CAPELLA SPACE

SAR IMAGERY PRODUCTS GUIDE
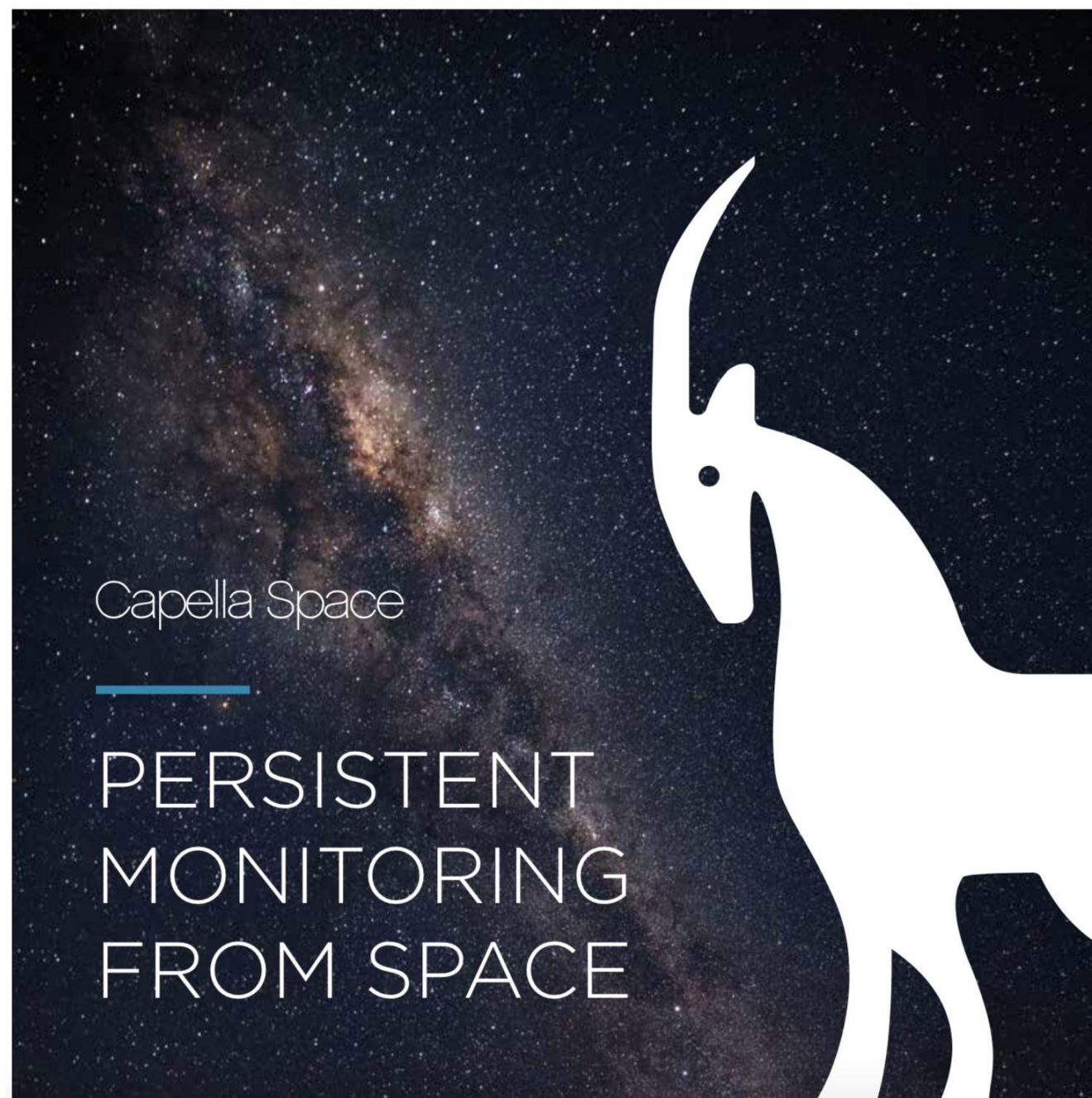

Capella Space

PERSISTENT
MONITORING
FROM SPACE

TABLE OF CONTENTS

DOCUMENT CHANGE LOG

Version	Date	Change Description
2.10	10 April 2020	Change log first introduced into document
2.11	29 April 2020	"Optional Acquisition Exclusivity" & "No Bumping Policy" sections
2.12	4 June 2020	Multi-Looking Figure, Ordering Section, Tasking Statuses
2.13	18 June 2020	Updated with new specification for Spot GEO imagery product
2.14	30 June 2020	Revised content to reflect initial product offerings available from Sequoia
2.15	4 September 2020	Extended & Custom imagery products; Expanded tasking description
2.16	11 September 2020	Added minimum and maximum range of values for Custom parameters

THE CAPELLA ADVANTAGE

Capella Space is an information services company that provides on-demand Earth observation imagery. Through a constellation of small satellites, We provide easy access to frequent, timely, and quality information that affects dozens of industries worldwide. Capella's very high-resolution (VHR) synthetic aperture radar (SAR) satellites are matched with unparalleled infrastructure to deliver reliable global insights that sharpen our understanding of the changing world – improving decisions about commerce, conservation and well-being on Earth.

