

AXIENT® DIGITAL PSM

ADVANCED DIGITAL IN-EAR MONITOR SYSTEM

Groundbreaking performance features in the ADTQ quad transmitter and ADTD dual transmitter – including scalable channel count, Multichannel Wideband RF, and Spatial Diversity Transmission – ensures faultless performance in the most challenging RF environments. ShowLink® remote control, networkable monitoring with Wireless Workbench®, analog and digital (AES3, AES67, Dante) inputs, and internal antenna combining, bring a new level of management and flexibility to your entire in-ear monitor workflow. Superior stereo separation and crisp, clear digital audio brings unprecedented clarity and simplicity to global artists everywhere.

Welcome to a new era of live performance with Axient Digital PSM.

AXIENT DIGITAL PSM

FEATURES

- Powered by Shure WMAS innovation*, Axient Digital PSM delivers flexible, pioneering spectral efficiency and access to scalable channel count**
- Spatial Diversity transmission defends against multipath interference
- True Digital Diversity reception combines two discrete RF signals, dramatically improving signal reception and range
- Four different transmission modes to choose from**
- Wide tuning range to cover more cities, festivals, and events on tour
- ShowLink® technology delivers real-time remote control of all ADXR bodypack wireless receiver parameters from the monitor mix position and elsewhere

** The availability of WMAS features is subject to regional regulations and may vary accordingly. Contact your Shure local representative for specific details in your area.*
*** Available in planned firmware update, date TBD.*

SYSTEM SPECIFICATIONS (SUBJECT TO CHANGE)

RF

RF Carrier Frequency Range	470 to 1260 MHz *Varies by region (see frequency tables)*
Working Range	100 m (330 ft) *Note: Actual range depends on RF signal absorption, reflection and interference.*
RF Tuning Step Size	25 kHz *typical*

AUDIO

Latency (Analog Output)	Digital: ⩽2.8 ms Analog FM: 1.29 ms
Audio Frequency Response	20 Hz – 15 kHz (±1 dB) *Note: Dependent on microphone type*
Signal-to-Noise Ratio	110 dB *typical*
Total Harmonic Distortion	Digital: < 0.01% (typical)Ref. at ±18 dBv, 1 kHz, digital gain @ 0 dB Ref. at ±18 dBv, 1 kHz, digital gain @ 0 dB Analog FM: < 0.5% (typical)Ref. at ±34 kHz deviation @1 kHz Ref. at ±34 kHz deviation @1 kHz
Sensitivity	Digital: -93 dBm (typical) at 10e-5 BER
Analog FM	-94 dBm (typical) at 27 dB SINAD
MPX Pilot Tone (Analog FM)	19 kHz
System Audio Polarity	Not inverted



Axient Digital PSM
Family

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ADTQ (QUAD) / ADTD (DUAL)
DIGITAL WIRELESS TRANSMITTERS

SPECIFICATIONS
(SUBJECT TO CHANGE)

Dimensions (H × W × D)	1.7 × 19.0 × 15.2 in (44 × 432 × 385mm)
Weight	ADTQ: 10.4 lb (4.7 kg) ADTQDC: 11.1 lb (5.0 kg) ADTD: 10.4 lb (4.7 kg) ADTDDC: 10.8 lb (4.9 kg)
Housing	Steel; extruded aluminum
Power Requirements	AC Input: 100 to 240 V AC, 50-60 Hz, 1.2 A max (6.2 A max outlet loaded) AC Output: 100-240 V AC, 5A max, 50/60 Hz UNSW DC Input: 12-48 V DC, 10.1 A max
Network Interface	10/100 Mbps, 1 Gbps, Dante Digital Audio
Fuse	T5A
Operating Temperature Range	-18°C (0°F) to 50°C (122°F)
Storage Temperature Range	-29°C (-20°F) to 74°C (165°F)

