

# ISO Geodetic Registry

<i>Item class</i>	GeodeticCRS
<i>Name</i>	<b>KGD2002 - XYZ</b>
<i>Item status</i>	VALID
<i>Identifier</i>	1008
<i>Alias</i>	KGD2002
<i>Alias</i>	Korean Geodetic Datum 2002
<i>Information source</i>	<p><i>Title</i> Implementation of the New Korean Geocentric Datum and GPS CORS Management</p> <p><i>Author</i> Y.-J. Lee, H.-K. Lee, C.-O. Kwon, J.-H. Song</p> <p><i>Publisher</i> International Federation of Surveyors (FIG)</p> <p><i>Publication date</i> 2008</p> <p><i>Series/Journal name</i> FIG Working Week 2008, Stockholm, Sweden, 14-19 June 2008</p> <p><i>Other citation details</i> <a href="https://www.fig.net/resources/proceedings/fig_proceedings/fig2008">https://www.fig.net/resources/proceedings/fig_proceedings/fig2008</a> (accessed 2023-04-10)</p>
<i>Information source</i>	<p><i>Title</i> Korea Geodetic Framework for Sustainable Development</p> <p><i>Author</i> J.-H. Kwon</p> <p><i>Publisher</i> United Nations Economic and Social Council</p> <p><i>Publication date</i> 2012</p> <p><i>Series/Journal name</i> Nineteenth United Nations Regional Cartographic Conference for Asia and the Pacific, Bangkok, 29 October – 1 November 2012</p> <p><i>Issue identification</i> E/CONF.102/IP.17</p> <p><i>Other citation details</i> <a href="https://unstats.un.org/unsd/geoinfo/rcc/docs/rccap19/ip/E_Conf.102_IP17_Korea_19th_UNRCC-AP_Session3_26%20Oct.pdf">https://unstats.un.org/unsd/geoinfo/rcc/docs/rccap19/ip/E_Conf.102_IP17_Korea_19th_UNRCC-AP_Session3_26%20Oct.pdf</a> (accessed 2023-04-10)</p>
<i>Information source</i>	<p><i>Title</i> Grids &amp; Datums: The Republic of Korea</p> <p><i>Author</i> C.J. Mugnier</p> <p><i>Publisher</i> American Society for Photogrammetry and Remote Sensing</p> <p><i>Publication date</i> 2017</p> <p><i>Series/Journal name</i> Photogrammetric Engineering &amp; Remote Sensing</p> <p><i>Issue identification</i> Volume 83, No. 8, August 2017</p> <p><i>Page</i> 537-539</p> <p><i>Other citation details</i> <a href="https://doi.org/10.14358/PERS.83.8.539">https://doi.org/10.14358/PERS.83.8.539</a> (accessed 2023-04-10)</p>
<i>Information source</i>	<p><i>Title</i> World Geodetic System Technical Guidelines</p> <p><i>Author</i> Geodesy Department, NGII</p> <p><i>Publisher</i> National Geographic Information Institute (NGII), Ministry of Construction and Transportation, Republic of Korea</p> <p><i>Revision date</i> 2004-12</p> <p><i>Other citation details</i> Web page in Korean, accessible only within Korea. <a href="https://www.ngii.go.kr/kor/contents/view.do?sq=119&amp;board_code=contents_data/">https://www.ngii.go.kr/kor/contents/view.do?sq=119&amp;board_code=contents_data/</a> (accessed 2023-06-26)</p>
<i>Data source</i>	ISO Geodetic Registry
<i>Scope</i>	Spatial referencing
<i>Datum</i>	Korean Geodetic Datum 2002
<i>Coordinate System</i>	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*

**Republic of Korea - onshore and offshore**

# ISO Geodetic Registry

<i>Item class</i>	GeodeticDatum	
<i>Name</i>	<b>Korean Geodetic Datum 2002</b>	
<i>Item status</i>	VALID	
<i>Identifier</i>	1006	
<i>Alias</i>	KGD2002	
<i>Information source</i>	<i>Title</i>	Grids & Datums: The Republic of Korea
	<i>Author</i>	C.J. Mugnier
	<i>Publisher</i>	American Society for Photogrammetry and Remote Sensing
	<i>Publication date</i>	2017
	<i>Series/Journal name</i>	Photogrammetric Engineering & Remote Sensing
	<i>Issue identification</i>	Volume 83, No. 8, August 2017
	<i>Page</i>	537-539
	<i>Other citation details</i>	<a href="https://doi.org/10.14358/PERS.83.8.539">https://doi.org/10.14358/PERS.83.8.539</a> (accessed 2023-04-10)
	<i>Title</i>	Implementation of the New Korean Geocentric Datum and GPS CORS Management
	<i>Author</i>	Y.-J. Lee, H.-K. Lee, C.-O. Kwon, J.-H. Song
<i>Information source</i>	<i>Publisher</i>	International Federation of Surveyors (FIG)
	<i>Publication date</i>	2008
	<i>Series/Journal name</i>	FIG Working Week 2008, Stockholm, Sweden, 14-19 June 2008
	<i>Other citation details</i>	<a href="https://www.fig.net/resources/proceedings/fig_proceedings/fig2008">https://www.fig.net/resources/proceedings/fig_proceedings/fig2008</a> (accessed 2023-04-10)
	<i>Title</i>	World Geodetic System Technical Guidelines
	<i>Author</i>	Geodesy Department, NGII
	<i>Publisher</i>	National Geographic Information Institute (NGII), Ministry of Construction and Transportation, Republic of Korea
	<i>Revision date</i>	2004-12
	<i>Other citation details</i>	Web page in Korean, accessible only within Korea. <a href="https://www.ngii.go.kr/kor/contents/view.do?sq=119&amp;board_code=contents_data/">https://www.ngii.go.kr/kor/contents/view.do?sq=119&amp;board_code=contents_data/</a> (accessed 2023-06-26)
	<i>Title</i>	Korea Geodetic Framework for Sustainable Development
<i>Information source</i>	<i>Author</i>	J.-H. Kwon
	<i>Publisher</i>	United Nations Economic and Social Council
	<i>Publication date</i>	2012
	<i>Series/Journal name</i>	Nineteenth United Nations Regional Cartographic Conference for Asia and the Pacific, Bangkok, 29 October – 1 November 2012
	<i>Issue identification</i>	E/CONF.102/IP.17
	<i>Other citation details</i>	<a href="https://unstats.un.org/unsd/geoinfo/rcc/docs/rccap19/ip/E_Conf.102_IP17_Korea_19th_UNRCC-AP_Session3_26%20Oct.pdf">https://unstats.un.org/unsd/geoinfo/rcc/docs/rccap19/ip/E_Conf.102_IP17_Korea_19th_UNRCC-AP_Session3_26%20Oct.pdf</a> (accessed 2023-04-10)
	<i>Data source</i>	ISO Geodetic Registry
	<i>Remarks</i>	Replaces Korean 1985 Datum.
	<i>Anchor definition</i>	KGD2002 is a GRS80-based geodetic reference frame aligned to ITRF2000 at epoch 2002.0. The origin of the datum was recalculated based on the VLBI observations from 1995 to 2002. The datum is realized through 60 CORS and a network of about 20,000 control points.
	<i>Release date</i>	2001-03-19

