

EPS - SAPOS Produktdefinition 6.0 6.2013 - 2.1 (Anhang B.1) - AK-RB 21 - 2.4.2

Mountpoint	Land	SAPOS	Dienst	bps	GNSS	ID	Differential GPS Corrections			Delta Differential GPS Corrections			GPS Reference Station Parameters			GPS Time of Week	GPS Special Message	RTK Uncorrected Carrier Phases	RTK Uncorrected Pseudoranges	RTK Carrier Phase Corrections	High-Accuracy Pseudorange Corrections	Extended Reference Station Parameters			Antenna Type Definition Record	Antenna Reference Point (ARP)	Differential GLONASS Corrections	GNSS System Time Offset	Proprietary Message, FKP	Antenna	Anth	ARP_X	ARP_Y	ARP_Z	Message						
							1	2	3	14	16	18	19	20	21							22	23	24												31	37	59			
Produktdefinition	SAPOS		EPS		GG		1	3600	29	61	499															1		10													
EPS_2_2G_BB	BB	0023	EPS	1248	GG	1023	1			13	60	59																								SAPOS_LGB					
EPS_BB	BB	0004	EPS	1091	GG	4	1			13	60	59																								SAPOS_LGB					
EPS_BE	BE	0896	EPS	1071	GG	896	1			29	61																									3787401.840	896152.920	5036226.560			
EPS_BW	BW	0000	EPS	1162	GG	0	1			14																										4165924.410	659817.610	4768943.530			
EPS_BY	BY	0457	EPS	1314	GG	457	1			13																										4182374.740	888991.190	4716980.370			
EPS_HE	HE	0737	EPS	1292	GG	737	1			15																										4057378.350	642625.600	4862896.280			
EPS_HH-SH	HH-SH	0023	EPS	1020	GG	1023	1			13	60	59																									3678970.370	636505.790	5153972.700	SAPOS.GeoNord (EPS), RTCM 2.3, Hotline: 040/42826-5000	
EPS_MV	MV	0785	EPS	1073	GG	785	1			10	26																										3691917.100	796609.150	5122487.660	SAPOS_EPS	
EPS_NI	NI	0688	EPS	1220	GG	688	1			29	44	59																									3828388.080	620499.100	5046634.680	NI_EPS_0511-64609-222	
EPS_NI-Mitte	NI	0677	EPS	1208	GG	677	1	1		29	60	59																									3804452.390	618635.780	5064815.710	NI_EPS_Mitte 0511-64609-222	
EPS_NW-VRS	NW	0588	EPS	1328	GG	588	1			6																											3944312.540	518443.440	4968921.650		
EPS_RP	RP	0514	EPS	632	G	514	1			60																											4074063.710	538166.940	4862001.840	EPS_RP	
EPS_SL	SL	0931	EPS	773	GG	931	1			17	60	59																										4137360.760	489397.280	4813559.140	SAPOS_SL
EPS_SN	SN	0906	EPS	1227	GG	906	1			29	61	59																										3902644.650	973038.600	4933653.420	Trimble Pivot Platform in DGPS-Mode
EPS_LSA_Mitte	ST	0098	EPS	1165	GG	98	1			30	60	30																										3843072.510	790989.470	5011796.820	EPS_LSA_Mitte
EPS_LSA_VRS	ST	0023	EPS	994	GG	1023	1			30	60	31																										3812940.910	775751.600	5036975.650	EPS-LSA-VRS
EPS_TH	TH	0001	EPS	1019	GG	1	1			29	30																											3954940.000	771150.000	4927938.000	

Bestandsformate RTCM Version 2.3 (nicht in der SAPOS-Produktdefinition erfasst, weitere Unterstützung im Ermessen der SAPOS-Betreiberländer)

HEPS (RTCM 2.3 VRS) - AK RB 13/21 (2005)