AUDIO INPUT

Polarity	Positive
Nominal Input Level	Switchable +4 dB u, -10 dBV
Maximum Input Level	+4 dBV – 28 dBV -10 dBV – 16 dBV
Connector Pins	Analog XLR: 1=ground, 2=hot, 3=cold 6.35mm (1/4" TRS: Tip=hot, Ring=cold, Sleeve=ground AES3 XLR: 1=ground, 2=hot, 3=cold dig audio
Impedance	32.59 K Ω
Gain Adjustment Range	-16 to +20 dB (analog and digital) +12 dB (Aux Mode for analog inputs)
Phantom Power Protection	Analog: 50 V DC AES3: 100 V DC
AES3	48, 96, 192 KHz sample rates
Dante Digital Audio	Min. Latency: 250 µs Supported Sample Rates: 48K, 96K Bit Depth: 24bit

AUDIO OUTPUT (HEADPHONE)

Connector Type	3.5 mm (1/4") TRS
Minimum Load Impedance	2 Ω
Output Impedance	<1 Ω
Audio Output Power	100 mW @ 32 Ω
Dynamic Range	110dB, A-weighted

RF OUTPUT

Connector Type	BNC
Impedance	50 Ω

OVERVIEW

The ADTQ / ADTD Digital Wireless Transmitters reimagine in-ear monitoring wireless transmission. Groundbreaking performance features – including scalable channel count*, Multichannel Wideband RF, and Spatial Diversity Transmission – ensures faultless performance in the most challenging RF environments. ShowLink® remote control, networkable monitoring with Wireless Workbench®, analog and digital (AES3, AES67, Dante) inputs, and internal antenna combining, bring a new level of management and flexibility to your entire in-ear monitor workflow.

FEATURES

- Powered by Shure WMAS innovation**, ADTQ/ADTD deliver flexible, pioneering spectral efficiency and access to scalable channel count*
- Patented Spatial Diversity transmission defends against multipath interference
- Four different transmission modes**
- Wide tuning range
- Real-time remote control of all ADXR bodypack wireless receiver parameters from the monitor mix position and elsewhere with exclusive ShowLink
- Encrypted RF
- Five-segment Channel Quality meter
- Large, 6.6-inch front panel color display
- Networked control with Shure Wireless Workbench
- Internal antenna combining capabilities
- 8 (ADTQ) or 4 (ADTD) x switchable combo connectors for analog or AES3 digital options
- 4 x Ethernet ports for network control and Dante/AES67 digital input options
- 4 (ADTQ) or 2 (ADTD) coaxial RF antenna output connectors
- 1 x 3.5mm front-panel headphone connector with adjustable volume
- Locking AC power connection that cascades to additional components
- DC module version available to support redundant power

** Available in planned firmware update, date TBD*
***The availability of WMAS features is subject to regional regulations and may vary*

AVAILABLE TRANSMITTER FREQUENCY BANDS

BAND	Frequency (MHz)
G53	*470 to 510*
G54	479 to 565
G55†	470 to 636*
G56/G56J/G56K	*470 to 636*
G57	*470 to 608*
G63	*487 to 636*
H54	*520 to 636*
K54	*606 to 663***
K55	*606 to 694*
K56	*606 to 714*
K58	*622 to 698*
K60	*614 to 703*
L60	*630 to 698*
P55	*694 to 703, 748 to 758, 803 to 806*
X51	*925 to 937.5*
X55	*941 to 960*
X57	*961 to 1154*
Z16††	*1240 to 1260*

** With a gap between 608 to 614 MHz.*
*** With a gap between 608 to 614 MHz and a gap between 616 to 653 MHz.*

† Operation mode varies according to region. In Brazil, High Density mode is used. The maximum power level for Peru is 10mW.
†† Z16 for Japan only.



ADTQ
Quad Transmitter



ADTD
DualTransmitter

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ADXR DIGITAL WIRELESS BODYPACK RECEIVER

SPECIFICATIONS

(SUBJECT TO CHANGE)

Dimensions (H × W × D)	4.0" x 2.7" x .85" (102 mm x 68 mm x 21.5 mm)
Weight	4.4 oz (124 g) *Without battery*
Housing	Aluminum 6061-T6, PC/ABS
Battery Type	Shure SB910 Rechargeable LiIon or 3x AAA batteries via SB913A battery sled
Operating Temperature Range	-18°C (0°F) to 50°C (122°F) *Note: Battery characteristics may limit this range.*
Storage Temperature Range	-29°C (-20°F) to 74°C (165°F) ***Note: Battery characteristics may limit this range.***
Battery Runtime	Up to 5.25 hours with True Digital Diversity

