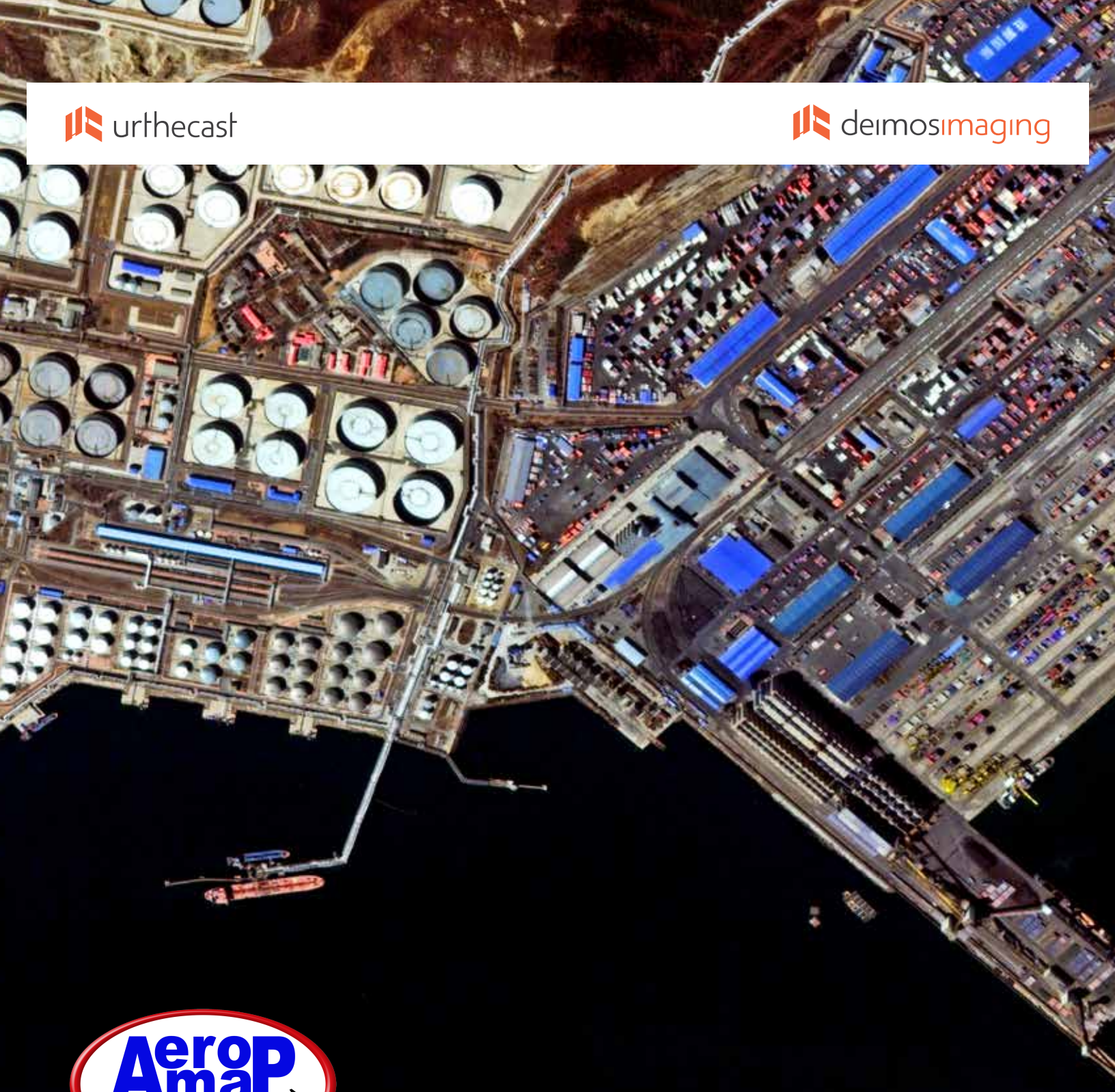
urthecast

deimosimaging



AeroMap Technology Systems

Product Guide

June 2016

Introduction

DAVIS-MONTHAN AIR FORCE BASE, TUCSON, AZ, USA. **CAPTURED BY DEIMOS-2**

A new kind of Earth Observation

UrtheCast operates a next-generation EO system, with a unique suite of four sensors: Deimos-2, Deimos-1, and two sensors onboard the International Space Station,Theia and Iris — the world's first full-color UHD video camera.

