HDO103 RF SWITCH

HDO103 is an RF switch module for HDO product family. The unit is used for signal back up purposes. HDO103 has an extended frequency range to fulfil DOCSIS 3.1 requirements.

HDO103 has two inputs with RF wideband detectors and one output. RF power detectors are used for defining a switching decision level of RF routing.

A user can change the switching decision limits via UI.

Features

- DOCSIS 3.1 compatible 1.2 GHz bandwidth
- Flat equalised frequency response
- Good flatness
- Small form factor family, 2 RU height
- Local and remote software control of all adjustments

Management features

- Switching decision signal level adjustment
- Signal routing monitoring
- Switching mode setting, automatic/ manual
- Switching restore setting, automatic/ manual
- Switching delay setting, high and low values
- Reference level setting with decision level setting
- LED indicators for signal and module statuses
- Internal temperature measurement and monitoring
- Non-volatile logging of 32 latest events, including alarms, alarming values, settings changes and application starts.
- Uptime and total uptime counters
- All alarm limits fully user configurable
- Local PC connection through backplane HDO bus with DVX021 cable
- Remote IP connection through HDC100 controller module
- SNMP monitoring and configuration through HDC100 controller module

Technical specifications

Parameter	Specification	Note
RF parameters		
Frequency range	5…1218 MHz	1)
Insertion loss	2 dB	2)
Isolation	70 dB	3)
Flatness	±0.3 dB	4)
Slope	±0.3 dB	
RF impedance	75 Ω	
Return loss	20 dB	5)
Switching decision level window	-15…+15 dBm	6)
General		
Power consumption	2 W	
Supply voltages	25 V / 50 mA 6.3 V / 60 mA	
Connectors	F female	
Dimensions	2U x 7HP x 380 mm Occupies 1/12 of HDX frame	h x w x d
Weight	1.5 kg	
EMC compliance	EN 50083-2	
Enclosure classification	IP20	
Operating temperature range	0...+45 °C	
Storage temperature range	-20...+60 °C	
Operating relative humidity	0…85 %	

Notes

1) RF detector range is 50…1218 MHz.
2) Maximum value.
3) Minimum attenuation from an inactive input to the output.
4) Maximum value.
5) Minimum value at 5…40 MHz and above 40 MHz -1.0 dB/ octave.
6) Total RF power in an input. A user can set the switching decision level within the level window. RF detector accuracy depends on the signal type and the amount of RF signals. Typical accuracy is better than ±2 dB.

Block diagram