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LEGENDARY
PERFORMANCE™

QLX-D™ DIGITAL WIRELESS



QLX-D™ Digital Wireless delivers defined, streamlined performance with transparent 24-bit digital audio. Combining professional features with simplified setup and operation, QLX-D offers outstanding wireless functionality for demanding live sound events and installations.

Transparent 24-bit digital audio captures every performance detail

- Extended 20 Hz to 20 kHz frequency range*
- Over 120 dB of dynamic range eliminates transmitter gain adjustment

Incredibly Efficient Wireless

- Wide up to 72 MHz tuning bandwidth**
- Up to 22 compatible systems per 8 MHz TV channel

Powerful Networking Features

- Compatible with Shure Wireless Workbench® 6 control software
- Remote control from an iOS device via ShurePlus™ Channels mobile app

Rugged, secure systems built to match demanding environments

- AES-256 encryption for secure wireless transmission
- Professional-grade all metal construction

APPLICATIONS

- Musicians
- Presenters
- Houses of Worship
- Education
- Hotels and Conference Centers

PRODUCT HIGHLIGHTS

- 24-bit Digital Audio
- 100 meter Range
- Ethernet Networking
- Rechargeable Power Options

*Microphone dependent **Region dependent

System Specifications

RF Carrier Range	174 - 216 MHz, 470 - 865 MHz, 1492 - 1525 MHz, 1785 - 1805 MHz, *varies by region*
Working Range	100 m *Note: Actual range depends on RF signal absorption, reflection and interference.*
RF Tuning Step Size	25 kHz, *varies by region*
Image Rejection	>70 dB, typical
RF Sensitivity	–97 dBm at 10^{-5} BER
Latency	<2.9 ms
Audio Frequency Response	QLXD1: 20 Hz – 20 kHz (±1 dB) QLXD2: *Note: Dependent on microphone type*
Audio Dynamic Range *System Gain @ +10*	>120 dB, A-weighted, typical
Total Harmonic Distortion *–12 dBFS input, System Gain @ +10*	< 0.1%
System Audio Polarity	Positive pressure on microphone diaphragm produces positive voltage on pin 2 (with respect to pin 3 of XLR output) and the tip of the 6.35 mm (1/4-inch) output.
Operating Temperature Range	-18 °C to 50 °C *Note: Battery characteristics may limit this range.*
Storage Temperature Range	-29 °C to 74 °C *Note: Battery characteristics may limit this range.*

Frequency Range

Band	Range (MHz)	Transmitter Output (mW)
V51	174 – 216	1 or 10
G51	470 – 534	1 or 10
H51	534 – 598	1 or 10
K51	606 – 670	1 or 10
L52	632 – 694	1 or 10
P51	710 – 782	1 or 10
Q51	794 – 806	1 or 10
S50	823 – 832, 863 – 865	1 or 10
Z17	1492 – 1525	1 or 10
Z18	1785 – 1805	1 or 10

NOTE: This Radio equipment is intended for use in musical professional entertainment and similar applications. This Radio apparatus may be capable of operating on some frequencies not authorized in your region. Please contact your national authority to obtain information on authorized frequencies and RF power levels for wireless microphone products.

Rechargeable Power Management (sold separately)



SB900A Rechargeable Battery QLX-D transmitters are compatible with the SB900A lithium-ion rechargeable battery, which provides up to 10 hours of continuous use and precise tracking of remaining life and charge cycle details.

SBC200 Dual Docking Recharging Station This compact and portable unit charges batteries while in transmitters or out. Up to 4 SBC200's can be chained together to run off one power supply.

SBC800 Eight Battery Recharging Station This compact and portable unit charges up to 8 SB900A batteries to full capacity within 3 hours, with status LEDs to indicate power levels. SB900A batteries fit securely in the charger for easy, efficient storage and transport.

