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Japan Meteorological Agency

Guide to acquiring MTSAT HRIT & JPEG files from the JMA Data Dissemination System (JDDS) server

This guide describes how to acquire MTSAT imagery files through the Japan Meteorological Agency (JMA)'s Internet server, operated to support registered National Meteorological and Hydrological Services (NMHSs).

In 2002, JMA started providing satellite imagery through the Internet as a backup to direct dissemination with the GMS-5. From June 2005 through March 2007, MTSAT-1R's hourly IR1 HRIT imagery was available through the Internet. On 6 March 2007, JMA started providing MTSAT-1R's half-hourly HRIT imagery files from all channels through the Internet using a new server, JMA Data Dissemination System (JDDS). From 23 January 2008, small-sized JPEG imagery for narrow-band Internet users will become available through the JDDS in addition to HRIT imagery files. Below are the details of how to access the JDDS server and the available imagery files stored on it, including definitions of file names.

1. Access to the Internet server of the JMA Data Dissemination System (JDDS)

The JDDS allows FTP access through the Internet.

Upon request, JMA can provide user accounts (user ID and temporary password) for access to the JDDS. Users can access the System by FTP using the host name to be informed with user ID/password.

In order to ensure the security of the system, all users are kindly requested to set a new password and change it regularly. Each password is valid for up to 90 days. A warning e-mail message titled "[JDDS/JMA] Your Password will expire in a few days" will be automatically sent to the user's registered e-mail address every day from seven days before the expiry. On receiving this message, users should access the website to be informed with user ID/password, to set a new password, otherwise the account will be locked at the end of the seven-day period. The password should be at least eight characters.

2. Available satellite imagery files and their directories/filenames

This section gives an outline of the satellite imagery files stored in the JDDS.

(1) Directories

Satellite imagery files from the last three days are stored in directories */hrit* and */jpeg* under the root directory of the JDDS.

(2) Files

(a) HRIT

Registered NMHSs can acquire all MTSAT-1R imagery from four infrared channels and one visible channel. The size of the image files ranges from about 3 to 4 MB for infrared-channel imagery to the maximum 56 MB for visible-channel imagery.

All HRIT image files are stored in the */hrit* directory of the JDDS with the file names shown below. Full-disk images are divided into Northern-hemisphere and Southern-hemishere versions.

/hrit / Z__C_RJTD_*yyyyMMddhhmmss*_OBS_SAT_Pir1_Rnh_image.tar.gz
Z__C_RJTD_*yyyyMMddhhmmss*_OBS_SAT_Pir1_Rsh_image.tar.gz
Z__C_RJTD_*yyyyMMddhhmmss*_OBS_SAT_Pir2_Rnh_image.tar.gz
Z__C_RJTD_*yyyyMMddhhmmss*_OBS_SAT_Pir2_Rsh_image.tar.gz
Z__C_RJTD_*yyyyMMddhhmmss*_OBS_SAT_Pir3_Rnh_image.tar.gz
Z__C_RJTD_*yyyyMMddhhmmss*_OBS_SAT_Pir3_Rsh_image.tar.gz
Z__C_RJTD_*yyyyMMddhhmmss*_OBS_SAT_Pir4_Rnh_image.tar.gz
Z__C_RJTD_*yyyyMMddhhmmss*_OBS_SAT_Pir4_Rsh_image.tar.gz
Z__C_RJTD_*yyyyMMddhhmmss*_OBS_SAT_Pvis_Rnh_image.tar.gz
Z__C_RJTD_*yyyyMMddhhmmss*_OBS_SAT_Pvis_Rsh_image.tar.gz

The symbols used in the above file names have the following definitions:

Symbol	**Meaning**
yyyy	year
MM	month (01-12)
dd	day (01-31)
hhmmss	hour, minute, second (UTC)
Pir1	infrared channel #1 (10.3-11.3 micrometer)
Pir2	infrared channel #2 (11.5-12.5 micrometer)
Pir3	infrared channel #3 (6.5-7.0 micrometer)
Pir4	infrared channel #4 (3.5-4.0 micrometer)
Pvis	visible channel (0.55-0.9 micrometer)
Rnh	Northern-hemisphere imagery obtained by full-disk observation, Northern-hemisphere observation or Northern-hemisphere special observation for wind extraction
Rsh	Southern-hemisphere imagery obtained by full-disk observation, Southern-hemisphere observation or Southern-hemisphere special observation for wind extraction

