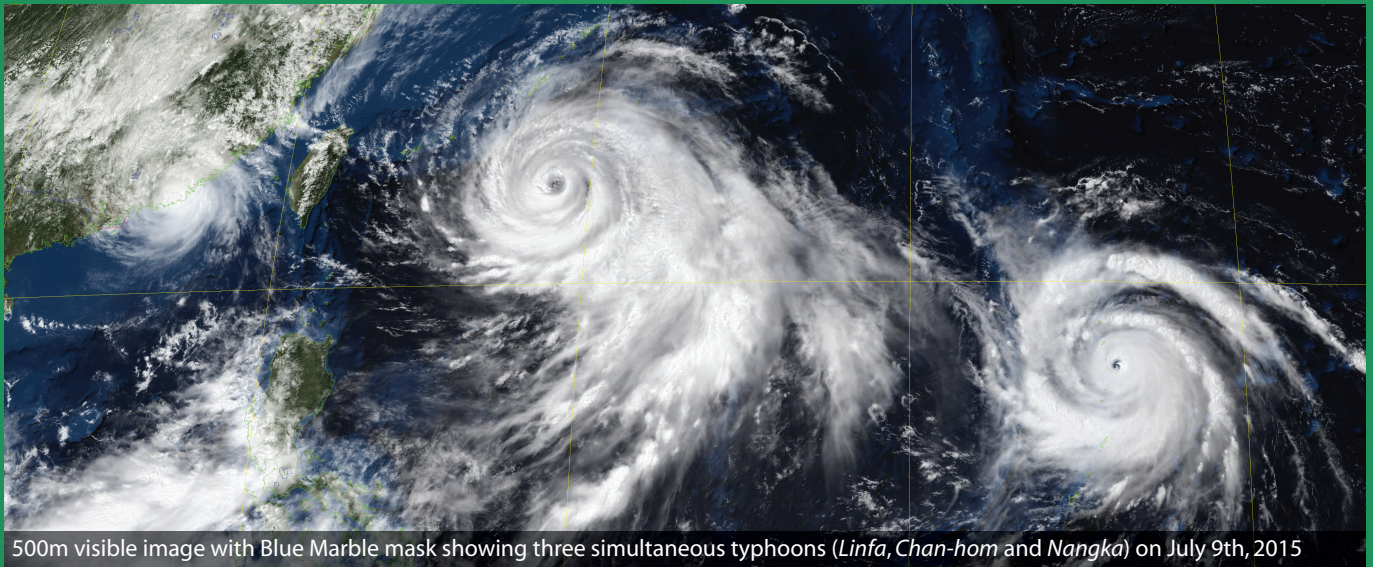
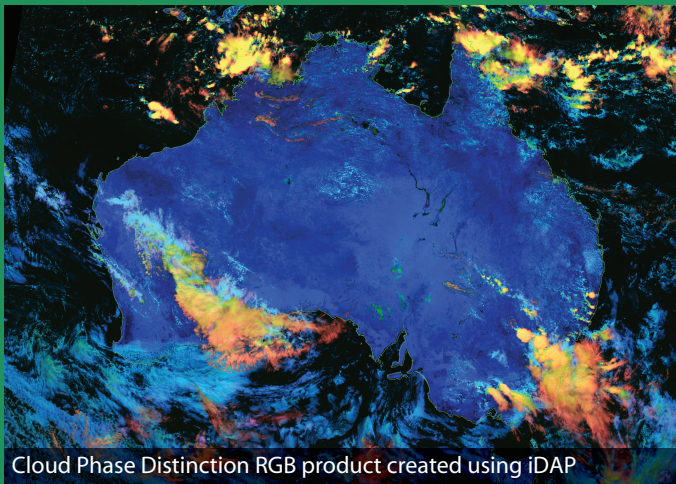


# HimawariCast System

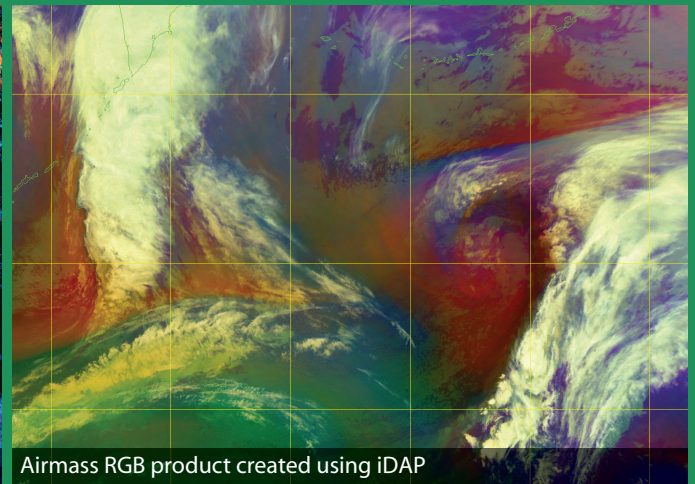
Reliable, high-performance system for receiving and processing Himawari images and other data from the HimawariCast service