Battery Runtime (at 10 mW)

Battery Type	Runtime
SB900A	up to 10 hours
Alkaline	up to 9 hours

Furnished Accessories

All Systems
PS23 Power supply
1/2 Wave Receiver Antenna (2)
2' BNC Cable (2)
BNC Bulkhead Adapter (2)
Rackmout Hardware kit
2 × AA batteries (bodypack systems)

Handheld Systems
Microphone Clip (handheld systems)
Handheld Zipper Bag (bodypack systems)

Bodypack Systems
Bodypack Antenna
Bodypack Zipper Bag (bodypack systems)

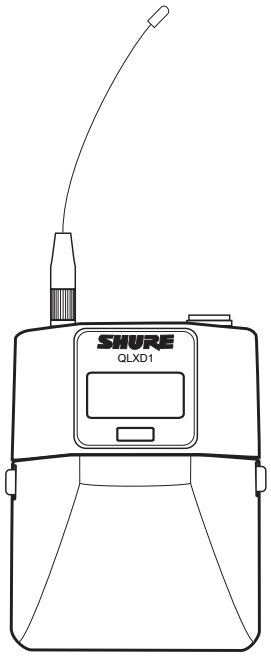
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QLXD1 Wireless Bodypack Transmitter

Overview

Featuring transparent 24 bit digital audio quality and incredibly efficient RF spectrum usage, the QLXD1 bodypack transmitter is ideal for wireless vocals and instruments in presentation spaces, music venues, and houses of worship. Easy to use, the QLXD1 quickly syncs with a wireless receiver over IR at the push of a button and maintains clear, uninterrupted signal over its entire 100 m (330 ft.) range. All metal construction ensures durability, and a wide selection of compatible microphone choices offer legendary Shure sound signatures..

- 20 Hz to 20 kHz frequency range with flat response (actual response is microphone dependent)
- Over 120 dB of dynamic range - no transmitter gain adjustments needed
- AES 256-bit encryption for secure transmission
- Up to 9 hours continuous use with 2 x AA alkaline batteries
- Optional Shure SB900A lithium ion rechargeable battery provides up to 10 hours of continuous use and reports remaining runtime in hours and minutes
- External charging contacts for docked charging
- Backlit LCD with easy to navigate menu and controls
- Selectable display mode showing group/channel, frequency, or battery runtime
- 100 meter line-of-sight operating range
- 4-Pin male mini connector (TA4M)
- Rugged metal construction
- Detachable ¼ wave antenna
- Frequency and power lockout



QLXD1 Wireless Bodypack Transmitter

Product Specifications

Mic Offset Range	0 to 21 dB (in 3 dB steps)
Battery Type	Shure SB900A Rechargeable Li-Ion or AA batteries 1.5 V
Battery Runtime *@ 10 mW*	Shure SB900A: up to 10 hours Alkaline: up to 9 hours
Dimensions	86 × 65 × 23 mm, *H × W × D*
Weight	138 g, *without batteries*
Housing	Cast aluminum

Audio Input	
Connector	4-pin male mini connector (TA4M)
Configuration	Unbalanced
Impedance	1 MΩ
Maximum Input Level *1 kHz at 1% THD*	8.5 dBV (7.5 Vpp)
Preamplifier Equivalent Input Noise (EIN) *System Gain Setting ≥ +20*	–120 dBV, A-weighted, typical

RF Output	
Connector	SMA
Antenna Type	1/4 wave
Impedance	50 Ω
Occupied Bandwidth	< 200 kHz
Modulation Type	Shure proprietary digital
Power	1 mW or 10 mW *See Frequency Range and ouput power table, varies by region*

Microphone Options (see catalog for more)

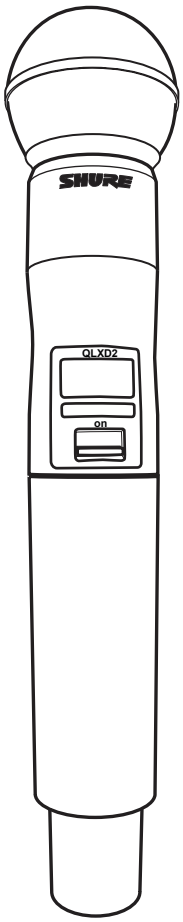
SM35	SM35 Condenser Headset Microphone, Cardioid
MX150/O	MX150 Condenser Lavalier Microphone, Omnidirectional
MX150/C	MX150 Condenser Lavalier Microphone, Cardioid
WL183	WL183 Condenser Lavalier Microphone, Omnidirectional
WL184	WL184 Condenser Lavalier Microphone, Supercardioid
WL185	WL185 Condenser Lavalier Microphone, Cardioid
WL93	WL93 Condenser Lavalier Microphone, Omnidirectional
WB98H	WB98H/C Condenser Instrument Clip-on Mic, Cardioid
MX153B	MX153 Condenser Headset Microphone, Omnidirectional, Black
MX153T	MX153 Condenser Headset Microphone, Omnidirectional, Tan

QLXD2 Wireless Handheld Transmitter

Overview

Featuring transparent 24-bit digital audio quality and incredibly efficient RF spectrum usage, the QLXD2 handheld transmitter is ideal for wireless vocals in presentation spaces, music venues, and houses of worship. Easy to use, the QLXD2 quickly syncs with a wireless receiver over IR at the push of a button and maintains clear, uninterrupted signal over its entire 100 m range. All metal construction ensures durability, and a wide selection of compatible microphone choices offer legendary Shure sound signatures.