AUDIO OUTPUT (HEADPHONE)

Connector Type	Locking 3.5 mm (1/8") TRS
Minimum Load Impedance	2 Ω
Output Impedance	<1 Ω
Audio Output Power	100 mW @ 32 Ω
Dynamic Range	110 dB, A-weighted
L/R Stereo Separation	300 Ω: >75 dB 600 Ω: >90 dB 1000 Ω: >100 dB

RF INPUT

Antenna Type	¼ wave *Note: Varies by hardware variant*
Impedance	50 Ω
Connector Type	SMA
Spurious Rejection	>80 dB (typical)
Image Rejection	>80 dB
Squelch Threshold	22 dB SINAD (±3 dB) in Analog FM mode



ADXR
Bodypack Receiver

OVERVIEW

Axient Digital PSM wireless bodypack receiver for onstage in-ear monitoring and broadcast IFB. Tour-grade features include True Digital Diversity that combines two discrete RF signals for greater RF quality and range, and ShowLink® that provides engineers with real-time remote control of all ADXR parameters.

FEATURES

- ShowLink technology delivers real-time remote control of all ADXR bodypack wireless receiver parameters
- True Digital Diversity reception combines two discrete RF signals, dramatically improving signal reception and range
- Wide tuning range
- CueMode supports monitoring of different stage mixes and storing of up to 64 separate channels on one bodypack
- Threaded headphone connector
- Includes 2 x SB910 lithium-ion rechargeable batteries

AVAILABLE TRANSMITTER FREQUENCY BANDS

ADXR	BAND	Frequency (MHz)
A (470 to 636 MHz)	G53	470 to 510
	G54	479 to 565
	G55	470 to 636*
	G56/G56J/G56K	470 to 636
	G57	470 to 608
	G63	487 to 636
	H54	520 to 636
B (606 to 810 MHz)	K54	606 to 663**
	K55	606 to 694
	K56	606 to 714
	K58	622 to 698
	K60	614 to 703
	L60	630 to 698
P55 (694 to 806 MHz)	P55	694 to 703, 748 to 758, 803 to 806
C (925 to 960 MHz)	X51	925 to 937.5
	X55	941 to 960
X57 (961 to 1154 MHz)	*X57*	*961 to 1154*
Z16† (1240 to 1260 MHz)	*Z16*	*1240 to 1260*

** With a gap between 608 to 614 MHz.*
*** With a gap between 608 to 614 MHz and a gap between 616 to 653 MHz.*

† Z16 for Japan only.

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AD8C 8-PORT ANTENNA COMBINER

OVERVIEW

AD8C combines up to eight RF outputs into one output to feed a single transmit antenna. AD8C can also combine the RF of up to four Axient Digital PSM transmitters to feed two transmit antennas to support Spatial Diversity. The Shure AD8C 8-Port Combiner enables Automatic Transmitter Compensation with ADTQ or ADTD Axient Digital PSM transmitters, which helps defend against passive signal loss.

FEATURES

- 8-port passive antenna combiner for Axient Digital PSM
- Selectable 8:1 or 2x 4:1 modes
  - 8:1 mode combines up to eight RF inputs to a single RF output
  - 2x 4:1 mode divides the combiner into two sections, each section combines up to 4 RF inputs to a single RF output
- Automatic Transmitter Compensation with ADTQ or ADTD Axient Digital PSM transmitters
- Ethernet switch for remote control and firmware updates
- DC module version available to support redundant power

SPECIFICATIONS

(SUBJECT TO CHANGE)

Dimensions (H × W × D)	1.7" x 19.0" x 15.2" (44 mm x 482 mm x 385 mm)
Weight	*AD8C: 8.3 lb (3.8 kg)* *AD8CDC: 8.7 lb (3.9 kg)*
Housing	Low Carbon Steel (Chassis); Aluminum (Front panel & cover)
Power Requirements	AC Input: 100 to 240 V AC, 50-60 Hz, .68 A max (5.68 A max outlet loaded) AC Output: 100-240 V AC, 5A max, 50/60 Hz UNSW DC Input: 10.9-14.8 V DC, 3.3 A max
Network Interface	10/100 Mbps, 1 Gbps
Fuse	T5A
Operating Temperature Range	--18°C (0°F) to 63°C (145.4°F)
Storage Temperature Range	-29°C (-20°F) to 74°C (165°F)

