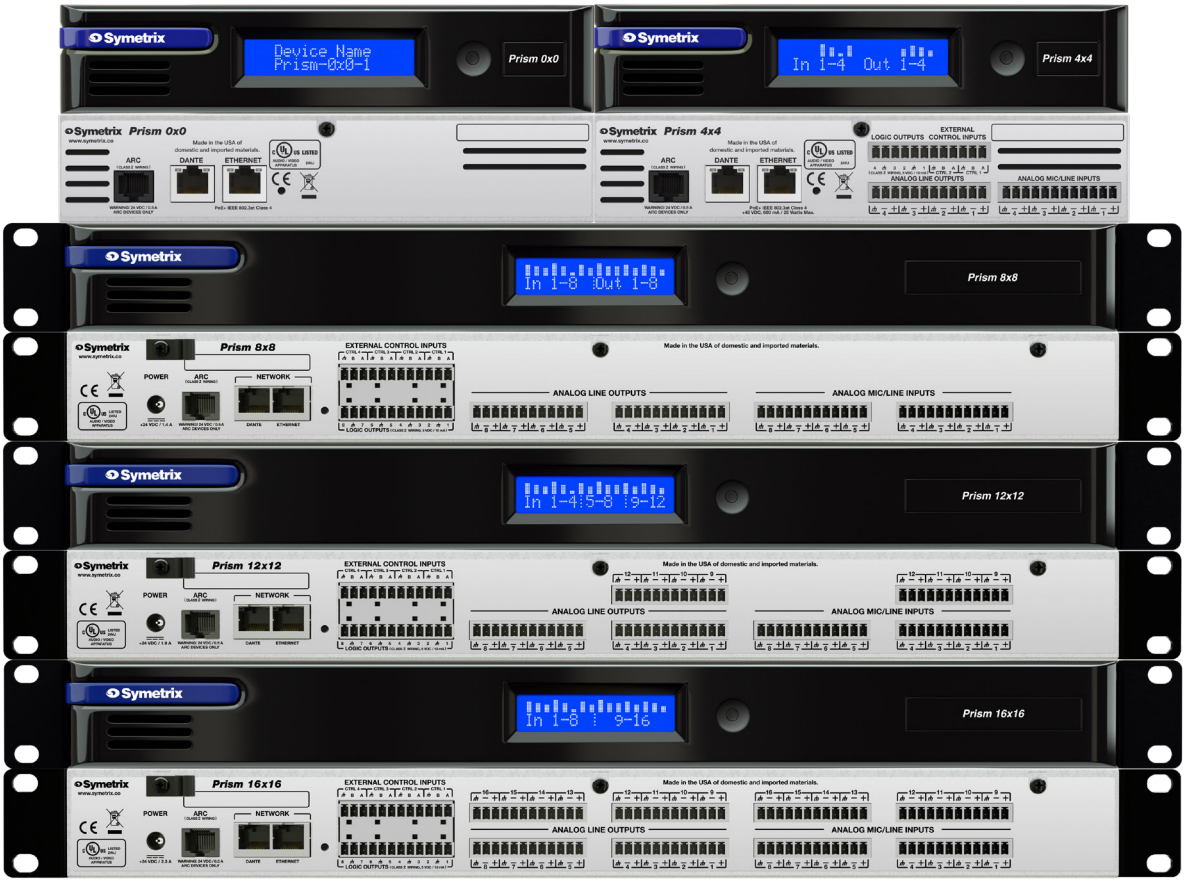
Prism: 0x0 4x4 8x8 12x12 16x16



Prism 0x0, 4x4, 8x8, 12x12 and 16x16 DSPs provide sophisticated state of the art audio signal processing at price points that were unimaginable only a few short years ago. The same uncompromising analog and digital design found in the Symetrix top of the line DSPs is now available across the Prism family.

Dante™ in our DNA.

All Prism models are optionally available equipped with 64x64 Dante channels. Dante is an uncompressed multi-channel digital media technology. Symetrix designs and supports one, and only one, network audio protocol: Audinate's Dante. Symetrixand Dante provide the fastest way to implement, control and maintain a system of networked DSPs and accessories - including select third-party products.

Scale up.