							Differential GPS Corrections		Delta Differential GPS Corrections		GPS Reference Station Parameters				GPS Time of Week		GPS Special Message		RTK Uncorrected Carrier Phases		RTK Uncorrected Pseudoranges		RTK Carrier Phase Corrections		High-Accuracy Pseudorange Corrections		Extended Reference Station Parameters		Antenna Type Definition Record		Antenna Reference Point (ARP)		Differential GLONASS Corrections		GNSS System Time Offset		Proprietary Message, FKP	
Mountpoint	Land	SAPOS	Dienst	bps	GNSS	ID	1	2	3	14	16	18	19	20	21	22	23	24	31	37	59	Antenna	Anth	ARP_X	ARP_Y	ARP_Z	Message											
Sollwerte AK RB 13/21			VRS	G		1			13		59	1*	1*	1	1	13	10	10										* optional										
VRS_2_1G_BB	BB	0023	VRS	4298	G	1023	1	1	13	60	59				1	1	13	10	10				ADVNULLANTENNA		3746820.540	870162.750	5070826.300	SAPOS_LGB										
VRS_2_2G_BE	BE	0899	VRS	7050	GG	899	1		29	62				1	1						1	1			3784762.910	904532.150	5036748.890											
VRS_BY	BY	0439	VRS	4974		439			13				1	1			12		10				10	GPPNULLANTENNA		4182374.740	888991.190	4716980.370										
VRS_2_1G_HE	HE	0752	VRS	3253	G	752	1		14		60	1	1			14	26	20				9	ADVNULLANTENNA		4057378.350	642625.600	4862896.280	Trimble Pivot Platform in VRS-Mode										
VRS_2_HH-SH	HH-SH	0723	VRS	2343		723			13	61	59	1	1				60	60						GPPNULLANTENNA		3675798.640	634920.670	5156414.230	SAPOS.GeoNord (HEPS), RTCM 2.3 (VRS), Hotline: 040/42826-5000									
VRS_MV	MV	0000	VRS	3110	G	0	1		13	60	59				1	1		10	10					ADVNULLANTENNA		3675191.400	781186.050	5136857.090	SAPOS									
VRS_2_1G_NI	NI	0677	VRS	3431	G	677	1		13	60	59				1	1		10	10					GPPNULLANTENNA		3814803.980	617863.420	5057229.500	NI_VRS 0511-64609-222									
EPS_VRS_RP	RP	0525	VRS	5640	G	525	60		10			1	1			10	10	10						GPPNULLANTENNA		4083870.620	506250.480	4856924.750										
VRS_2_1G_RP	RP	0040	VRS	3414	G	40	1		10			1	1			10	10	10						GPPNULLANTENNA		4077334.140	500633.680	4862896.430										
VRS_2_2G_SL	SL	0023	VRS	4022	GG	1023	1		15	60	59			1	1	14	17	17	1	1				ADVNULLANTENNA		4118735.580	503030.240	4827868.320	SAPOS_SL									
VRS_SN	SN	0900	VRS	3490	G	900	1		14		59	1	1			14	11	11				9	ADVNULLANTENNA		3902644.650	973038.600	4933653.420	Trimble Pivot Platform in VRS-Mode										
VRS_2_1G_ST	ST	0023	VRS	5814	GG	1023	1		13	60	60			1	1	13	10	10	1	1				ADVNULLANTENNA		3812940.910	775751.600	5036975.650	RTCM23_VRS									
VRS_TH	TH	0816	VRS	2666		816			14	13		1	1			14	11	10				9	GPPNULLANTENNA		3948221.120	767456.440	4933653.420											

HEPS (RTCM 2.3 FKP) - AK RB 13/21 (2005)

Mountpoint	Land	SAPOS	Dienst	bps	GNSS	ID	1	2	3	14	16	18	19	20	21	22	23	24	31	37	59	Antenna	Anth	ARP_X	ARP_Y	ARP_Z	Message	
Sollwerte AK RB 13/21																											* optional	
FKP_2_1G_BB	BB	0016	FKP	4727	G	16	1		13	60	59		1*	1*	1	1	13	10	10	1*		10	15	ADNULLANTENNA	3745501.240	874790.190	5070967.050	SAPOS_LGB
FKP_2_2G_BE	BE	0896	FKP	7351	GG	896	1		29	62				1	1					1	1	5		3787401.840	896152.920	5036226.560		
FKP_2_HH-SH	HH-SH	0723	FKP	3011	G	723	10		13	61	59			1	1	13	10	10				10	GPPNULLANTENNA	3686330.190	640207.360	5148203.670	SAPOS.GeoNord (HEPS), RTCM 2.3 (FKP), Hotline: 040/42826-5000	
FKP_MV	MV	0000	FKP	3076	G	0	1		13	60	61			1	1		10	10				11	ADVNULLANTENNA	3665625.510	785720.720	5142883.170	SAPOS	
FKP_2_1G_NI	NI	0677	FKP	4084	G	677	1		13	60	59			1	1		10	10			13	GPPNULLANTENNA	3804452.390	618635.780	5064815.710	NI_FKP 0511-64609-222		
FKP_2_1G_RP	RP	0525	FKP	3158		525			10					1	1	10	10	10			10	GPPNULLANTENNA	4083870.620	506250.480	4856924.750			
FKP_2_2G_SL	SL	0934	FKP	4730	GG	934	1		15	60	61			1	1	15	16	16	1	1	5	ADVNULLANTENNA	4117343.170	497236.480	4829926.500	SAPOS_SL		
FKP_SN	SN	0149	FKP	3546		149		60	13					1	1	12	10				1	ADVNULLANTENNA	3905100.840	986637.880	4929291.830			
FKP_2_1G_ST	ST	0082	FKP	6805	GG	82	1		13	60	60			1	1	13	10	10	1	1	5	ADVNULLANTENNA	3832767.850	773525.920	5022314.320	RTCM23_FKP		

