



Velaris 200

Ultra-Compact, Fully Integrated Satellite Terminal for UAV Comms

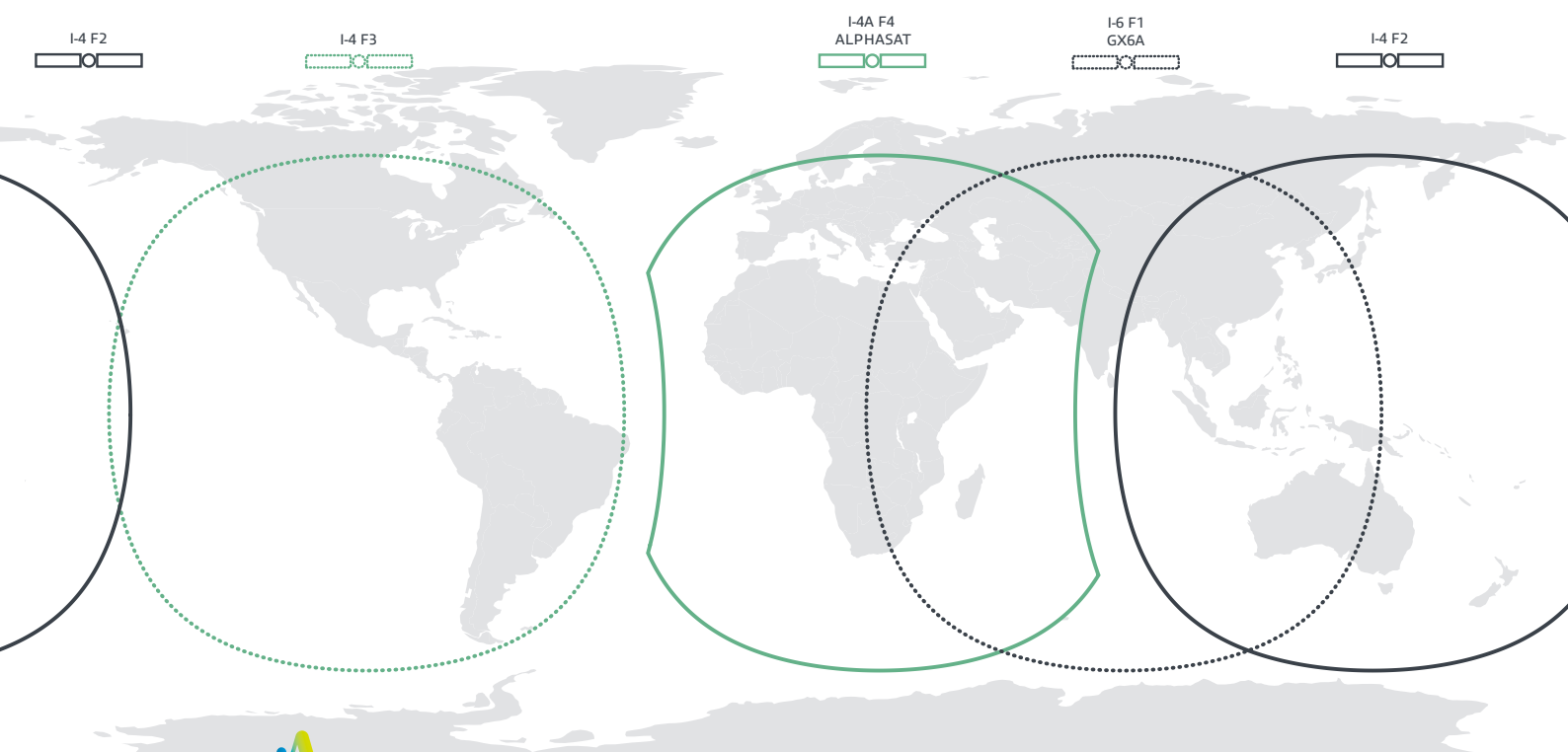
A complete low SWaP-C modular BGAN satellite data unit, with integrated antenna, for use with Viasat Velaris data services for lightweight UAV applications. Data rates of up to 200kbps possible across the Viasat L-Band satellite network.



