

# Which routing switch do you need?

	Indigo SYSTEM		Vision SYSTEM	Indigo SYSTEM
	Safe Switch 3G	Safe Switch-L 3G	M-SAFESWITCH-2	SW803 3G
Frame system	Indigo (2U, 1U, DTB)	Indigo (2U, 1U, DTB)	Vision (3U)	Indigo (2U, 1U, DTB)
Product type	Card	Card	Software app	Card
Main use	Manual or automatic clean and intelligent switching	Manual or automatic clean and intelligent switching	Manual or automatic clean and intelligent switching	Small matrix
Switch configuration	2 x 2	2 x 2	2 x 1 and 2 x 1 (dual channel product with two independent switches)	8 x 3
Input preference	User defined	User defined	Primary input (Source A) unless error condition detected	
Number of video inputs	2	2	4 (NB. Any of the inputs can be routed to the two independent switches)	8
Number of video outputs (max)	2 of Output 1 and 1 of Output 2	2 of Output 1 and 2 of Output 2	1 of Switch 1 and 1 of Switch 2 (or 2 of one switch if configured as single channel device)	1 of Output 1 and 1 of Output 2 and 1 of Output 3
Input loop-throughs		2		
Works with SDI (3Gb/s, HD and SD)	●	●	●	●
Works with IP (ST 2022-6, ST 2022-7, ST 2110-10, ST 2110-20 and ST 2110-21)			●	
Video formats supported	8 (625i, 525i, 720p50, 720p59.94, 1080i50, 1080i59.94, 1080p50, 1080p59.94)	8 (625i, 525i, 720p50, 720p59.94, 1080i50, 1080i59.94, 1080p50, 1080p59.94)	31 (625i, 525i, 720p50, 720p59.94, 720p60, 1080i50, 1080i59.94, 1080i60, 1080p23.98, 1080p24, 1080p25, 1080p29.97, 1080p30, 1080p50, 1080p59.94, 1080p60, 1080PsF23.98, 1080PsF24, 1080PsF25, 1080PsF29.97, 1080PsF30, 2048x1080p23.98, 2048x1080p24, 2048x1080p25, 2048x1080p29.97, 2048x1080p30, 2048x1080PsF23.98, 2048x1080PsF24, 2048x1080PsF25, 2048x1080PsF29.97, 2048x1080PsF30)	8 (625i, 525i, 720p50, 720p59.94, 1080i50, 1080i59.94, 1080p50, 1080p59.94)
Inputs and outputs can be any mixture of SDI and IP			●	
Inputs and outputs can be mixture of ST 2022 and ST 2110			●	
Includes IP gateway functionality (IP to SDI or SDI to IP)			●	
Includes IP to IP translation functionality (network address translation, unicast to multicast address translation, setting firewall restrictions etc.)			●	
Fault conditions available to automatically trigger switch	18 (input missing, input video standard incorrect, EDH missing, EDH full field error, EDH active picture error, line CRC error, audio group 1 missing, audio group 2 missing, audio group 3 missing, audio group 4 missing, active video black, Ancillary Timecode missing, Ancillary Timecode frozen, active video frozen, channel 1 audio silence in selected group, channel 2 audio silence in selected group, channel 3 audio silence in selected group, channel 4 audio silence in selected group)	18 (input missing, input video standard incorrect, EDH missing, EDH full field error, EDH active picture error, line CRC error, audio group 1 missing, audio group 2 missing, audio group 3 missing, audio group 4 missing, active video black, Ancillary Timecode missing, Ancillary Timecode frozen, active video frozen, channel 1 audio silence in selected group, channel 2 audio silence in selected group, channel 3 audio silence in selected group, channel 4 audio silence in selected group)	10 (input missing, input video standard incorrect, active video black, active video frozen, video error, network error, audio group 1 missing, audio group 2 missing, audio group 3 missing and audio group 4 missing)	
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Other signal parameters monitored (in addition to those that can trigger switch – listed above)	Reference video format	Reference video format	Packet loss, duplicated packets, packet delay variation, count of packets ignored by app, ignored multicast packets, reference 1 and 2 present and time present, reference 1 and 2 format, reference 1 and 2 incompatible format, PTP master and backup clock present and time present, PTP statistics – network delay, delay variation, reference offset and sync period	
User can decide what constitutes a fault separately for each input	●	●		
Decides which feed to select based on which contains the most significant fault condition	●	●		
Checks other input is free of that fault before switching	●	●		
Corrects timing difference between inputs of up to one frame with full framestore synchroniser	●	●	●	
Corrects timing difference between inputs which is more than one frame by delaying earliest arriving input	● (by up to 25 frames in one frame steps)	● (by up to 25 frames in one frame steps)	● (by up to ten frames in one frame steps)	
Video delay on output			Up to ten frames (adjustable in one frame steps)	
Reference timing	From any SDI input or from SD Black and Burst or HD tri-level syncs	From any SDI input or from SD Black and Burst or HD tri-level syncs	From any SDI input, or from Vision frame dual references (SD Black & Burst or HD tri-level syncs) or PTP	
Loss of reference protection (with drift lock)	●	●		
Reference redundancy with user options for timing source priority			●	
Passes entire video stream including embedded audio and data	●	●	● (when SDI or ST 2022 – no audio or data in ST 2110-20)	
Internal test pattern generator (with 13 test patterns)			●	
Number of presets			16	15
Hands-on control panels available	VisionPanel and SBB-4	VisionPanel and SBB-4	VisionPanel and SBB-4	SW808 Controller, VisionPanel and SBB-4
SNMP control	Available for purchase	Available for purchase	Complimentary	Available for purchase
GPI inputs and outputs	6 bi-directional GPIs	12 bi-directional GPIs		5 GPI inputs and 1 GPI output
Relay bypass protection	● (RM64 option)	● (as standard)		
Fibre output (for SDI over fibre)	● (RM57 option)		(NB. IP only over fibre)	
Routing switches in 2U (max)	12	6		6
Routing switches in 3U (max)			20	
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