HEPS (VRS) - SAPOS Produktdefinition 6.0 6.2013 - 2.2 (Anhang B.2) - AK-RB 21 - 2.4.2

Mountpoint	Land	SAPOS	Dienst	bps	GNSS	ID	1003	1004	1005	1006	1007	1008	1012	1013	1014	1015	1016	1017	1021	1023	1025	1029	1030	1031	1032	1033	1034	1035	1037	1038	1039	1074	1084	1230	4094	Antenna	Anth	ARP_X	ARP_Y	ARP_Z	CRS	Message
Produktdefinition SAPOS			VRS3		GG	4095	1	10					1	60*					30*	30*	30*	60*	30*	30*	10	10									GPNULLANTENNA						nach GeoInfoDok, max. 31 Zeichen	[BL]_[Datentyp]_[Hotline-Nr.]
VRS_3_2G_BB	BB	0016	VRS3	3036	GG	16	1	(0/2)	10		10	1	(0/1)	60					30	30	30		30	30	?	10									GPNULLANTENNA	0.000	3746820.541	870162.750	5070826.301	ETRS89_UTM33-DE_DHHN92_NH		
VRS_3_2G_BE	BE	0899	VRS3	2530	GG	899	1			13	17	1	(0/3)												?											GPNULLANTENNA		3784762.909	904532.152	5036748.888		
VRS_3_2G_BW	BW	0397	VRS3	2458	GG	397							1	(0/3)					42	42				30	30	?									GPNULLANTENNA		4223169.147	668884.282	4716980.370	DE_DHDN_3GK3*DE_DHHN92_NH		
VRS_3_2G_BY	BY	0272	VRS3	2454	GG	272							1	(0/3)					42	42	42			30	30	?									GPNULLANTENNA		4182374.742	888991.195	4716980.370	DHDN2011_NN2007_Bayern	BY_VRS_089-21291030	
VRS_3_2G_HE	HE	0287	VRS3	2469	GG	287							1	(0/3)					42	42				30	30	?									GPNULLANTENNA		4057378.350	642625.599	4862896.284	DE_DHDN_3GK3_HE*DE_DHHN92_NH		
VRS_3_2G_HH-SH	HH-SH	0723	VRS3	2428	GG	723					10		1	(0/1)	60				30	30	30	59	30	30	?	10									GPNULLANTENNA		3678970.375	636505.793	5153972.702	ETRS89_UTM32-DE_DHHN92_NH	SAPOS.GeoNord (HEPS), RTCM 3.1 (VRS), GPS+GLONASS, Hotline: 040/42826-5000	
VRS_3_2G_HH-SH	HH-SH	0723	VRS3	914	G	723	1				10											59			?											GPNULLANTENNA		3678970.375	636505.793	5153972.702		SAPOS.GeoNord (HEPS), RTCM 3.0 (VRS), Hotline: 040/42826-5000
VRS_3M_2G_HH-SH	HH-SH	0723	VRS3	2343	GG	723					26								30	30	30	59	30	30	?	10									GPNULLANTENNA		3678970.375	636505.793	5153972.702	ETRS89_UTM32-DE_DHHN92_NH	SAPOS.GeoNord (HEPS), RTCM 3.2 (VRS), GPS+GLONASS, Hotline: 040/42826-5000	
VRS_3_MV	MV	0773	VRS3	2454	GG	773						10	1	(0/1)	61										?										GPNULLANTENNA		3671272.237	783058.228	5139357.073			
