

FLEX 2400 Switch & Splitter



Redundant Telco Links

GigE Ethernet option

New feature

1+1 Encoder Systems

Modulator Protection

ASI, Telco E1, T1, E3, DS3, E4, STM-1, R.F (L-band) & Ethernet



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The ARG FLEX 2400 is a fully managed, high availability protection switch and distribution amplifier solution.

Factory fitted modules are configured for distribution amplification, protection switching and diverse routing applications. A wide range of signal formats are supported including SDI, ASI, Telecom E3, DS3, STM-1 and RF interfaces.

The ARG FLEX 2400 can be programmed to switch on loss of signal and pre-determined signal deterioration such as bit error rate, frame loss or loss of synchronisation.

A manual switchover is possible via a front panel key, and a switchover can also be forced by GPIs on the rear panel. Front panel LEDs indicate power supply health and channel status. An indication of the channel selected is given by a flashing LED. Alarm LEDs are latched and can be reset via a front panel switch or via the web server if fitted.

SNMP and web server management functionality are included as standard making on all switches providing a perfect fit for any network management scenario.

In addition to dual power supplies, relay by-pass cards carry the signal from the input directly to the output in the event of power source failure.

Custom built for the application

Every FLEX 2400 assembly is custom built for the job from a range of switching and amplifier modules. In this way, for example a protection switch can be specified for many different broadcast and telecommunication applications.

ASI and G.703 interfaces

Telco and Interfaces G.703 (T1, E1, E3, DS3, STM-1) and ASI Transport Stream modules are available with new modules being constantly developed.

RF L-Band Interface

Characteristics up to 2.5 GHz with low insertion loss and VSWR. Output monitor port. 50 Ohm and 75 Ohm versions available.

Protection switching and active splitting.

A Flex chassis can hold up to three splitters or two switches or any combination of switches or splitters to suit the application.

Manual or automatic switching

The Flex 2400, if fitted with a switch module, comes with a front panel key switch, which is ideal for assisting in the maintenance and commissioning of critical equipment.

GPI control and monitoring.

The Flex 2400 easily interface to GPI control systems, and of course it can provide its own status via the GPI interface

Ethernet Option

Introduced 2010 is an 8 port GigE switch with 2 SFP channels and two RS232 channels. Please contact the factory for configuration and full technical specs.

SNMP for third party NMS control

Third party NMS, with SNMP capability, can monitor the units health and protection switch status. MIB is available on request.

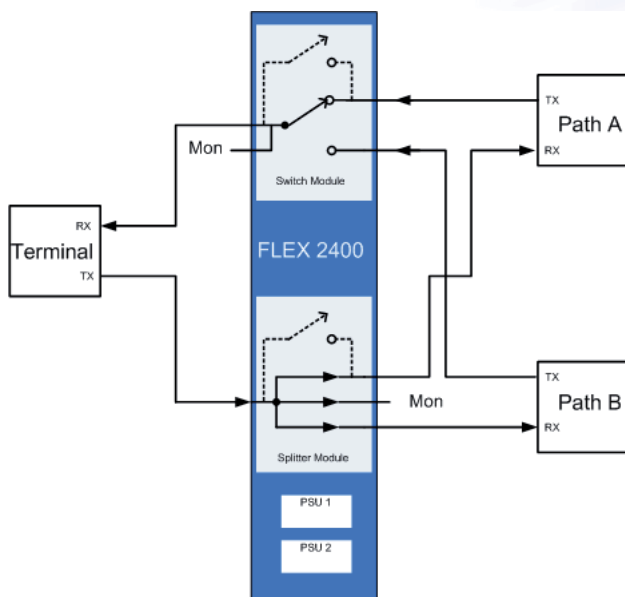
Web Server capability.

The Web server, supplied with the SNMP option, provides remote control and monitoring of the switch from any web browser.

Programmable switching criteria

The Flex can be pre-programmed to switch on a variety of criteria such as Sync Loss, AIS null packets and BER. Switching criteria depends upon specific module fitted.

