

Option SxE and SxA only - Advanced formats

This option introduces a variety of new formats to the standard set of 76 currently available on the SxA and SxE. The new formats include 4:2:2 YUV, 4:4:4 RGB and 4:4:4 YUV at 10/12 bit and 3G level A and B.

For broadcast manufacturers the new option allows rigorous testing of many more formats, beyond the standard signals used in traditional broadcasting. Among the support for 3G level B on the SxA and SxE is the ability to generate and analyse signals such as SMPTE 425-B carrying 1 x 372M dual link payload.

Uniquely the PHABRIX units create three pathological signals in all formats which will be of great interest to broadcast manufacturers. The first is as defined in SMPTE RP198 and is the split field signal with the equaliser test in the first half and the PLL test in the second half. The second and third are separate full-frame EQ test and PLL tests signals. To maintain a regular parity distribution and mitigate any DC offset, the EQ part of the pattern inverts a bit at the start of the first line in each alternate frame. This is the form of 3G Level B Pathological signal that many video manufacturers are adopting as their test signal of choice as it stresses electronic circuits more thoroughly.

Option code: **PHSXOF**

Link Type	Reference Standard	Resolution		Rates									
				60	59.94	50	30	29.97	25	24	23.98		
1.485 Gb/s													
SMPTE 372M	SMPTE 274M	1920 x 1080	4:2:2 (Y'CbCr)/10-bit	P	P	P							
			4:4:4 (RGB'), 4:4:4 (RGB' + A)/10-bit										
		4:4:4 (RGB')/12-bit											
		4:4:4 (Y'CbCr), 4:4:4 (Y'CbCr + A)/10-bit	I	I	I	P,F	P,F	P,F	P,F	P,F			
		4:4:4 (Y'CbCr)/12-bit											
	SMPTE 428-B	2048 x 1080	4:4:4 (XYZ)/12-bit							P,F	P,F		
3 Gb/s													
SMPTE 425-A	SMPTE 296M	1280 x 720	4:4:4 (RGB'), 4:4:4 (RGB' + A)/10-bit	P	P	P	P	P	P	P	P	P	
			4:4:4 (Y'CbCr), 4:4:4 (Y'CbCr + A)/10-bit										
	SMPTE 274M	1920 x 1080	4:4:4 (RGB'), 4:4:4 (RGB' + A)/10-bit	I	I	I	P,F	P,F	P,F	P,F	P,F		
	SMPTE 274M	1920 x 1080	4:4:4 (RGB')/12-bit	I	I	I	P	P	P	P	P		
	SMPTE 428-B	2048 x 1080	4:4:4 (Y'CbCr)/12-bit								P,F	P,F	
SMPTE 274M	1920 x 1080	4:4:4 (XYZ)/12-bit	I	I	I	P,F	P,F	P,F	P,F	P,F			
3 Gb/s	Mapping of 2 x SMPTE 292M HD SDI Interfaces			BLUE formats are standard on the SxD and as an option on the SxA and SxE									
SMPTE 425-B	1 x SMPTE-372M dual link payload			TURQUOISE formats on SxA and SxE as SMPTE 425-B carrying 1 x SMPTE 372M dual link payload									
				RED formats can be detected by the Sx but not fully handled									