500m visible image with Blue Marble mask showing three simultaneous typhoons (*Linfa, Chan-hom and Nangka*) on July 9th, 2015



Cloud Phase Distinction RGB product created using iDAP



Airmass RGB product created using iDAP

**The Dartcom HimawariCast System can receive, archive, process and display Himawari LRIT/HRIT images and other data from the Japan Meteorological Agency (JMA) HimawariCast service.**

C-Band antenna options are available to suit different locations and requirements. A PCIe DVB-S2 receiver performs demodulation.

HimawariCast data includes Advanced Himawari Imager (AHI) images covering 14 spectral bands with 500m–2km resolution. Numerical weather prediction (NWP) products, ground observations and other data can be fed into the JMA SATAID software.

Images can be viewed and processed using the Dartcom iDAP software, with facilities such as animation, enhancement, RGB products, palette products, reprojection, masking, printing and exporting to third-party file formats.

The Dartcom MacroPro software automates the processing facilities provided by iDAP, enabling fully automatic ingest and processing with full logging and alarms.

Outputs are also available for processing software such as PCI Geomatica, ERDAS IMAGINE and ENVI/IDL, as well as standard interchange formats such as PGM and GeoTIFF.



## Components

- **Antenna** – various sizes available to suit different locations, or customers can source their own locally.
- **Receiver** – PCIe internal DVB-S2 receiver card.
- **Ingest and visualisation PC** – running Dartcom Geostationary Ingester and Dartcom iDAP/MacroPro software. Customers can either supply their own PC, or for a turnkey solution Dartcom can supply a PC fully set-up and tested.

Dartcom can also provide on-site installation and training services.

## Features

- Fully automatic reception, decryption, decompression, archiving, output and processing.
- Multi-threaded software for optimum timeliness and accelerated processing.

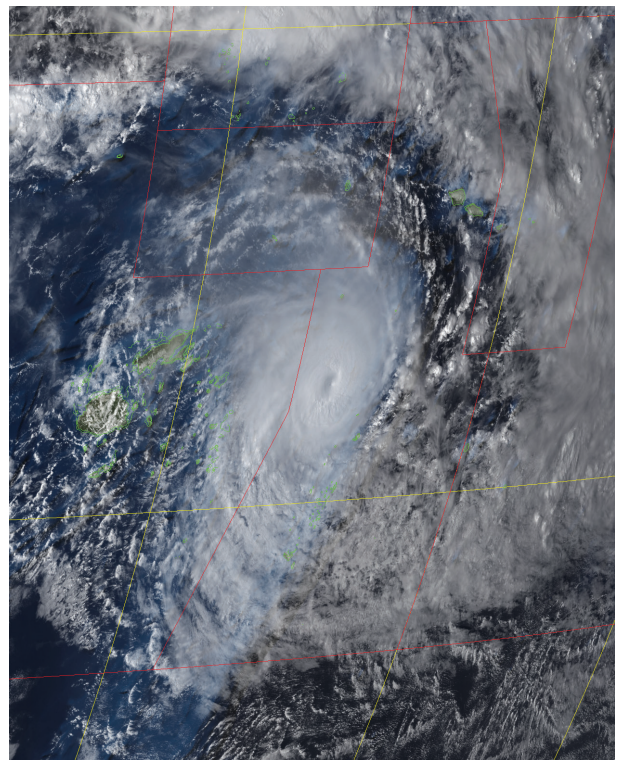
- Proven, robust, reliable hardware and software, with installations all over the world in all climates, temperatures and environments.
- Comprehensive hardware and software diagnostics at all levels, with on-screen and email alarms, and full logging if required.
- Full technical support and regular software updates.