- 30 Hz to 20 kHz frequency range with flat response (actual response is microphone dependent)
- Interchangeable Shure microphone capsules, including the legendary SM58®
- AES 256-bit encryption for secure transmission
- Over 120 dB of dynamic range – no transmitter gain adjustment needed
- 1, 10 mW selectable RF output power
- Up to 9 hours continuous use with 2 x AA alkaline batteries
- Optional Shure SB900A lithium ion rechargeable battery provides up to 10 hours of continuous use and reports remaining runtime in hours and minutes
- External charging contacts for docked charging
- Backlit LCD with easy to navigate menu and controls
- Selectable display mode showing group/channel, frequency, or battery runtime
- 100 meter line-of-sight operating range
- Rugged metal construction
- Frequency and power lockout



QLXD2 Wireless Handheld Transmitter

Product Specifications

Mic Offset Range	0 to 21 dB (in 3 dB steps)
Battery Type	Shure SB900A Rechargeable Li-Ion or AA batteries 1.5 V
Battery Runtime *@ 10 mW*	Shure SB900A: up to 10 hours Alkaline: up to 9 hours *See Battery Runtime Chart*
Dimensions	256 mm × 51 mm (10.1 in. × 2.0 in.) L × Dia.
Weight	347 g (12.2 oz.), *without batteries*
Housing	Machined aluminum

Audio Input	
Configuration	Unbalanced
Maximum Input Level *1 kHz at 1% THD*	145 dB SPL (SM58), typical *Note: Dependent on microphone type*

RF Output	
Antenna Type	Integrated Single Band Helical
Occupied Bandwidth	< 200 kHz
Modulation Type	Shure proprietary digital
Power	1 mW or 10 mW *See Frequency Range and ouput power table, varies by region*

Microphone Options

QLXD2/SM58®	Handheld Transmitter with SM58 Cartridge
QLXD2/SM86	Handheld Transmitter with SM86 Cartridge
QLXD2/SM87A	Handheld Transmitter with SM87A Cartridge
QLXD2/BETA® 58A	Handheld Transmitter with Beta 58A Cartridge
QLXD2/BETA® 87A	Handheld Transmitter with Beta 87A Cartridge
QLXD2/BETA® 87C	Handheld Transmitter with Beta 87C Cartridge
QLXD2/KSM9	Handheld Transmitter with KSM9 Cartridge

QLXD4 Digital Wireless Receiver

Overview

Featuring transparent 24 bit digital audio quality and incredibly efficient RF spectrum usage, the QLXD4 is a half-rack digital wireless receiver for use with QLX-D™ Digital Wireless Systems. Ideal for presentation spaces, music venues, and houses of worship, the QLXD4 combines professional features with streamlined setup and operation. Automatic scanning quickly finds open frequencies and one-touch sync quickly deploys them to transmitters. Ethernet networking enables networked channel scanning across multiple receivers and Wireless Workbench software integration for remote control of receiver settings from a PC or Mac.

- Up to 72 MHz tuning bandwidth (region dependent)
- Up to 168 compatible channels per frequency band (region dependent)
- Digital predictive switching diversity ensures solid RF connection
- Automatic channel scan quickly finds the cleanest frequency
- IR sync deploys selected frequency to transmitter
- Ethernet networking provides streamlined setup across multiple receivers
- Networked channel scan configures open frequencies for all connected receivers
- AES 256-bit encryption for secure wireless transmission
- Up to 60 dB of adjustable audio gain
- High-contrast LCD menu and controls with lockout feature
- Audio and RF LED meters with peak indicator
- Detachable ½ wave antennas
- Mic / line switchable XLR output
- ¼" instrument output
- Durable steel construction with brushed finish
- Professional-grade rack hardware included
- Compatible with Shure Wireless Workbench® 6 control software
- Remote monitoring and control from iOS devices via ShurePlus™ Channels app

