

Country	External IP Address	External Port (internal)	Mount Point Name	Corrections	Group	Description	Horizontal Reference Frame	Vertical Reference Frame	Accuracy [m]	
Germany	www.vrsnow.de 212.18.21.155	2101 (2101)	TVN_CM_R Plus	GPS, GLO	Survey	CMR+	ETRS89	Ellipsoid GRS80	0,01-0,02	
			TVN_CM_R X	GPS, GLO, GAL, BDS	Survey	CMRx	ETRS89	Ellipsoid GRS80	0,01-0,02	
			TVN_CM_R X GPS_GLO	GPS, GLO	Survey	CMRx	ETRS89	Ellipsoid GRS80	0,01-0,02	
			TVN_DGPS	GPS	Survey	RTCM 2	ETRS89	Ellipsoid GRS80	0,5-1,0	
			TVN_RTCM_23	GPS	Survey	RTCM 2	ETRS89	Ellipsoid GRS80	0,01-0,02	
			TVN_RTCM_31	GPS, GLO	Survey	RTCM 3.1	ETRS89	Ellipsoid GRS80	0,01-0,02	
			TVN_RTCM_32	GPS, GLO, GAL, BDS	Survey	RTCM 3.2 MSM5	ETRS89	Ellipsoid GRS80	0,01-0,02	
			TVN_RTCM_31_GPS_only	GPS	Survey	RTCM 3.1	ETRS89	Ellipsoid GRS80	0,01-0,02	
			www.vrsnow.de 212.18.21.155	2102 (2102)	RTCM Online Transformation [based on governmental data, which was for free for Trimble]	TVN_DE_TR_BB	GPS, GLO, GAL, BDS	Survey	Brandenburg - RTCM Online Transformation	ETRS89
	TVN_DE_TR_BE	GPS, GLO, GAL, BDS	Survey	Berlin - RTCM Online Transformation	DHDN	DHHN92	0,1			
	TVN_DE_TR_BW	GPS, GLO, GAL, BDS	Survey	Baden Württemberg - RTCM Online Transformation	DHDN	DHHN92	0,1			
	TVN_DE_TR_BY	GPS, GLO, GAL, BDS	Survey	Bayern - RTCM Online Transformation	DHDN	DHHN92	0,1			
	TVN_DE_TR_HE	GPS, GLO, GAL, BDS	Survey	Hessen - RTCM Online Transformation	DHDN	DHHN92	0,1			
	TVN_DE_TR_HH	GPS, GLO, GAL, BDS	Survey	Hamburg - RTCM Online Transformation	DHDN	DHHN92	0,1			
	TVN_DE_TR_MV	GPS, GLO, GAL, BDS	Survey	Mecklenburg Vorpommern - RTCM Online Transformation	42/83-3°	DHHN92	0,1			
	TVN_DE_TR_NI_HB	GPS, GLO, GAL, BDS	Survey	Niedersachsen, Bremen - RTCM Online Transformation	DHDN	DHHN92	0,1			
	TVN_DE_TR_NRW	GPS, GLO, GAL, BDS	Survey	Nordrhein Westfalen - RTCM Online Transformation	DHDN	DHHN92	0,1			
	TVN_DE_TR_RP	GPS, GLO, GAL, BDS	Survey	Rheinland Pfalz - RTCM Online Transformation	DHDN	DHHN92	0,1			
	TVN_DE_TR_SH	GPS, GLO, GAL, BDS	Survey	Schleswig Holstein - RTCM Online Transformation	DHDN	DHHN92	0,1			
TVN_DE_TR_SL	GPS, GLO, GAL, BDS	Survey	Saarland - RTCM Online Transformation	DHDN	DHHN92	0,1				
TVN_DE_TR_SN	GPS, GLO, GAL, BDS	Survey	Sachsen - RTCM Online Transformation	DHDN	DHHN92	0,1				
TVN_DE_TR_ST	GPS, GLO, GAL, BDS	Survey	Sachsen Anhalt - RTCM Online Transformation	42/83-3°	DHHN92	0,1				
TVN_DE_TR_TH	GPS, GLO, GAL, BDS	Survey	Thüringen - RTCM Online Transformation	DHDN	DHHN92	0,1				
TVN_DE_TR_DBREF	GPS, GLO, GAL, BDS	Survey	Germany - RTCM Online Transformation	DB_REF	DB_REF					
TVN_DE_TR_Hoehe	GPS, GLO, GAL, BDS	Survey	Germany - Height only - RTCM Online Transformation	ETRS89	DHHN92					
TVN_DE_RTCM32_TR_HOEHE	GPS, GLO, GAL, BDS	Survey	Germany - Height only - RTCM Online Transformation	ETRS89	DHHN92					
TVN_DE_RTCM32_TR_HOEHE16	GPS, GLO, GAL, BDS	Survey	Germany - Height only (new Geoid GCG2016) - RTCM Online Transformation	ETRS89	DHHN2016					
www.vrsnow.de 212.18.21.155	2103 (2103)	RTCM Online Transformation [based on data from Ing. office SEILER. We have to pay a special amount to them for every subscription sold]	TVN_DE_TR_Plus_BB	GPS, GLO	Transformation PLUS	Brandenburg - RTCM Online Transformation	42/83-3°	DHHN92	0,05	
TVN_DE_TR_Plus_BE	GPS, GLO	Transformation PLUS	Berlin - RTCM Online Transformation	DHDN	DHHN92	0,05				
TVN_DE_TR_Plus_BW	GPS, GLO	Transformation PLUS	Baden Württemberg - RTCM Online Transformation	DHDN	DHHN92	0,03				
TVN_DE_TR_Plus_BY	GPS, GLO	Transformation PLUS	Bayern - RTCM Online Transformation	DHDN	DHHN92	0,05 – 0,10				