VRS_3_2G_NI	NI	0677	VRS3	2755	GG	677						10	1	(0/1)	60				30	30	30	60	30	30	?	10									GPNULLANTENNA		3810786.734	618167.718	5060200.135	ETRS89_UTM32-DE_DHHN92_NH	NI_VRS3_0511-64609-222	
VRS_3_2G_NW	NW	0585	VRS3	2920	GG	585						10	1	(0/1)					42	42				5	5	?									GPNULLANTENNA		3944697.047	519329.219	4968472.022	DHDN_N77		
VRS_3_1G_RP	RP	0525	VRS3	1412	G	525					10	10			10				41	42	42				?	10									GPNULLANTENNA	0.191	4077334.137	500633.682	4862896.430	ETRS89_UTM32-DE_DHHN92_NH		
VRS_3_2G_RP	RP	0525	VRS3	2518	GG	525					11		10	1	(0/1)	9				42	42	42				?	10								GPNULLANTENNA	0.191	4077334.137	500633.682	4862896.430	ETRS89_UTM32-DE_DHHN92_NH		
VRS_3_2G_SL	SL	0934	VRS3	2578	GG	934						1	(0/1)	60					30	30	30	60	30	30	?	10									GPNULLANTENNA		4118419.541	501827.537	4828260.427	DHDN_3GK2_SL197	SL_VRS_0681-9712222	
VRS_3_2G_SN	SN	0149	VRS3	1461	G	149						1	(0/3)						41	42				30	?	10									GPNULLANTENNA		3902644.650	973038.596	4933653.421	DHHN92		
VRS_3_2G_SN	SN	0149	VRS3	2472	GG	149							1	(0/3)					42	42				60	30	?	10								GPNULLANTENNA		3902644.650	973038.596	4933653.421	DHHN92		
VRS_3_2G_SN_RD83	SN	0149	VRS3	2460	GG	149						1	(0/1)						42	42				30	30	?	10								GPNULLANTENNA		3902644.650	973038.596	4933653.421	DE_RD83		
PRS_3_2G_ST	ST	0100	VRS3	2467	GG	100						1	(0/1)	60					60	60				10	10	?									GPNULLANTENNA		3819363.645	775040.659	5032248.678	ETRS89_NHN_GCG2011		
VRS_3_1G_ST	ST	0100	VRS3	1453	G	100									60				60	60			30	11	?										GPNULLANTENNA		3812940.909	775751.596	5036975.654	ETRS89_NHN_GCG2011	RTCM30_VRS	
VRS_3_2G_ST	ST	0100	VRS3	2459	GG	100							1	(0/1)	48					60	60			30	11	10	?								GPNULLANTENNA		3812940.909	775751.596	5036975.654	ETRS89_NHN_GCG2011	RTCM30_VRS_GG	
VRS_3_2G_TH	TH	0209	VRS3	2221	GG	209						1	(0/3)						42	41	42			30	30	?	10								GPNULLANTENNA		3948221.117	767456.441	4933653.421	PDB3_DHHN92		
VRS_3_GG_TH	TH	0209	VRS3	2224	GG	209						1	(0/3)						42	42	42			30	30	?	10								GPNULLANTENNA		3948221.117	767456.441	4933653.421	PDB3_DHHN92		

