

Itanium Vector Math Library HP Labs, CERN

(Measured accuracy and performance 100,000 random arguments)
(memory to memory vector functions)

(All corner cases ISO 9899, ANSI/IEEE 754-1985 compliant, integrated)

URL: http://h21007.www2.hp.com/dspp/files/unprotected/vml/Itanium_VML.pdf

Function	Itanium 2 (cycles)	Accuracy (ulps)	Function	Itanium 2 (cycles)	Accuracy (ulps)
vabs	2.148	perfect	vabsf	2.268	perfect
vacos	11.674	-0.50039, 0.50033	vacosf	8.262	-0.50003, 0.49998
vacosh	14.149	-0.49984, 0.50013	vacoshf	9.732	-0.49999, 0.49999
vacot	9.845	-0.50020, 0.50020	vacotf	8.227	-0.50008, 0.49999
vacoth	13.797	-0.50022, 0.50015	vacothf	8.276	-0.49999, 0.49999
vasin	11.747	-0.50013, 0.50084	vasinf	9.652	-0.49999, 0.50008
vasinh	16.681	-0.50010, 0.50037	vasinhf	10.195	-0.49999, 0.49999
vatan	9.914	-0.49986, 0.50010	vatanf	7.661	-0.49999, 0.49999
vatan2	12.733	-0.49989, 0.50011	vatan2f	11.752	-0.49998, 0.49998
vatanh	12.682	-0.50018, 0.50040	vatanhf	9.222	-0.49999, 0.49999
vcos	11.696	-0.50031, 0.50052	vcosf	8.785	-0.49998, 0.50009
vcosh	9.633	-0.50054, 0.50066	vcoshf	7.644	-0.50004, 0.50007
vcot	16.759	-0.50050, 0.50040	vcotf	12.774	-0.50004, 0.49999
vcoth	12.177	-0.50024, 0.50024	vcothf	10.653	-0.49999, 0.49997
vdiv	6.116	-0.49999, 0.50000	vdivf	5.102	-0.49999, 0.49998
vexp	5.622	-0.50013, 0.50022	vexpf	4.612	-0.49999, 0.49999
vexp10	5.622	-0.50019, 0.50017	vexp10f	4.612	-0.50001, 0.50000
vexp2	5.132	-0.50019, 0.50016	vexp2f	4.612	-0.49998, 0.50001
vlog	6.661	-0.49990, 0.50009	vlogf	6.245	-0.49999, 0.49999
vlog10	6.661	-0.49976, 0.50020	vlog10f	6.213	-0.49999, 0.49999
vlog2	6.661	-0.49998, 0.49999	vlog2f	6.174	-0.49999, 0.49998
vpow	19.796	-0.50015, 0.50019	vpowf	15.444	-0.50003, 0.50001
vrcp	5.103	-0.49999, 0.49998	vrcpf	3.6	-0.49999, 0.50000
vrsqrt	7.644	-0.50019, 0.50016	vrsqrtf	5.624	-0.49999, 0.49999
vscn - vsin	13.239	-0.50041, 0.50040	vscnf - vsinf	11.709	-0.50000, 0.50001
vscn - vcos		-0.50051, 0.50031	vscnf - vcosf		-0.49997, 0.50011
vsin	11.695	-0.50041, 0.50040	vsinf	8.77	-0.50003, 0.50012
vsinh	10.633	-0.50048, 0.50049	vsinhf	7.185	-0.49998, 0.50005
vsqrt	7.138	-0.49998, 0.49999	vsqrtf	5.618	-0.49999, 0.49999
vtan	16.793	-0.50060, 0.50023	vtanf	12.774	-0.49998, 0.49999
vtanh	12.688	-0.50024, 0.50022	vtanhf	9.669	-0.49997, 0.49999