Key features

- Fully integrated module: omni-directional antenna and BGAN Radio Modulated data unit within IP67 assembly
- Low Size: Ø 145mm x 85mm tall
- Low Weight: 580g
- Low Power: 15W @ 70kbps bidirectional
- Data rates up to 200 kbps (Regional Class 4)
- Operational as a Viasat Regional Class 4 terminal with current network. For full Viasat Velaris coverage future factory upgradable to Class 16
- Integrated GNSS receiver
- Single RPAS interface for power and data

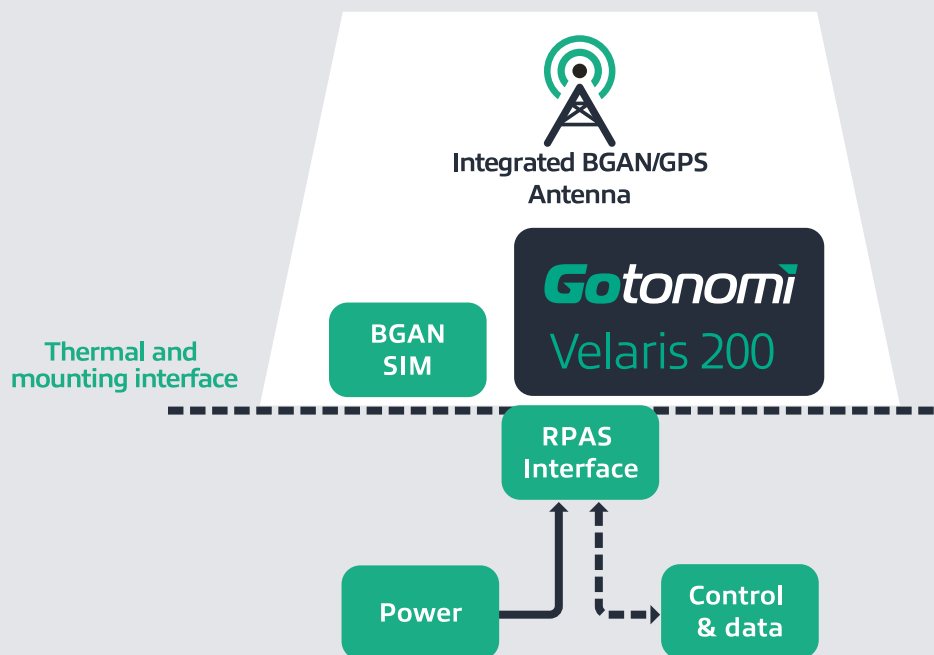
Regional Class 4 Coverage



Manufacturer Part Number: 200300100040000000

Velaris 200	Specification
Dimensions:	Height: 83mm 3.3" Diameter: 145mm typ, 162mm max 5.7" typ, 6.4" max Weight: 580g 20.5 oz
Power (average):	Network idle: 0.65W Receive: 3.7W Power consumption at 70kbps transmit: 15W Power consumption at 200kbps transmit: 20W Peak transient: 40W
Weather & ingress protection:	IP67 rating
BGAN Class:	Regional Class 4 (up to 200kbps) between 20° & 90° elevation Class 16 (up to 100kbps) between 5° & 90° elevation - future development, factory upgrade
Power supply	Input: 18-36V DC Baseline: suitable for operation directly from 6s and 8s LiPo battery packs or regulated 28V avionics supply
RPAS interface	DC power supply and Ethernet data connection: 9 pin D Sub connector
Software interface	RESTful API AT Interface On device Web GUI
RF frequencies	L-Band: 1518-1559 MHz, 1626 - 1675 MHz GNSS systems operating: 1575.42 MHz