<i>Coordinate Reference Epoch</i>	2002.0
<i>Scope</i>	Spatial referencing
<i>Ellipsoid</i>	GRS 1980
<i>Prime Meridian</i>	Greenwich

## Extent

<i>Description</i>	<b>Republic of Korea - onshore and offshore</b>
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# ISO Geodetic Registry

<i>Item class</i>	Ellipsoid														
<i>Name</i>	<b>GRS 1980</b>														
<i>Item status</i>	VALID														
<i>Identifier</i>	27														
<i>Alias</i>	Geodetic Reference System 1980														
<i>Alias</i>	GRS1980														
<i>Alias</i>	IAG GRS80														
<i>Alias</i>	International 1979														
<i>Alias</i>	GRS80														
<i>Information source</i>	<table> <tr> <td><i>Title</i></td><td>Geodetic Reference System 1980</td></tr> <tr> <td><i>Author</i></td><td>H. Moritz</td></tr> <tr> <td><i>Publisher</i></td><td>Springer International Publishing</td></tr> <tr> <td><i>Publication date</i></td><td>2003-03</td></tr> <tr> <td><i>Series/Journal name</i></td><td>Journal of Geodesy</td></tr> <tr> <td><i>Issue identification</i></td><td>Volume 74, No. 1</td></tr> <tr> <td><i>Page</i></td><td>128–162</td></tr> </table>	<i>Title</i>	Geodetic Reference System 1980	<i>Author</i>	H. Moritz	<i>Publisher</i>	Springer International Publishing	<i>Publication date</i>	2003-03	<i>Series/Journal name</i>	Journal of Geodesy	<i>Issue identification</i>	Volume 74, No. 1	<i>Page</i>	128–162
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<i>Author</i>	H. Moritz														
<i>Publisher</i>	Springer International Publishing														
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<i>Page</i>	128–162														
<i>Information source</i>	<table> <tr> <td><i>Title</i></td><td>Geodetic Reference System 1980</td></tr> <tr> <td><i>Author</i></td><td>H. Moritz</td></tr> <tr> <td><i>Publisher</i></td><td>International Association of Geodesy</td></tr> <tr> <td><i>Publication date</i></td><td>1984</td></tr> <tr> <td><i>Series/Journal name</i></td><td>Bulletin Geodesique</td></tr> <tr> <td><i>Issue identification</i></td><td>Volume 58, No. 3</td></tr> <tr> <td><i>Page</i></td><td>395-405</td></tr> </table>	<i>Title</i>	Geodetic Reference System 1980	<i>Author</i>	H. Moritz	<i>Publisher</i>	International Association of Geodesy	<i>Publication date</i>	1984	<i>Series/Journal name</i>	Bulletin Geodesique	<i>Issue identification</i>	Volume 58, No. 3	<i>Page</i>	395-405
<i>Title</i>	Geodetic Reference System 1980														
<i>Author</i>	H. Moritz														
<i>Publisher</i>	International Association of Geodesy														
<i>Publication date</i>	1984														
<i>Series/Journal name</i>	Bulletin Geodesique														
<i>Issue identification</i>	Volume 58, No. 3														
<i>Page</i>	395-405														
<i>Data source</i>	ISO Geodetic Registry														
<i>Remarks</i>	Adopted by IUGG 1979 Canberra. Inverse flattening is derived from geocentric gravitational constant $GM = 3986005e8 \text{ m}^3/\text{s}^2$ , dynamic form factor $J_2 = 108263e-8$ and Earth's angular velocity = $7292115e-11 \text{ rad/s}$ .														
<i>Semi-major axis</i>	6378137.0 m														
<i>Inverse flattening</i>	298.257222101 m														

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

# ISO Geodetic Registry

Item class	CartesianCS	
Name	<b>Geocentric 3D right-handed Cartesian CS.</b> <b>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.</b>	
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	<b>Geocentric X</b>	
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	<b>Geocentric Y</b>	
Item status	VALID	
Identifier	37	

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

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