Please note that all HRIT files are GZIP-compressed TAR files containing five *segment files*. For details of the HRIT imagery files, please refer to the “JMA HRIT Mission Specific Implementation” document available on the JMA website at

http://www.jma.go.jp/jma/jma-eng/satellite/mtsat1r/4.2HRIT_1.pdf

(b) JPEG

Half-hourly JPEG imagery files are stored in ten sub-directories under the */jpeg* directory of the JDDS. The size of these files is less than 300 kilobytes.

i) Full disk

/jpeg /fd /

Z__C_RJTD_yyyyMMddhhmmss_OBS_SAT_PSir1_RDfd_JRsdus_image.jpg
Z__C_RJTD_yyyyMMddhhmmss_OBS_SAT_PSir3_RDfd_JRsdus_image.jpg
Z__C_RJTD_yyyyMMddhhmmss_OBS_SAT_PSir4_RDfd_JRsdus_image.jpg
Z__C_RJTD_yyyyMMddhhmmss_OBS_SAT_PSvis_RDfd_JRsdus_image.jpg

ii) East Asia: the area is the same as in LRIT's polar-stereographic projection

/jpeg /ea /

Z__C_RJTD_yyyyMMddhhmmss_OBS_SAT_PSir1_RDea_JRsdus_image.jpg
Z__C_RJTD_yyyyMMddhhmmss_OBS_SAT_PSir3_RDea_JRsdus_image.jpg
Z__C_RJTD_yyyyMMddhhmmss_OBS_SAT_PSir4_RDea_JRsdus_image.jpg
Z__C_RJTD_yyyyMMddhhmmss_OBS_SAT_PSvis_RDea_JRsdus_image.jpg

iii) Northeast of Japan: the area is the same as in LRIT's polar-stereographic projection

/jpeg /nej /

Z__C_RJTD_yyyyMMddhhmmss_OBS_SAT_PSvis_RDnej_JRsdus_image.jpg

iv) Southwest of Japan: the area is the same as in LRIT's polar-stereographic projection

/jpeg /swj /

Z__C_RJTD_yyyyMMddhhmmss_OBS_SAT_PSvis_RDswj_JRsdus_image.jpg

v) Northwest square grid: 5S-65N, 80E-145E

/jpeg /nw /

Z__C_RJTD_yyyyMMddhhmmss_OBS_SAT_PSir1_RDnwt_JRsdus_image.jpg
Z__C_RJTD_yyyyMMddhhmmss_OBS_SAT_PSir3_RDnwt_JRsdus_image.jpg
Z__C_RJTD_yyyyMMddhhmmss_OBS_SAT_PSir4_RDnwt_JRsdus_image.jpg
Z__C_RJTD_yyyyMMddhhmmss_OBS_SAT_PSvis_RDnwt_JRsdus_image.jpg

vi) Northeast square grid: 5S-65N, 135E-160W

/jpeg /ne /

Z__C_RJTD_yyyyMMddhhmmss_OBS_SAT_PSir1_RDnet_JRsdus_image.jpg
Z__C_RJTD_yyyyMMddhhmmss_OBS_SAT_PSir3_RDnet_JRsdus_image.jpg
Z__C_RJTD_yyyyMMddhhmmss_OBS_SAT_PSir4_RDnet_JRsdus_image.jpg
Z__C_RJTD_yyyyMMddhhmmss_OBS_SAT_PSvis_RDnet_JRsdus_image.jpg

vii) Southeast square grid: 65S-6N, 135E-160W

/jpeg /se /

Z__C_RJTD_yyyyMMddhhmmss_OBS_SAT_PSir1_RDset_JRsdus_image.jpg
Z__C_RJTD_yyyyMMddhhmmss_OBS_SAT_PSir3_RDset_JRsdus_image.jpg

