

Geostationary Ingester

Ingest software for receiving and processing MTG, LRIT, HRIT, UHRIT, SAF and GOES ABI data from EUMETCast, HimawariCast, GOES and GEO-KOMPSAT-2A (GK-2A)

髞 Dartcom Geostationary Ingester	- 🗆 X
🕲 EUMETCast HRIT 💿 EUMETCast MTG FCI 💿 EUMETCast Other 🕲 GOES HRIT 💿 HimawariCast HRIT 💿 GK-2A HRIT	
Control Start Stop Pause Resume Ingesting Start ingesting automatically Start ingesting automatically Reception File acquisition Decryption & decompression Output Ingest data Receiver: USB LRIT Receiver - SYN model V	Status Processing data Processing packet Decryption and decompression APID Packets Processing packet Awaiting next file APID Packets File type Count APID Packets Alpha-numeric text 20758 DCS data 13144 Image data 5103 208 199017 1001562 S0002
Control port: USB LRIT Receiver (COM3) Frequency: 1694, 1000 MHz Calibration	Output IDAP image: Sampling IR15 FD
Downconverter: Quorum 1691-137.5MHz ~ Data source: Dartcom USB LRIT interface ~	Latest data: GOES-16 GOES-16 product ACHA FD ACHT FD (16/16) DSI FD IN07 FD (16/16) IN07 FD (16/16)
Source device: USB LRIT interface 🗸	
Apply settings	Service: HRIT, GOES-16 Type: Image data, GOES-16 product Product: IR13 FD (10.30µm) Date: Tue, Jul 18, 2023 Time: 09:30:21 (UTC)
Help About Diagnostics 🛕 Lock 💣 Acce	ss: Normal Advanced Engineer Ingesters

The Dartcom Geostationary Ingester software automatically ingests, decrypts, decompresses, archives and outputs geostationary satellite data.

Images can be automatically processed and animated using the Dartcom MacroPro software, then displayed and manipulated further using the Dartcom iDAP software.

Features of the Geostationary Ingester software include:

- Handling of MTG, LRIT, HRIT, UHRIT, SAF and GOES ABI data from EUMETCast, HimawariCast, GOES and GK-2A.
- Support for USB, TCP/IP, UDP/IP and DVB data sources.
- Fully automatic ingest, output and archiving.

- Multi-threaded for simultaneous ingest from different services utilising multiple CPU cores.
- · Image previews with map overlays and position read-outs.
- Output of image data as Dartcom iDAP images, navigated and calibrated where possible, and with vector map overlays.
- Reprojection and output of image data in PCI Geomatica, ERDAS IMAGINE, ENVI/IDL and GeoTIFF formats.
- Output of MTG LI and GOES GLM lightning flash data to iDAP and MacroPro via a database.
- Output of derived wind speed and direction from MTG FCI level 2 AMV products to iDAP and MacroPro via a database.

General

- · Automatic ingest and output of MTG, LRIT, HRIT, UHRIT, SAF and GOES ABI data from EUMETCast, HimawariCast, GOES-East/West and GEO-KOMPSAT-2A (GK-2A) services, with no user intervention required after configuration.
- Multi-threaded, layered architecture allowing simultaneous ingest from different services utilising multiple CPU cores.
- Comprehensive software user guide and help system.

File acquisition

- Automatic data transfer from Dartcom USB LRIT/HRIT receivers with Reed-Solomon decoding, derandomisation and file assembly.
- · Automatic frame acquisition from TCP/IP and UDP/IP streams with unicast and multicast support.
- Automatic file acquisition from DVB software.
- Archiving of acquired raw files covering up to 7 days.
- Filtering by service, file type, data type and product, allowing unwanted data to be discarded collectively or selectively.

Decryption and decompression

- Automatic file decryption with archiving covering up to 7 days.
- · Automatic file decompression with archiving covering up to 366 days in folders by type, date and time if required.

Outputs

- · Automatic preview creation, with map overlays and geographical position read-outs on image previews.
- Extraction of GOES EMWIN data for further processing using software such as Weather Message.
- · Output of image data as single plane (greyscale) or multi-plane (false colour) Dartcom iDAP images, navigated and calibrated where possible, with area selection, sub-sampling by factor or to a specific size, enhancement and vector map overlays.
- · Output of meteorological charts and products as iDAP images.
- Reprojection and output of image data in PCI Geomatica, ERDAS ٠ IMAGINE, ENVI/IDL and GeoTIFF formats.
- Output of image data as PGM files, with 8-bit or 16-bit data.
- Output of lightning flash and wind speed and direction data to a ٠ database for iDAP/MacroPro.
- · Output of text data (such as service messages) and binary data to files, or via email, serial port or TCP/IP socket.
- Archiving of output files covering up to 366 days.

Monitoring and diagnostics

- Detailed activity logging, on-screen alarms and email alarms.
- Monitoring of storage space and breaks in data reception.

Reception File acquisition Decryption & decompression Output Reception File acquisition Decryption & decompression Output Acquire files Map overlays path C:\Program Files (x86)\Dartcom\Map overlays Look for files in: Store previews in archives C:\EUMETCast\received\bas\default Choose... Output data: Image data Archive acquired files in: C:\Dartcom\Data\XRIT\Ra Choose... Delete files over 1 + hours old Process only these file types MSG1 ^ ⊡ √Image data ⊡ √MSG1_IODC HRV IR_016 IR_039 IR_087 IR_097 rocess new file types by default Clear file types Alarm if maximum time without data exceeded



Output settings tab

GOES-16: GOES-16 product: ACHA FD GOES-16: GOES-16 product: ACHT FD

GOES-16: GOES-16 product: DST FD GOES-16: GOES-16 product: DST FD GOES-16: GOES-16 product: IR07 FD GOES-16: GOES-16 product: IR07 Meso 1 GOES-16: GOES-16 product: IR07 Meso 2

Cho

File acquisition settings tab





Map overlay settings window



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