Capella Space offers a 24-hour all-weather Earth observation imaging capability with a focus on the following core competencies:

- **Timely** (rapid automated order-to-delivery)
- **Quality** (very high resolution and radiometrically enhanced)
- **Accessible** (intuitive self-serve customer experience)
- **Frequent** (high-cadence revisit timeframes)

Capella's SAR constellation supports users at all levels of government, research and commercial organizations. In 2020 Capella will launch Sequoia, the first commercial mission in the United States to provide very high-resolution SAR imagery. Sequoia will have a mid-latitude orbit at an altitude of 525 km with an inclination of 45 degrees.

We will use the increasing availability of low-orbit launch vehicles and the global availability of launch providers to maintain a reactive space infrastructure that is easily replenished and updated. The Capella constellation will support the needs of remote-sensing customers through a customer experience that is simple, responsive, and user-friendly.

CAPELLA SENSOR FEATURES

Each Capella satellite will carry an X-band, single-frequency radar capable of acquiring spotlight, sliding spotlight, and stripmap images. The main characteristics of the Capella SAR system can be found in Table 1.

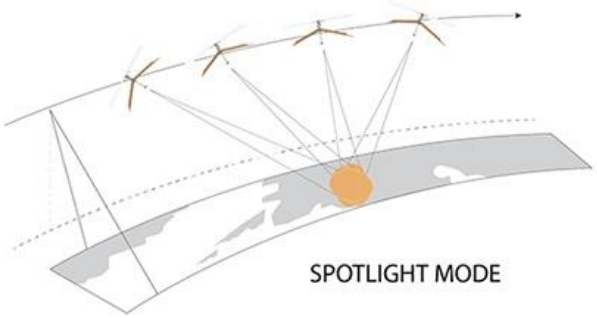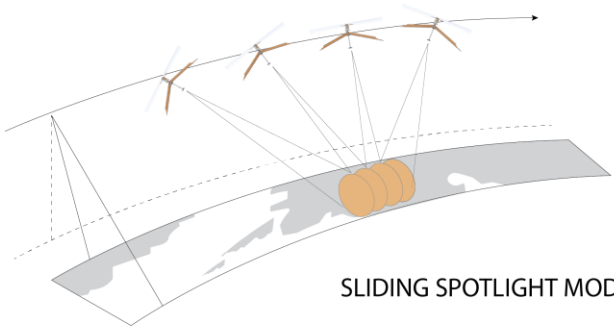|	
Frequency Band	X-band (9.4 – 9.9 GHz)
Transmit Power	600 Watt
Polarizations	Single-Pol HH
Imaging Bandwidth	Up to 500 MHz
Acquisition Direction	Left and Right sides
Imaging Modes	Spotlight, Sliding Spotlight, Stripmap

Table 1: Capella radar main system parameters.

IMAGING MODES

Capella's agile satellites can image with a wide range of look angles and can quickly maneuver with a rotation rate of 1.5 degree per second to image to the left or right of the satellite ground track. The satellites support Spotlight (Spot), Sliding Spotlight (Site) and Stripmap (Strip) imaging modes. These Imaging modes are summarized In Table 2.

Capella's SAR imaging capabilities are well suited for a variety of applications across a range of market verticals. These include traditional intelligence, surveillance and reconnaissance for defense and security, maritime domain awareness, and emerging commercial applications such as insurtech, energy and commodities trading, agriculture, and infrastructure monitoring.

Mode Description	Illustration
SPOTLIGHT (SPOT) In spotlight mode the antenna beam is focused on a point on the Earth for an extended period of time. Azimuth resolution increases with the dwell time of the antenna beam on the target, and range resolution increases with the bandwidth. Dwell time on a single spot is set to provide a desired azimuth resolution. The image width is determined by the antenna beam size. These longer dwell time acquisitions processed with multiple looks provide better image quality with less speckle.	 SPOTLIGHT MODE
SLIDING SPOTLIGHT (SITE) The sliding-spotlight imaging mode increases the image length of high-resolution spotlight acquisitions. Instead of illuminating a fixed point on the ground, in sliding-spotlight mode the acquisition angle is slowly varied to slide the illumination point along the ground. Sliding spotlight provides excellent image resolution with larger area coverage than spotlight.	 SLIDING SPOTLIGHT MODE

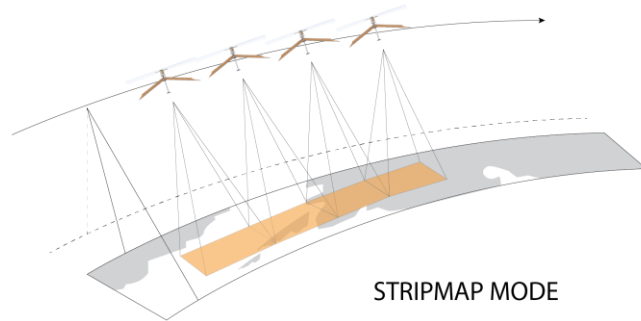| STRIPMAP (STRIP)	
In stripmap mode the center of the antenna beam moves in tandem with the satellite. The ground swath is illuminated with continuous sequence of pulses while the antenna beam is fixed in look angle. This results in a SAR image longer than spotlight and sliding spotlight with a continuous image quality and resolution.	STRIPMAP MODE

Table 2: Capella's SAR imaging modes.