RF

Frequency Range	AD8C: 470 – 960 MHz AD8CX: 960 – 1260 MHz
Impedance	50 Ω
Connector Type	Input: 8 x BNC Output: 3 x BNC
RF Configuration	Passive (Input/Output)
Insertion Loss	4:1: -8 dB (typical) 8:1: -12 dB (typical)
RF Port to Port Isolation	> 20 dB (25 dB typical)
RF Input Peak	36 dBm (4W)
RF Input Average	27 dBm (0.5W)



AD8C
8-Port Combiner

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AD221 2-WAY PASSIVE COMBINER/SPLITTER

OVERVIEW

Shure AD221 2-Way Combiner/Splitter streamlines your use of multiple Axient Digital PSM systems at any venue. AD221 combines two incoming signals into one signal or splits incoming signal into two outgoing signals. Shure AD221 2-Way Combiner/Splitter enables Automatic Transmitter Compensation with ADTQ or ADTD Axient Digital PSM transmitters, which helps defend against passive signal loss.

FEATURES

- Passive 2-way combiner/splitter for Axient Digital PSM
- Splits an incoming signal into two outgoing signals or combines two incoming signals into one signal
- Automatic Transmitter Compensation with ADTQ or ADTD Axient Digital PSM transmitters
- Back plate designed for convenient mounting

SPECIFICATIONS

(SUBJECT TO CHANGE)

Dimensions (H × W × D)	1.3" x 4.0" x 3.6" (34 mm x 101.4 mm x 92 mm)
Weight	*.55 lb (251 g)*
Housing	Cast Aluminum
Operating Temperature Range	--18°C (0°F) to 63°C (145.4°F)
Storage Temperature Range	-29°C (-20°F) to 74°C (165°F)

RF

Frequency Range	AD8C: 470 – 960 MHz AD8CX: 960 – 1260 MHz
Impedance	50 Ω
Connector Type	3 x BNC
RF Configuration	Passive (Input/Output)
Insertion Loss	4 dB (typical)
RF Port to Port Isolation	> 20 dB (25 dB typical)
RF Input Peak	36 dBm (4W)
RF Input Average	27 dBm (0.5W)



AD221
2-Way Combiner/Splitter

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SBC441 4-BAY NETWORK CHARGER

OVERVIEW

The SBC441 4-Bay Docking Charger supports up to four Axient® Digital ADXR Wireless Bodypack Receivers or Shure SB910 rechargeable batteries. The SBC441 includes dual network ports for monitoring and network pass-through. Compatible with both Shure SB910 rechargeable batteries and Axient Digital PSM ADXR bodypack receivers, the SBC441 desktop networked charger is a great addition to your Shure Axient Digital PSM wireless in-ear system.

FEATURES

- 4-bay docking charger for use with Axient Digital PSM
- Compatible with Shure SB910 rechargeable batteries and Axient Digital PSM ADXR bodypack receivers
- Dual network ports for monitoring and network pass-through
- A single power supply supports two chargers

SPECIFICATIONS

(SUBJECT TO CHANGE)

Dimensions (H × W × D)	2.4" x 3.1" x 8.5" (60.3 mm x 78.8 mm x 216.5 mm)
Weight	*1.17 lb (531 g)*
Housing	Molded PC/ABS plastic, cast aluminum
Operating Temperature Range	-18°C (0°F) to 50°C (122°F) *Note: Battery characteristics may limit this range*
Storage Temperature Range	-29°C (-20°F) to 74°C (165°F) *Note: Battery characteristics may limit this range*
Compatible Devices	Batteries: Up to 4 x SB910 Receivers: Up to 4 x ADXR
Network Interface	10/100 Mbps Ethernet (2x)
Network Address Capability	DHCP or manual IP address
Charge Time	3 hours
Charge Current	1.25 A (maximum)
External Power Supply	PS60
Power Requirement (Input Rating)	15 V, 4.0 A (maximum)



SBC441
4-Bay Charger

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