Increase a Prism system's analog input and output count using Symetrix Dante-enabled xIn 4, xIO 4x4, xOut 4, xIn 12, and xOut 12 expanders.

Total design control.

Program Prism using Symetrix' award winning Composer open-architecture Windows CAD application.

Connect to the outside world.

Connect to Ethernet equipped touch panels, W Series wall remotes, and any of the Symetrix ARC wall panels including the ARC-3 with graphical menus and universal mounting options.

Form, fit and function.

Prism 8x8, 12x12 and 16x16 models are 19" x 1U. Prism 0x0 and 4x4 are 1/2 rack x 1U. (Surface and rack mount kits sold separately).

An embedded web server for status and control.

Prism's embedded web server displays analog I/O levels, diagnostics, and provides access to ARC-WEB, a remote interface accessible from any smart phone, tablet or computer. The embedded server is accessible using any popular web browser by entering Prism's local LAN, or publicly accessible IP address or its fully qualified domain name into the browser's address field.

Installed Sound DSP Quick Comparison

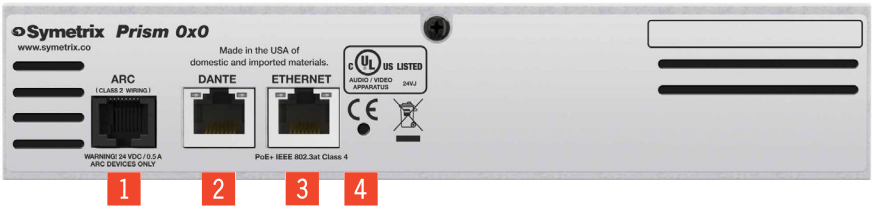
	Mic/Line Inputs	Line Only Inputs	AEC Channels	Line Outputs	Expansion Slots	ARC Port	Control Inputs	Logic Outputs	Design Software	Dante	RS-232	10/100 Base-T Ethernet Ports	1000 Base-T Ethernet Ports	Power Supply	Form Factor
Edge	Up to 16	-	Up to 16	Up to 16	4	Yes	8 Closures 4 Pots	8	Composer	Optional	Yes	2	2	Internal and/or External	1U Full Rack
Radius NX 4x4	4	-	Up to 16	4	1	Yes	4 Closures 2 Pots	4	Composer	Optional	Yes	2	2	Internal	1U Full Rack
Radius NX 12x8	12	-	Up to 16	8	1	Yes	8 Closures 4 Pots	8	Composer	Optional	Yes	2	2	Internal	1U Full Rack
Prism 0x0	-	-	-	-	-	Yes	-	-	Composer	Yes	No	1	1	PoE+	1U Half Rack
Prism 4x4	4	-	-	4	-	Yes	4 Closures 2 Pots	4	Composer	Optional	No	1	1	PoE+	1U Half Rack
Prism 8x8	8	-	-	8	-	Yes	8 Closures 4 Pots	8	Composer	Optional	No	1	1	External	1U Full Rack
Prism 12x12	12	-	-	12	-	Yes	8 Closures 4 Pots	8	Composer	Optional	No	1	1	External	1U Full Rack
Prism 16x16	16	-	-	16	-	Yes	8 Closures 4 Pots	8	Composer	Optional	No	1	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

The Prism family is included in the Symetrix line of Dante™ enabled DSPs. Symetrix uses Dante, a multi-channel digital media networking technology, to interconnect multiple Symetrix DSPs, Symetrix I/O expanders, and select third-party Dante enabled devices. Prism is ideally suited for applications requiring powerful, extremely cost effective advanced signal processing coupled with a standardized means for future expansion.

- 64x64 Dante and powerful Symetrix DSP reduce overall system costs.
- Ultra low latency Dante network audio protocol uses standard IT infrastructure.
- Cost-effective processing, mixing, and routing for Dante-enabled end points.
- Configured using award winning Composer software. Controlled from W Series remotes, ARC wall panels, ARC-WEB and T Series touchscreens. Embedded web server enables remote metering and diagnostics.
- Compact ½ rack format. PoE+ injector included. Rack and surface mount kits sold separately.
- Front panel LCD provides configuration information, system status, and analog audio levels.