STANDARD SAR IMAGERY PRODUCTS

The standard SAR imagery products are defined with predefined sets of imaging acquisition parameters that provide the optimal full performance range of the Capella radar system. The specification for standard SAR imagery products is delineated in Table 3 and Table 4 below. The spatial resolution of SLC images is defined using azimuth and slant range, while the spatial resolution for GEO images is defined using azimuth and ground range.

Product	Imaging Mode	Nominal Scene Size	Azimuth Resolution	Slant Range Resolution	Look Angle Range
Site SLC	Sliding Spotlight	5 km x 10 km	1.0 m	0.5 m	25° to 40°
Strip SLC	Stripmap	5 km x 20 km	1.7 m	1.0 m	25° to 40°

Table 3: Specification of the standard single look complex (SLC) image product type..

Product	Imaging Mode	Nominal Scene Size	# Of Looks	Azimuth Resolution	Ground Range Resolution	Pixel Spacing	Look Angle Range
Spot GEO	Spotlight	5 km x 5 km	9	0.5 m	0.5 m to 0.7 m	0.35 m	25° to 40°
Site GEO	Sliding Spotlight	5 km x 10 km	5	1.0 m	0.8 m to 1.2 m	0.6 m	25° to 40°
Strip GEO	Stripmap	5 km x 20 km	1	1.7 m	1.6 m to 2.4 m	1.2 m	25° to 40°

Table 4: Specification of the standard geocoded (GEO) image product type.

Figure 1: Nominal scene size of SAR imagery products for each imaging mode.

The analytical range resolution of Capella's SAR systems is 0.3 m in the slant-range direction. Spectral weighting used in every SAR system to control range sidelobes degrades this value slightly. The azimuth resolution depends on the Doppler bandwidth. In the case of stripmap imaging, Doppler bandwidth is set by the physical length of the antenna, and azimuth resolution achieved is half of the antenna length. For spotlight mode, larger Doppler bandwidth is achieved by dwelling on the target as the satellite moves. In this case, the resolution is proportional to the integration time over the same target scene. The agility of Capella's spacecraft allows for longer dwell times over the same scene than phased-array SAR systems, where beam-steering angle is limited to a few degrees.

In Table 4, the pixel spacing for geocoded products (GEO) are also specified. The image formation process produces a sampled version of the image on a grid in the spatial (image) domain. To avoid aliasing, the pixel spacing must be finer than the impulse response defined resolution of the sensor. For example, in the Spot GEO product, a pixel spacing (0.35 m) finer than the ground resolution (0.5 m) is used to sample the image. Changing the sample spacing does not change the range and azimuth resolution of the sensor.

Capella offers two types of SAR imagery products:

Single Look Complex (SLC):

- Contains both amplitude and phase of the radar signal

- Range-compressed and focused SAR image in slant-range geometry

- Georeferenced using orbit data and Range-Doppler projected

Geocoded (GEO):

- Contains amplitude information only

- Range-compressed, focused and multi-looked SAR image

- Multi-look techniques applied to enhance radiometric resolution

- Terrain-height corrected using a high-resolution Digital Elevation Model (DEM)

- UTM-WGS84 map projection

Capella provides imagery files in cloud-optimized GeoTIFF (COG) format with metadata in JSON format. More detailed data format descriptions are available in Capella's "SAR Products Format Specification" document.

MULTI-LOOK PROCESSING

Multi-looking is a technique that generates images with lower speckle and increased image quality. The agile design of the Capella satellite provides much longer dwell times in spotlight imaging mode which can result in centimeter-scale azimuth resolution. Furthermore, at certain look angles sub-0.5m ground range resolution can also be achieved.

Capella's SAR sensors provide more looks than other commercial SAR systems because they are capable of imaging the same location on the ground for tens of seconds in spotlight mode. The standard very high-resolution SAR (i.e., 1 meter) imagery products currently available from other SAR providers are ground-projected using from 1 to 4 looks. In contrast, the Capella system can provide a maximum ground range resolution of 0.5 m with 9 looks which provides substantial improvement in the image quality. The Capella multi-looked imagery is obtained by splitting a long synthetic aperture into a set of sub-apertures and then combining them onto the GEO product. For this purpose, 9 0.5m-resolution SLC imagery are generated with multiple squint angle each time that a Spot product is collected and processed.