Unprecedented variety

Every day, UrtheCast delivers high-quality data and revolutionary value-added products, services, and solutions to serve the rapidly-evolving geospatial and geoanalytics markets. With this diverse data offering, we're building what will become the world's most advanced, space-based Big Data geospatial collection.

The future 24-satellite Constellation

Working as one, UrtheCast's groundbreaking 16-satellite OptiSAR™ and 8-satellite UrtheDaily™ Constellations, both under development, will revolutionize global monitoring. OptiSAR™ will provide high-resolution, high-revisit imagery in all weather conditions, day and night. Complementing the capabilities of OptiSAR™, UrtheDaily™ will provide worldwide coverage, every day at 10:30 am.

COVER: DALIAN, CHINA. **CAPTURED BY DEIMOS-2**

Deimos-2

Deimos-2 is a very high-resolution, agile and cost-effective satellite that provides 75-cm pan-sharpened images with a 12-km swath. It provides best-of-class responsiveness, and can deliver processed images in less than an hour after acquisition, with 24/7/365 service.

Launch Date	June 19, 2014
Design Life	10 years
Orbit	Ascending, sun-synchronous
LTAN	10:30 am local time
Inclination	98°
Altitude	620 km
Period	97.2 minutes
Sensor Type	CCD push-broom
Agility	±45°

Deimos-1

Deimos-1, the first Spanish Earth Observation satellite, captures 22-m imagery with a very wide swath of 650 km. It has been designed to cover large areas extremely frequently, and is ideally suited for applications like precision agriculture and forestry monitoring.

Launch Date	July 29, 2009
Design Life	10 years
Orbit	Ascending, sun-synchronous
LTAN	10:30 am local time
Inclination	98°
Altitude	660 km
Period	98 minutes
Sensor Type	CCD push-broom
Agility	Nadir pointing

MADRID, SPAIN. **CAPTURED BY DEIMOS-2**

Iris

Iris, UrtheCast's High-Resolution Camera (HRC), is mounted on an agile pointing platform that allows for the tracking of targeted Areas of Interest (AOI). Iris captures 1m full-color videos with a duration of up to 60-seconds.

Launch Date	November 25, 2013
Orbit	Inclined
Inclination	51.6°
Altitude	400 km (nominal)
Period	90 minutes
Sensor Type	CMOS
Agility	Biaxial pointing platform (±20°)
Storage	480 GB

Theia

Theia, UrtheCast's Medium-Resolution Camera (MRC), captures strips of medium-resolution, four-channel multispectral imagery, with a swath width of approximately 50 km.

Launch Date	November 25, 2013
Orbit	Inclined
Inclination	51.6°
Altitude	400 km (nominal)
Period	90 minutes
Sensor Type	CCD push-broom
Agility	Nadir pointing
Storage	480 GB

AGRICULTURAL STRUCTURES, IDAHO, USA. **CAPTURED BY THEIA**

Product Specifications

Deimos-2

Spectral Bands	Pan: 560 - 900 nm
	Blue: 466 - 525 nm
	Green: 532 - 599 nm
	Red: 640 - 697 nm
	NIR: 770 - 892 nm
Product Type	Pan-sharpened
	Panchromatic (Pan)
	Multispectral (MS)
	Bundle (Pan and MS)
	Stereo Pair
Swath Width	12 km
GSD	75 cm
	3 m for MS
Processing Level	Level 1B (RPC with metadata)
	Level 1C (Ortho)
Dynamic Range	10 bit*
Map Projection	UTM*
Datum	WGS84*
File Format	GeoTIFF
Delivery Method	Electronic*