## Software

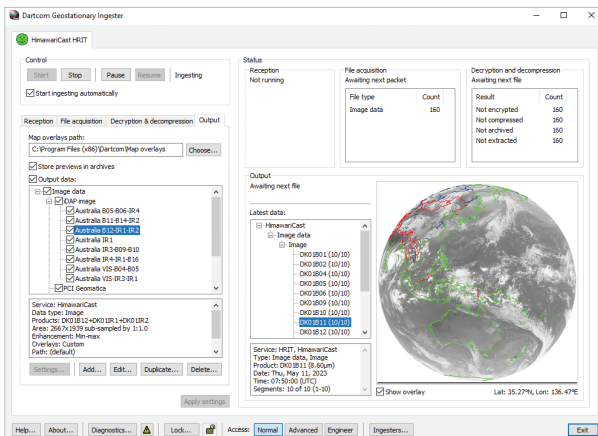
- **Dartcom Geostationary Ingester** – provides automatic ingest, archiving and output of images and other data.
- **Dartcom iDAP** – provides a wide range of image manipulation and processing facilities such as animation, enhancement, RGB products, palette products, reprojection, masking, printing, archiving and exporting to third-party file formats.
- **Dartcom MacroPro** – automates the image processing facilities provided by iDAP, with full logging and alarms.



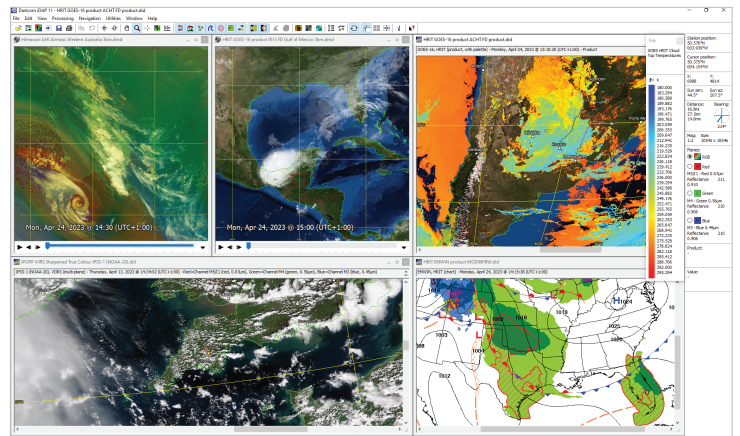
HimawariCast antenna



Cyclone *Winston* approaching Fiji on February 19th, 2016



Dartcom Geostationary Ingester software



Dartcom iDAP/MacroPro processing and visualisation software

### Hardware

For coverage with different antenna sizes, please see the *Service availability* section.

#### Antenna

- 3-segment (2.4m) or 8-segment (3.7m) glass-fibre reinforced precision compression moulded polyester parabolic reflector.
- Supplied with galvanised steel azimuth/elevation mount and pedestal, and 50m of CT100 75Ω co-axial cable.
- Phase locked loop C-Band LNB with 5G interference rejection filter in weatherproof powder-coated housing.

#### DVB receiver and software

- TBS 6903 PCIe DVB-S2 receiver card.
- Supplied with Windows drivers and KenCast FAZZT software.

#### C-Band LNB specifications

<b>Feed type</b>	Scalar horn
<b>Polarisation</b>	Linear
<b>RF input</b>	4.1–4.2GHz
<b>Noise figure</b>	0.8dB typical
<b>Total gain</b>	>60dB
<b>RF output</b>	950–1050MHz

#### TBS 6903 PCIe DVB-S2 receiver card specifications

<b>RF input frequency</b>	950–2150MHz
<b>RF input connector</b>	2 × 75Ω F-type
<b>Symbol rates</b>	1Msps to 67.5Msps
<b>Channel rate</b>	Up to 190Mbps



