Dante Broadway™

FEATURES & BENEFITS

▸ **Compact Power:** 8in+8out or 16in+16out plus 1Gbps Ethernet interface in a 17mm x 17mm package

▸ **Network to the edge**: Enable Dante networking across your entire product range

▸ **Simple audio interfacing**: I²S interface allows direct connection to a wide variety of ADC, DAC, DSP and amplifier chips

▸ **Rich set of control interfaces**: Choice of SPI, UART, and GPIO interfaces enable sophisticated products with networked control

▸ **Firmware updatable**: Software updates with new features and fixes can be loaded via the network

▸ **Easy to use**: Incorporates award-winning Dante features such as automatic device discovery, plug-and-play networking, user-editable device names and channel labels, and more

▸ **Dante Device Protocol**: Enables routing, event and control management via the Host CPU interface

▸ **Device monitoring**: Signal presence, latency statistics and clock stability statistics exposed to Dante Controller for real-time device status monitoring

▸ **Device Lock**: Lock and unlock Broadway devices remotely using Dante Controller

▸ **Multi-protocol transport**: Supports Dante Audio over IP and AES67 RTP

▸ **Glitchless redundancy**: Connect a secondary network for extreme reliability

DANTE FEATURES

▸ **High performance media networking**: Low latency, tightly synchronized transport of uncompressed audio over IP networks

▸ **High-quality clocks**: Low jitter audio clock synthesis with sample-accurate time alignment between networked devices

▸ **Highly interoperable**: Dante is the most interoperable, easy-to-use network solution. Exchange networked audio with hundreds of Dante-enabled AV products

▸ **Deployable on most network switches**: Dante runs easily on existing network switch infrastructure

Bang, Meet Buck

Dante Broadway delivers Dante networking for medium channel-count applications at a breakthrough price-to-performance ratio. The Dante Broadway chip is ideal for products such as small mixers, power amplifiers and conferencing solutions.

Offering significant performance enhancements over the low channel-count Dante Ultimo solution, Dante Broadway delivers 16x16 channels of audio at sample rates up to 96kHz, or 8x8 channels at 176.4 and 192 kHz in an affordable, compact chip. Latency can be as low as 0.25ms on Gigabit Ethernet, and redundancy is supported in specific configurations for high-availability applications.

Balancing Act

Dante Broadway provides a perfect blend of performance, features and economy for mid-tier products such as multi-channel amplifiers, smaller DSP units, hardware interfaces and compact mixing consoles.

Dante Broadway blends the small form factor of our popular Ultimo products with the most popular features of the powerful Brooklyn II module, including latency as low as 0.25ms and support for Gigabit Ethernet.

Team Player

All Dante interfaces provide a powerful combination of guaranteed interoperability and deep integration with manufacturer's products. With a rich set of control interfaces (including SPI, UART and GPIO), plus support for Dante Device Protocol, packet bridging and AES67, Dante Broadway can seamlessly connect an audio product with networked control into the growing ecosystem of Dante-enabled products.

Bring the Family

Dante Broadway enables entire families of Dante-enabled products. With up to 16x16 channels, quarter-millisecond latency, Gigabit speeds and plenty of computing power, Dante Broadway is the foundation for Dante products in many industry segments. Whether you are creating edge devices, DSPs, conferencing solutions or fully-fledged mixing platforms, Dante Broadway delivers while keeping BOM costs down.

Dante Broadway shares many features with the Ultimo family - so you can minimize development effort by using common audio and control interfacing across Ultimo and Broadway-based products.

Dante™

Accurate, Dependable, Proven

For over 10 years, Audinate has been perfecting Dante – now the global de facto standard in audio networking – and all that expertise is embodied in Dante Broadway.

Guaranteed interoperability, bit-perfect transmission, glitch-free redundancy, sample-accurate synchronization, immunity to analog interference, software-based audio routing, and Audinate's exhaustive testing all contribute to make Dante Broadway the key to revolutionizing your own product portfolio.

SPECIFICATIONS

Hardware

256 pin BGA (17 mm x 17 mm)

1.2VDC, 1.8VDC and 3.3VDC @ 1.5W max

High quality, low jitter clock generation via external Silabs chip

Network Interface

Standard 1Gbps Ethernet

RGMII / MII Ethernet interface with MDIO

Hardware time-stamping, supporting sample-accurate playback

Audio Flows In/Out: Up to 16x16 (unicast or multicast)

Latency from 0.25ms

Audio Interface

Up to 8x8 or up to 16x16 audio channels

TDM, I2S digital audio formats

Audio transport formats: Dante Audio over IP, AES67 RTP

16, 24 or 32 bits per sample

44.1, 48, 88.2, 96, 176.4 and 192 kHz sample rates

Sample rate pull-up/down (+4.1667, +0.1, -0.1, and - 4.0 %)

Provides LRCLK, SCLK, MCLK (256x FS)

Control Interfaces

2x UARTs: A and B, console on UART-A

SPI Slave

8x GPIO pins for user controls

PRODUCT FAMILY FEATURE COMPARISON

Feature	Ultimo	Broadway	Brooklyn II
Channel Configurations*	2x2 or 4x4	8x8 or 16x16	8x8, 32x32 or 64x64
Maximum sample Rate	96 kHz	192 kHz	192 kHz
Minimum Latency	1 ms	0.25 ms	0.25 ms
Form Factor	144 pin MAPBGA (13mm x 13mm)	256 pin BGA (17 mm x 17 mm)	Card edge module (4.5cm x 6cm)
Control Interfaces	SPI Master & Slave or UART, GPIO	SPI Slave, UART, GPIO	SPI Master & Slave, GPIO, I2C, UART
Audio Interfaces	Two I2S Lines	Eight TDM or I2S lines	Eight TDM or I2S lines
Network Speed	100 Mbps	1 Gbps / 100 Mbps	1 Gbps / 100 Mbps
Glitchless Redundancy	No	Yes	Yes
Integration Tools	DDP, Packet Bridge	DDP, Packet Bridge	DDP, Packet Bridge, embedded Dante API

Higher channel counts (up to 512x512) are available with the Dante HC platform

Note: All information within this document is subject to change without notice.

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Digital Media Networking Perfected

APPLICATIONS

▸ **Multichannel amplifiers**

▸ **Audio interfaces**

▸ **Compact mixing consoles**

▸ **DSP units**

▸ **Conferencing systems**