

# ISO Geodetic Registry

<i>Item class</i>	Transformation	
<i>Name</i>	<b>ITRF2008 to NAD 83 (2011) Epoch 2010 [v1]</b>	
<i>Item status</i>	VALID	
<i>Identifier</i>	566	
<i>Information source</i>	<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>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>	Publication of North American Datum of 1983 (2011) Epoch 2010.00, North American Datum of 1983 (PA2011) Epoch 2010.00 and North American Datum of 1983 (MA2011) Epoch 2010.00
<i>Information source</i>	<i>Author</i>	US Government
	<i>Publisher</i>	Office of Federal Register, NARA
	<i>Publication date</i>	2013-08-08
	<i>Edition date</i>	2013-08-08
	<i>Series/Journal name</i>	Federal Register Notice
	<i>Issue identification</i>	Volume 78, No. 153, Document: 2013–19167, Citation: 78 FR 48421
	<i>Page</i>	48421-48422
	<i>Title</i>	CORS Coordinates
	<i>Author</i>	National Geodetic Survey
	<i>Publisher</i>	National Oceanic and Atmospheric Administration (NOAA) National Geodetic Survey (NGS)
<i>Information source</i>	<i>Revision date</i>	2017-05-16
	<i>Series/Journal name</i>	NGS Online listing of transformation parameters
	<i>Other citation details</i>	webpage
	<i>Data source</i>	ISO Geodetic Registry
	<i>Remarks</i>	Transformation defines NAD83(2011) 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>	ITRF2008 - XYZ	
<i>Target CRS</i>	NAD 83 (2011) Epoch 2010 - 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, Delaware, Florida, Georgia, Idaho, Illinois,</b>
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**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>X-axis translation</i>	0.99343 metre
<i>Y-axis translation</i>	-1.90331 metre
<i>Z-axis translation</i>	-0.52655 metre
<i>X-axis rotation</i>	25.91467 milliarc-second
<i>Y-axis rotation</i>	9.42645 milliarc-second
<i>Z-axis rotation</i>	11.59935 milliarc-second
<i>Scale difference</i>	1.71504 parts per billion
<i>Rate of change of X-axis translation</i>	7.9E-4 metre per year
<i>Rate of change of Y-axis translation</i>	-6.0E-4 metre per year
<i>Rate of change of Z-axis translation</i>	-0.00134 metre per year
<i>Rate of change of X-axis rotation</i>	0.06667 milliarc-second per year
<i>Rate of change of Y-axis rotation</i>	-0.75744 milliarc-second per year
<i>Rate of change of Z-axis rotation</i>	-0.05133 milliarc-second per year
<i>Rate of change of scale difference</i>	-0.10201 parts per billion per year
<i>Time reference</i>	1997.0 year

# 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>