System T - Net I/O

Next Generation Networked Broadcast Production

Solid State Logic

OXFORD • ENGLAND

Network I/O

A complete family of interfaces for flexible, scalable, networked routing & I/O systems.

SSL Network I/O is a range of devices which facilitate use of IP Audio networking using Audinate's Dante technology for audio production. Dante is an IP Audio Network which uses standard industrial IT network infrastructure for audio transport, routing, device discovery and control (including access management). Dante networks offer interoperability with products from hundreds of different manufacturers with full AES67 compliance. IP audio networking offers a fresh approach to audio routing and asset sharing for audio production with a wide range of benefits:

Key Features:

- High Channel Counts: 512 channels @ 48kHz (256 @ 96kHz) on a single 1GB connection
- Guaranteed Interoperability: plug & play discoverability of more than 1750 devices from more than 430 different manufacturers - and growing
- Remote Device Control: parameters configured anywhere on the network
- Reduced Cost: standard low cost IT hardware, standard and/or existing Cat 5 or Cat 6 cabling with audio and control on the same network bi-directionally down a single cable
- Simplified Interconnectivity: Ethernet/IP connectivity simplifies interfacing with a wide range of devices including Intercoms and Station Automation
- Flexible Scalability: systems can grow as your needs evolve. Want a bigger network? Add another switch!
- Full Network Redundancy: technology tried and tested across many industries and fully compatible with all network redundancy models
- Distributed Routing Control: routing control from unlimited devices or terminals
- Absolute Resilience: failure of a single device has no effect on any other devices in the network
- Standards compliant: IEEE and IETF compliant thus deployable on and can mix with traffic on any standard IP infrastructure. SSL Network I/O is AES67 compliant.

Network I/O Controller

Comprehensive remote control and status monitoring application

The SSL Network I/O Controller application provides comprehensive remote control of Network I/O Mic, Line and AES3 interfaces across a Dante network. The software can be installed onto any PC located anywhere on the network and multiple instances of the software can coexist on the network, with all instances of the application having access to all SSL interfaces currently available on the network. The Controller application offers complete control over the extensive feature set of SSL's interfaces and acts as a communication aid with clear real time device and channel attention indication.

System T Integrated Control

The only production systems where full routing & remote control is integrated within our control interfaces.

SSL is unique in offering a range of Control Interfaces for Broadcast and Live production applications where routing configuration and control is completely integrated. System T control interfaces include; S500 modular large format & S300 compact fixed format consoles, S500m OB & Flypack solutions, Tempest Control Rack (TCR), Remote Tiles and stand-alone touchscreen interfaces. With SSL Live this includes L100, L200, L350 and L550 consoles. Of course Dante Controller and the Network I/O Control Application can be used alongside these interfaces in a hugely versatile networked control environment.

SSL Network I/O

Superior interfaces for IP audio networks

A16.D16

A versatile combination of mic/line and digital I/O

The A16.D16 provides a combination of SSL SuperAnalogue™ and AES3 digital I/O to Dante and AES 67 based IP networks. A16.D16 includes redundant network connections and PSUs. It features 16 line inputs - four of which also have switchable mic circuits, 16 line outputs and 16 digital I/O in eight AES3 pairs. There are four GPIO.

A32

Bulk analogue line level I/O

The A32 provides 32 line inputs and 32 line outputs of SSL SuperAnalogue™ I/O to Dante and AES 67 based IP networks. A32 includes redundant network connections and PSUs.

D64

AES to Dante conversion wherever you need it

The D64 provides 32 input/output Pairs of AES3 digital audio I/O. Sample Rate Convertors allow seamless integration of unlocked AES sources. D64 includes redundant network connections and PSUs.

SDI

SDI embedder/de-embedder

Bidirectional bridging between embedded SDI Audio, your IP network and MADI. SDI has eight SDI circuits, each capable of embedding and de-embedding, the unit also includes 8 AES pairs and three MADI connections (2 x optical, 1 x coax I/O). In addition to SDI-Dante bridging, SDI allows direct bridging between SDI and MADI infrastructure. Internal channel-by-channel routing enables flexible routing between all three domains. SDI includes redundant network connections and PSUs.

Dante PCIeR

Fully redundant high capacity interface

High capacity Dante connectivity for any suitably specified Mac or PC. It features Primary and Secondary network connections. Streams up to 128 channels (at 44.1, 48 kHz, 88.2, 96 KHz) or 64 channels (at 176.4 or 192 kHz). Synchronisation latency is less than 1 µSec, and Network latency as low as 150µs. The card is compatible with external PCIe chassis for laptops.

GPIO 32

High capacity GPIO

32 GPIO connections for interfacing with System T consoles and transporting GPIO across System T networks.

MADI-Bridge

MADI to Dante interface with full redundancy and confidence monitoring

The MADI-Bridge is a broadcast specification bridge between the MADI audio format and Dante. It is a bi-directional interface that can deliver 64 channels @ 48kHz (32 channels at 96kHz, 16 channels @ 192kHz). MADI-Bridge 'Split Mode' enables 2 x 32 channels @ 96kHz streams to be merged to form a single 64 channel @ 48kHz stream. MADI-Bridge also features bidirectional sample rate conversion between any asynchronous sample rates, from 44.1kHz to 192kHz. MADI-Bridge features redundant PSU, MADI and IP Network ports and in addition to the inbuilt clock redundancy options in Dante Controller, the MADI-Bridge also includes a pair of redundant sync inputs for use as a self-redundant Dante Grand master clock. 32bit MADI control tunnelling allows a pair of MADI-Bridges to be used to pass audio and user bits (including control data) of a whole MADI stream across a network.

