	1	-	External	1U Full Rack
Jupiter 8	8	-	-	8	-	Yes	4 Closures 2 Pots	4	Jupiter	No	No	1	-	External	1U Full Rack
Jupiter 12	12	-	-	4	-	Yes	4 Closures 2 Pots	4	Jupiter	No	No	1	-	External	1U Full Rack
Zone Mix 761	4	8	-	6	-	Yes	4 Closures 2 Pots	4	761	No	Yes	1	-	External	1U Full Rack



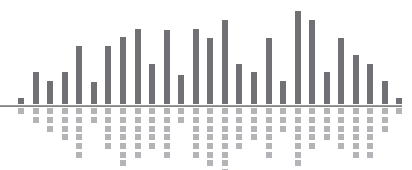
Shown: Solus NX 16x8 rear panel. Solus NX 8x8 and 4x4 rear panels are identical except for the number of analog audio inputs and outputs.



- 1 Power:** Switching power supply providing 24 VDC @ 1.4 amperes. *Note: Each power supply will accept a 100-240 VAC input.*
- 2 ARC:** Distributes power and RS-485 data to one or more ARC devices.
- 3 Factory Reset Switch:** To be used under the supervision of Symetrix technical support, it has the ability to reset the unit's network configuration and completely reset the unit to factory defaults.
- 4 Ethernet:** 10/100 Base-T Ethernet port for Symetrix Composer host control and third-party accessory controllers over IP. Features auto-crossover sensing for direct device-to-device connections.
- 5 Logic Outputs:** Four (4) logic outputs with two (2) paired common ground pins. Logic Outputs go low (0V) when active, and are internally pulled high (5V) when inactive and can drive external LED indicators directly.
- 6 External Control Inputs:** Two (2) analog control inputs able to be used as 2 potentiometer inputs or as 4 switch inputs (+3.3 VDC reference voltage supplied).
- 7 Analog Line Outputs:** Eight (8) balanced analog line level audio outputs, with individually software-controllable +/- 24 dB of digital trim and mute.
- 8 Analog Mic/Line Inputs:** Sixteen (16) balanced analog audio inputs, with individually software-controllable pre-amp gain (reference levels of -36 dBu and +4 dBu), +/- 24 dB of digital trim, phantom power, signal inversion and mute.

## Electrical Specifications

ANALOG INPUTS	
Number of Balanced Mic / Line Inputs	Switchable balanced mic or line level. Solus NX 16x8 – Sixteen (16); Solus NX 8x8 – Eight (8); Solus NX 4x4 – Four (4).
Connectors	3.81 mm terminal blocks.
Nominal Input Level	+4 dBu line or -36 dBu mic level (software selectable) with 20 dB of headroom.
Maximum Input Level	+23 dBu.
Mic Pre-amp gain	+40 dB switchable with ± 24 dB of digital trim.
Mic Pre-amp EIN	< -114 dBu, 22 Hz - 22 kHz, 100 Ω source impedance.
CMRR	> 80 dB @ 1 kHz, unity gain.
Input impedance	> 18k Ohms balanced, > 9k Ohms unbalanced, > 2k Ohms with phantom power engaged.
Phantom power (per input)	+20 VDC @ 20 mA maximum per input.
ANALOG OUTPUTS	
Number of Balanced Line Outputs	Balanced line level. Solus NX 16x8 – Eight (8); Solus NX 8x8 – Eight (8); Solus NX 4x4 – Four (4).
Connectors	3.81 mm terminal blocks.
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	200 Ohms balanced, 100 Ohms unbalanced.
Dynamic Range	> 117 dB, A-weighted.
THD+Noise	< -97 dB; 22.4 kHz BW, unweighted; 1 kHz, +18 dBu output.
SYSTEM	
Sampling Rate	48 kHz, ± 100 ppm.
Frequency Response (A/D/A)	20 Hz – 20 kHz, ± 0.5 dB.
Dynamic Range (A/D/A)	> 110 dB (A-weighted), input to output.
Channel Separation (A/D/A)	> -90 dB @ 1 kHz, typical.
THD+Noise	< -93 dB (un-weighted); 1 kHz @ +22 dBu with 0 dB gain.
Latency (A/D/A)	< 1.6 mS, input routed to output.
Processors	1 x Analog Devices SHARC 21489 @ 400 MHz SIMD.
Raw Processing Capacity	400 MIPS, 1.6 GFLOPS.
Delay Memory	174 mono seconds.
Analog control inputs	0-3.3 VDC.
Recommended External Control Potentiometer	10k Ohm, linear.
Logic Outputs	Low (0V) when active, pulled high (5V) when inactive.
Logic Output Maximum External Power Supply Voltage	24 VDC.
Logic Output Maximum External Power Supply Current Sinking	50 mA.
Logic Output Maximum Output Current	10 mA.
RS-485 Serial I/O	38.4 kbaud (default) 8 data bits, 1 stop bit, no parity, no flow control. May be broken out of ARC port.
Ethernet Cable	Standard CAT5e or CAT6, maximum device-to-device length = 100 meters.
ARC Cable	Standard CAT5, distance dependent upon load and number of devices. 8 Watts maximum power available.
Maximum Devices Per System	80 units per Site File.
Maximum Stored Presets	1000.