*Additional options available upon request

Iris

Spectral Bands	RGB (Bayer Filter)
Product Type	Full color video
	GeoTIFF frame stack
Scene Size	1.9 km x 1.1 km (HD)
	3.8 km x 2.2 km (UHD)
GSD	1 m
Processing Level	Ortho
Duration	Up to 60 seconds
Frame Format	HD
	4K Ultra HD
Frame Rate	30 FPS (video)
	3 FPS (frame stack)
Video Codec	H.264
Dynamic Range	16 bit
Map Projection	UTM*
Datum	WGS84*
File Format	MPEG-4 (video)
	GeoTIFF (frame stack)
Delivery Method	Electronic*

*Additional options available upon request

Deimos-1

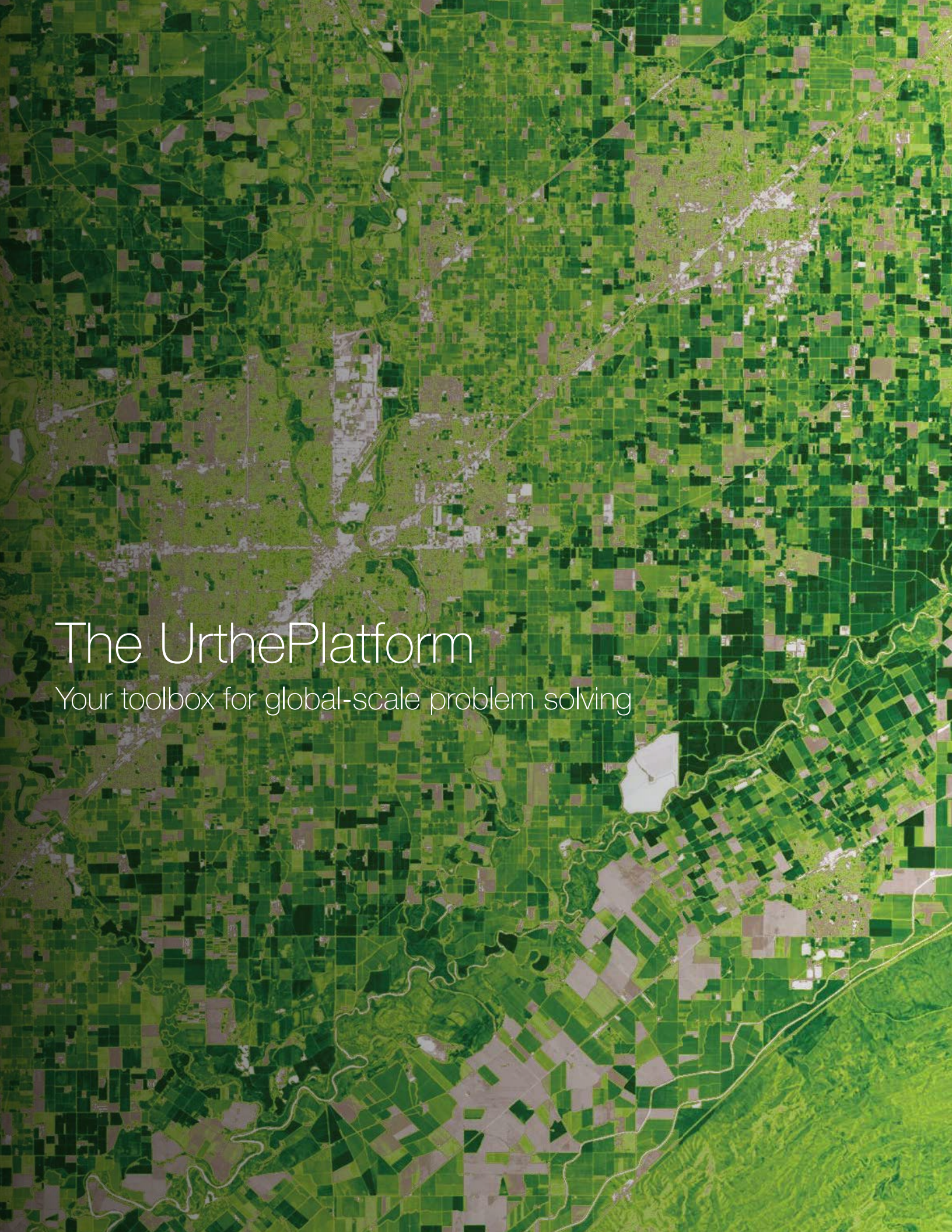
Spectral Bands[1]	Green: 520-600 nm
	Red: 630-690 nm
	NIR: 770-900 nm
Product Type	Multispectral
Swath Width	650 km
GSD	22 m
Processing Level	Level 1R (RPC with metadata)
	Level 1T (Ortho)
Dynamic Range	10 bit*
Map Projection	UTM*
Datum	WGS84*
File Format	GeoTIFF
Delivery Method	Electronic*

