ISO Geodetic Registry

Item class	GeodeticCRS
Name	**IGb14 - XYZ**
Item status	VALID
Identifier	727
Alias	International GNSS Service 2014 (V2)
Information source	*Title* Switch to IGb14 reference frame *Author* P. Rebischung *Publisher* International GNSS Service (IGS) *Publication date* 2020-04-14 *Series/Journal name* ISGMAIL *Issue identification* 7921 *Other citation details* https://lists.igs.org/pipermail/ igsmail/2020/007917.html (accessed 2020-06-03)
Data source	ISO Geodetic Registry
Remarks	Replaces IGS14 - XYZ.
Scope	Spatial referencing
Datum	IGb14
Coordinate System	Geocentric 3D right-handed Cartesian CS. Axes: Geocentric X,Y,Z. Orientation: Z to North Pole, [X and Y in the equatorial plane, X at Prime Meridian | X in the equatorial plane at the Prime Meridian]. UoM: m.

Extent

Description	**World.**	
Geographic Bounding Box	*West-bound longitude*	-180.0
	North-bound latitude	90.0
	East-bound longitude	180.0
	South-bound latitude	-90.0

Item class	GeodeticDatum
Name	**IGb14**
Item status	VALID
Identifier	724
Alias	International GNSS Service 2014 (V2)
Information source	Title Switch to IGb14 reference frame Author P. Rebischung Publisher International GNSS Service (IGS) Publication date 2020-04-14 Series/Journal name ISGMAIL Issue identification 7921 Other citation details https://lists.igs.org/pipermail/ igsmail/2020/007917.html (accessed 2020-06-03)
Data source	ISO Geodetic Registry
Remarks	An update to IGS14. Replaces IGS14. Used by IGS products from 2020-05-17. An updated set of satellite and ground antenna calibrations, igs14.atx, should be used together with IGb14, as well as post-seismic deformation models psd_IGb14.snx. IGb14 is aligned indirectly with ITRF2014 via IGS14.
Anchor definition	IGb14 was obtained from a long-term stacking of daily IGS solutions of GPS weeks 730 to 2092. IGb14 is aligned in origin, scale and orientation to IGS14 via a subset of 233 stable, well-performing IGS stations.
Release date	2020-04-14
Coordinate Reference Epoch	2010.0
Scope	Spatial referencing
Ellipsoid	GRS 1980
Prime Meridian	Greenwich

Extent

Description	**World.**	
Geographic Bounding Box	West-bound longitude	-180.0
	North-bound latitude	90.0
	East-bound longitude	180.0
	South-bound latitude	-90.0

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Item class	Ellipsoid
Name	**GRS 1980**
Item status	VALID
Identifier	27
Alias	Geodetic Reference System 1980
Alias	GRS1980
Alias	IAG GRS80
Alias	International 1979
Alias	GRS80
Information source	*Title* Geodetic Reference System 1980 *Author* H. Moritz *Publisher* Springer International Publishing *Publication date* 2003-03 *Series/Journal name* Journal of Geodesy *Issue identification* Volume 74, No. 1 *Page* 128–162
Information source	*Title* Geodetic Reference System 1980 *Author* H. Moritz *Publisher* International Association of Geodesy *Publication date* 1984 *Series/Journal name* Bulletin Geodesique *Issue identification* Volume 58, No. 3 *Page* 395-405
Data source	ISO Geodetic Registry
Remarks	Adopted by IUGG 1979 Canberra. Inverse flattening is derived from geocentric gravitational constant GM = 3986005e8 m*m*m/s/s, dynamic form factor J2 = 108263e-8 and Earth's angular velocity = 7292115e-11 rad/s.
Semi-major axis	6378137.0 m
Inverse flattening	298.257222101 m

ISO Geodetic Registry

Item class	PrimeMeridian	
Name	**Greenwich**	
Item status	VALID	
Identifier	25	
Alias	Zero meridian	
Information source	*Title*	Why the Greenwich meridian moved
	Author	S. Malys, J.H. Seago, N.K. Pavlis, P.K. Seidelmann, G.H. Kaplan
	Publisher	Springer International Publishing
	Publication date	2015-12
	Series/Journal name	Journal of Geodesy
	Issue identification	Volume 89, No. 12
	Page	1263–1272
Information source	*Title*	IERS Conventions (2010)
	Author	G. Petit, B.J. Luzum (eds)
	Publisher	Verlag des Bundesamts fur Kartographie und Geodasie
	Publication date	2010
	Edition date	
	Series/Journal name	IERS Technical Notes
	Issue identification	36.0
	Other citation details	ISSN: 1019-4568
Data source	ISO Geodetic Registry	
Greenwich longitude	0.0 °	

ISO Geodetic Registry

Item class	CartesianCS
Name	**Geocentric 3D right-handed Cartesian CS. Axes: Geocentric X,Y,Z. Orientation: Z to North Pole, [X and Y in the equatorial plane, X at Prime Meridian | X in the equatorial plane at the Prime Meridian]. UoM: m.**
Item status	VALID
Identifier	45
Alias	Earth centred, earth fixed, right-handed 3D coordinate system, consisting of 3 orthogonal axes with X and Y axes in the equatorial plane, positive Z-axis parallel to mean earth rotation axis and pointing towards North Pole. UoM: m.
Alias	ECEF
Information source	*Title* ISO 19111 Geographical information - Spatial referencing by coordinates
	Author International Organization for Standardization (ISO)
	Publisher International Organization for Standardization (ISO)
	Publication date 2007-07-01
	Edition Second Edition
	Series/Journal name International Standard
	Issue identification ISO 19111:2007
Data source	ISO Geodetic Registry
Remarks	Used in geocentric coordinate reference systems.

Axes

Item class	CoordinateSystemAxis
Name	**Geocentric X**
Item status	VALID
Identifier	33
Information source	*Title* ISO 19111 Geographical information - Spatial referencing by coordinates
	Author International Organization for Standardization (ISO)
	Publisher International Organization for Standardization (ISO)
	Publication date 2007-07-01
	Edition Second Edition
	Series/Journal name International Standard
	Issue identification ISO 19111:2007
Data source	ISO Geodetic Registry
Abbreviation	X
Direction	Geocentre > equator/0°E
Unit	metre

Item class	CoordinateSystemAxis
Name	**Geocentric Y**
Item status	VALID
Identifier	37

Information source	Title	ISO 19111 Geographical information - Spatial referencing by coordinates
	Author	International Organization for Standardization (ISO)
	Publisher	International Organization for Standardization (ISO)
	Publication date	2007-07-01
	Edition	Second Edition
	Series/Journal name	International Standard
	Issue identification	ISO 19111:2007
Data source	ISO Geodetic Registry	
Abbreviation	Y	
Direction	Geocentre > equator/90°E	
Unit	metre	

Item class	CoordinateSystemAxis	
Name	**Geocentric Z**	
Item status	VALID	
Identifier	39	
Information source	Title	ISO 19111 Geographical information - Spatial referencing by coordinates
	Author	International Organization for Standardization (ISO)
	Publisher	International Organization for Standardization (ISO)
	Publication date	2007-07-01
	Edition	Second Edition
	Series/Journal name	International Standard
	Issue identification	ISO 19111:2007
Data source	ISO Geodetic Registry	
Abbreviation	Z	
Direction	Geocentre > north pole	
Unit	metre	