Mechanical Specifications		
Items	Specifications	Remarks
Space Required	1U (WDH: 18.91 in x 9.88 in x 1.72 in / 48.02 cm x 25.1 cm x 4.37 cm). Depth does not include connector allowance.	Allow at least 3 inches of additional clearance for rear panel connections. Additional depth may be required depending upon your specific wiring and connections.
Electrical	24V 1.4A, 34W Maximum.	Symetrix Part Number 12-0034. CUI part number SDI65-24-U-P5.
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	Safety: UL 60065, cUL 60065, IEC 60065. EMC: "Class A" device (applies to all of the following) EN 55032, EN 55103-2, EN 61000-3-2, EN 61000-3-3, FCC Part 15, ICES-003. Environmental: RoHS.	
Shipping Weight	8.7 lbs. (3.9 kg)	

## Architect and Engineer Specifications: Solus NX 4x4.

The device shall provide four analog inputs that are selectable as line or mic level with fine trim and phantom power plus four analog line outputs that are adjustable with fine trim. Levels, phantom powers, signal inversions and mutes shall be controllable via software. Audio connections shall be accessed via rear panel 3.81 mm terminal block connectors.

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 the device's rear panel Ethernet connector. All internal processing shall be digital (DSP). Available DSP components shall include (but not be limited to) various forms of: mixers, equalizers, filters, crossovers, dynamics/gain controls, routers, delays, remote controls, meters, generators, onboard logic, and diagnostics.

The front panel shall include a LCD and momentary switch. The display shall indicate unit name, IP address, MAC address, Site File version, and fault messages and can be switched between system overview and meter displays.

External control shall include dedicated software screens as well as preset selection, I/O level control and muting using the optional ARC wall panel remote controls via industry-standard CAT5 cable with RJ45 connectors. A built-in web server shall provide four instances of ARC-WEB, which allows for user control from nearly any web browser or mobile device. Logic I/O shall consist of four contact closures or two potentiometer inputs along with four logic outputs. The logic outputs may be used to drive LEDs directly or control external relays or switches. All program memory shall be non-volatile and provide program security should power fail. The device shall provide an on-board real-time clock to facilitate automatic, timed changing of presets and may sync to NTP. Third-party control systems may interface over IP using a published ASCII control protocol.

Audio conversion shall be 24-bit, 48 kHz and internal processing shall be 32-bit or 40-bit floating point, 48 kHz. The dynamic range shall not be lower than 110 dB, A-weighted with a maximum input level of +23 dBu and maximum output level of +24 dBu.

The device shall have a power plug that accepts power from Symetrix part number 12-0034, CUI power supply part number SDI65-24-U-P5. 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 mount into a standard 19" 1U EIA rack. The device shall be a Symetrix **Solus NX 4x4**.

