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**Table 1: Resources used.**

<b>Configuration</b>	<b>Turbo Rates</b>	<b>Viterbi Rates</b>	<b>Virtex-4 Slices</b>	<b>Virtex-5 Slices</b>	<b>Block RAMS</b>
3GPP™ UMTS T					

S3G[1:0] Turbo Decoder Standard Select  
0 = 3GPP™ UMTS  
1 = 3GPP™ LTE  
2 = 3GPP2/1xEV-DV  
3 = 3GPP2/1xEV-DO

S3G[2] Viterbi Decoder Standard Select  
0 = 3GPP™  
1 = 3GPP2

SCLZ Extrinsic Information Scale (1–32)

SLD MAP Decoder Delay  
0 = delay 136  
1 = delay 264

SM Viterbi Decoder State Select  
0 = 16 state (constraint length 5)  
1 = 32 state (constraint length 6)  
2 = 64 state (constraint length 7)  
3 = 256 state (constraint length 9)

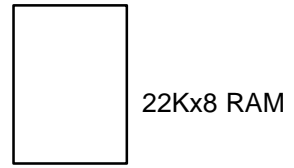
START Decoder Start

TB Tail Bite Select for Viterbi decoder  
0 = Terminated with  $m$  symbol tail  
1 = Tail Bite decoding

TCM Input data type select  
0 = Signed Magnitude  
1 = Two's Complement

VA V





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Figure 3: Simplified block diagram of PCD03V eight state turbo decoder.









Figure 8: Performance with block size 600,  
3GPP™



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