

Digital Wireless Microphones

By George Petersen

Just as consoles, system control and signal processing have made the switch to digital, wireless mics are also making the transition. And wireless audio is ideally suited for the digital domain, whether for the precision of packing more frequencies into smaller bandwidths, applying security encryption or simply taking advantage of transmitting an unaltered digital stream. We looked at some recent offerings and found systems for nearly any application or budget. At the same time, don't count out analog systems, which — in many situations — remain a viable alternative. Note that pricing is omitted here, as systems can vary widely depending on transmitter/receiver options and mic/capsule choices and accessories, such as external antennas. Manufacturer URLs are provided if you need more information.

Alteros GTX Series Ultra-Wideband



Frequency Bands: 6.5 GHz
Max Channels: 24 channels simultaneous
Transmitters: GTX24 bodypack
Batteries/life: (2) AA; 6 hours (alkaline)
Latency: < 3 ms
Resolution: 24-bit/48 kHz
RF Output: 2 nW

Audio Outs: MAD1, fiber, Dante and AES67 digital
Extras: 7" touch screen on GTX3224 receiver for parameter access and performance monitoring; Ethernet port for remote monitor/control

alteros.tech

Avlex MIPRO ACT-848

Frequency Bands: 480 to 960 MHz, country dependent
Max Channels: Up to 48 simultaneous
Transmitters: ACT-80HC condenser handheld; ACT-80TC bodypack; TA-80 plug-on
Batteries/Life: Rechargeable lithium; 13 hours
Latency: 2.7 mSec
Resolution: 24-bit, 44.1 kHz
RF Output: 10 mW or 50 mW
Audio Outs: (2) XLR and 1/4" analog; S/PDIF digital; Dante optional
Extras: One, two or four mic channels in 1U chassis; SmartEQ with capsule emulation; color vacuum fluorescent display.



avlex.com

CAD Audio CADLive 4000 Series



Frequency Bands: 902 to 928 MHz
Max Channels: 17 systems simultaneously
Transmitters: CADLive D90 supercardioid handheld; beltpack with Equitek E19 earworn and E29 lavalier mics
Batteries/life: AA; 15 hours max

Latency: N/A
Resolution: 24-bit, 44.1 kHz
RF Output: 10, 30, 50 mW
Audio Outs: XLR and 1/4" analog
Extras: Single channel chassis in half-rack form; case included.

cadaudio.com

AKG DMS800



Frequency Bands: 548.1 to 605.9 MHz; 614.1 to 697.9 MHz
Max Channels: 40 simultaneous
Transmitters: DPT bodypack; DHT handheld available with D5, D7 or C5 capsules
Batteries/life: (2) AA; 6.5 hours (alkaline or NIMH rechargeables)
Latency: 3.9 mSec

Resolution: 24-bit, 44.1 kHz
RF Output: 10 to 50 mW
Audio Outs: (2) analog XLR and 1/4"; Dante and AES/EBU digital outs
Extras: Two-channel DSR800 receiver with rear BNC antenna mounts; onboard DSP includes HP filter, dbx compressor and limiter.

akg.com

Audio-Technica System 10 PRO

Frequency Band: 2.4 GHz range
Max Channels: 10 simultaneous
Transmitters: ATW-T1001 UniPak bodypack; ATW-T1002 handheld cardioid; ATW-T1006 boundary mic; ATW-T1007 desk stand
Batteries/Life: (2) AA; 7 hours
Latency: 3.8 ms
Resolution: 24-bit, 48.1 kHz
RF Output: 10mW
Audio Outs: XLR or 1/4" analog
Extras: Two-channel unit in rackable half-rack chassis; receiver/antenna modules can be docked in the chassis or mounted remotely (up to 328 feet away) via Ethernet cable.



audio-technica.com

Beyerdynamic TG 1000 Dual Receiver

Frequency Bands: Five blocks within the 470 to 789 MHz range
Max Channels: 24 simultaneous
Transmitters: TG 1000 handheld; TG 1000 beltpack
Batteries/Life: (2) AA; 8 hours
Latency: 2.1 ms
Resolution: 24-bit

RF Output: 10, 50 mW
Audio Outs: (2) XLR and TRS analog; Dante digital
Extras: Dual-channel receiver; five interchangeable capsules available for handheld, including TG V90w ribbon model.



north-america.beyerdynamic.com

ClearOne WS800



Frequency Bands: 603 to 630 MHz; 902 to 928 MHz
Max Channels: Up to 32 channels max
Transmitters: Boundary; gooseneck; beltpack; handheld with Audio OM3 or OM5 capsules
Batteries/life: (2) AA NIMH rechargeable; up to 8 hours