## Architect and Engineer Specifications: Solus NX 8x8.

The device shall provide eight analog inputs that are selectable as line or mic level with fine trim and phantom power plus eight analog line outputs that are adjustable with fine trim. Levels, phantom powers, signal inversions and mutes shall be controllable via software. Audio connections shall be accessed via rear panel 3.81 mm terminal block connectors.

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 the device's rear panel Ethernet connector. All internal processing shall be digital (DSP). Available DSP components shall include (but not be limited to) various forms of: mixers, equalizers, filters, crossovers, dynamics/gain controls, routers, delays, remote controls, meters, generators, onboard logic, and diagnostics.

The front panel shall include a LCD and momentary switch. The display shall indicate unit name, IP address, MAC address, Site File version, and fault messages and can be switched between system overview and meter displays.

External control shall include dedicated software screens as well as preset selection, I/O level control and muting using the optional ARC wall panel remote controls via industry-standard CAT5 cable with RJ45 connectors. A built-in web server shall provide four instances of ARC-WEB, which allows for user control from nearly any web browser or mobile device. Logic I/O shall consist of four contact closures or two potentiometer inputs along with four logic outputs. The logic outputs may be used to drive LEDs directly or control external relays or switches. All program memory shall be non-volatile and provide program security should power fail. The device shall provide an on-board real-time clock to facilitate automatic, timed changing of presets and may sync to NTP. Third-party control systems may interface over IP using a published ASCII control protocol.

Audio conversion shall be 24-bit, 48 kHz and internal processing shall be 32-bit or 40-bit floating point, 48 kHz. The dynamic range shall not be lower than 110 dB, A-weighted with a maximum input level of +23 dBu and maximum output level of +24 dBu.

The device shall have a power plug that accepts power from Symetrix part number 12-0034, CUI power supply part number SDI65-24-U-P5. 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 mount into a standard 19" 1U EIA rack. The device shall be a Symetrix **Solus NX 8x8**.

## Architect and Engineer Specifications: Solus NX 16x8.

The device shall provide sixteen analog inputs that are selectable as line or mic level with fine trim and phantom power plus eight analog line outputs that are adjustable with fine trim. Levels, phantom powers, signal inversions and mutes shall be controllable via software. Audio connections shall be accessed via rear panel 3.81 mm terminal block connectors.

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 the device's rear panel Ethernet connector. All internal processing shall be digital (DSP). Available DSP components shall include (but not be limited to) various forms of: mixers, equalizers, filters, crossovers, dynamics/gain controls, routers, delays, remote controls, meters, generators, onboard logic, and diagnostics.

The front panel shall include a LCD and momentary switch. The display shall indicate unit name, IP address, MAC address, Site File version, and fault messages and can be switched between system overview and meter displays.

External control shall include dedicated software screens as well as preset selection, I/O level control and muting using the optional ARC wall panel remote controls via industry-standard CAT5 cable with RJ45 connectors. A built-in web server shall provide four instances of ARC-WEB, which allows for user control from nearly any web browser or mobile device. Logic I/O shall consist of four contact closures or two potentiometer inputs along with four logic outputs. The logic outputs may be used to drive LEDs directly or control external relays or switches. All program memory shall be non-volatile and provide program security should power fail. The device shall provide an on-board real-time clock to facilitate automatic, timed changing of presets and may sync to NTP. Third-party control systems may interface over IP using a published ASCII control protocol.

Audio conversion shall be 24-bit, 48 kHz and internal processing shall be 32-bit or 40-bit floating point, 48 kHz. The dynamic range shall not be lower than 110 dB, A-weighted with a maximum input level of +23 dBu and maximum output level of +24 dBu.

The device shall have a power plug that accepts power from Symetrix part number 12-0034, CUI power supply part number SDI65-24-U-P5. 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 mount into a standard 19" 1U EIA rack. The device shall be a Symetrix **Solus NX 16x8**.