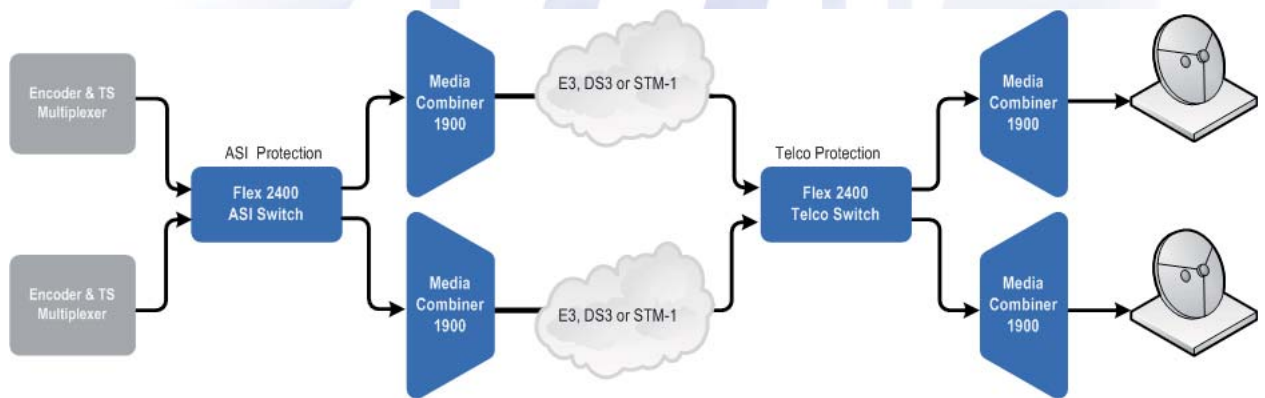
Specific industry standard switching and control protocols are available on request.



Telco or ASI Configuration

Switching and splitting modules

Input	Protection Switch Module	Active Splitter Module
ASI	2 inputs: 3 Outputs	1 Input: 4 Outputs
R.F.	2 inputs: 1 Output + 1 Output Monitor	-
SDI	-	1 Input: 4 Outputs
T1	2 Inputs: 2 Outputs	1 Input: 3 Outputs
E1	2 Inputs: 2 Outputs	1 Input: 3 Outputs
E3	2 Inputs: 2 Outputs	1 Input: 3 Outputs
DS3	2 Inputs: 2 Outputs	1 Input: 3 Outputs
E4	2 Inputs: 2 Outputs	1 Input: 3 Outputs
STM-1	2 Inputs: 2 Outputs	1 Input: 3 Outputs
GigE	Managed Ethernet switch	2 Gige SFP, 8 x Fast Ethernet



Application example with ARG 1900 Mediacombiner



Switching Criteria

Interface Module	Switching Criteria	Gate Period	Switching Speed
E1 (2.048 Mb/s)	Loss of Signal (LoS) Alarm Indication Signal (AIS)	250mS	<0.5 mS
E3 (34.368 Mb/s)	Loss of Signal (LoS) Alarm Indication Signal (AIS)	250mS	<0.5 mS
E3 G.832 (34.368 Mb/s)	Loss of Signal (LoS) Loss of Frame Alignment (LoFA) F.A. errors > 1 in 10 ³	250mS 250mS 1S	<0.5 mS
DS3 (44.736 Mb/s)	Loss of Signal (LoS) Loss of Frame Alignment (LoFA) F.A. errors > 1 in 10 ³	250mS 250mS 1S	<0.5 mS
STM-1 (44.736 Mb/s)	Loss of Signal (LoS) Loss of Frame Alignment (LoFA) F.A. errors > 1 in 10 ³	250mS 250mS 1S	<0.5 mS
ASI	Loss of Signal Loss of MPEG - 32 consecutive losses of the 47H MPEG frame sync word. per ETSI TRS 101 290	1S 1S	<0.5 mS
RF	External Control or ganged with other module	N/A	<3 mS

Module Options

Each 1U unit can house one or two of the functional modules listed above, giving combinations of protection switches and active splitters.

These modules may operate independently or be interconnected and additional ancillary modules may be fitted in addition to the functional modules.

Management and Control

Front panel LEDs, and alarm reset
Alarm outputs on open contact relays.
Switch control selection via GPI's
Front panel key switch
SNMP and Web control
Leitch router protocol
Other protocols available on request.

Environmental

Operating temperature: 0°C to 40°C
Storage temperature: -5°C to 70°C

RF Module Characteristics

RF Frequency Range DC to 3 GHz
Insertion Loss, signal path <0.2dB to 1 GHz, <0.6 dB to 2.5 GHz
Return Loss < 12dB to 1 GHz, < 14dB to 2.5 GHz
Isolation, signal path, > 58dB to 1 GHz, > 40dB to 2.5 GHz
Crosstalk, <-42dB to 1GHZ, <-35dB tp 2.5 GHz
Max RF Power 10W at 3 GHz
Monitoring port -20dB

Mechanical

Height: 43.6mm (1U)
Width: 482.6mm (19")
Depth: 385mm (15") incl. connectors
Weight: 4.8kg (12.3lbs) depending on modules fitted

Power Supply

Dual supply, single phase auto-ranging
100-240VAC (50-60Hz)
36-72V DC (factory fitted option)