Figure 2 presents a simulation of the Spot product using Capella's radar mounted on airborne platform. Multi-looking processing produces enhanced radiometric resolution with higher sensitivity to brightness changes and less noise. The single look image on the left has significant speckle noise but the multi-look version on the right has much improved image clarity and target detectability. The road emerges clearly in the multi-looked image and is easier to distinguish than in the single-look image. The scene also contains backscatter variations over the grassy areas which are clearly discernable.
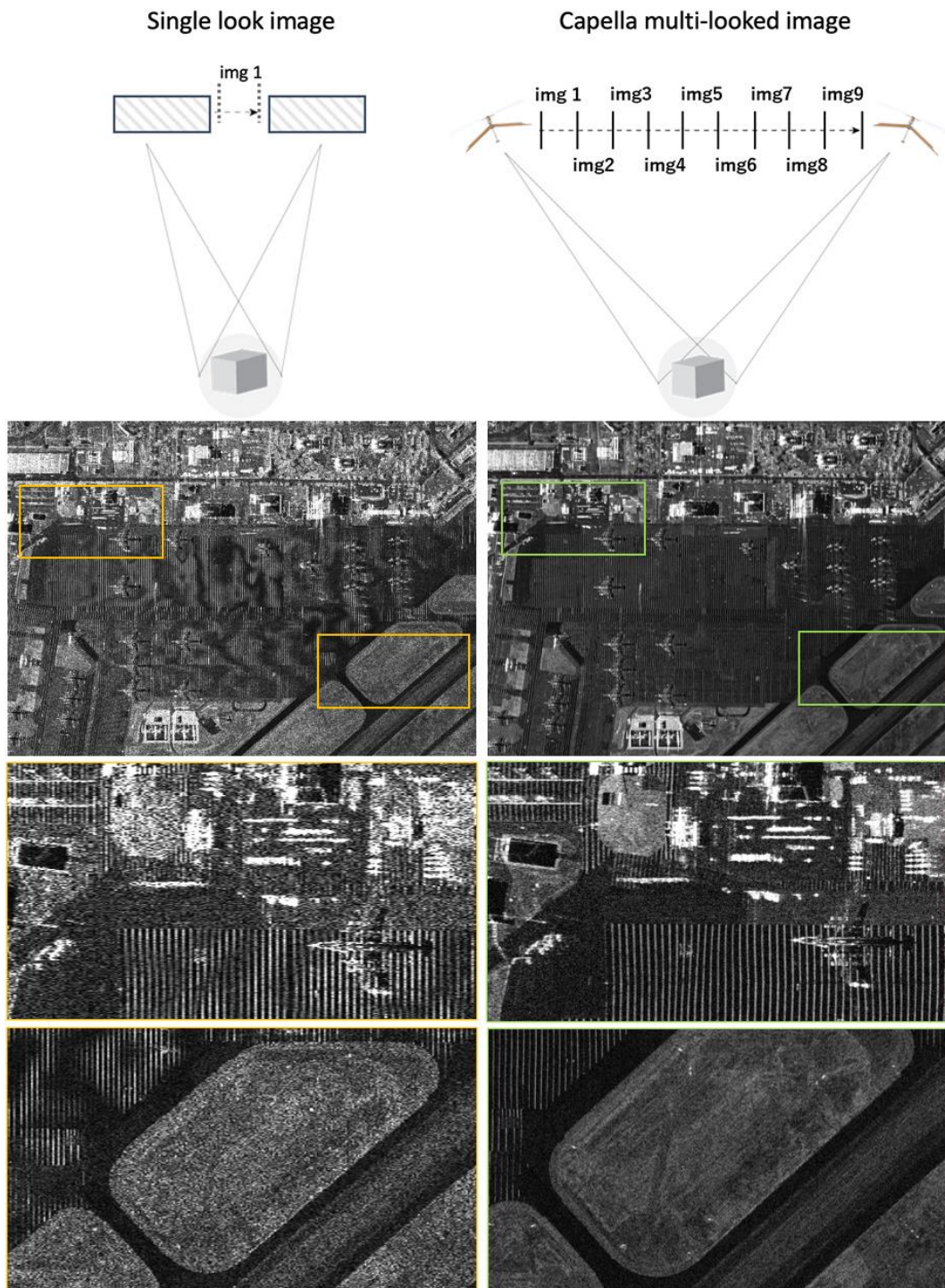
Figure 2: Image quality improvement via the multi-look process. A short integration time is needed to generate single-look SAR images (left) and longer integration times generate Capella's 9-look imagery (right). Single-look and multi-look images have the same resolution, equal to 0.5 meter.

EXTENDED SAR IMAGERY PRODUCTS

The extended SAR imagery products provide increased acquisition opportunities and shorter revisit time periods via imaging acquisitions in broader look angle ranges than the standard products. All other imaging acquisition parameters use the same settings as

standard products. The specification for extended SAR imagery products is delineated in Table 5 and Table 6 below.

Product	Imaging Mode	Nominal Scene Size	Azimuth Resolution	Slant Range Resolution	Look Angle Range
Site SLC (Extended)	Sliding Spotlight	5 km x 10 km	1.0 m	0.5 m	15° to 45°
Strip SLC (Extended)	Stripmap	5 km x 20 km	1.7 m	1.0 m	15° to 45°

Table 5: Specification of the extended single look complex (SLC) image product type.

Product	Imaging Mode	Nominal Scene Size	# Of Looks	Azimuth Resolution	Ground Range Resolution	Pixel Spacing	Look Angle Range
Spot GEO (Extended)	Spotlight	5 km x 5 km	9 to 10	0.5 m to 1.0 m	0.5 m to 1.2 m	0.35 m	15° to 40°
Site GEO (Extended)	Sliding Spotlight	5 km x 10 km	5 to 6	1.0 m to 2.0 m	0.7 m to 1.9 m	0.6 m	15° to 45°
Strip GEO (Extended)	Stripmap	5 km x 20 km	1 to 2	1.7 m to 3.4 m	1.5 m to 3.9 m	1.2 m	15° to 45°

Table 6: Specification of the extended geocoded (GEO) image product type. In geocoded products, number of looks is adaptively selected to bring the azimuth resolution near to the ground range resolution.

