

Confidence.

DARK 22M

Highlights

The DARK 22M is a high specification device that interfaces between analogue, USB and Dante network audio.

The 2 x mic/line inputs and outputs allow for stereo or 2 x mono links across copper or fibre Ethernet, or between a USB device. The inputs feature the Clarke Reference mic amp design.

The DARK22M features a Dante Brooklyn 3 module, with 1GB network interface and the ability to happily act as the master clock on a large network. So although the DARK 22M is low channel count, it has high specification networking not normally found at this level.

Overview

- 2 x XLR input, 2 x XLR output
- Inputs mic/line/48v switchable with Clarke Reference mic amp design
- Copper and fibre network connections (1GB)
- USB C audio interfacing
- Dante network interfacing
- Double network redundancy
- Local and remote control
- PoE or local power




Glensound
 Keeps Working



DARK22M Network Audio Interface Features



Analogue Inputs & Outputs

Two analogue inputs and two analogue outputs are presented on full size 3 pin XLRs. The mic inputs are independently selectable mic/48V/line. So the DARK22M is more like 2 x 1 channel interfaces as each side can be configured separately. A dynamic mic input on input 1 and a phantom power mic on input 2? No problem.

USB Inputs & Outputs

The DARK22M is also a bi-directional USB to Dante converter too. It can also be set as a bi-directional USB to analogue converter. A pair of channels can be selected from the 4 pairs of available USB channels.

Dante Inputs & Outputs

There is a pair of Dante network channels which can be routed with the analogue and USB connections. This pair can be selected from 4 pairs of available network channels.

Audio Processing

Where the DARK22M really sets itself apart is in audio performance. It started life as the DARK8MAI – an 8 channel mic amp. This means that the resources of the DARK8MAI are still available – namely an 8 channel analogue to digital converter. GlenSound's design engineer Alex Clarke was able to utilise these ADC channels in a rather clever way. By sending each input equally across 4 x ADC inputs, then combining them in the ADC. When you divide by four, you end up with the same level, but the noise cancels out, resulting in a much improved signal to noise ratio and dynamic range. This has resulted in the mic inputs on the DARK 22M being just about the cleanest and brightest of any network mic amp available.

Further DSP Options

As a DSP device, further dynamics are available. By default, it includes GlenSound's well known Referee compressor system. This is a compressor curve that only affects the audio input just prior to clipping. A graduated compressor, that is much subtler than a hard limiter, but with the benefit that it will prevent the input from clipping.

Further DSP is available for a wideband compressor, a high pass or low pass filter, mixing the inputs to one output, for example. These are not standard features but can be customised on order dependent on your particular requirement.



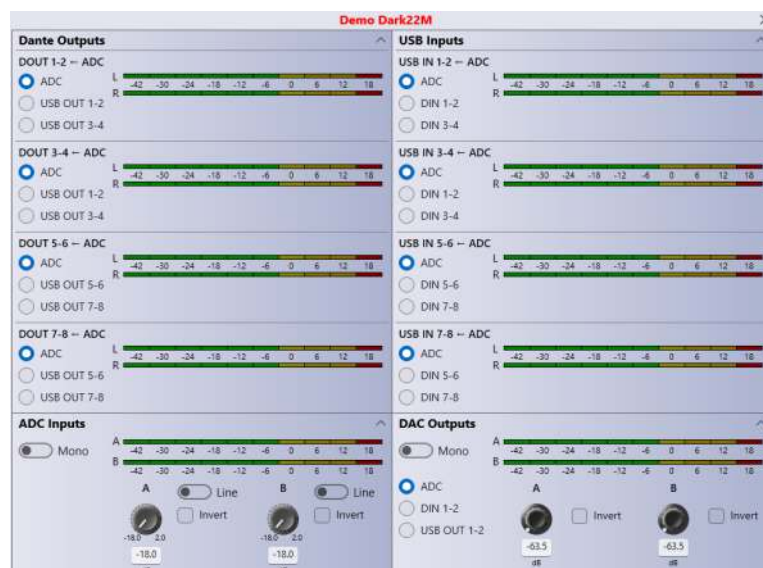
DARK22M Network Audio Interface Features

Network Connectivity & Redundancy

Network options on the DARK 22M are also very powerful. There is a primary and a secondary port on copper RJ45 sockets, and primary and secondary ports via your choice of SFP fibre modules. The SFP ports allow all choices of single mode, multi mode, or single fibre bi-directional modules. These can be configured in redundant mode, or a switched mode, basically turning the connections into a 4 port switch that can be used for daisy chaining other network devices.

Network Interfacing

Typically with low channel count units, devices are fairly basic, and in the Dante world this would mean the basic Ultimo module, and the associated limitations of a 100MB network interface. The DARK22M is not an entry level unit. It features the full specification Brooklyn 3 module, with 1GB network interface and its ability to happily act as the master clock on a large network. So although it has a low channel count, it has high specification networking not normally found at this level.



Control

The input type and gain level can be set directly on the unit itself. The DARK22M is also part of GlenController, the GlenSound remote control app. This means input type, input gain, and level monitoring is available via remote control.

The DARK22M uses UDP for remote control and the command list is available. This means if you are using a dedicated control app that can generate UDP commands (and most can) then your choice of remote will also be able to control the DARK22M.

Power Options

Powering is also well catered for with PoE available on both copper ports or a locking USB C with PD, allowing the use of USB C battery packs or plug top supplies. There is intelligent management of the power source allowing silent switching between the different power options.



