

# ISO Geodetic Registry

|                           |  |  |
|---------------------------|--|--|
| <i>Item class</i>         | GeodeticCRS  |  |
| <i>Name</i>               | <b>JGD2000 - LatLonEHt</b>   |  |
| <i>Item status</i>        | VALID  |  |
| <i>Identifier</i>         | 281  |  |
| <i>Alias</i>              | Japanese Geodetic Datum 2000   |  |
| <i>Information source</i> | <i>Title</i>   | The New Geodetic Reference System of Japan _ Its adoption and application to our products  |
|                           | <i>Author</i>  | Geographical Survey Institute  |
|                           | <i>Publisher</i>   | Geographical Survey Institute (GSI), Tsukuba, Japan  |
|                           | <i>Publication date</i>  | 2004-03  |
|                           | <i>Series/Journal name</i>   | Bulletin of the Geographical Survey Institute  |
|                           | <i>Issue identification</i>  | Volume 50  |
|                           | <i>Page</i>  | 33-36  |
|                           | <i>Title</i>   | Concept of the New Japanese Geodetic System  |
|                           | <i>Author</i>  | Y. Hiyama, A. Yamagiwa, T. Kawahara, M. Iwata, Y. Fukuzaki, Y. Shouji, Y. Sato, T. Yutsudo, T. Sasaki, H. Shigematsu, H. Yamao, T. Inukai, M. Ohtaki, K. Kokado, S. Kurihara, I. Kimura, T. Tsutsumi, T. Yahagi, Y. Furuya, I. Kageyama, S. Kawamoto, K. Yamaguchi, H. Tsuji, S. Matsumura |
|                           | <i>Publisher</i>   | Geographical Survey Institute (GSI), Tsukuba, Japan  |
| <i>Information source</i> | <i>Publication date</i>  | 2004-03  |
|                           | <i>Series/Journal name</i>   | Bulletin of the Geographical Survey Institute  |
|                           | <i>Issue identification</i>  | Volume 51  |
|                           | <i>Page</i>  | 1-9  |
| <i>Data source</i>        | ISO Geodetic Registry  |  |
| <i>Scope</i>              | Spatial referencing  |  |
| <i>Datum</i>              | Japanese Geodetic Datum 2000   |  |
| <i>Coordinate System</i>  | Ellipsoidal 3D CS. Axes: latitude, longitude, ellipsoidal height. Orientations: north, east, up. UoM: degree, degree, metre. |  |

## Extent

|                                |                                     |       |
|--------------------------------|-------------------------------------|-------|
| <i>Description</i>             | <b>Japan - onshore and offshore</b> |       |
| <i>Geographic Bounding Box</i> | <i>West-bound longitude</i>         | 122.9 |
|                                | <i>North-bound latitude</i>         | 45.6  |
|                                | <i>East-bound longitude</i>         | 154.0 |
|                                | <i>South-bound latitude</i>         | 20.4  |

# ISO Geodetic Registry

|                                   |   |  |
|-----------------------------------|---|--|
| <i>Item class</i>                 | GeodeticDatum   |  |
| <i>Name</i>                       | <b>Japanese Geodetic Datum 2000</b>   |  |
| <i>Item status</i>                | VALID   |  |
| <i>Identifier</i>                 | 111   |  |
| <i>Alias</i>                      | JGD2000   |  |
| <i>Information source</i>         | <i>Title</i>  | Concept of the New Japanese Geodetic System  |
|                                   | <i>Author</i>   | Y. Hiyama, A. Yamagiwa, T. Kawahara, M. Iwata, Y. Fukuzaki, Y. Shouji, Y. Sato, T. Yutsudo, T. Sasaki, H. Shigematsu, H. Yamao, T. Inukai, M. Ohtaki, K. Kokado, S. Kurihara, I. Kimura, T. Tsutsumi, T. Yahagi, Y. Furuya, I. Kageyama, S. Kawamoto, K. Yamaguchi, H. Tsuji, S. Matsumura |
|                                   | <i>Publisher</i>  | Geographical Survey Institute (GSI), Tsukuba, Japan  |
|                                   | <i>Publication date</i>   | 2004-03  |
|                                   | <i>Series/Journal name</i>  | Bulletin of the Geographical Survey Institute  |
|                                   | <i>Issue identification</i>   | Volume 51  |
|                                   | <i>Page</i>   | 1-9  |
|                                   | <i>Title</i>  | The New Geodetic Reference System of Japan – Its adoption and application to our products  |
|                                   | <i>Author</i>   | Geographical Survey Institute  |
|                                   | <i>Publisher</i>  | Geographical Survey Institute (GSI), Tsukuba, Japan  |
| <i>Information source</i>         | <i>Publication date</i>   | 2004-03  |
|                                   | <i>Series/Journal name</i>  | Bulletin of the Geographical Survey Institute  |
|                                   | <i>Issue identification</i>   | Volume 50  |
|                                   | <i>Page</i>   | 33-36  |
| <i>Data source</i>                | ISO Geodetic Registry   |  |
| <i>Remarks</i>                    | Replaces Tokyo Datum. Replaced by Japanese Geodetic Datum 2011 from 2011-10-21.   |  |
| <i>Anchor definition</i>          | Equivalent to ITRF94 at epoch 1997.0. Fundamental point: Tokyo-Taisho, latitude: 35°39'29.1572"N, longitude: 139°44'28.8759"E (of Greenwich). |  |
| <i>Release date</i>               | 2002-04   |  |
| <i>Coordinate Reference Epoch</i> | 1997.0  |  |
| <i>Scope</i>                      | Spatial referencing   |  |
| <i>Ellipsoid</i>                  | GRS 1980  |  |
| <i>Prime Meridian</i>             | Greenwich   |  |