CUSTOM SAR IMAGERY PRODUCTS

The custom SAR imagery products provided advanced control of imaging acquisition parameters. The custom imagery product offering gives expert users the power to submit new acquisition tasking requests with very specific SAR imaging characteristics in order to collect bespoke image products that satisfy their application requirements.

Capella's custom SAR imagery acquisition is a unique capability that unlocks new use cases, fosters innovation, facilitates proof of concept development, and provides optimal utilization of satellite capacity by allowing imaging across the full 5°-45° accessible look angle range of the Capella radar system (varies slightly by imaging mode).

The power of custom SAR imagery products is available to users by submitting new acquisition tasking requests using the Capella Console or Capella API with the ability to control the imaging parameters described in the table below.

Imaging Parameter	Description	Minimum	Maximum
Window Open	The earliest user-defined time when acquisition can occur. Image acquisition can begin any time after the Window Open time up to the Window Close time. Units for this parameter is Date Time.	n/a	n/a

Window Close	The latest user-defined time when acquisition can occur. Image acquisition must occur no later than the Window Close time which effectively sets the tasking request expiration date. Units for this parameter is Date Time.	n/a	n/a
Tasking Tier	The new acquisition tasking tier (e.g. 1-Day, 3-Day, 7-Day). Units for this parameter is String.	n/a	n/a
Look Direction	Whether spacecraft is looking left or right with respect to its velocity vector during image acquisition. Units for this parameter is String.	n/a	n/a
Ascending/Descending	Whether the spacecraft is on the ascending (South to North) or descending (North to South) orbit during image acquisition. Units for this parameter is String.	n/a	n/a
Look Angle Minimum	Minimum angle between the sub-satellite point and image center point. Based on the full accessible look angle range of the Capella radar the smallest possible look angle is 5°. Units for this parameter is Degrees.	5	40 for Spot 45 for Site 45 for Strip
Look Angle Maximum	Maximum angle between the sub-satellite point and image center point. Based on the full accessible look angle range of the Capella radar the largest possible look angle is 45°. Units for this parameter is Degrees.	5	40 for Spot 45 for Site 45 for Strip
Imaging Mode	The radar system imaging mode (e.g. spotlight, sliding spotlight, stripmap). Units for this parameter is String.	n/a	n/a
Scene Length	Desired image scene length. This parameter is only customizable for sliding spotlight and stripmap imaging modes. Units for this parameter is Kilometers.	5	5 for Spot 50 for Site 200 for Strip
Ground Range Resolution Minimum	Minimum ground range resolution of the resulting image. Modification of this parameter only impacts the resolution of the GEO product type. Units for this parameter is Meters.	0.5 for Spot 0.7 for Site 1.5 for Strip	3.1 for Spot 5.0 for Site 11.5 for Strip
Ground Range Resolution Maximum	Maximum ground range resolution of the resulting image. Modification of this parameter only impacts the resolution of the GEO product type. Units for this parameter is Meters.	0.5 for Spot 0.7 for Site 1.5 for Strip	3.1 for Spot 5.0 for Site 11.5 for Strip
Azimuth Resolution Minimum	Minimum azimuth resolution of the resulting image. Modification of this parameter impacts the resolution of both the SLC and GEO product type. Units for this parameter is Meters.	0.5 for Spot 1.0 for Site 1.7 for Strip	3.1 for Spot 5.0 for Site 11.5 for Strip
Azimuth Resolution Maximum	Maximum azimuth resolution of the resulting image. Modification of this parameter impacts the resolution of both the SLC and GEO product type. Units for this parameter is Meters.	0.5 for Spot 1.0 for Site 1.7 for Strip	3.1 for Spot 5.0 for Site 11.5 for Strip

Table 7: Imaging acquisition parameters for custom SAR imagery products. In GEO image product type the number of looks in azimuth is fixed to 9, 5 and 1 for Spot, Site and Strip, respectively. When custom collects are requested SLC image product type is recommended in order to optimize multi-looking and geocoding to match user needs.

Since custom SAR imagery products allow acquisitions in the full accessible look angle range of the Capella radar system the ground range resolution for the resulting geocoded (GEO) image product type will vary according to the imaging geometry. The azimuth resolution is not impacted by look angle and the slant range resolution for the SLC image product type will remain consistent. The variation of ground range resolution for the GEO image product type related to modification of look angle is characterized in the table below.

Product	Full Accessible Look Angle Range	Ground Range Resolution
Spot GEO (Custom)	5° to 40°	0.5 m to 3.1 m
Site GEO (Custom)	5° to 45°	0.7 m to 5.0 m
Strip GEO (Custom)	5° to 45°	1.5 m to 11.5 m

Table 8: Ground range resolution for the GEO image product type across the full accessible look angle range of the custom products when the imagery is acquired with the nominal scene size.

