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EDG Data Set Name

MODIS/Aqua Surface Reflectance Daily L2G Global 250m SIN Grid

Granule Shortname

MYD09GQK

Version	Acquisition Range	Science Quality Status
V003	March 6 2003 (2003065)	Provisional

Data Set Characteristics

Area = ~ 10° x 10° lat/long

Image Dimensions = 2 (4800x4800 row/column)

Average File Size = 196 MB

Resolution = 250 meters

Projection = Sinusoidal

Data Format = HDF-EOS

Science Data Sets (SDSs) = 5

Product Description

MODIS 250 m Surface Reflectance is a two-band product computed from the MODIS Level 1B land bands 1 and 2 (centered at 648 nm and 858 nm, respectively). The product is an estimate of the surface spectral reflectance for each band as it would be measured at ground level if there were no atmospheric scattering or absorption. A correction scheme reducing the effects of atmospheric gases, aerosols, and thin cirrus clouds is applied to all pixels passing Level 1B quality control.

The MODIS/Aqua Surface Reflectance Daily L2G Global 250m SIN Grid product (MYD09GQK) shown above is a false-color image derived from the 250m data in Bands 1 and 2. Data from Bands 3-7 (500m resolution) are not included in this product. MYD09GQK is processed globally every day using Level 2G 250m Pointer Files ([MYDPTQKM](#)) to place Level 2 Surface Reflectance (MYD09) on a geographic grid. Quality assurance data for the MYD09GQK product is provided at three different levels: for the individual pixel, for each band, and for the whole file.

NOTE: These products are provisional, meaning that product quality may not be optimal. Incremental product improvements are still occurring, and users are urged to contact MODIS Science Team representatives prior to use of the data in publications. These data are likely to be replaced when the validated product becomes available.

SDS	Units	Data Type	Fill Value	Valid Range	Divide by Scale Factor
250m Surface Reflectance Band 1 (620-670 nm)	Reflectance	16-bit signed integer	-28672	-100 - 16000	10000
250m Surface Reflectance Band 2 (841-876 nm)	Reflectance	16-bit signed integer	-28672	-100 - 16000	10000
*250m Reflectance Band Quality	Bit field	16-bit unsigned integer	2995	0	na
Orbit and coverage	Bit field	8-bit unsigned integer	15	0 - 255	na
Number of Observations	na	8-bit signed integer	-1	0 - 127	na

***Quality Control Bit Index:** - Bits are numbered from left (MSB) to right (LSB)

Bit	Description
0-1	spare (unused);
2	adjacency correction performed;
	1 -- yes
	0 -- no
3	atmospheric correction performed;
	1 -- yes
	0 -- no
4 - 7	band 2 data quality four bit range;
	0000 -- highest quality
	1000 -- dead detector; data interpolated in L1B
	1001 -- solar zenith ≥ 86 degrees
	1010 -- solar zenith ≥ 85 and < 86 degrees
	1011 -- missing input
	1100 -- internal constant used in place of climatological data for at least one atmospheric constant
	1101 -- correction out of bounds pixel constrained to extreme allowable value
	1110 -- L1B data faulty
	1111 -- not processed due to deep ocean or clouds
8 - 11	band 1 data quality four bit range;
	SAME AS ABOVE
12 - 13	cloud state;
	00 -- clear
	01 -- cloudy
	10 -- mixed
	11 -- not set, assumed clear
14-15	MODLAND QA bits;
	corrected product produced at
	00 -- ideal quality all bands
	01 -- less than ideal quality some or all bands
	corrected product not produced due to
	10 -- cloud effects all bands
	11 -- other reasons some or all bands may be fill value [Note that a value of (11) overrides a value of (01)].

Order Data through the EOS Data Gateway

(<http://edcimswww.cr.usgs.gov/pub/imswelcome/>)

EOS Data Gateway Search Tips

Data Center: EDC-ECS

Sensor: MODIS
Dataset: MODIS/Aqua Surface Reflectance Daily L2G Global 250m SIN Grid
Spatial: HORIZONTALTILENUMBER Max/Min VERTICALTILENUMBER Max/Min
Geographic Extent: Type Lat/Long Range or Draw on Map
Temporal Extent: 2003-03-06 to present

Retrieve Data through the LP DAAC Data Pool

(<http://LPDAAC.usgs.gov/tutorial/datapool.html>)

Product Information

[Product Description](#)

(<http://modis-land.gsfc.nasa.gov/products/products.asp?ProdFamID=2>)

[User Guide](#)

(<http://modis-land.gsfc.nasa.gov/mod09/html/guide.htm>)

[Algorithm Theoretical Basis Document \(ATBD\)](#)

(http://eospsso.gsfc.nasa.gov/eos_homepage/for_scientists/atbd/viewInstrument.php?instrument=MODIS)

[MODIS Standard Data Products Catalog](#)

(<http://modis.gsfc.nasa.gov/data/dataprod/descchart.html>)

[EOS Data Products Handbook Volume 1 \(2000\)](#)

(http://eospsso.gsfc.nasa.gov/eos_homepage/misc_html/data_prod.html)

Contact Information

[LP DAAC User Services](#)

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