Z__C_RJTD_yyyyMMddhhmmss_OBS_SAT_PSir4_RDset_JRsdus_image.jpg
Z__C_RJTD_yyyyMMddhhmmss_OBS_SAT_PSvis_RDset_JRsdus_image.jpg

viii) Southwest square grid: 65S-6N, 80E-145E
/jpeg /sw /
Z__C_RJTD_yyyyMMddhhmmss_OBS_SAT_PSir1_RDswt_JRsdus_image.jpg
Z__C_RJTD_yyyyMMddhhmmss_OBS_SAT_PSir3_RDswt_JRsdus_image.jpg
Z__C_RJTD_yyyyMMddhhmmss_OBS_SAT_PSir4_RDswt_JRsdus_image.jpg
Z__C_RJTD_yyyyMMddhhmmss_OBS_SAT_PSvis_RDswt_JRsdus_image.jpg

ix) Northwest Pacific square grid: 15S-55N, 90E-155E
/jpeg /nc /
Z__C_RJTD_yyyyMMddhhmmss_OBS_SAT_PSir1_RDnwpt_JRsdus_image.jpg
Z__C_RJTD_yyyyMMddhhmmss_OBS_SAT_PSir3_RDnwpt_JRsdus_image.jpg
Z__C_RJTD_yyyyMMddhhmmss_OBS_SAT_PSir4_RDnwpt_JRsdus_image.jpg
Z__C_RJTD_yyyyMMddhhmmss_OBS_SAT_PSvis_RDnwpt_JRsdus_image.jpg

x) Southwest Pacific square grid: 55S-15N, 107.5E-172.5E
/jpeg /sc /
Z__C_RJTD_yyyyMMddhhmmss_OBS_SAT_PSir1_RDswpt_JRsdus_image.jpg
Z__C_RJTD_yyyyMMddhhmmss_OBS_SAT_PSir3_RDswpt_JRsdus_image.jpg
Z__C_RJTD_yyyyMMddhhmmss_OBS_SAT_PSir4_RDswpt_JRsdus_image.jpg
Z__C_RJTD_yyyyMMddhhmmss_OBS_SAT_PSvis_RDswpt_JRsdus_image.jpg

The symbols used in the above file names have the following definitions:

Symbol	**Meaning**
PS	meteorological satellite element
ir1	infrared channel #1 (10.3-11.3 micrometer)
ir3	infrared channel #3 (6.5-7.0 micrometer)
ir4	infrared channel #4 (3.5-4.0 micrometer)
vis	visible channel (0.55-0.9 micrometer)
RD	area
fd	full disk
ea	east Asia
nej	northeast of Japan
swj	southwest of Japan
nwt	northwest area with square grid (80E-145E, 5S-65N)
net	northeast area with square grid (135E-160W, 5S-65N)
swt	southwest area with square grid (80E-145E, 6N-65S)
set	south east area with square grid (135E-160W, 6N-65S)
nwpt	northwest Pacific with square grid (90E-155E, 15S-55N)
swpt	southwest Pacific with square grid (107.5E-172.5E, 15N-55S)
JRsdus	remarks
image	imagery data

As with the LRIT direct dissemination, the visible imagery files for East Asia are available for daytime only, while the infrared channel #4 imagery files for East Asia are available for nighttime only. The files for northeast and southwest Japan (iii and iv) are available for daytime only. Please refer to MANAM at the URL below for updated information.

http://mscweb.kishou.go.jp/operation/opr_plan.htm

3. Notices and inquiries

The contact point of registered NMHSs will receive e-mails that contain operational information on the JDDS including advance notifications such as temporary suspension of the service. Please note that the uploading of HRIT files to the JDDS may be delayed without notification in the event of unexpected system failure.

Please feel free to contact the administrator at the e-mail address below to change your contact point, unlock your account due to a forgotten password or submit technical inquiries regarding access to the JDDS.

metsat@met.kishou.go.jp