How to choose a Cypress converter to meet you conversion need.

There are three major TV systems in the world: NTSC, PAL and SECAM. The differences between these three systems can be characterized in three aspects:

1) Color sub-carrier frequency

2) Vertical scanning frequency (the number of pictures per second)

3) Horizontal scanning frequency (the number of lines per picture) Table 1 shows details of the difference

Video System / Character	NTSC(M)	PAL			SECAM
		B,D,G,I	M	N	
Color Subcarrier Frequency	3.579545 MHz	4.43361875 MHz	3.575611MHz	3.582062MHz	for B:4.25000MHz for R:4.406250MHz
Horizontal Scanning Frequency (Line Freq.)	15.734KHz (525 Lines)	15.625KHz (625 Lines)	15.734 KHz (525 Lines)	15.625KHz (625 Lines)	15.625KHz
Vertical Scanning Frequency (Field Freq.)	60 Hz	50 Hz	60 Hz	50 Hz	50 Hz

When converting from one video system to another system, depending on the degree of difference between the two systems it can be as easy as only altering color frequency of the input or as complicate as a process of changing all three frequencies (color ,line and field frequencies).

If two systems differ only in color frequency, e.g. conversion between PAL (B,D,G,I) and SECAM, or between NTSC and PAL M, then an economic analog converter converting color frequency is enough. If two systems differ in all three aspects, e.g. conversion between NTSC and PAL, or NTSC and SECAM, then a full-frame digital converter converting all three frequencies is required. Once you know the degree of difference between your input and output system you can then choose a suitable converter model for your conversion job. Choosing a wrong converter could result in an incomplete conversion and cause output picture to roll and unable to be recorded on your VCR.

All Cypress digital models convert all three frequencies and can be used in any conversion with TV or VCR(for recording) of any kinds. However Cypress's analog models, convert only color frequency, are suitable only for conversions where two systems differ only in color frequency. When they are used in conversions where two systems differ in all three frequencies the output picture will become squashed and rolling on the screen and un-recordable by VCR.

Nevertheless, if your TV has vertical hold adjustment and can accommodate both 50 and 60 Hz. You can still use analog converter. In such case the output picture won't be rolling but it will be either extended or squashed.

The table below gives the guideline for choosing the correct converter models.

All digital models	Ideal for use in any system conversion. Output is recordable on VCR, no picture rolling or compression on TV screen;
Analog models CPM-100N,CP-200S CN-100P/M CS-200P,CPB-PN	For these models since their input and output differ only in color frequency, the conversion is complete, the output picture is recordable, no picture rolling or compression on the TV screen.
Analog models CN-100P/(RF) CP-100N CN-100P/N,CS-100N	For these models since their input and output differ in all three frequencies, but converter only convert color frequency therefore the output picture is un-recordable, picture might be rolling constantly on screen if TV has no V-hold adjustment. Picture might be compressed (or extended) due to lack of line conversion.