

ISO Geodetic Registry

<i>Item class</i>	Transformation	
<i>Name</i>	IGb08 to IGS14 [IGS v1]	
<i>Item status</i>	VALID	
<i>Identifier</i>	611	
<i>Information source</i>	<i>Title</i>	ITRF2014: A new release of the International Terrestrial Reference Frame modeling nonlinear station motions
	<i>Author</i>	Z. Altamimi, P. Rebischung, L. Metivier, X. Collilieux
	<i>Publisher</i>	American Geophysical Union
	<i>Publication date</i>	2016-08-04
	<i>Edition date</i>	
	<i>Series/Journal name</i>	Journal of Geophysical Research Solid Earth
<i>Information source</i>	<i>Issue identification</i>	Volume 121, Issue 8
	<i>Title</i>	Upcoming switch to IGS14/igs14.atx
	<i>Author</i>	P. Rebischung
	<i>Publisher</i>	International GNSS Service (IGS)
	<i>Publication date</i>	2016-12-21
	<i>Series/Journal name</i>	IGSMail
<i>Information source</i>	<i>Issue identification</i>	7399.0
	<i>Title</i>	Analysis and results of ITRF2014
	<i>Author</i>	Z. Altamimi, P. Rebischung, L. Metivier, X. Collilieux
	<i>Publisher</i>	International Earth Rotation and Reference Systems Service Central Bureau, Verlag des Bundesamts für Kartographie und Geodäsie, Frankfurt am Main, Germany
	<i>Publication date</i>	2017
	<i>Edition date</i>	
<i>Data source</i>	<i>Series/Journal name</i>	IERS Technical Notes
	<i>Issue identification</i>	38.0
	<i>ISO Geodetic Registry</i>	
<i>Remarks</i>	Transformation identical with ITRF2008 to ITRF2014 due to IGb08 being aligned to ITRF2008 and IGS14 being aligned to ITRF2014. Accuracy of transformation is given at the reference epoch for the transformation parameters. Accuracy at other epochs depends on the accuracies of the parameters at the reference epoch and their rates of change. Refer to citations for accuracies of the parameters and their rates of change.	
<i>Operation version</i>	IGS v1	
<i>Scope</i>	Spatial referencing	
<i>Operation accuracy</i>	0.001 m	
<i>Source CRS</i>	IGb08 - XYZ	
<i>Target CRS</i>	IGS14 - XYZ	
<i>Operation method</i>	Time-Dependent Position Vector Transformation (geocentric Cartesian domain)	

Extent

<i>Description</i>	World.	
<i>Geographic Bounding Box</i>	<i>West-bound longitude</i>	-180.0
	<i>North-bound latitude</i>	90.0
	<i>East-bound longitude</i>	180.0
	<i>South-bound latitude</i>	-90.0

Operation parameter values

<i>X-axis translation</i>	-1.6 millimetre
<i>Y-axis translation</i>	-1.9 millimetre
<i>Z-axis translation</i>	-2.4 millimetre
<i>X-axis rotation</i>	0.0 milliarc-second
<i>Y-axis rotation</i>	0.0 milliarc-second
<i>Z-axis rotation</i>	0.0 milliarc-second
<i>Scale difference</i>	0.02 parts per billion
<i>Rate of change of X-axis translation</i>	0.0 millimetre per year
<i>Rate of change of Y-axis translation</i>	0.0 millimetre per year
<i>Rate of change of Z-axis translation</i>	0.1 millimetre per year
<i>Rate of change of X-axis rotation</i>	0.0 milliarc-second per year
<i>Rate of change of Y-axis rotation</i>	0.0 milliarc-second per year
<i>Rate of change of Z-axis rotation</i>	0.0 milliarc-second per year
<i>Rate of change of scale difference</i>	-0.03 parts per billion per year
<i>Time reference</i>	2010.0 year

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<i>Item class</i>	OperationMethod
<i>Name</i>	Time-Dependent Position Vector Transformation (geocentric Cartesian domain)
<i>Item status</i>	VALID
<i>Identifier</i>	82
<i>Alias</i>	Time-Dependent 7-Parameter Transformation
<i>Alias</i>	14-Parameter Transformation
<i>Alias</i>	Time-Dependent Position Vector Transformation
<i>Data source</i>	ISO Geodetic Registry
<i>Remarks</i>	Note the analogy with the rotation for the Time-dependent Coordinate Frame 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>