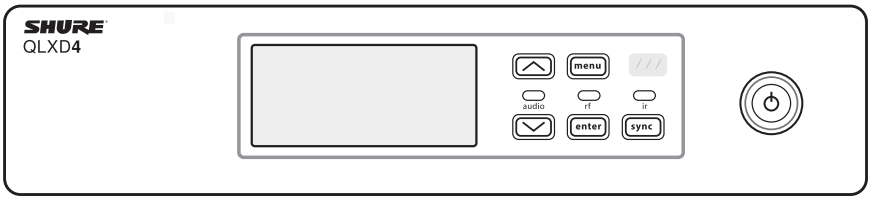
Product Specifications

Dimensions	41 × 197 × 151 mm, *H × W × D*
Weight	777 g, *without antennas*
Housing	Steel
Power requirements	12 V DC @ 0.4 A, supplied by external power supply (tip positive)

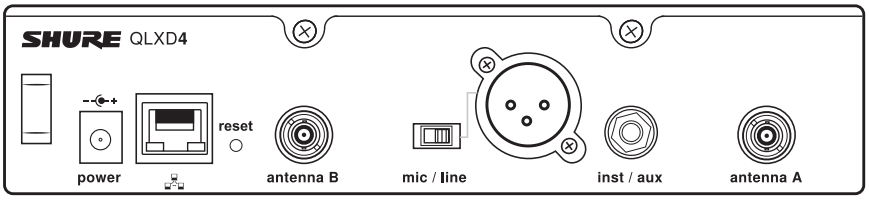
RF Input	
Spurious Rejection	> 80 dB, typical
Connector Type	BNC
Impedance	50 Ω

Audio Output	
Gain Adjustment Range	-18 to +42 dB in 1 dB steps
Configuration	1/4" (6.35 mm): Impedance balanced (Tip = audio, Ring = no audio, Sleeve = ground) XLR: Balanced (1 = ground, 2 = audio +, 3 = audio –)
Impedance	1/4" (6.35 mm): 100 Ω (50 Ω Unbalanced) XLR: 100 Ω
Full Scale Output	1/4" (6.35 mm): +12 dBV XLR: LINE setting = +18 dBV, MIC setting = –12 dBV
Mic/Line Switch	30 dB pad
Phantom Power Protection	1/4" (6.35 mm): Yes XLR: Yes

Networking	
Network Interface	Single Port Ethernet 10/100 Mbps
Network Addressing Capability	DHCP or Manual IP address
Maximum Ethernet Cable Length	100 m



QLXD4 Front Panel



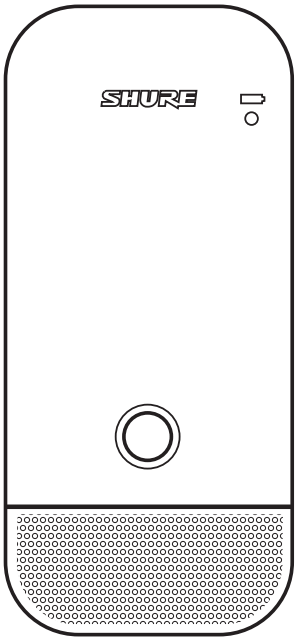
QLXD4 Back Panel

ULXD6 Wireless Boundary Transmitter

Overview

The ULXD6 wireless boundary transmitter combined with ULX-D or QLX-D digital receiver deliver uncompromising digital audio clarity and solid RF performance in a form factor that fits perfectly in business settings.

- Available in UHF TV band
- AES 256-bit encryption for secure transmission
- Low-profile boundary form factor for meetings and events where quick setup and teardown is important
- Very short latency (<3 msec)
- Long transmission range (up to 300 feet / 100 meters)
- SB900A rechargeable battery pack provides up to 9 hours of battery life
- Standard AA alkaline batteries are additional power options
- SBC450 (4-bay) and SBC850 (8-bay) Networked Charging Stations for docked charging of 4 or 8 ULXD6 transmitters
- Configurable Mute button (Toggle, Push-to-Mute, Push-to-Talk, disabled) and Mute LED behavior
- Adjustable RF power, high-pass filter, and power lock settings