The MADI-Bridge features a front panel headphone socket (with rotary level control) and inbuilt headphone monitor routing. Simple front panel controls route mono or stereo paths from MADI In, MADI Out, Dante In or Dante Out directly to the headphones. A front panel LCD screen provides signal present metering, selectable to show four points in the signal chain: MADI In, MADI Out, Dante In and Dante Out. GPIO connections allow for transfer of tally info and switching functions across the network with the audio.

Stageboxes

Superior SSL mic/line preamp technology for your Dante Audio Network

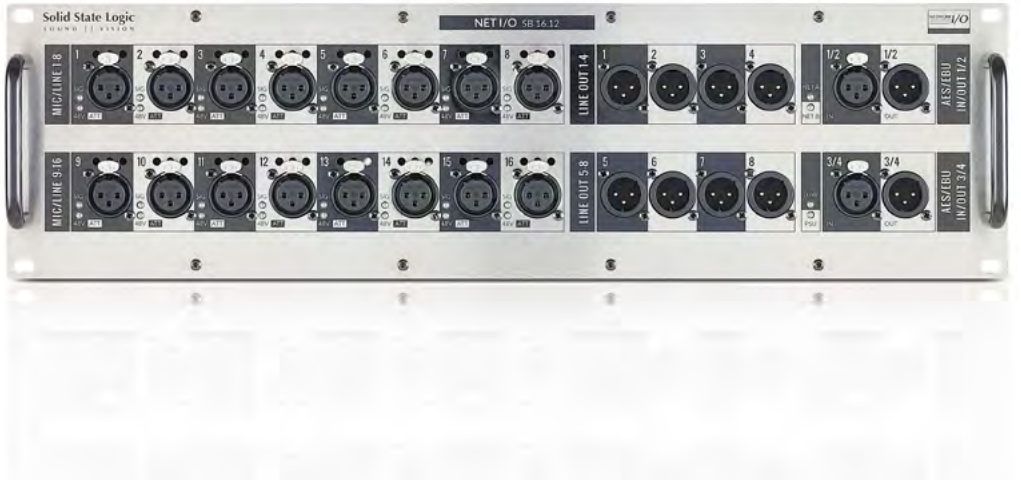
Network I/O Stageboxes make SSL's renowned SuperAnalogue™ preamp design with its superior audio performance available for a wide range of Dante network applications. Designed for use on any broadcast studio floor, venue or recording room, SSL Network I/O Stageboxes allow easy deployment of mic pres and speaker feeds where needed. Network I/O's plug and play features allow devices to easily be moved, even between locations and retain routing and settings if required. All units can be remote controlled via System T broadcast consoles and control interfaces, SSL Live consoles, and the SSL Network I/O Controller APP. There are four different models available; SB 8.8, SB i16, SB 16.12 and SB 32.24. All four stageboxes can operate at 48kHz or 96kHz sample rates and include on-board gain compensated splits as Tx signals on the network. For example the SB 8.8 could includes 8 Dante Tx signals with an adjusted mic signal and 8 that include gain compensation from an installation point of the operators choosing.

SB 8.8 & SB i16

These 2RU units offer slightly different configurations but share identical features. The SB 8.8 offers eight mic/line inputs and eight line level outputs. SB i16 offers sixteen mic/line inputs. Both models feature a pair of redundant RJ45 Dante network connections, a pair of network extension connections, GPIO connectivity and redundant PSUs. They have individual signal present, phantom power and local attention LEDs to provide intuitive front panel feedback. They feature inbuilt limiters and SSL's innovative AutoPad system that automatically applies a Pad according to gain setting. The AutoPad is applied if the gain is set at a low value that would require a pad to achieve making the entire possible mic gain range seamlessly available at all times.

SB 16.12

SB 16.12 is a 3U ruggedised enclosure featuring dual redundant power supplies, 16 mic/line inputs, 8 analogue line outputs and 4 digital inputs and outputs on 2 AES3 input/output pairs. It has a pair of redundant RJ45 Dante network connections in addition to a user configurable SFP port that can be fitted with RJ45 or optical connectors. These can be used for network extension or to provide network separation for the gain-compensated Dante “split”, for connection to a second Dante-equipped console or appropriately equipped device on a different network. It has individual signal present, clip and phantom power LED’s as well as global indication of PSU, Network A and B and Hardware status.



SB 32.24

SB32.24 is a 5U ruggedised enclosure featuring dual redundant power supplies, 32 mic/line inputs, 16 analogue line outputs and 8 digital inputs and outputs on 4 AES3 input/output pairs. It has a pair of redundant RJ45 Dante network connections in addition to a user configurable SFP port that can be fitted with RJ45 or optical connectors. These can be used for network extension or to provide network separation for the gain-compensated Dante “split”, for connection to a second Dante-equipped console or appropriately equipped device on a different network. It has individual signal present, clip and phantom power LED’s as well as global indication of PSU, Network A and B and Hardware status.