Electrical Specifications

ANALOG INPUTS	
Number of Inputs	None.
ANALOG OUTPUTS	
Number of Outputs	None.
SYSTEM	
Sampling Rate	48 kHz.
Processors	1 x Analog Devices SHARC 21489 @ 400 MHz SIMD.
Raw Processing Capacity	400 MIPS, 1.6 GFLOPS.
Delay Memory	174 mono seconds.
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.
Dante Cable	Standard 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	128 units per Site File.
Maximum Stored Presets	1000.



1. **ARC:** Distributes power and RS-485 data to one or more ARC devices.
2. **Dante:** 1000 Base-T Ethernet port provides 128 (64x64) channels of Dante network audio.
3. **Ethernet:** 10/100 Base-T Ethernet port for Symetrix Composer host control, third-party accessory controllers over IP, and power. Features auto-crossover sensing for direct device-to-device connections.
4. **Factory Reset Switch:** To be used under the supervision of technical support, it has the ability to reset the unit's network configuration and completely reset the unit to factory defaults.

Mechanical Specifications

Items	Specifications	Remarks
Space Required	Half rack unit (WDH: 20.83 cm x 23.83 cm x 4.37 cm / 8.2 in. x 9.38 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 802.3at Class 4, 7 Watts minimum to 25.5 Watts maximum. No line voltage switching required.	Note: Subject to change when actual power requirements are determined.
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	5.1 lbs. (2.3 kg)	

Architect and Engineer Specifications: Prism 0x0.

The half rack device shall provide network audio processing, mixing, and routing using the Dante™ protocol with a capacity of 128 (64×64) channels. The connector shall be 1000 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 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, 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, 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. 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.

Internal processing shall be 32-bit or 40-bit floating point, 48 kHz.

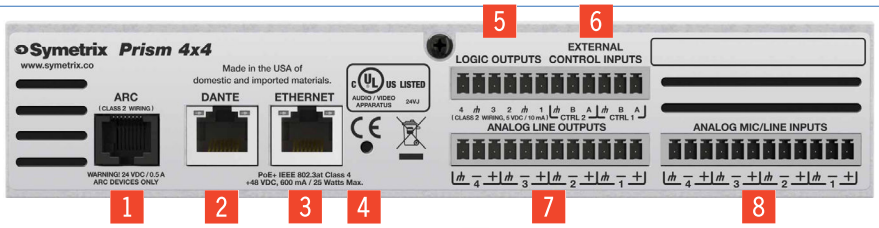
The device shall be powered over Ethernet (PoE+) by an IEEE 802.3at Class 4 standard compliant switch, or the included injector. The device can be powered from either the Dante or Ethernet Port . The device shall meet UL/CSA and CE safety requirements and comply with CE and FCC Part 15 emissions limits. 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 an available bracket or rack tray. The device shall be a Symetrix Prism 0x0.

The Prism family is the workhorse series in Symetrix's DSP lineup. With all the core features needed for the most common applications, it provides powerful processing with flexible control, and optional Dante networking. Prism is ideally suited for applications requiring powerful, extremely cost effective advanced signal processing coupled with a standardized means for future expansion.

- 4 analog in and out, and powerful Symetrix DSP reduce overall system costs.
- Optional 64x64 Ultra low latency Dante network audio protocol uses standard IT infrastructure.
- Industry leading analog and A/D/D/A performance, 48 volt phantom mic power.
- Configured using award winning Composer software. Controlled from W Series remotes, ARC wall panels, ARC-WEB and T Series touchscreens. Embedded web server enables remote metering and diagnostics.
- Compact ½ rack format. PoE+ injector included. Rack and surface mount kits sold separately.
- Front panel LCD provides configuration information, system status, and analog audio levels.

