

2013jan24	MRD	predictions										
predicted loss versus cable length and frequency (includes adapters and what not)												
cable length		frequency in MHz										
in meters	20	50	100	200	300	400	500	600	650	700	800	
1	-0.61	-0.34	-0.05	0.566	0.874	1.18	1.54	1.94				For 20 and 50 MHz use from datasheet's balun loss of 0.6 and cable loss of .3 and .456 and no etch loss for 20 MHz see above; with cable scaled for length see above; with cable scaled for length just add 2m and 5m cable numbers together
2	-0.31	0.11	0.545	1.44	2.03	2.61	3.25	3.89				
5	0.59	1.48	2.33	4.06	5.49	6.91	8.38	9.71				
7	0.28	1.59	2.875	5.5	7.52	9.52	11.63	13.6				
measured losses versus cable length and frequency												
cable length		frequency in MHz										
in meters	20	50	100	200	300	400	500	600	650	700	800	
1	-0.61	-0.85	0.7	2.26	2.96	3.35	3.23	3.7				user predicted value for 20 MHz which hasen't been measured yet ! user predicted value for 20 MHz which hasen't been measured yet ! user predicted value for 20 MHz which hasen't been measured yet ! just add 2m and 5m cable numbers together; can't actually test as have no way to daisy chain 2 cables.
2	-0.31	-0.75	1.09	2.59	3.55	4.52	5.57	6.49				
5	0.59	1.63	3.5	4.46	5.98	7.73	8.8	11.29				
7	0.28	0.88	4.59	7.05	9.53	12.25	14.37	17.78				
response of Hittite HMCAD1511 ADC assuming wimple RC model and F3dB of 650 MHz (typical)												
F3dB	650	MHz										
		frequency in MHz										
ADC loss	20	50	100	200	300	400	500	600	650	700	800	
in dB	0.004	0.026	0.102	0.393	0.839	1.395	2.019	2.677	3.010	3.344	4.005	
net frequency response of the converted bits using measured cable losses as much as possible												
cable length		frequency in MHz										
in meters	20	50	100	200	300	400	500	600	650	700	800	
1	-0.606	-0.824	0.802	2.653	3.799	4.745	5.249	6.377				
2	-0.306	-0.724	1.192	2.983	4.389	5.915	7.589	9.167				
5	0.594	1.656	3.602	4.853	6.819	9.125	10.819	13.967				
7	0.284	0.906	4.692	7.443	10.369	13.645	16.389	20.457				