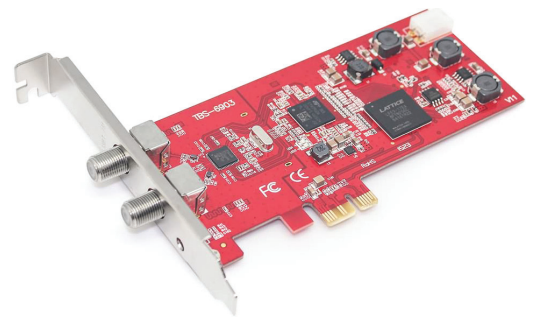
2.4m parabolic dish antenna



3.7m parabolic dish antenna



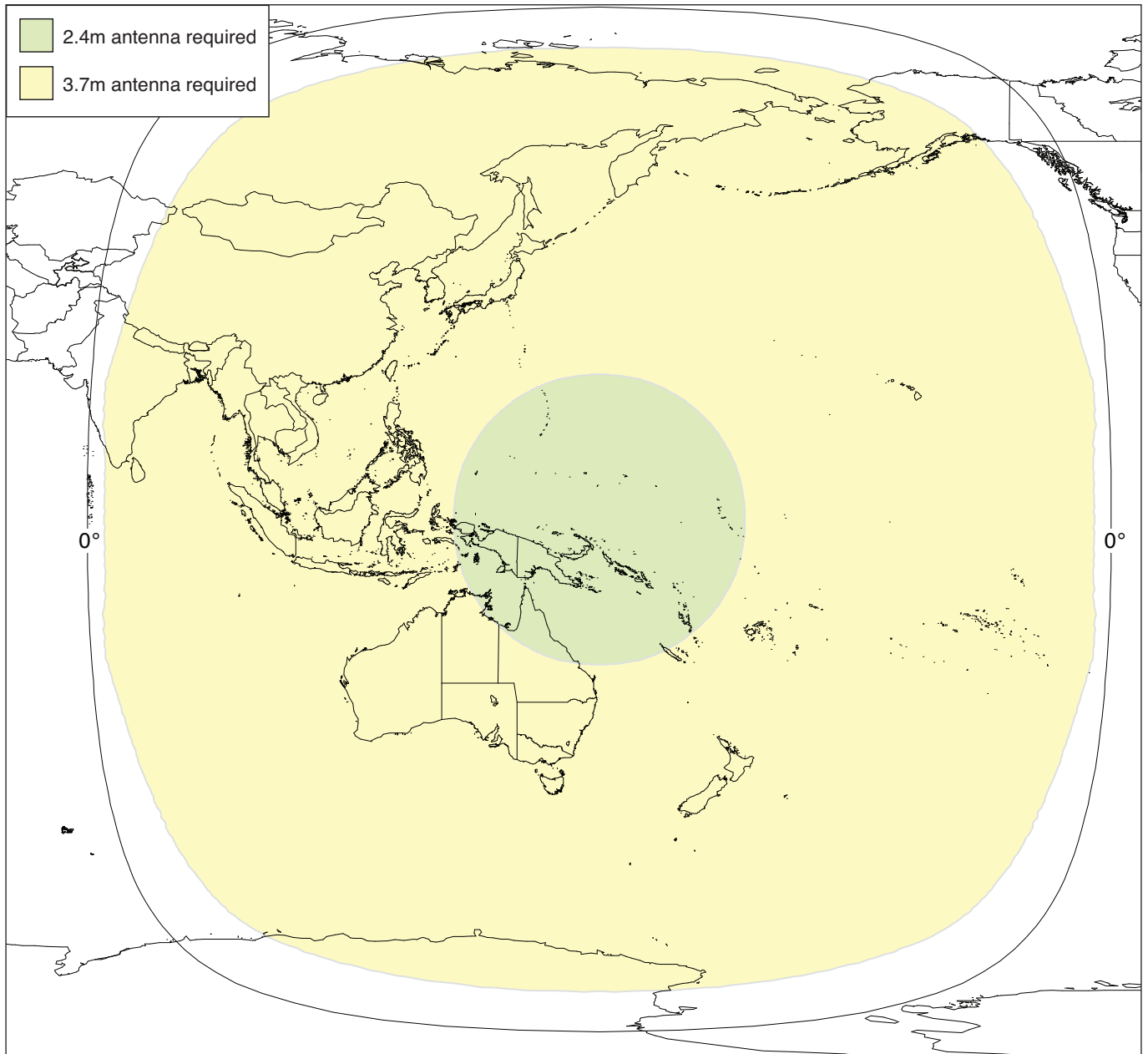
C-Band LNB



TBS 6903 PCIe DVB-S2 receiver card

#### Antenna specifications

	2.4m antenna	3.7m antenna
<b>Reflector type</b>	Prime focus parabolic	Prime focus parabolic
<b>Reflective material</b>	3-segment glass-fibre reinforced polyester	8-segment glass-fibre reinforced polyester
<b>Reflector diameter</b>	2.4m	3.7m
<b>F/D ratio</b>	0.37	0.37
<b>Gain</b>	37.5dBi	40.9dBi
<b>Polarisation</b>	Linear	Linear
<b>G/T @ 10° elevation</b>	17.2dB/K	19.7dB/K
<b>Wind speeds</b>	80km/h (43kt) operational 201km/h (109kt) survival	72km/h (39kt) operational 201km/h (109kt) survival



HimawariCast service availability



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