Electrical Specifications

ANALOG INPUTS	
Number of Inputs	Four (4) switchable balanced mic or line level.
Connectors	3.81 mm terminal blocks.
Nominal Input Level	+4 dBu.
Maximum Input Level	+23 dBu.
Mic Pre-amp gain	0, 12, 24, 44 or 54 dB switchable with ± 24 dB trim.
Mic Pre-amp EIN	< -125dB with 150 ohm source impedance. 22.4 kHz BW.
CMRR	> 79 dB @ 1 kHz, unity gain.
Input impedance	8k Ohms balanced, 4k Ohms unbalanced.
Phantom power (per input)	+48 VDC, 10 mA maximum.
Dynamic range	> 113 dB, A-weighted.
THD+Noise	< -100 dB; 22.4 kHz BW, unweighted; 1 kHz @ +15 dBu with 0 dB gain. Course gain is set to +4dBu.
A to D Latency	0.28 mS.
ANALOG OUTPUTS	
Number of Outputs	Four (4) balanced line level.
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	300 Ohms balanced, 150 Ohms unbalanced.
Dynamic Range	> 117 dB, A-weighted.
THD+Noise	< -97 dB; 22.4 kHz BW, unweighted; 1 kHz, 0 dB gain +8dBu output.
D to A Latency	0.60 mS.
SYSTEM	
Sampling Rate	48 kHz.
Frequency Response (A/D/A)	20 Hz – 20 kHz, ± 0.5 dB.
Dynamic Range (A/D/A)	> 113 dB, A-weighted.
Channel Separation (A/D/A)	> 110 dB @ 1 kHz, +24 dBu.
THD+Noise	< 95 dB (22.4 kHz BW, un-weighted); 1 kHz @ +15 dBu with 0 dB gain.
Latency (A/D/A)	1.04 mS, inputs routed to outputs.
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.



1. **ARC:** Distributes power and RS-485 data to one or more ARC devices.
2. **Dante:** 1000 Base-T Ethernet port provides 128 (64x64) channels of Dante network audio. Requires optional factory installed Dante card.
3. **Ethernet:** 10/100 Base-T Ethernet port for Symetrix Composer host control, third-party accessory controllers over IP, and power. Features auto-crossover sensing for direct device-to-device connections.
4. **Factory Reset Switch:** To be used under the supervision of technical support, it has the ability to reset the unit's network configuration and completely reset the unit to factory defaults.
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:** Four (4) 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:** Four (4) balanced analog line level audio outputs, with individually software-controllable +/- 24 dB of digital trim and mute.
8. **Analog Mic/Line Inputs:** Four (4) balanced analog audio inputs, with individually software-controllable pre-amp gain (reference levels of -50 dBu, -40 dBu, -20 dBu, -10 dBV and +4 dBu), +/- 24 dB of digital trim, phantom power, signal inversion and mute.

SYSTEM (continued)	
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.
Dante Cable	Standard 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	128 units per Site File.
Maximum Stored Presets	1000.

Mechanical Specifications

Items	Specifications	Remarks
Space Required	Half rack unit (WDH: 20.83 cm x 23.83 cm x 4.37 cm / 8.2 in. x 9.38 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 802.3at Class 4, 25.5 Watts maximum. No line voltage switching required.	Note: Subject to change when actual power requirements are determined.
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	5.1 lbs. (2.3 kg)	

Architect and Engineer Specifications: Prism 4x4.

The half rack device shall provide four analog mic/line inputs that are adjustable from line to mic level with coarse gain, 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.

Network audio expansion shall be provided by an optional factory installed Dante™ card with a capacity of 128 (64x64) channels. The connector shall be 1000 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 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 switchers. 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 113 dB, A-weighted with a maximum input level of +23 dBu and maximum output level of +24 dBu.

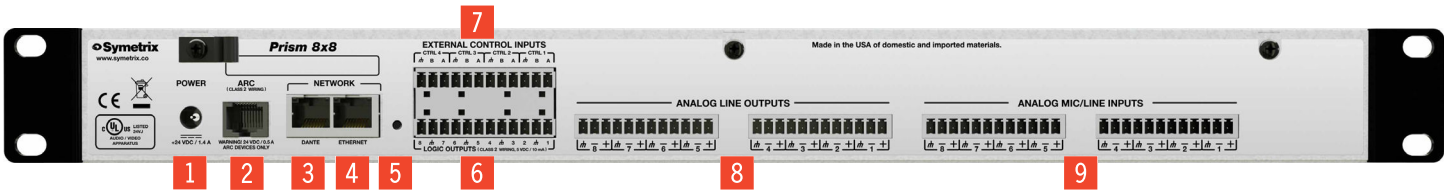
The device shall be powered over Ethernet (PoE+) by an IEEE 802.3at Class 4 standard compliant switch, or the included injector. The device can be powered from either the Dante or Ethernet Port. The device shall meet UL/CSA and CE safety requirements and comply with CE and FCC Part 15 emissions limits. 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 an available bracket or rack tray. The device shall be a Symetrix Prism 4x4.

