ISO Geodetic Registry

Item class	GeodeticCRS	
Name	**NAD 83 (MA11) Epoch 2010 - XYZ**	
Item status	VALID	
Identifier	379	
Alias	NAD83(MA11)	
Alias	North American Datum of 1983 (MA11)	
Information source	*Title*	CORS Coordinates
	Author	National Geodetic Survey
	Publisher	National Oceanic and Atmospheric Administration (NOAA) National Geodetic Survey (NGS)
	Revision date	2017-05-16
	Series/Journal name	NGS Online listing of transformation parameters
	Other citation details	webpage
Information source	*Title*	Introducing HTDP 3.1 to transform coordinates across time and spatial reference frames
	Author	C. Pearson, R.A. Snay
	Publisher	Springer-Verlag
	Publication date	2013-01-01
	Edition date	2013-01-01
	Series/Journal name	GPS Solutions
	Issue identification	Volume 17, No. 1
	Page	1-15
	Other citation details	NAD83 (2011), NAD83 (MA11), NAD83 (PA11) transformation from IGb08
Information source	*Title*	Publication of North American Datum of 1983 (2011) Epoch 2010.00, North American Datum of 1983 (PA2011) Epoch 2010.00 and North American Datum of 1983 (MA2011) Epoch 2010.00
	Author	US Government
	Publisher	Office of Federal Register, NARA
	Publication date	2013-08-08
	Edition date	2013-08-08
	Series/Journal name	Federal Register Notice
	Issue identification	Volume 78, No. 153, Document: 2013–19167, Citation: 78 FR 48421
	Page	48421-48422
Data source	ISO Geodetic Registry	
Scope	Spatial referencing	
Datum	North American Datum of 1983 (MA11) Epoch 2010	
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	**Guam - onshore and offshore. Northern Mariana Islands - onshore and offshore. Palau - onshore and offshore.**	
Geographic Bounding Box	*West-bound longitude*	129.48
	North-bound latitude	23.9
	East-bound longitude	149.55

South-bound latitude	1.64

ISO Geodetic Registry

Item class	GeodeticDatum	
Name	**North American Datum of 1983 (MA11) Epoch 2010**	
Item status	VALID	
Identifier	101	
Alias	NAD83(MA11)	
Information source	*Title*	Notice to Adopt Standard Method for Horizontal Datum Transformation
	Author	US Government
	Publisher	Office of Federal Register, NARA
	Publication date	1990-08-10
	Edition date	1990-08-10
	Series/Journal name	Federal Register Notice
	Issue identification	Volume 55, No. 155, Document: 00-18809
	Page	32681.0
	Other citation details	Mandates use of NADCON for official transformations between datums
Information source	*Title*	CORS Coordinates
	Author	National Geodetic Survey
	Publisher	National Oceanic and Atmospheric Administration (NOAA) National Geodetic Survey (NGS)
	Revision date	2017-05-16
	Series/Journal name	NGS Online listing of transformation parameters
	Other citation details	webpage
Information source	*Title*	NADCON 5.0: Geometric Transformation Tool for points in the National Spatial Reference System
	Author	D. Smith, A. Bilich
	Publisher	NOAA's National Geodetic Survey
	Publication date	2017-03-27
	Edition date	2017-03-27
	Series/Journal name	NGS Technical Report
	Other citation details	Replaces version 4.2 and all earlier. Provides gridding algorithm, datum transformations, and extents of covnversion grids.
Information source	*Title*	Publication of North American Datum of 1983 (2011) Epoch 2010.00, North American Datum of 1983 (PA2011) Epoch 2010.00 and North American Datum of 1983 (MA2011) Epoch 2010.00
	Author	US Government
	Publisher	Office of Federal Register, NARA
	Publication date	2013-08-08
	Edition date	2013-08-08
	Series/Journal name	Federal Register Notice
	Issue identification	Volume 78, No. 153, Document: 2013–19167, Citation: 78 FR 48421
	Page	48421-48422
Data source	ISO Geodetic Registry	
Remarks	Replaces NAD83(MARP00) for control determined in an active reference frame and NAD83 (FBN) for passive control.	
Anchor definition	Realization of NAD83. The frame is defined by a seven parameter transformation of ITRF2008 3D geocentric Cartesian coordinates and velocities for the Guam and the Commonwealth of the Northern Mariana Islands (CNMI) at reference epoch 2010.0. The frame is kept aligned to the Mariana tectonic plate using an Euler pole rotation. The origin, scale and orientation of the frame are nominally defined	

	to be that for the BIH Terrestrial System 1984 (BTS84). This also is a realization of passive control constrained to the values at the CORS. NAD83(20110 serves as a connection between passive network transformed by grids and active frames defined by time-dependent transformations.
Release date	2013
Coordinate Reference Epoch	2010.0
Scope	Spatial referencing
Ellipsoid	GRS 1980
Prime Meridian	Greenwich

Extent

Description	**Guam - onshore and offshore. Northern Mariana Islands - onshore and offshore. Palau - onshore and offshore.**	
Geographic Bounding Box	*West-bound longitude*	129.48
	North-bound latitude	23.9
	East-bound longitude	149.55
	South-bound latitude	1.64

ISO Geodetic Registry

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	