Block diagram



Velaris Module

Ultra Compact Satellite
Terminal for UAV Comms

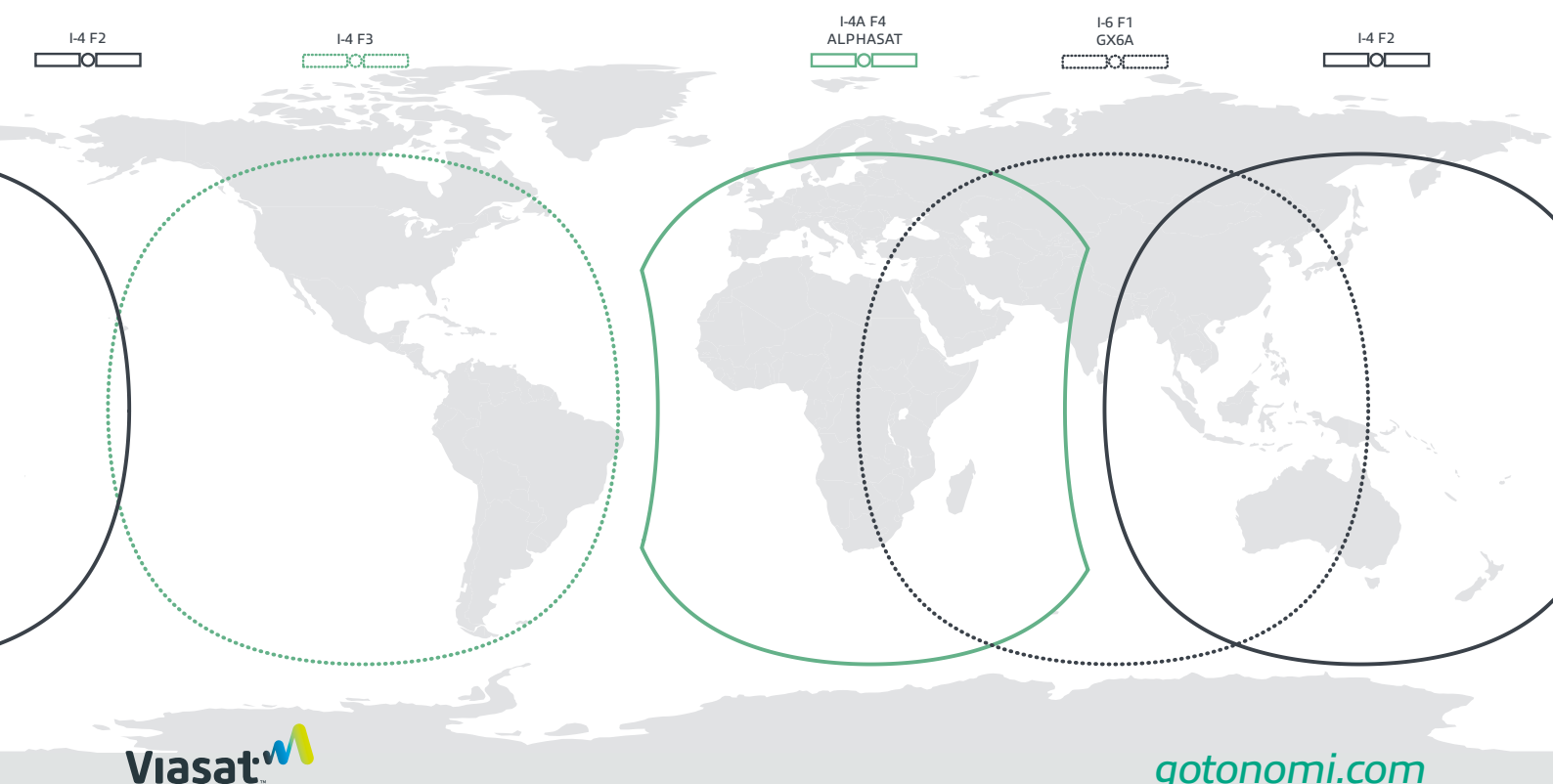
A complete low SWaP-C modular BGAN satellite data unit, for use with Viasat Velaris data services for lightweight UAV applications. Data rates of up to 200kbps possible across the Viasat L-Band satellite network.



Key features

- Low Size: 94mm x 94.5mm x 16.5mm tall
- Low Weight: 195g
- Low Power: 15W @ 70kbps bidirectional
- Data rates up to 200kbps (Regional Class 4)
- Operational as a Regional Class 4 terminal with current network, for full Viasat Velaris coverage future factory upgradable to Class 16
- Integrated GNSS receiver

