

# ISO Geodetic Registry

<i>Item class</i>	Transformation	
<i>Name</i>	<b>ITRF97 to NAD 83 (CORS96) Epoch 1997.0 [v1]</b>	
<i>Item status</i>	VALID	
<i>Identifier</i>	604	
<i>Information source</i>	<i>Title</i>	NGS No Longer Updates Published CORS Coordinates in the Following Reference Frames
	<i>Author</i>	National Geodetic Survey
	<i>Publisher</i>	National Oceanic and Atmospheric Administration (NOAA) National Geodetic Survey (NGS)
	<i>Revision date</i>	2017-03-16
	<i>Edition date</i>	2017-03-16
	<i>Series/Journal name</i>	NGS Online listing of transformation parameters
	<i>Other citation details</i>	webpage
	<i>Title</i>	Introducing HTDP 3.1 to transform coordinates across time and spatial reference frames
	<i>Author</i>	C. Pearson, R.A. Snay
	<i>Publisher</i>	Springer-Verlag
<i>Information source</i>	<i>Publication date</i>	2013-01-01
	<i>Edition date</i>	2013-01-01
	<i>Series/Journal name</i>	GPS Solutions
	<i>Issue identification</i>	Volume 17, No. 1
	<i>Page</i>	1-15
	<i>Other citation details</i>	NAD83 (2011), NAD83 (MA11), NAD83 (PA11) transformation from IGB08
	<i>Title</i>	Continuously Operating Reference Station (CORS): History, Applications, and Future Enhancements
	<i>Author</i>	R.A. Snay, T. Soler
	<i>Publisher</i>	ASCE
	<i>Publication date</i>	2008-04-01
<i>Information source</i>	<i>Edition date</i>	2008-04-01
	<i>Series/Journal name</i>	Journal of Surveying Engineering
	<i>Issue identification</i>	Volume 134, No. 4
	<i>Page</i>	95-104
	<i>Other citation details</i>	NAD83 (CORS96) Epoch 1996.0,NAD83 (CORS96) Epoch 1997.0,NAD83 (CORS96) Epoch 2002.0
	<i>Title</i>	
	<i>Author</i>	
	<i>Publisher</i>	
	<i>Publication date</i>	
	<i>Edition date</i>	
<i>Data source</i>	ISO Geodetic Registry	
<i>Remarks</i>	Transformation defines NAD83(CORS96) and is treated as errorless.	
<i>Operation version</i>	v1	
<i>Scope</i>	Spatial referencing	
<i>Operation accuracy</i>	0.0 m	
<i>Source CRS</i>	ITRF97 - XYZ	
<i>Target CRS</i>	NAD 83 (CORS96) Epoch 1997.0 - XYZ	
<i>Operation method</i>	Time-Dependent Coordinate Frame Transformation (geocentric Cartesian domain)	

## Extent

<i>Description</i>	<b>United States and Territories - onshore and offshore: Puerto Rico. United States (USA) - Alaska, CONUS (Alabama, Arizona, Arkansas, California, Colorado, Connecticut,</b>
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**Delaware, Florida, Georgia, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Utah, Vermont, Virginia, Washington, West Virginia, Wisconsin, Wyoming). Virgin Islands (US).**

<i>Geographic Bounding Box</i>	<i>West-bound longitude</i>	167.65
	<i>North-bound latitude</i>	74.71
	<i>East-bound longitude</i>	-63.88
	<i>South-bound latitude</i>	14.92

#### Operation parameter values

<i>Time reference</i>	1997.0 year
<i>Rate of change of scale difference</i>	-0.19 parts per billion per year
<i>Rate of change of Z-axis rotation</i>	-0.031 milliarc-second per year
<i>Rate of change of Y-axis rotation</i>	-0.757 milliarc-second per year
<i>Rate of change of X-axis rotation</i>	0.067 milliarc-second per year
<i>Rate of change of Z-axis translation</i>	0.0019 metre per year
<i>Rate of change of Y-axis translation</i>	-1.0E-4 metre per year
<i>Rate of change of X-axis translation</i>	7.0E-4 metre per year
<i>Scale difference</i>	-0.93 parts per billion
<i>Z-axis rotation</i>	11.599 milliarc-second
<i>Y-axis rotation</i>	9.426 milliarc-second
<i>X-axis rotation</i>	25.915 milliarc-second
<i>Z-axis translation</i>	-0.503 metre
<i>Y-axis translation</i>	-1.9074 metre
<i>X-axis translation</i>	0.9889 metre

# ISO Geodetic Registry

<i>Item class</i>	OperationMethod
<i>Name</i>	<b>Time-Dependent Coordinate Frame Transformation (geocentric Cartesian domain)</b>
<i>Item status</i>	VALID
<i>Identifier</i>	94
<i>Alias</i>	Time-Dependent 7-Parameter Transformation
<i>Alias</i>	14-Parameter Transformation
<i>Alias</i>	Time-Dependent Coordinate Frame Transformation
<i>Data source</i>	ISO Geodetic Registry
<i>Remarks</i>	Note the analogy with the Time-dependent Position Vector Transformation but beware of the differences! The Position Vector Transformation convention is used by IAG.
<i>Formula</i>	Geomatics Guidance Note No 7, part 2: Coordinate Conversions and Transformations including Formulas

## Operation parameters

<i>X-axis translation</i>
<i>Y-axis translation</i>
<i>Z-axis translation</i>
<i>X-axis rotation</i>
<i>Y-axis rotation</i>
<i>Z-axis rotation</i>
<i>Scale difference</i>
<i>Rate of change of X-axis translation</i>
<i>Rate of change of Y-axis translation</i>
<i>Rate of change of Z-axis translation</i>
<i>Rate of change of X-axis rotation</i>
<i>Rate of change of Y-axis rotation</i>
<i>Rate of change of Z-axis rotation</i>
<i>Rate of change of scale difference</i>
<i>Time reference</i>