APOGEE LABS

AL2273
DIGITAL MATRIX SWITCH

FEATURES

- Non-blocking matrix switch
- 16x16 up to 256x256 signal inputs/outputs
- Signal types include TTL, RS422, and low rate analog
- Configuration storage capability
- Modular and scalable architecture
- Independent input & output signal types

- Short-circuit protected outputs
- Built in BERT self-test
- Hot swappable input/output modules
- Redundant power supplies
- High contrast touch-screen display
- Easy to use GUI for remote control via Ethernet
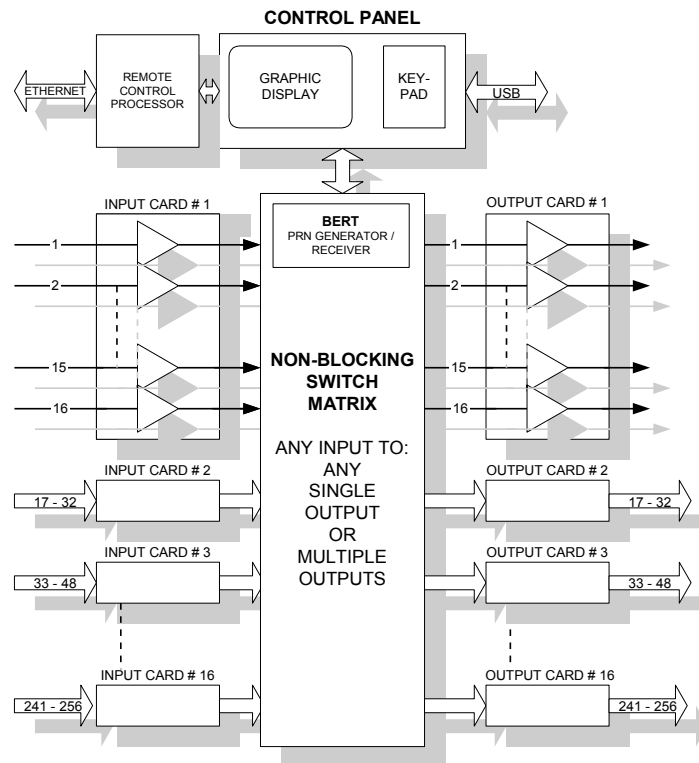
APPLICATION OVERVIEW

The AL2273 is a solid state solution for routing, distributing, and/or converting various signal types as an interface between telemetry and communications equipment, such as bit syncs, receivers, recorders, and decommutators. It is an ideal and cost effective alternative to a patch panel.

GENERAL OVERVIEW

The AL2273 is a fully non-blocking matrix switch capable of accommodating matrices ranging from 16 inputs x 16 outputs up to 256 inputs x 256 outputs. The modular design allows for an asymmetrical configuration of I/O modules, such as 128 x 256. Signal types supported include TTL, RS-422, and low speed analog. The digital I/O modules can be used together in any combination allowing both switching, signal conversion, and signal distribution.

The AL2273 system is comprised of two sub-assemblies that consist of an I/O module chassis and a switch controller, both of which easily mount into standard 19"-RETMA electronic equipment racks. Designed for ease of use, hinges on the I/O module chassis permit access to the rear of the chassis and standard BNC/Twinax connectors enable the use of existing patch panel cabling, without the need for special dongles.

FUNCTIONAL BLOCK DIAGRAM

SPECIFICATIONS

SYSTEM LATENCY
- Less than 60ns propagation delay

SIGNAL TYPES
- TTL, RS422, and low-rate analog

INPUTS
- Up to 256 Signals (128 Pairs)
- 16 inputs minimum
- Scalable in groups of 16
- Input over-voltage protection

OUTPUTS
- Up to 256 Signals (128 Pairs)
  - 16-outputs minimum
- Scalable in groups of 16
- Short-circuit protected

DATA BANDWIDTH
- TTL & RS-422 up to 35 Mbps
- Analog up to 650Khz

CONTROL
- Front panel
- Dual touch screen
- Remote Ethernet via GUI or telnet

CONFIGURATION STORAGE / RETRIEVAL
- Local - 256 individual configurations
- USB removable memory

MECHANICAL
- Control Panel
  - 19" rack mount — 7" High, 15.75" Deep
- Switch Chassis
  - 19" Rack Mount
  - 24.5" High, 6" Deep

POWER
- 100 to 240V AC, 50 to 60 Hz
- Dual redundant pluggable DC power supplies

ENVIRONMENT
- Operating temperature: 0^0 C to +50° C
- Relative humidity: 0 to 95%, non-condensing