The Prism family is the workhorse series in Symetrix's DSP lineup. With all the core features needed for the most common applications, it provides powerful processing with flexible control, and optional Dante networking. Prism is ideally suited for applications requiring powerful, extremely cost effective advanced signal processing coupled with a standardized means for future expansion.

- 8 analog in and out, and powerful Symetrix DSP reduce overall system costs.
- Optional 64x64 Ultra low latency Dante network audio protocol uses standard IT infrastructure.
- Industry leading analog and A/D/D/A performance, 48 volt phantom mic power.
- Configured using award winning Composer software. Controlled from W Series remotes, ARC wall panels, ARC-WEB and T Series touch-screens. Embedded web server enables remote metering and diagnostics.
- Front panel LCD provides configuration information, system status, and analog audio levels.

Electrical Specifications

ANALOG INPUTS	
Number of Inputs	Eight (8) switchable balanced mic or line level.
Connectors	3.81 mm terminal blocks.
Nominal Input Level	+4 dBu.
Maximum Input Level	+23 dBu.
Mic Pre-amp gain	0, 12, 24, 44 or 54 dB switchable with ± 24 dB trim.
Mic Pre-amp EIN	< -125dB with 150 ohm source impedance. 22.4 kHz BW.
CMRR	> 79 dB @ 1 kHz, unity gain.
Input impedance	8k Ohms balanced, 4k Ohms unbalanced.
Phantom power (per input)	+48 VDC, 10 mA maximum.
Dynamic range	> 113 dB, A-weighted.
THD+Noise	< -100 dB; 22.4 kHz BW, unweighted; 1 kHz @ +15 dBu with 0 dB gain. Course gain is set to +4dBu.
A to D Latency	0.28 mS.
ANALOG OUTPUTS	
Number of Outputs	Eight (8) balanced line level.
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	300 Ohms balanced, 150 Ohms unbalanced.
Dynamic Range	> 117 dB, A-weighted.
THD+Noise	< -97 dB; 22.4 kHz BW, unweighted; 1 kHz, 0 dB gain +8dBu output.
D to A Latency	0.60 mS.
SYSTEM	
Sampling Rate	48 kHz.
Frequency Response (A/D/A)	20 Hz – 20 kHz, ± 0.5 dB.
Dynamic Range (A/D/A)	> 113 dB, A-weighted.
Channel Separation (A/D/A)	> 110 dB @ 1 kHz, +24 dBu.
THD+Noise	< 95 dB (22.4 kHz BW, un-weighted); 1 kHz @ +15 dBu with 0 dB gain.
Latency (A/D/A)	1.04 mS, inputs routed to outputs.
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.



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. **Dante:** 1000 Base-T Ethernet port provides 128 (64x64) channels of Dante network audio. Requires optional factory installed Dante card.
4. **Ethernet:** 10/100 Base-T Ethernet port for Symetrix Composer host control, third-party accessory controllers over IP, and power. Features auto-crossover sensing for direct device-to-device connections.
5. **Factory Reset Switch:** To be used under the supervision of technical support, it has the ability to reset the unit's network configuration and completely reset the unit to factory defaults.
6. **Logic Outputs:** Eight (8) logic outputs with four (4) 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.
7. **External Control Inputs:** Four (4) analog control inputs able to be used as 4 potentiometer inputs or as 8 switch inputs (+3.3 VDC reference voltage supplied).
8. **Analog Line Outputs:** Eight (8) balanced analog line level audio outputs, with individually software-controllable +/- 24 dB of digital trim and mute.
9. **Analog Mic/Line Inputs:** Eight (8) balanced analog audio inputs, with individually software-controllable pre-amp gain (reference levels of -50 dBu, -40 dBu, -20 dBu, -10 dBV and +4 dBu), +/- 24 dB of digital trim, phantom power, signal inversion and mute.