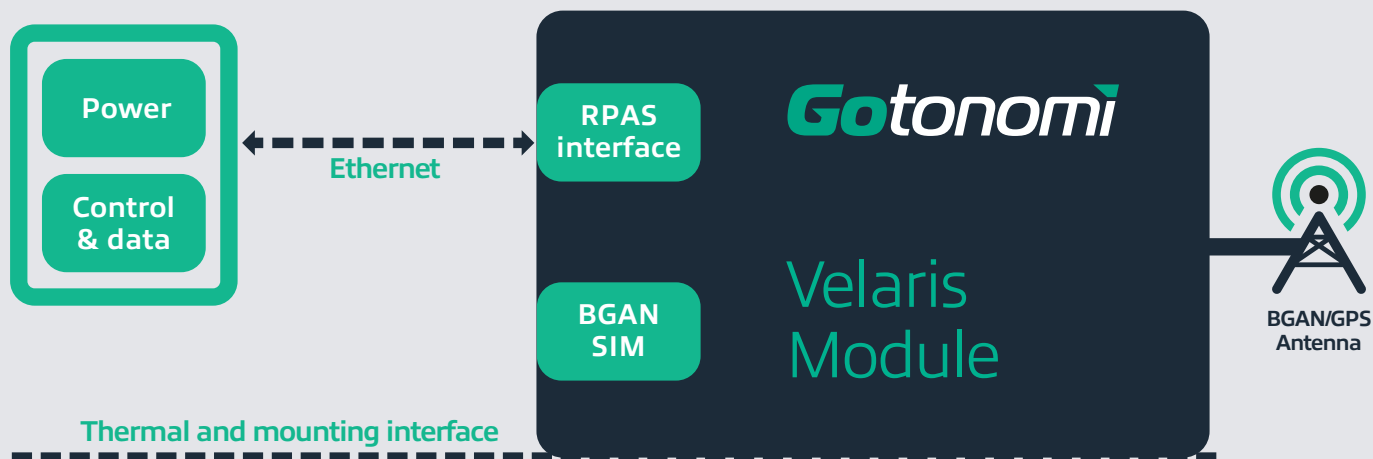
Regional Class 4 Coverage



Manufacturer Part Number: 200100100040000008

Velaris Module	Specification		
Dimensions:	Height:	15mm	0.65"
	Area:	94 x 94.5mm	3.7 x 3.7"
	Weight:	195g	6.9 oz
Power (average):	Network idle:	0.65W	
	Receive:	3.7W	
	Power consumption at 70kbps transmit:	15W	
	Power consumption at 200kbps transmit:	20W	
	Peak transient:	40W	
Antenna:	External Viasat approved antenna		
BGAN Class:	Regional Class 4 (up to 200kbps) between 20° & 90° elevation		
	Class 16 (up to 100kbps) between 5° & 90° elevation - future development, factory upgrade		
Power supply	Input: 18-36V DC Baseline: Suitable for operation directly from 6s and 8s LiPo battery packs or regulated 28V avionics supply		
RPAS interface	DC power and Ethernet data connection: Samtec T1M-10-GF-DH RF: SMPM female		
Software interface	RESTful API AT interface On device Web GUI		
RF frequencies	L-Band: 1518 - 1559 MHz, 1626 - 1675 MHz		
	GNSS systems operating: 1575.42 MHz		

