Innovation in the
Multi-Screen World

Freeway

The Overview

Combining groundbreaking performance with the ultimate in flexibility, Freeway offers the widest range of solutions for small to medium scale routing requirements. The combination of two frame options, a highly modular switching card architecture and an extensive integrated control system enables Freeway to be tailored for applications in the broadcast, transmission, post production and outside broadcast environments.

The Freeway family is based around two frame sizes, a switching modularity of 16 channels and is available in three series, dependant upon the maximum size that the system is planned to grow to.

Freeway 64 enables a maximum configuration of 64 x 64 per level, using four modules. In the 3U frame one 64 x 64 level can therefore be assembled, and in the 6U frame two levels. Again all signal formats are available in this series.

Freeway 128 is available for stereo analog audio and AES/EBU digital audio, permitting systems up to 128 x 128 to be assembled, using 8 modules in the 6U frame. Freeway 128 Timecode and RS422 variants permit systems up to 128 x 128 and 128 ports, respectively, to be assembled within the 3U frame using 4 modules each providing 32 channels. For analog video, a range of 16 channel splitters and combiners is available, allowing four 64 x 64 levels to be interconnected to provide a 128 x 128 router.

Freeway Frame Specifications

General	
Power	Autosensing 90 to 264 Vac. 50/60Hz
Power Consumption	3U frame 300W 6U frame 600W
Monitoring	
PSU Monitor	Failure alarm relay
Fan Monitor	Failure alarm relay
Control	
Control	2 x RS485, panel/ remote control
Configuration	1 x RS232
Expansion	1 x parallel port
Connectors	
Power	3 way IEC (with latch)
PSU/Fan Monitor	9 way D type socket
Control	9 way D type socket
Configuration	9 way D type socket
Expansion	37 way D type socket
AES Reference	9 way D type plug
Mechanical	19 inch rack mounting x 490mm deep (excluding connectors)
Environmental	
Cooling	Fan assisted, left to right
Operating Temperature	0 to 40 degrees Celsius

Specifications subject to change

Freeway is much more versatile than this however as systems using a mixture of 64 and 128 series modules for the various signal formats can be freely assembled to suit requirements. The key to this is the use of rear panels which carry the I/O connectors and which are fitted to suit the corresponding switching card inserted from the front. This approach ensures that all module positions can be employed for the maximum flexibility within a frame. It even allows analog modules to be replaced with digital, in the field, and without having to disturb signal wiring.

Further more, a typical Freeway system is not limited by the amount of switching modules that can be combined in any one frame. The internal control system can accommodate up to eight discrete switching levels, allowing each to be separately broken away. A dedicated control bus is employed, ensuring control of multiple frames by the control system, resident in any one of the frames.

This allows easy expansion after an installation is complete as extra switching levels can be installed and added to an existing Freeway system without difficulty.

Finally, both Freeway frame options provide dual PSU and dual controller capability, ensuring total security for mission critical environments.

Freeway Signal Formats
The following signal formats are supported by the Freeway family. Switching modules are 16 x 16 (unless stated).

Format		Freeway 64	Freeway 128
SDI		X	
AES/EBU		X	X
Analog Video		X	X*
Stereo Analog Audio		X	X
Timecode	Each switching module provides 32 x 32		X
RS422 Machine Control	Each switching module provides 32 ports		X
SDH, 155 Mbit/s		X	
DVB-ASI		X	

* using Freeway splitters and combiners.

Freeway supports a variety of Telco related signal formats allowing these signals to be easily incorporated into a traditional broadcast environment.