SYSTEM (continued)	
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.
Dante Cable	Standard 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	128 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 inch 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	9.4 lbs. (4.2 kg).	

Architect and Engineer Specifications: Prism 8x8.

The device shall provide eight analog mic/line inputs that are adjustable from line to mic level with coarse gain, 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.

Network audio expansion shall be provided by an optional factory installed Dante™ card with a capacity of 128 (64x64) channels. The connector shall be 1000 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 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 eight contact closures or four potentiometer inputs along with eight logic outputs. The logic outputs may be used to drive LEDs directly or control external relays or switchers. 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 113 dB, A-weighted with a maximum input level of +23 dBu and maximum output level of +24 dBu.

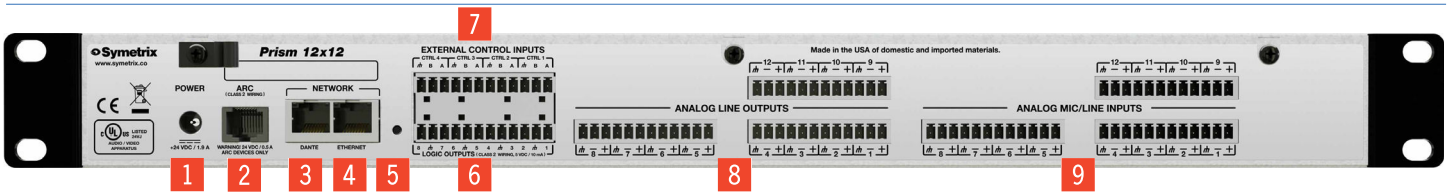
The device shall have a power plug that accepts power from Symetrix part number 12-0034, CUI power supply part number SDI65-24-U-P5. The device shall meet UL/CSA and CE safety requirements and comply with CE and FCC Part 15 emissions limits. The device shall be RoHS compliant. The chassis shall be constructed of cold rolled steel, and mounts into a standard 19" 1U EIA rack. The device shall be a Symetrix Prism 8x8.

The Prism family is the workhorse series in Symetrix's DSP lineup. With all the core features needed for the most common applications, it provides powerful processing with flexible control, and optional Dante networking. Prism is ideally suited for applications requiring powerful, extremely cost effective advanced signal processing coupled with a standardized means for future expansion.

- 12 analog in and out, and powerful Symetrix DSP reduce overall system costs.
- Optional 64x64 Ultra low latency Dante network audio protocol uses standard IT infrastructure.
- Industry leading analog and A/D/D/A performance, 48 volt phantom mic power.
- Configured using award winning Composer software. Controlled from ARC wall panels, W Series remotes, ARC-WEB and T Series touch-screens. Embedded web server enables remote metering and diagnostics.
- Front panel LCD provides configuration information, system status, and analog audio levels.

Electrical Specifications

ANALOG INPUTS	
Number of Inputs	Twelve (12) switchable balanced mic or line level.
Connectors	3.81 mm terminal blocks.
Nominal Input Level	+4 dBu.
Maximum Input Level	+23 dBu.
Mic Pre-amp gain	0, 12, 24, 44 or 54 dB switchable with ± 24 dB trim.
Mic Pre-amp EIN	< -125dB with 150 ohm source impedance. 22.4 kHz BW.
CMRR	> 79 dB @ 1 kHz, unity gain.
Input impedance	8k Ohms balanced, 4k Ohms unbalanced.
Phantom power (per input)	+48 VDC, 10 mA maximum.
Dynamic range	> 113 dB, A-weighted.
THD+Noise	< -100 dB; 22.4 kHz BW, unweighted; 1 kHz @ +15 dBu with 0 dB gain. Course gain is set to +4dBu.
A to D Latency	0.28 mS.
ANALOG OUTPUTS	
Number of Outputs	Twelve (12) balanced line level.
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	300 Ohms balanced, 150 Ohms unbalanced.
Dynamic Range	> 117 dB, A-weighted.
THD+Noise	< -97 dB; 22.4 kHz BW, unweighted; 1 kHz, 0 dB gain +8dBu output.
D to A Latency	0.60 mS.
SYSTEM	
Sampling Rate	48 kHz.
Frequency Response (A/D/A)	20 Hz – 20 kHz, ± 0.5 dB.
Dynamic Range (A/D/A)	> 113 dB, A-weighted.
Channel Separation (A/D/A)	> 110 dB @ 1 kHz, +24 dBu.
THD+Noise	< 95 dB (22.4 kHz BW, un-weighted); 1 kHz @ +15 dBu with 0 dB gain.
Latency (A/D/A)	1.04 mS, inputs routed to outputs.
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.