## Extent

|                                |                                     |       |
|--------------------------------|-------------------------------------|-------|
| <i>Description</i>             | <b>Japan - onshore and offshore</b> |       |
| <i>Geographic Bounding Box</i> | <i>West-bound longitude</i>         | 122.9 |
|                                | <i>North-bound latitude</i>         | 45.6  |
|                                | <i>East-bound longitude</i>         | 154.0 |
|                                | <i>South-bound latitude</i>         | 20.4  |

# 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 |
| <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  |              |                                |               |           |                  |                                      |                         |         |                            |                     |                             |                  |             |         |
| <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  |              |                                |               |           |                  |                                      |                         |         |                            |                     |                             |                  |             |         |

# ISO Geodetic Registry

|                            |                               |   |
|----------------------------|-------------------------------|---|
| <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>Information source</i>  | <i>Title</i>                  | IERS Conventions (2010)   |
|                            | <i>Author</i>                 | G. Petit, B.J. Luzum (eds)                                      |
|                            | <i>Publisher</i>              | Verlag des Bundesamts fur Kartographie und Geodasie             |
|                            | <i>Publication date</i>       | 2010  |
|                            | <i>Edition date</i>           |   |
|                            | <i>Series/Journal name</i>    | IERS Technical Notes  |
|                            | <i>Issue identification</i>   | 36.0  |
| <i>Data source</i>         | <i>Other citation details</i> | ISSN: 1019-4568   |
|                            | ISO Geodetic Registry         |   |
| <i>Greenwich longitude</i> | 0.0 °                         |   |

# ISO Geodetic Registry

|                           |  |   |
|---------------------------|--|---|
| <i>Item class</i>         | EllipsoidalCS  |   |
| <i>Name</i>               | <b>Ellipsoidal 3D CS. Axes: latitude, longitude, ellipsoidal height. Orientations: north, east, up. UoM: degree, degree, metre.</b>  |   |
| <i>Item status</i>        | VALID  |   |
| <i>Identifier</i>         | 46   |   |
| <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>Remarks</i>            | Used in geographic 3D coordinate reference systems. Horizontal coordinates referenced to this CS are in degrees. Any degree representation (e.g. DMSH, decimal, etc.) may be used but that used must be declared for the user. |   |

## Axes

|                           |   |   |
|---------------------------|---|---|
| <i>Item class</i>         | CoordinateSystemAxis  |   |
| <i>Name</i>               | <b>Geodetic latitude</b>  |   |
| <i>Item status</i>        | VALID   |   |
| <i>Identifier</i>         | 38  |   |
| <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>Remarks</i>            | Used in geographic 2D and geographic 3D coordinate reference systems. |   |
| <i>Abbreviation</i>       | Lat   |   |
| <i>Direction</i>          | north   |   |
| <i>Unit</i>               | degree (supplier to define representation)                            |   |

  

|                           |                           |   |
|---------------------------|---------------------------|---|
| <i>Item class</i>         | CoordinateSystemAxis      |   |
| <i>Name</i>               | <b>Geodetic longitude</b> |   |
| <i>Item status</i>        | VALID                     |   |
| <i>Identifier</i>         | 34                        |   |
| <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>Remarks</i>      | Used in geographic 2D and geographic 3D coordinate reference systems. |  |
| <i>Abbreviation</i> | Lon   |  |
| <i>Direction</i>    | east  |  |
| <i>Unit</i>         | degree (supplier to define representation)                            |  |

  

|                           |  |   |
|---------------------------|--|---|
| <i>Item class</i>         | CoordinateSystemAxis   |   |
| <i>Name</i>               | <b>Ellipsoidal height</b>  |   |
| <i>Item status</i>        | VALID  |   |
| <i>Identifier</i>         | 36   |   |
| <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  |
|                           | ISO Geodetic Registry  |   |
| <i>Data source</i>        | ISO Geodetic Registry  |   |
| <i>Remarks</i>            | Used only as part of an ellipsoidal 3D coordinate system in a geographic 3D coordinate reference system, never on its own. |   |
| <i>Abbreviation</i>       | h  |   |
| <i>Direction</i>          | up   |   |
| <i>Unit</i>               | metre  |   |