Block diagram



Velaris Multi-link Module

Ultra Compact Satcom and
Cellular UAV Terminal with
Edge Compute

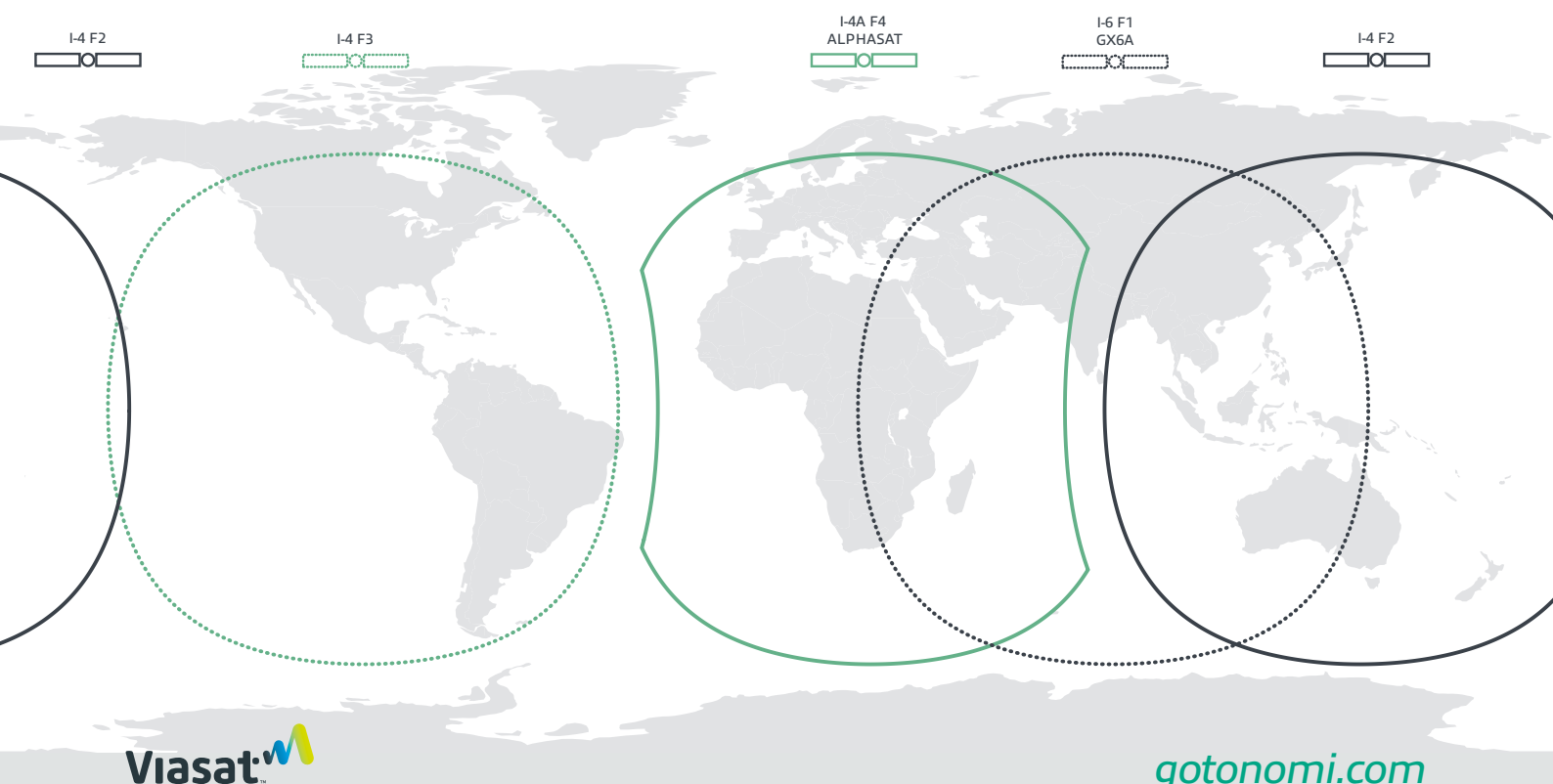
A complete low SWaP-C modular BGAN satellite and LTE data unit, with integrated edge compute, for use with Viasat Velaris data services for lightweight UAV applications. Data rates of up to 200kbps possible across the Viasat L-Band satellite network.



Key features

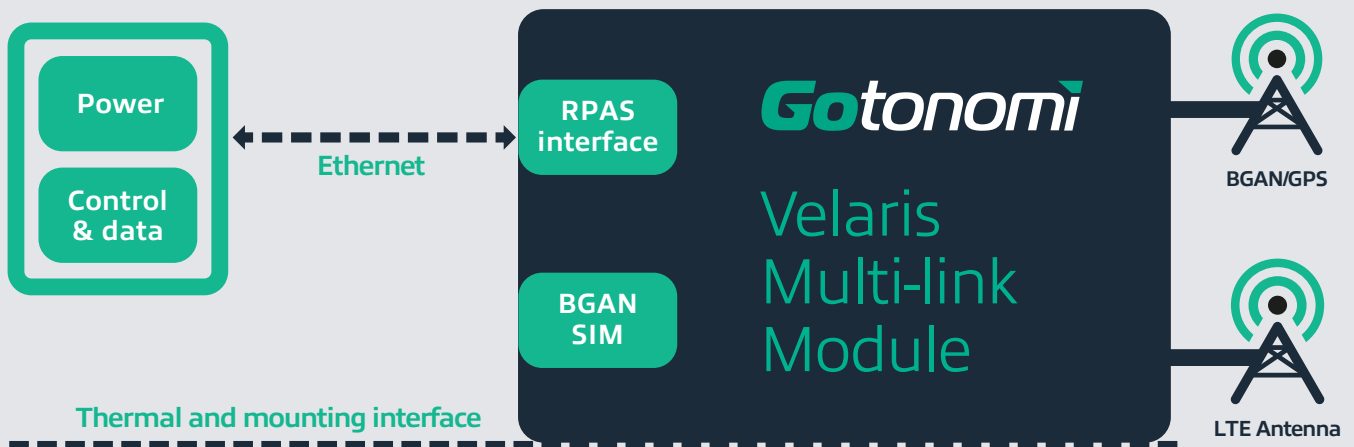
- Low Size: 140mm x 95mm x 15mm tall
- Low Weight: 245g
- Low Power: 16W @ 70kbps bidirectional
- Data rates up to 200kbps (Regional Class 4)
- Operational as a Viasat Regional Class 4 with current network. For full Viasat Velaris coverage future factory upgradable to Class 16
- SOM module enabling edge processing
- Integrated GNSS receiver