ORDERING AND DELIVERY

ORDERING

The Capella platform can be used to order archive data, task satellite acquisition and manage your order as an end user or data reseller. The platform is made of two tools: the Capella Console (Figure 3), a web portal with simple visual interface to access archive collects and task satellites, and the Capella Application Programming Interface (API), a powerful solution for archive access and tasking that allows the development of automated workflows.

Figure 3: The Capella Console web application.

The Capella Console and API both leverage the spatio-temporal asset catalog (STAC) specification. The STAC metadata and catalog search API is designed for ease of use. Queries with simple metadata filters return links to product assets based on a user's project needs. Capella Space standard data products (Spot, Site and Strip) can be ordered and delivered with a minimum purchase of a single scene.

TASKING SERVICE DESCRIPTION

Capella provides a tasking service (Figure 4) that enables customers to request timely, high-quality image acquisitions that meet their analytics and operational needs. The tasking service allows users to submit imagery tasking requests, monitor status, and download the resulting imagery in a streamlined workflow.
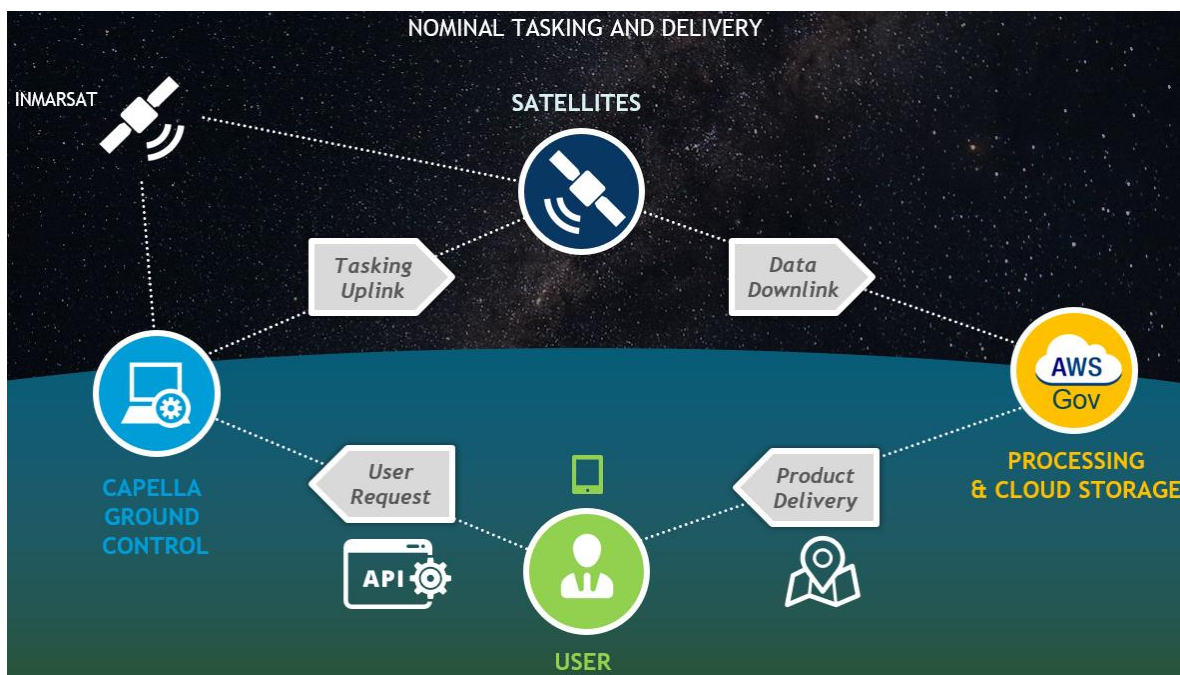
Figure 4: Tasking and delivery paradigm.

Submitting a tasking request is simple and user-friendly. First, a user will decide on their point-target location or polygon AOI and desired configuration of imaging acquisition parameters. Next, using the Capella Console or Capella API the user specifies their desired imaging parameters and submits their tasking request. After submitting the tasking request, users will be notified when their tasking request is ready for review. The review contains an estimated cost of the collect requested and the detailed tasking request configuration. While submitting a new tasking request, the user can select an optional pre-approval, which allows the user to skip the review of the tasking configuration and cost estimation.

Once the estimated cost is reviewed and approved by the user, the tasking request enters a queue until it is evaluated by the constellation scheduling system. This system evaluates new tasking requests every 15 minutes. The constellation scheduling system will determine if the new acquisition can be accommodated given the current capacity of the constellation and prior imaging commitments. Once scheduling of the constellation is complete the user will be informed whether the tasking request has been accepted or rejected and a new schedule will be uplinked to the satellite constellation at the next available contact opportunity. At any point the user can request the status of the submitted tasking request via the Capella Console or using the API.

The standard scheduling process is entirely automated to provide rapid-response capabilities 24-hours a day and maximize constellation throughput. All orders are processed on a first-come, first-served basis. A tasking request can be placed any time prior to the user's desired acquisition time and will be accepted provided the collection constraints are feasible within the tasking plan. Every organization and user is assigned an anonymous universally unique identifier (UUID) that is associated with their catalog queries, orders, tasking requests and datasets. All interactions with Capella system (platform, archive catalog, tasking database, etc.) are performed using the anonymized UUIDs for organization and user. In the event of another user submitting a new tasking request that is

rejected due to consumption of imaging capacity by an existing accepted tasking order the system does not provide any details related to the existing acquisition order to other users (i.e. the system only reports that the new tasking request is rejected).