1. **Power:** Switching power supply providing 24 VDC @ 1.9 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. **Dante:** 1000 Base-T Ethernet port provides 128 (64x64) channels of Dante network audio. Requires optional factory installed Dante card.
4. **Ethernet:** 10/100 Base-T Ethernet port for Symetrix Composer host control, third-party accessory controllers over IP, and power. Features auto-crossover sensing for direct device-to-device connections.
5. **Factory Reset Switch:** To be used under the supervision of technical support, it has the ability to reset the unit's network configuration and completely reset the unit to factory defaults.
6. **Logic Outputs:** Eight (8) logic outputs with four (4) 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.
7. **External Control Inputs:** Four (4) analog control inputs able to be used as 4 potentiometer inputs or as 8 switch inputs (+3.3 VDC reference voltage supplied).
8. **Analog Line Outputs:** Twelve (12) balanced analog line level audio outputs, with individually software-controllable +/- 24 dB of digital trim and mute.
9. **Analog Mic/Line Inputs:** Twelve (12) balanced analog audio inputs, with individually software-controllable pre-amp gain (reference levels of -50 dBu, -40 dBu, -20 dBu, -10 dBV and +4 dBu), +/- 24 dB of digital trim, phantom power, signal inversion and mute.

SYSTEM (continued)	
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.
Dante Cable	Standard 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	128 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 inch additional clearance for rear panel connections. Additional depth may be required depending upon your specific wiring and connections.
Electrical	24V 1.9A, 45W 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	9.4 lbs. (4.2 kg)	

Architect and Engineer Specifications: Prism 12x12.

The device shall provide twelve analog mic/line inputs that are adjustable from line to mic level with coarse gain, fine trim and phantom power plus twelve 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.

Network audio expansion shall be provided by an optional factory installed Dante™ card with a capacity of 128 (64x64) channels. The connector shall be 1000 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 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 eight contact closures or four potentiometer inputs along with eight logic outputs. The logic outputs may be used to drive LEDs directly or control external relays or switchers. 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 113 dB, A-weighted with a maximum input level of +23 dBu and maximum output level of +24 dBu.

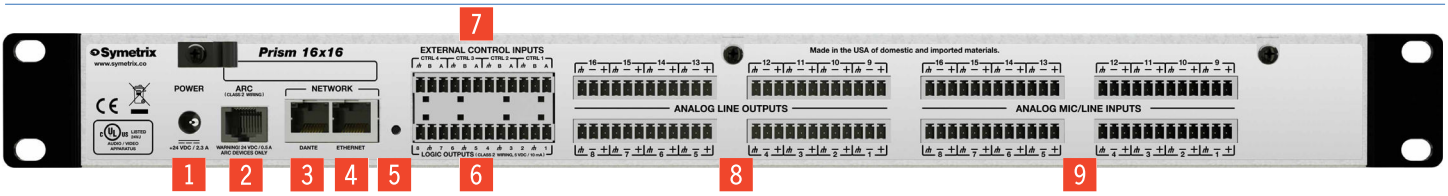
The device shall have a power plug that accepts power from Symetrix part number 12-0034, CUI power supply part number SDI65-24-U-P5. The device shall meet UL/CSA and CE safety requirements and comply with CE and FCC Part 15 emissions limits. The device shall be RoHS compliant. The chassis shall be constructed of cold rolled steel, and mounts into a standard 19" 1U EIA rack. The device shall be a Symetrix Prism 12x12.

The Prism family is the workhorse series in Symetrix's DSP lineup. With all the core features needed for the most common applications, it provides powerful processing with flexible control, and optional Dante networking. Prism is ideally suited for applications requiring powerful, extremely cost effective advanced signal processing coupled with a standardized means for future expansion.