ULXD6 Wireless Boundary Transmitter

Product Specifications

Gain Offset Range	0 to 21 dB (in 3 dB steps)
Battery Type	Shure SB900A Rechargeable Li-Ion or AA/LR6 batteries (1.5 V)
Battery Runtime @ 10 mW	Shure SB900A: up to 9 hours 20 minutes Alkaline: up to 8 hours 40 minutes
Dimensions	114 mm x 62 mm x 34 mm (4.48 in. x 2.43 in. x 1.35 in.) H x W x D
Weight	241 g with AA batteries
Housing	Molded Plastic

RF Output

Antenna Type	Integrated PIFA
Impedance	50 Ω
Occupied Bandwidth	< 200 kHz
Modulation Type	Shure Proprietary Digital
Power	1 mW, 10 mW, 20 mW (See Frequency Range and output power table, varies by region)

Available Models

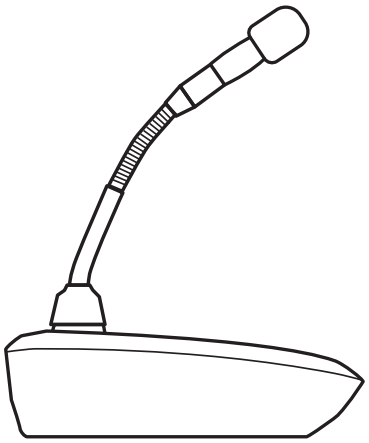
ULXD6/O	Wireless Boundary Transmitter, Omnidirectional
ULXD6/C	Wireless Boundary Transmitter, Cardioid

ULXD8 Wireless Gooseneck Base Transmitter

Overview

The ULXD8 Wireless Gooseneck Base Transmitter combined with ULX-D or QLX-D digital receivers deliver uncompromising digital audio clarity and solid RF performance in a form factor that fits perfectly in business settings.

- Available in UHF TV band
- AES 256-bit encryption for secure transmission
- Convenient gooseneck form factor for meetings and events where quick setup and teardown is important
- Designed for use with Shure Microflex MX405, MX410 and MX415 gooseneck microphones
- Very short latency (<3 msec)
- Long transmission range (up to 300 feet / 100 meters)
- Rechargeable SB900A battery pack provides up to 9 hours of battery life
- Standard AA alkaline batteries are additional power options
- SBC450 (4-bay) and SBC850 (8-bay) Networked Charging Stations for docked charging of 4 or 8 ULXD8 transmitters
- Configurable Mute button (Toggle, Push-to-Mute, Push-to-Talk, disabled) and Mute LED behavior
- Adjustable RF power, high-pass filter, and power lock settings



ULXD8 Wireless Gooseneck Base Transmitter

Product Specifications

Gain Offset Range	0 to 21 dB (in 3 dB steps)
Battery Type	Shure SB900A Rechargeable Li-Ion or AA/LR6 batteries (1,5 V)
Battery Runtime @ 10 mW	Shure SB900A: up to 9 hours Alkaline: up to 8 hours 20 minutes
Dimensions	137 mm x 78 mm x 41 mm (5.39 in. x 3.08 in. x 1.60 in.) H x W x D
Weight	293 g with AA batteries
Housing	Molded Plastic

RF Output

Antenna Type	Integrated PIFA
Impedance	50 Ω
Occupied Bandwidth	<200 kHz
Modulation Type	Shure Proprietary Digital
Power	1 mW, 10 mW, 20 mW (See Frequency Range and output power table, varies by region)

Microphone Options

MX405LP/C	Cardioid, 5" (12.7 cm), bi-color status indicator, less preamp
MX405LP/S	Supercardioid, 5" (12.7 cm), bi-color status indicator, less preamp
MX405RLP/N	No microphone cartridge, 5" (12.7 cm), light ring, less preamp
MX410LP/C	Cardioid, 10" (25.4 cm), bi-color status indicator, less preamp
MX410LP/S	Supercardioid, 10" (25.4 cm), bi-color status indicator, less preamp
MX410RLP/N	No microphone cartridge, 10" (25.4 cm), light ring, less preamp
MX410LPDF/C	Cardioid, 10" (25.4 cm), bi-color status indicator, less preamp, dualflex
MX410LPDF/S	Supercardioid, 10" (25.4 cm), bi-color status indicator, less preamp, dualflex
MX410RLPDF/C	Cardioid, 10" (25.4 cm), light ring, less preamp, dualflex
MX410RLPDF/S	Supercardioid, 10" (25.4 cm), light ring, less preamp, dualflex
MX410RLPDF/N	No microphone cartridge, 10" (25.4 cm), light ring, less preamp, dualflex
MX415LP/C	Cardioid, 15" (38.1 cm), bi-color status indicator, less preamp
MX415LP/S	Supercardioid, 15" (38.1 cm), bi-color status indicator, less preamp
MX415RLP/N	No microphone cartridge, 15" (38.1 cm), light ring, less preamp
MX415LPDF/C	Cardioid, 15" (38.1 cm), bi-color status indicator, less preamp, dualflex
MX415LPDF/S	Supercardioid, 15" (38.1 cm), bi-color status indicator, less preamp, dualflex
MX415RLPDF/C	Cardioid, 15" (38.1 cm), light ring, less preamp, dualflex
MX415RLPDF/S	Supercardioid, 15" (38.1 cm), light ring, less preamp, dualflex
MX415RLPDF/N	No microphone cartridge, 15" (38.1 cm), light ring, less preamp, dualflex