TERM	DESCRIPTION
Tasking Request	A tasking request made by the user, which can be a single point target or a polygon AOI, as well as the imaging mode and collect constraints.
Collect	A Collect is a potential or fulfilled imagery acquisition opportunity for a tasking request. For point targets, there will typically be one collect per tasking request. For polygon tasking requests, there may be many collects to complete the coverage of the area of interest.
Tasking Tier	The tasking tier allows users to constrain the period within which their tasking request will be fulfilled. A 7-day tier means that the image can be collected anytime within 7 days, whereas a 1-day tier means the image should be collected within a single day. A user may choose a Window Duration longer than the timeframe for a predefined tasking tier in order to maximize acquisition opportunities.
Acquisition Time	Sensing time of specific AOI.
Window Open	The earliest user-defined time when acquisition can occur. Image acquisition can begin any time after the Window Open time. Window Open signifies the start of the Window Duration.
Window Close	The latest user-defined time when acquisition can occur. Image acquisition must occur no later than the Window Close time. Window Close signifies the end of the Window Duration and effectively sets the tasking request expiration date.

Table 9: Definition of the tasking service terminology.

NO BUMPING POLICY

Once a new tasking request has been accepted it will remain accepted until acquisition and delivery. There is no "bumping" of accepted tasking requests by higher priority orders, meaning the Capella system will never automatically cancel an accepted tasking request in order to accommodate another imaging request. However, tasking requests can be moved by the Capella system within the scope of the requested acquisition window duration or cancelled if an imaging restriction is imposed.

TASKING TIERS

The Tasking Service supports a variety of Tasking Tiers (see table below), which give the user additional certainty that a tasking request will be collected within a 1-day, 3-day, or 7-day period from the Window Open time. When a tasking request is made, the user is required to select a Window Open and a Tasking Tier. If a request is accepted, a user will be guaranteed to receive new SAR data with an acquisition time indicated by the Tasking Tier starting from the Window Open time. For example, if a tasking request is accepted by Capella with a Window Open of January 1st and a 3-day Tasking Tier, the user can be certain that new SAR will be collected by January 4th.

TASKING TIER	TASKING TIMEFRAME
7-Day	Once the tasking request is accepted it will be acquired within 7 days.
3-Day	Once the tasking request is accepted it will be acquired within 3 days.
1-Day	Once the tasking request is accepted it will be acquired within 1 day.

Table 10: New acquisition tasking tier descriptions.

For additional flexibility, a user has the option to set Window Close to a period longer than the Tasking Tier period, for cases where they would prefer data acquisition within a certain Tasking Tier period, but would also accept data collected outside of that period. In this case, the user will only be charged for the Tasking Tier that aligns with the acquisition time when their imagery is actually collected. For example, if a tasking request is submitted with a Window Open of January 1st, a 1-day tier and Window Close of January 8th, and the image is collected on the 4th day, the user will only be charged for the 7-day tier. It is not possible to set the Window Close for a shorter period than the selected Tasking Tier.

TRACKING TASKING STATUS

Customers can monitor the status of tasking requests and data delivery in real-time using the Capella Console or Capella API.

TASKING STATUS	DESCRIPTION
Received	A tasking request is received from our system and the processing of cost estimation started. AOI tasking requires tessellation algorithms to estimate number of acquisitions required. At this stage, the tasking request is not submitted scheduling.
Review	The user has the opportunity review the estimated cost for the tasking request.
Approved	Once the cost is reviewed and accepted by the user, the request can be submitted to the scheduling system.
Accepted	The tasking request is guaranteed for full acquisition.
Active	The tasking request is scheduled, and the data acquisition started. At this point, in particular for large AOIs, the full completion of the tasking request is not yet guaranteed.
Rejected	The tasking is rejected because there is no capacity available in the acquisition window.
Error	The tasking cannot be submitted due to a scheduling error or problems during the ingestion of the tasking request.
Anomaly	An anomaly occurred during collect that prevents full completion of the tasking request
Completed	The tasking request has been completed. All required collects have been acquired.

Table 11: Definition of the tasking statuses.

For each collect, customers will be informed on the status of their SAR data as described in the following table.

COLLECT STATUS	WINDOW DURATION TIMEFRAME
Tasked	Acquisition of the SAR images has been incorporated into a schedule and uplinked to spacecraft.
Collected	The image has been collected by the Capella SAR system on the spacecraft.
Processing	Data has been downlinked and we are processing the SAR product requested.
QA	Images is waiting for QA checks.
Anomaly	Something in the downlink or processing went wrong. We will communicate the nature of the problem.
Delivered	Processed product is ready and available for customer download.