[1]A synthetic blue band can be generated to produce natural-color images
*Additional options available upon request

Theia

Spectral Bands	Blue: 470-570 nm
	Green: 500-600 nm
	Red: 600-700 nm
	NIR: 780-880 nm
Product Type	Multispectral
Swath Width	50 km
GSD	5 m
Processing Level	Ortho
Dynamic Range	16 bit
Map Projection	UTM*
Datum	WGS84*
File Format	GeoTIFF
Delivery Method	Electronic*

*Additional options available upon request



The UrthePlatform

Your toolbox for global-scale problem solving

Monitor more efficiently

The UrthePlatform allows you to save and track your location, point, line, or polygon using the Areas of Interest API. Monitor new imagery in your Area of Interest using the Events API, then instantly display or analyze fresh data directly in your current application or workflow using the Map Tiles API or Ordering API.

Explore Earth APIs

Discover our collection of APIs and developer tools that help you access, integrate, and analyze Earth imagery data.

Map Tiles

Visualize and render constantly-refreshed Earth imagery within your application or service.

Ordering

Extract GeoTIFF data in the bands you need, cropped to your Area of Interest.

Areas of Interest

Locate, save, and track one or thousands of locations on the planet, no matter how big or small.

Satellite Tracker

Predict and plan imaging opportunities using satellite trajectories and sensor footprints.

Archive

Search, filter, and refine all available data we provide.

Events

Subscribe to a feed of changes and updates that have occurred in your Area of Interest.

Dive in with the Developer Center

The developer center is home to everything you need to get started using UrtheCast Earth APIs. Read the comprehensive documentation, play around with interactive tutorials, and use Developer Tools to visualize imagery data.

Sign up today at developers.urthecast.com

FRESNO CALIFORNIA, USA. **CAPTURED BY DEIMOS-1**

Licensing

UrtheCast products are licensed, rather than sold, and their usage is defined through an End User License agreement. The license that you purchase determines how widely the products can be distributed.

We offer the following standard license types:

Basic User

1-5 Permitted Licensees

Extended User

6-10 Permitted Licensees

Unlimited User

>10 Permitted Licensees

Academic User

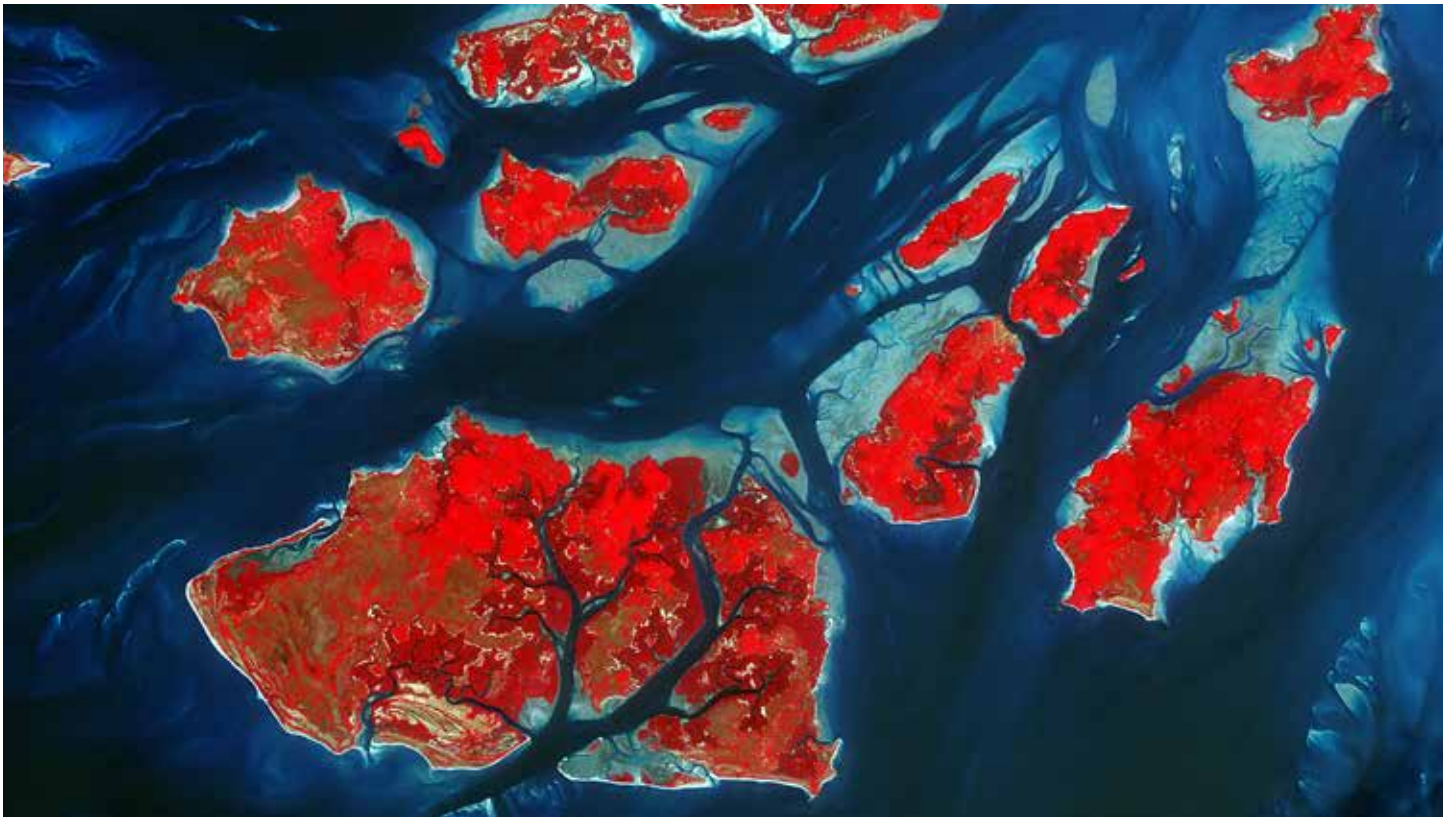
Contact Us

Ordering

Via Customer Experience

Via API

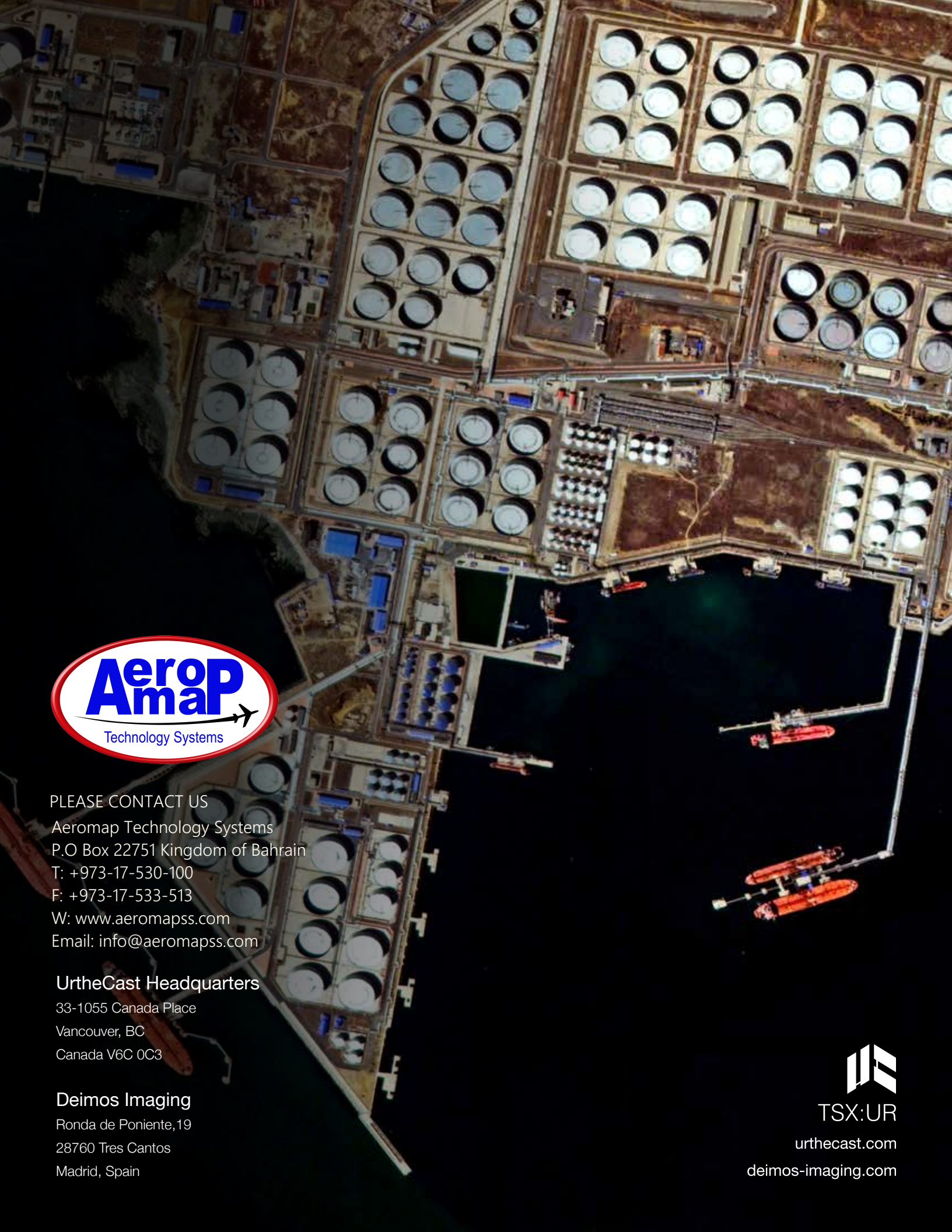
developers.urthecast.com



BISSAGOS ISLANDS,GUINEA-BISSAU. **CAPTURED BY DEIMOS-1**

FOREST MINE, BRAZIL. **CAPTURED BY DEIMOS-2**

BURJ KHALIFA, DUBAI. **CAPTURED BY DEIMOS-2**



PLEASE CONTACT US

Aeromap Technology Systems
P.O Box 22751 Kingdom of Bahrain
T: +973-17-530-100
F: +973-17-533-513
W: www.aeromapss.com
Email: info@aeromapss.com

UrtheCast Headquarters
33-1055 Canada Place
Vancouver, BC
Canada V6C 0C3

Deimos Imaging
Ronda de Poniente,19
28760 Tres Cantos
Madrid, Spain

TSX:UR

urthecast.com

deimos-imaging.com