- 16 analog in and out, and powerful Symetrix DSP reduce overall system costs.
- Optional 64x64 Ultra low latency Dante network audio protocol uses standard IT infrastructure.
- Industry leading analog and A/D/D/A performance, 48 volt phantom mic power.
- Configured using award winning Composer software. Controlled from W Series remotes, ARC wall panels, ARC-WEB and T Series touchscreens. Embedded web server enables remote metering and diagnostics.
- Front panel LCD provides configuration information, system status, and analog audio levels.

Electrical Specifications

ANALOG INPUTS	
Number of Inputs	Sixteen (16) switchable balanced mic or line level.
Connectors	3.81 mm terminal blocks.
Nominal Input Level	+4 dBu.
Maximum Input Level	+23 dBu.
Mic Pre-amp gain	0, 12, 24, 44 or 54 dB switchable with ± 24 dB trim.
Mic Pre-amp EIN	< -125dB with 150 ohm source impedance. 22.4 kHz BW.
CMRR	> 79 dB @ 1 kHz, unity gain.
Input impedance	8k Ohms balanced, 4k Ohms unbalanced.
Phantom power (per input)	+48 VDC, 10 mA maximum.
Dynamic range	> 113 dB, A-weighted.
THD+Noise	< -100 dB; 22.4 kHz BW, unweighted; 1 kHz @ +15 dBu with 0 dB gain. Course gain is set to +4dBu.
A to D Latency	0.28 mS.
ANALOG OUTPUTS	
Number of Outputs	Sixteen (16) balanced line level.
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	300 Ohms balanced, 150 Ohms unbalanced.
Dynamic Range	> 117 dB, A-weighted.
THD+Noise	< -97 dB; 22.4 kHz BW, unweighted; 1 kHz, 0 dB gain +8dBu output.
D to A Latency	0.60 mS.
SYSTEM	
Sampling Rate	48 kHz.
Frequency Response (A/D/A)	20 Hz – 20 kHz, ± 0.5 dB.
Dynamic Range (A/D/A)	> 113 dB, A-weighted.
Channel Separation (A/D/A)	> 110 dB @ 1 kHz, +24 dBu.
THD+Noise	< 95 dB (22.4 kHz BW, un-weighted); 1 kHz @ +15 dBu with 0 dB gain.
Latency (A/D/A)	1.04 mS, inputs routed to outputs.
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.



1. **Power:** Switching power supply providing 24 VDC @ 2.3 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. **Dante:** 1000 Base-T Ethernet port provides 128 (64x64) channels of Dante network audio. Requires optional factory installed Dante card.
4. **Ethernet:** 10/100 Base-T Ethernet port for Symetrix Composer host control, third-party accessory controllers over IP, and power. Features auto-crossover sensing for direct device-to-device connections.
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8. **Analog Line Outputs:** Sixteen (16) balanced analog line level audio outputs, with individually software-controllable +/- 24 dB of digital trim and mute.
9. **Analog Mic/Line Inputs:** Sixteen (16) balanced analog audio inputs, with individually software-controllable pre-amp gain (reference levels of -50 dBu, -40 dBu, -20 dBu, -10 dBV and +4 dBu), +/- 24 dB of digital trim, phantom power, signal inversion and mute.

SYSTEM (continued)	
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.
Dante Cable	Standard 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	128 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 inch additional clearance for rear panel connections. Additional depth may be required depending upon your specific wiring and connections.
Electrical	24V 2.3A, 56W 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	9.4 lbs. (4.2 kg)	

Architect and Engineer Specifications: Prism 16x16.

The device shall provide sixteen analog mic/line inputs that are adjustable from line to mic level with coarse gain, fine trim and phantom power plus sixteen 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.

Network audio expansion shall be provided by an optional factory installed Dante™ card with a capacity of 128 (64x64) channels. The connector shall be 1000 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 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 eight contact closures or four potentiometer inputs along with eight logic outputs. The logic outputs may be used to drive LEDs directly or control external relays or switchers. 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 113 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 mounts into a standard 19" 1U EIA rack. The device shall be a Symetrix Prism 16x16.