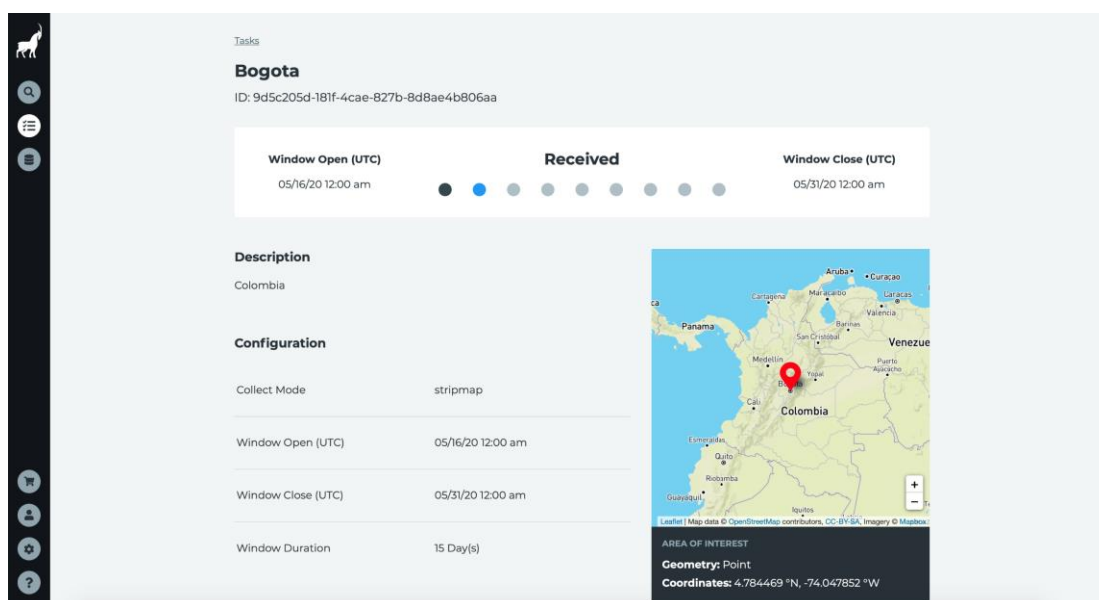Table 12: Definition of the collect statuses..

Figure 5: Tasking configuration and status on the Capella Console web application.

ACQUISITION TASKING CANCELLATION POLICY

Tasking requests for new acquisitions that have been accepted (i.e. accepted or active status) can be cancelled by the user that submitted the request using either the Capella Console or REST API. If an order is cancelled the following cancellation policy applies:

- Cancellation > 72 hours before first acquisition of order = cancellation available at no charge

- Cancellation 12 - 72 hours before first acquisition of order = cancellation available at 25% charge of full order value

- < 12 hours before first acquisition of order = no cancellation allowed with 100% charge of full order value

For large-area tasking requests which require multiple acquisitions to fulfill the order all cancellation deadlines are before the very first acquisition. Consequently, once the 12-hour deadline is passed for multi-acquisition orders the imaging acquisition can no longer be cancelled, all data products will be acquired & delivered, and full order value will be charged. Furthermore, if a tasking request is automatically rescheduled by the Capella scheduling system within the scope of the designated tasking tier acquisition window duration the cancellation deadlines reset and are moved in timeframe along with the rescheduled tasking request.

OPTIONAL ACQUISITION EXCLUSIVITY

An extra-cost option for time-limited acquisition exclusivity is provided via holdback delays before new acquisition tasking datasets are cataloged into our historical archive for other users to discover and purchase. The archive catalog holdback delay options for any given new acquisition order are the following:

- None (default behavior; all datasets immediately added to archive catalog)

- 30-Day Archive Catalog Holdback Delay = +10% uplift surcharge of full order value

- 1-Year Archive Catalog Holdback Delay = +25% uplift surcharge of full order value

No identifying details of any new acquisition tasking order or previously collected dataset in the archive catalog is visible to any other users in the Capella system.
Furthermore, even after the holdback period expires and the SAR imagery products are cataloged all dataset holdings in the Capella archive are anonymized, so no identifying details are visible to other users which connect these SAR imagery products back to user or organization who originally requested their original acquisition.

DELIVERY

All data product delivery is via the Capella online platform consisting of the Capella Console web application and the Capella API. Once SAR imagery products have been processed and made available for users to download the datasets from the Capella online platform the products are considered delivered.

THE CAPELLA REVOLUTION

In contrast to the slow and expensive SAR ordering and dissemination systems now in place, Capella blends SAR imaging with the most innovative technology and tools such as commercial micro-electronics, automated command and control, worldwide downlink services, cloud-based operations, and user-friendly interfaces. We offer simplicity in ordering, guaranteed acquisition times at extremely high volume and velocity, easy online data access and fair prices.

We are building a large constellation of small SAR satellites that provide very high-resolution images, anywhere on the planet, at volumes and temporal resolution rates that are unparalleled. Capella can support customers who need an image rapidly, as well as

those who need to persistently monitor AOIs, using a coherent image stack, and receive notification when changes are detected. Until now, SAR imaging has been used as a specialized and expensive remote sensing tool, but at Capella, we are transforming SAR into an easily accessible, global information source. Our revolution is to make SAR affordable and ubiquitous across the globe—democratizing access to an expanding and essential remote sensing resource.

Capella Space

CONTACT

www.capellaspace.com

San Francisco, CA | Boulder, CO