SBC450 & SBC850 Networked Charging Stations

Overview

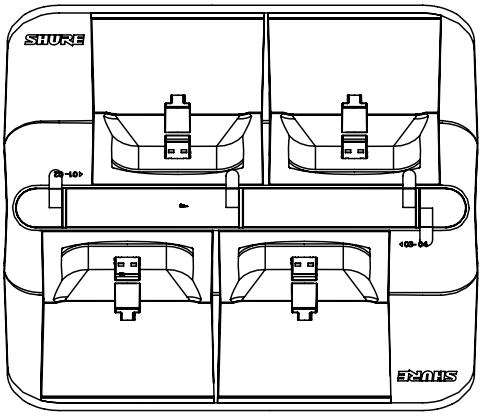
4-bay and 8-bay Networked Charging Stations charges up to 4 or 8 ULXD6 or ULXD8 transmitters that are equipped with the SB900A rechargeable battery. The transmitters simply slide into the charger; no need to remove the SB900A battery. When the Chargers are connected to a network, charging status of transmitters can be viewed remotely and settings or firmware can be updated while transmitters are in the charger, using Shure Wireless Workbench, SystemOn software or third-party room control systems.

Product Specifications

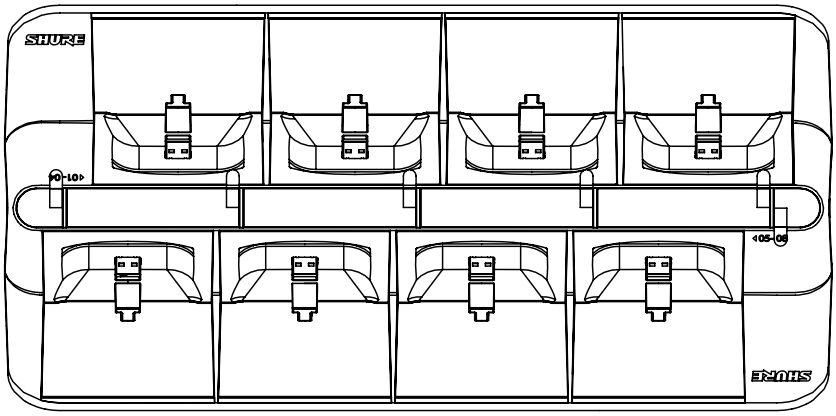
Charge Time	15 minutes = 1 hour runtime; 1 hour = 50% charged; 3 hours = 100% charged
Network Interface	10/100 Mbps Ethernet
Power Requirement	15 V DC @ 4.0 A maximum, supplied by external power supply (tip positive)
Housing	Molded Plastic, Cast Zinc Alloy
Dimensions	SBC450 82 mm x 224 mm x 192 mm (3.23 in. x 8.83 in. x 7.56 in.), H x W x D SBC850 82 mm x 392 mm x 192 mm (3.23 in. x 15.43 in. x 7.56 in.), H x W x D
Weight	SBC450 1.59 kg (3.51 lbs) SBC850 2.67 kg (5.89 lbs)
Operating Temperature Range	0°C (32°F) to 45°C (113°F)
Storage Temperature Range	-29°C (-20°F) to 74°C (165°F)

Available Models

SBC450	Networked Charging Station, 4 Ports
SBC850	Networked Charging Station, 8 Ports



SBC450 Networked Charging Stations



SBC850 Networked Charging Stations

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