HEPS (VRS) - SAPOS Produktdefinition 6.0 6.2013 - 2.2 (Anhang B.3) - AK-RB 21 - 2.4.2

Mountpoint	Land	SAPOS	Dienst	bps	GNSS	ID	1003	1004	1005	1006	1007	1008	1012	1013	1014	1015	1016	1017	1021	1023	1025	1029	1030	1031	1032	1033	1034	1035	1037	1038	1039	1074	1084	1230	4094	Antenna	Anth	ARP_X	ARP_Y	ARP_Z	CRS	Message	
Produktdefinition SAPOS			MAC3		GG		1	10					1	60*	10 (5)	10*	10*		10	10	10	60*	30*	10	10											GPNULLANTENNA						nach GeoInfoDok, max. 31 Zeichen	[BL]_[Datentyp]_[Hotline-Nr.]
MAC_3_2G_BB	BB	0000	MAC3	3478	GG	0	1	(0/2)	10		10	1	(0/1)	60	15 (5)				15	30	30			30	30	?	10									GPNULLANTENNA		3745501.241	874790.192	5070967.055	ETRS89_UTM33-DE_DHHN92_NH		
MAC_3_2G_BE	BE	0898	MAC3	3193	GG	898	1	(0/2)	16		10	1	(0/1)	11 (5)				11						31	31	?											GPNULLANTENNA	0.081	3789641.501	916964.084	5030824.037		
MAC_3_2G_BW	BW	0397	MAC3	3230	GG	397							1	(0/1)	50 (5)				10	42						10										ADVNULLANTENNA		4214034.005	684329.320	4723570.577	DE_DHDN_3GK3*DE_DHHN92_NH		
MAC_3_2G_BY	BY	0272	MAC3	3366	GG	272							1	(0/1)	10 (5)				10	46	46	46				10									ADVNULLANTENNA		4191647.063	899148.695	4707396.811	DHDN2011_NN2007_Bayern	BY_MAC_089-21291030		
MAC_3_2G_HE	HE	0287	MAC3	3209	GG	287							1	(0/1)	30 (5)				10	46	46					10										ADVNULLANTENNA		4059859.638	652148.353	4859622.611	DE_DHDN_3GK3_HE*DE_DHHN92_NH		
MAC_3_2G_HH-SH	HH-SH	0723	MAC3	3217	GG	723							1	(0/1)	60	12 (5)			12	30	30	30	59	30	30	?	10									GPNULLANTENNA		3686330.191	640207.359	5148203.666	ETRS89_UTM32-DE_DHHN92_NH	SAPOS.GeoNord (HEPS), RTCM 3.1 (MAC), Hotline: 040/42826-5000	
MAC_3M_2G_HH-SH	HH-SH	0723	VRS3	2346	GG	723					10								30	30	30	59	30	30	?	10									GPNULLANTENNA		3678970.375	636505.793	5153972.702	ETRS89_UTM32-DE_DHHN92_NH	SAPOS.GeoNord (HEPS), RTCM 3.2 (VRS), GPS+GLONASS, Hotline: 040/42826-5000		
MAC_3_2G_NI	NI	0677	MAC3	3544	GG	677						1	(0/1)	60	13 (5)			13	30	30	30	60	30	30	?	10									GPNULLANTENNA		3804452.395	918635.782	5064815.708	ETRS89_UTM32-DE_DHHN92_NH	NI_MAC3_0511-64609-222		
MAC_3_2G_NW	NW	0585	MAC3	3644	GG	585						1	(0/1)	10 (5)				10	46	47					?	10									ADVNULLANTENNA		3955213.645	519785.516	4960272.291	DHDN_N77			
MAC_3_1G_RP	RP	0525	MAC3	2357	G	525					10		10	10 (5)	5	5			46	46	46				?	10									ADVNULLANTENNA	0.191	4083870.624	506250.481	4856924.747	ETRS89_UTM32-DE_DHHN92_NH			
MAC_3_2G_RP	RP	0525	MAC3	4215	GG	525					10		10	10 (5)	10 (5)	5	5		47	46	46				?	10									ADVNULLANTENNA	0.191	4083870.624	506250.481	4856924.747	ETRS89_UTM32-DE_DHHN92_NH			
MAC_3_2G_SL	SL	0932	MAC3	3148	GG	932					9		1	(0/1)	51	11 (5)			11	30	30	60	30	30	?	10									ADVNULLANTENNA		4117343.170	497236.480	4829926.502	DHDN_3GK2_SL197	SL_MAC_0681-9712222		
MAC_3_2G_SN	SN	0149	MAC3	2631	GG	149							1	(0/1)	12 (6)				20	42	42				?	10									ADVNULLANTENNA		3905100.837	986637.882	4929291.833	DHHN92			
MAC_3_2G_ST	ST	0100	MAC3	3166	GG	100							1	(0/1)	60	10 (4)			10	60	60					?	10								ADVNULLANTENNA		3832767.855	773525.922	5022314.317	ETRS89_NHN_GCG2011			
MAC_3_2G_TH	TH	0209	MAC3	2370	GG	209							1	(0/1)	60	50 (5)			50	42	42	42				?	10								GPNULLANTENNA		3947466.910	769328.877	4934103.989	PDB3_DHHN92			

HEPS (FKP) - SAPOS Produktdefinition in Vorbereitung

Mountpoint	Land	SAPOS	Dienst	bps	GNSS	ID	1003	1004	1005	1006	1007	1008	1012	1013	1014	1015	1016	1017	1021	1023	1025	1029	1030	1031	1
------------	------	-------	--------	-----	------	----	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	---