Latency: 3 mSec
Resolution: 24-bit, 48 kHz
RF Output: 1 to 50 mW
Audio Outs: Phoenix blocks (XLR analog optional) or Dante digital
Extras: Four- or 8-channel receivers available

clearone.com

Lectrosonics Venue 2



Frequency Bands: 470 to 691 MHz
Max Channels: 16 simultaneous per 25.5 MHz block
Transmitters: HH handheld; SSM Micro bodypack; HM plug-on and LMA bodypack
Batteries/Life: (2) AA; 5.5 hours
Latency: 3.2 mSec
Resolution: 24-bit, 88.2 kHz

RF Output: 50 or 100 mW
Audio Outs: Six XLR analog
Extras: Digital Hybrid Wireless design; DSP emulation modes; 1U chassis can house up to six receiver modules; HH transmitter accepts capsules from six different manufacturers.

lectrosonics.com

Sennheiser System 6000



Frequency Bands: 470 to 798 MHz
Max Channels: 40 simultaneously
Transmitters: SKM 6000 handheld; SK 6000 bodypack
Batteries/Life: Rechargeable; 5.5 hours
Latency: 3.2 mSec
Resolution: 24-bit; up to 96kHz
RF Output: 10 or 50 mW (HD mode); 25 or 50 mW (LR mode)

Audio Outs: Analog XLR/TRS; Dante (including dual Dante) and AES digital
Extras: Two-channel receiver in single rackspace; 12 capsules (including Neumann) offered for handheld; Command function lets users set up a talkback channel to suitable transmitters

sennheiserusa.com

Sony DWZ Series



Frequency Bands: 2.4 MHz
Max Channels: 6 simultaneous
Transmitters: ZTX-M02RC handheld or ZTX-B02RC bodypack
Batteries/Life: (2) AA, 10 hours
Latency: N/A

Resolution: 24-bit/48 kHz
RF Output: 10 mW
Audio Outs: One XLR and two 1/4" TS
Extras: Interchangeable capsules on handhelds

pro.sony.com

Wisycm MRK960



Frequency Bands: 470 to 798 MHz (country dependent)
Max Channels: >24 simultaneous
Transmitters: MTP40S bodypack; MTH400F handheld
Batteries/life: (2) AA; 11 hours @ 50 mW (alkaline or NIMH rechargeables)
Latency: 3.9 mSec

Resolution: 24-bit, 48 kHz
RF Output: 10 - 50 mW
Audio Outs: (2) analog XLR and 1/4"; AES/EBU digital
Extras: BNC word clock; interchangeable capsules on handheld; Ethernet 10/100 base Tx network interface

wisycm.com

Line 6 XD-V75



Frequency Bands: 2.4 GHz
Max Channels: 14 simultaneous
Transmitters: Numerous handheld models and bodypacks with lavalier and headworn options
Batteries/Life: (2) AA; 8 hours
Latency: 2.9 mSec
Resolution: 24-bit, 44.1 kHz

RF Output: 3.3 mW or 10 mW
Audio Outs: XLR and 1/4" analog; USB digital
Extras: Onboard DSP mic modeling of well-known mics; interchangeable capsules, including V75-40V handheld with Earthworks WL40V capsule.

line6.com

Shure ADX Axient Digital



Frequency Bands: 470 to 615 MHz (USA)
Max Channels: 63 (in 8 MHz band, HD)
Transmitters: ADX1M micro and ADX1 bodypacks; ADX2 and ADX2FD handhelds
Batteries/Life: Li-Ion rechargeable; AAA adapter sleds; 9 hours
Latency: 2.0 ms (Standard Mode); 2.9 ms (High Density Mode)

Resolution: 24-bit/48kHz
RF Output: 2/10/50 mW
Audio Outs: XLR (line/mic level switchable); AES3/AES67 and Dante digital
Extras: Quadversity operation; High Density mode; ShowLink real-time control; Wireless Workbench and ShurePlus Channels App; Dante monitoring.

shure.com

VocoPro D-1

Frequency Bands: 902 to 928 MHz
Max Channels: Six in 15 groups
Transmitters: Includes Digital-1 handheld
Batteries/life: Rechargeable Li-Ion; 8 hours
Latency: 3 mSec
Resolution: 24-bit, 44.1 kHz
RF Output: 10 mW
Audio Outs: XLR and 1/4"
Extras: Single-channel/half-rack receiver; built-in spectrum analyzer



vocopro.com

Coming Next Month



Headworn Mics

From their humble, lo-fi beginnings, today's headworn mics can now deliver performance that can meet or exceed that of the best handheld transducers. We present the latest models.