

ISO Geodetic Registry

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|---------------------------|---|--|
| <i>Item class</i> | Transformation | |
| <i>Name</i> | NAD83(CSRs) v4 to NAD 83 (CORS96) Epoch 2002.0 [v1] | |
| <i>Item status</i> | VALID | |
| <i>Identifier</i> | 517 | |
| <i>Information source</i> | <i>Title</i> | The Canadian Spatial Reference System (CSRS) |
| | <i>Author</i> | Canadian Geodetic Survey |
| | <i>Publisher</i> | Canadian Geodetic Survey, Surveyor General Branch, Earth Sciences Sector, Natural Resources Canada, Government of Canada |
| | <i>Publication date</i> | 2016-08-30 |
| <i>Information source</i> | <i>Title</i> | The Evolution of NAD83 in Canada: Addendum |
| | <i>Author</i> | M. Craymer |
| | <i>Publisher</i> | Canadian Institute of Geomatics |
| | <i>Publication date</i> | 2006 |
| | <i>Series/Journal name</i> | Geomatica |
| | <i>Issue identification</i> | Volume 60, No. 4 |
| <i>Information source</i> | <i>Page</i> | 433.0 |
| | <i>Title</i> | Continuously Operating Reference Station (CORS): History, Applications, and Future Enhancements |
| | <i>Author</i> | R.A. Snay, T. Soler |
| | <i>Publisher</i> | ASCE |
| | <i>Publication date</i> | 2008-04-01 |
| | <i>Edition date</i> | 2008-04-01 |
| | <i>Series/Journal name</i> | Journal of Surveying Engineering |
| | <i>Issue identification</i> | Volume 134, No. 4 |
| | <i>Page</i> | 95-104 |
| | <i>Other citation details</i> | NAD83 (CORS96) Epoch 1996.0,NAD83 (CORS96) Epoch 1997.0,NAD83 (CORS96) Epoch 2002.0 |
| | <i>Title</i> | NGS No Longer Updates Published CORS Coordinates in the Following Reference Frames |
| | <i>Author</i> | National Geodetic Survey |
| <i>Information source</i> | <i>Publisher</i> | National Oceanic and Atmospheric Administration (NOAA) National Geodetic Survey (NGS) |
| | <i>Revision date</i> | 2017-03-16 |
| | <i>Edition date</i> | 2017-03-16 |
| | <i>Series/Journal name</i> | NGS Online listing of transformation parameters |
| | <i>Other citation details</i> | webpage |
| | <i>Title</i> | The Evolution of NAD83 in Canada |
| | <i>Author</i> | M. Craymer |
| | <i>Publisher</i> | Canadian Institute of Geomatics |
| | <i>Publication date</i> | 2006 |
| | <i>Series/Journal name</i> | Geomatica |
| <i>Information source</i> | <i>Issue identification</i> | Volume 60, No. 2 |
| | <i>Page</i> | 151-164 |
| <i>Data source</i> | ISO Geodetic Registry | |
| <i>Remarks</i> | Null transformation. NAD83(CSRs)v4 and NAD83(CORS96) epoch 2002 are equivalent by definition. | |
| <i>Operation version</i> | v1 | |
| <i>Scope</i> | Spatial referencing | |
| <i>Operation accuracy</i> | 0.0 m | |
| <i>Source CRS</i> | NAD83(CSRs) v4 - XYZ | |
| <i>Target CRS</i> | NAD 83 (CORS96) Epoch 2002.0 - XYZ | |

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|-------------------------|---|
| <i>Operation method</i> | Time-Dependent Position Vector Transformation (geocentric Cartesian domain) |
|-------------------------|---|

Extent

| | | |
|--------------------------------|---|--------|
| <i>Description</i> | North America - onshore and offshore: Canada - Alberta, British Columbia, Manitoba, New Brunswick, Newfoundland and Labrador, Northwest Territories, Nova Scotia, Nunavut, Ontario, Prince Edward Island, Quebec, Saskatchewan, Yukon. Puerto Rico. United States (USA) - Alaska, CONUS (Alabama, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, Florida, Georgia, Idaho, Illinois, 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> | 86.46 |
| | <i>East-bound longitude</i> | -47.74 |
| | <i>South-bound latitude</i> | 14.92 |

Operation parameter values

| | |
|---|--------------------------------|
| <i>Time reference</i> | 2002.0 year |
| <i>Rate of change of scale difference</i> | 0.0 parts per billion per year |
| <i>Rate of change of Z-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 X-axis rotation</i> | 0.0 milliarc-second per year |
| <i>Rate of change of Z-axis translation</i> | 0.0 metre per year |
| <i>Rate of change of Y-axis translation</i> | 0.0 metre per year |
| <i>Rate of change of X-axis translation</i> | 0.0 metre per year |
| <i>Scale difference</i> | 0.0 parts per billion |
| <i>Z-axis rotation</i> | 0.0 milliarc-second |
| <i>Y-axis rotation</i> | 0.0 milliarc-second |
| <i>X-axis rotation</i> | 0.0 milliarc-second |
| <i>Z-axis translation</i> | 0.0 metre |
| <i>Y-axis translation</i> | 0.0 metre |
| <i>X-axis translation</i> | 0.0 metre |

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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> |