DARK22M Network Audio Interface Features



Mechanical Design

The flexibility of the DARK22M concludes with the mechanical design. It is in a very strong casing, with custom designed front and rear bumpers. This allow for:

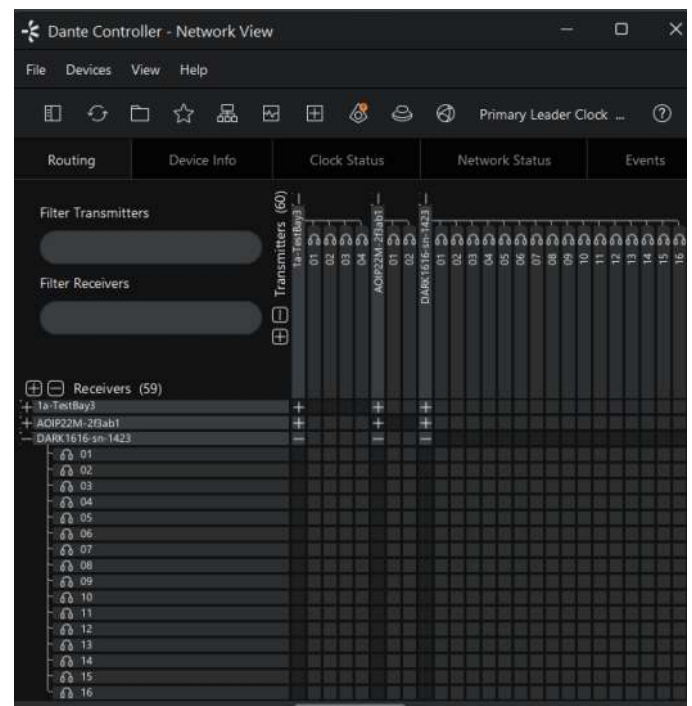
- Screwing under a desk or the inside of an equipment rack
- Cable tying for temporary securing
- The bumpers can also be removed allowing up to 3 DARK22Ms to be rack mounted together in a 1u 19" rack. Rack mount panel available separately.

Dante Controller

Dante Controller is a free software application that enables you to route audio and configure devices on a Dante network. With automatic device discovery, one-click signal routing and user-editable device and channel labels, setting up a Dante network couldn't be easier.

Dante Controller is much more than just a configuration and routing matrix. Dante Controller provides essential device status information and powerful real-time network monitoring, including device-level latency and clock stability stats, multicast bandwidth usage, and customized event logging, enabling you to quickly identify and resolve any potential network issues. You can also quickly and easily backup, restore, move, and reuse Dante network configurations using Presets, and edit Dante routing configurations offline.

Dante Controller is available for Windows and Mac OS X.



Features

- View all Dante-enabled audio devices and their channels on the network
- View and edit device clock and network settings
- Route audio between devices, and view the state of existing audio routes
- Rename devices and channels using your own friendly names
- Customize the receive latency (latency before playout)
- Save and reapply audio routing presets
- Edit presets offline, and apply as configurations for new network deployments
- Change sample rates and clock settings
- View multicast bandwidth across the network
- View transmit and receive bandwidth for each device
- View device performance information, including latency stats, clock stability stats and packet errors
- View comprehensive, configurable event logs

Dante Controller is available free from www.getdante.com

DARK22M

Network Audio Interface

Specification

AUDIO CONNECTIONS (ANALOGUE)		NETWORK AUDIO
Input Connection		Compatible Networks
2 x 3 pin XLR		Dante, AES67, SMPTEST2110-30
Output Connection		Dante Module
2 x 3 pin XLR		Brooklyn III
Input Type		Copper Network Connections
Dynamic line, 48v, line level		2 x RJ45 Ethernet sockets
Equivalent Input Noise		Fibre Network Connections
124dBu (150 ohms termination)		2 x SFP module slots
Input Gain Range		Operation Mode
Dynamic mic -4 to +59 dB		Fully Redundant or switched
48V -4 to +59 dB		Dante Network Resolution
Line: -18 to +2 dB		24 Bit
PAD		Dante Network Sample Rate
14dB on/off per input		44.1 - 192 kS/s
Frequency Response		Transfer Rate
+/- 0.5dbu 22Hz-22kHz		1000 Mbps
Noise Residual (22Hz-22kHz)		Input Channels
-113.8dB full scale		8 x input, assignable as a pair between analogue or USB
Total Harmonic Distortion		Output Channels
0.001% at 1kHz		8 x input, assignable as a pair between analogue or USB
AUDIO CONNECTIONS (USB C)*		POWER
TYPE		PoE
USB C		Consumption 10 watt
Input Channels		USB C
8, assignable as a pair		USB C with PD
Output Channels		
8, assignable as a pair		PHYSICAL
AUDIO ROUTING & CONTROL		Size
Sources/Destinations		223 x 127 x 49mm
Audio can be routed in pairs of channels, between analogue, network and USB		Weight
Control		0.8kg
Remotely via GenController application or UDP		Mechanics
Input level and input type via pushbuttons on unit		All aluminium construction
GenController Download		Custom rubber bumpers
www.glen sound.com		- edge protection
GLENCONTROLLER		- allow fixing under surface
Level Monitoring		- allow cable tie downs
10 meters		- can be removed for rack mounting
Routing		ENVIRONMENTAL
Multiple, one to one or one to many		Operating Temperature
Inputs		-20 to +40° C (32 to 122°F)
Mono/stereo		Storage Temperature
Phase		-20 to +70°C (-4 to 158°F)
Normal/reverse per channel		Relative Humidity
Custom Channel Names		0-95% non condensing
Yes		INCLUDED ITEMS
DAC & ADC Filtering		Quick Start Guide
Normal, short, slow, slow and short		Handbook by download link
		RJ45 Network Cable
		2 metre
* USB functions available in 2027		