TVN_DE_TR_Plus_HB	GPS, GLO	Transformation PLUS	Bremen - RTCM Online Transformation	DHDN	DHHN92	0,02				
TVN_DE_TR_Plus_HE	GPS, GLO	Transformation PLUS	Hessen - RTCM Online Transformation	DHDN	DHHN92	0,02				
TVN_DE_TR_Plus_HH	GPS, GLO	Transformation PLUS	Hamburg - RTCM Online Transformation	DHDN	DHHN92	0,02				
TVN_DE_TR_Plus_MV	GPS, GLO	Transformation PLUS	Mecklenburg Vorpommern - RTCM Online Transformation	42/83-3°	DHHN92	0,05				
TVN_DE_TR_Plus_NI	GPS, GLO	Transformation PLUS	Niedersachsen - RTCM Online Transformation	DHDN	DHHN92	0,02				
TVN_DE_TR_Plus_NRW	GPS, GLO	Transformation PLUS	Nordrhein Westpfalen - RTCM Online Transformation	DHDN	DHHN92	0,05 – 0,10				
TVN_DE_TR_Plus_RP	GPS, GLO	Transformation PLUS	Rheinland Pfalz - RTCM Online Transformation	DHDN	DHHN92	0,03				
TVN_DE_TR_Plus_SH	GPS, GLO	Transformation PLUS	Schleswig Holstein - RTCM Online Transformation	DHDN	DHHN92	0,05 – 0,10				
TVN_DE_TR_Plus_SL	GPS, GLO	Transformation PLUS	Saarland - RTCM Online Transformation	DHDN	DHHN92	0,05				
TVN_DE_TR_Plus_SN	GPS, GLO	Transformation PLUS	Sachsen - RTCM Online Transformation	DHDN	DHHN92	0,03				
TVN_DE_TR_Plus_ST	GPS, GLO	Transformation PLUS	Sachsen Anhalt - RTCM Online Transformation	42/83-3°	DHHN92	0,05				
TVN_DE_TR_Plus_TH	GPS, GLO	Transformation PLUS	Thüringen - RTCM Online Transformation	DHDN	DHHN92	0,05				
www.vrsnow.de 212.18.21.155	2104 (2104)	local transformation	TVN_DE_RTCM31_TR_Lokal	GPS, GLO	Transformation PLUS	for whole Germany but with fixed Trafo parameters in rover	DHDN / 42/83	DHHN92	see above	
TVN_DE_RTCM32_TR_LOCAL	GPS, GLO, GAL, BDS	Transformation PLUS	for whole Germany but with fixed Trafo parameters in rover	DHDN / 42/83	DHHN92	see above				
TVN_DE_CM_R Plus_TR_Lokal	GPS, GLO	Transformation PLUS	for whole Germany but with fixed Trafo parameters in rover	DHDN / 42/83	DHHN92	see above				
TVN_DE_CM_RX_TR_LOCAL	GPS, GLO, GAL, BDS	Transformation PLUS	for whole Germany but with fixed Trafo parameters in rover	DHDN / 42/83	DHHN92	see above				
www.vrsnow.de 212.18.21.155	2105 (2105)	local transformation	TVN_DE_TR_Lokale_Hoehe	GPS, GLO	Survey	Germany, Height only, with constant height offset in rover = -45m	ETRS89	DHHN92		
TVN_DE_RTCM32_TR_LOCAL_HEIGHT	GPS, GLO, GAL, BDS	Survey	Germany, Height only, with constant height offset in rover = -45m	ETRS89	DHHN92					
TVN_DE_RTCM32_TR_LOCAL_HEIGHT16	GPS, GLO, GAL, BDS	Survey	Germany, Height only, with constant height offset in rover = -45m	ETRS89	DHHN2016					
www.vrsnow.de 212.18.21.155	2160 (2160)		TVN_H-STAR	GNSS	GIS (H-Star)	encrypted CMR+ data; Survey devices are not able to work with	ETRS89	Ellipsoid GRS80	0,1	
TVN_DGPS_GIS	GNSS	GIS (H-Star)	RTCM 2	ETRS89	Ellipsoid GRS80	0,5-1,0				
www.vrsnow.de 212.18.21.155	2170 (2170)		TVN_AG_GPS	GPS	AG	encrypted CMR+ data; Survey devices are not able to work with	ETRS89	Ellipsoid GRS80	0,01-0,02	
TVN_AG_GNSS	GPS, GLO	AG	encrypted CMR+ data; Survey devices are not able to work with	ETRS89	Ellipsoid GRS80	0,01-0,02				
TVN_AG	GPS, GLO, GAL, BDS	AG	CMRx	ETRS89	Ellipsoid GRS80	0,01-0,02				
TVN_AG_DGPS	GPS	AG	RTCM 2	ETRS89	Ellipsoid GRS80	0,5-1,0				

Transformation Parameters for Local Transformation (Port 2104):

Bessel - DHDN:
dX= -584.9567m
dY= -107.7277m
dZ= -413.8036m
eX= 1.115526"
eY= 0.282417"
eZ= -3.138451"

Krassowski - 42/83:
dX= -23.3189m
dY= 121.7132m
dZ= 90.9399m
eX= 0.041789"
eY= -0.163727"
eZ= -0.147479"

m= -7.992171ppm

m= -0.799309ppm

BE, BW, BY, HB, HE, HH,
NI, NRW, RP, SH, SL, SN,
TH

BB, MV, ST