Regional Class 4 Coverage



Velaris Multi-link Module	Specification
Dimensions:	Height: 15mm 0.6" Area: 140 x 95mm 5.5 x 3.7" Weight: 245g 8.6 oz
Power (average):	Network idle: 0.65W Receive: 3.7W Power consumption at 70kbps transmit: 16W Power consumption at 200kbps transmit: 21W Peak transient: 40W
Antenna:	External Viasat approved antenna External LTE antenna
BGAN Class:	Viasat Regional Class 4 (up to 200kbps) between 20° & 90° elevation Class 16 (up to 100kbps) between 5° & 90° elevation - future development, factory upgrade
Power supply	Input: 18 – 36V DC Baseline: suitable for operation directly from 6s and 8s LiPo battery packs or regulated 28V avionics supply
RPAS interface	DC power supply and Ethernet data connection: Samtec T1M-10-GF-DH BGAN RF: SMPM female LTE RF: SMPM female Built in routing rules for BGAN and LTE traffic mapping
Software interface	RESTful API AT interface On device Web GUI
RF frequencies	L-Band: 1518 – 1559 MHz, 1626 – 1675 MHz GNSS systems operating: 1575.42 MHz LTE-FDD: B1/2/3/4/5/7/8/12/13/18/19/20/25/26/28; LTE-TDD: B38/39/40/41; WCDMA: B1/2/4/5/6/8/19; GSM: B2/3/5/8
SoM and LTE	NXPi.MX 8M MINI application processor SOM module enabling edge processing Cat 1 LTE worldwide coverage cellular module

Block diagram





200-A Omni

Ultra-Compact,
Omni-directional
antenna designed
for L-Band

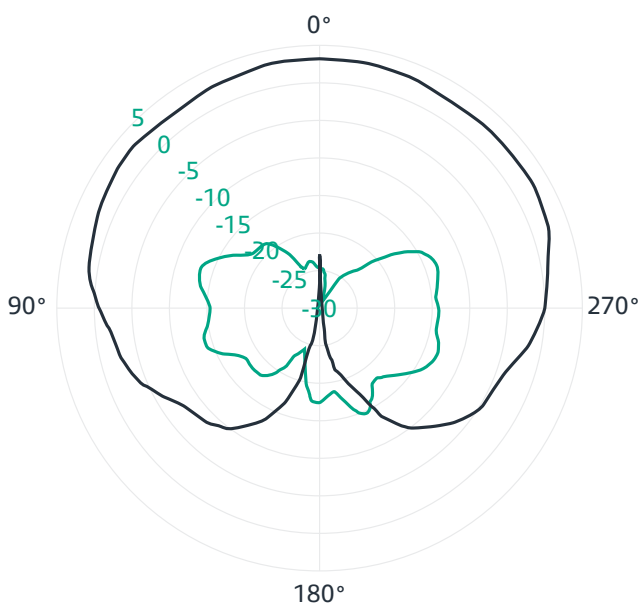
A omni-directional standalone antenna, designed for L-Band satcom applications. Specifically designed to pair with Gotonomi terminals allowing access to Viasat Velaris data services for lightweight UAV applications. Data rates of up to 200kbps across the Viasat L-Band satellite network.

Key features

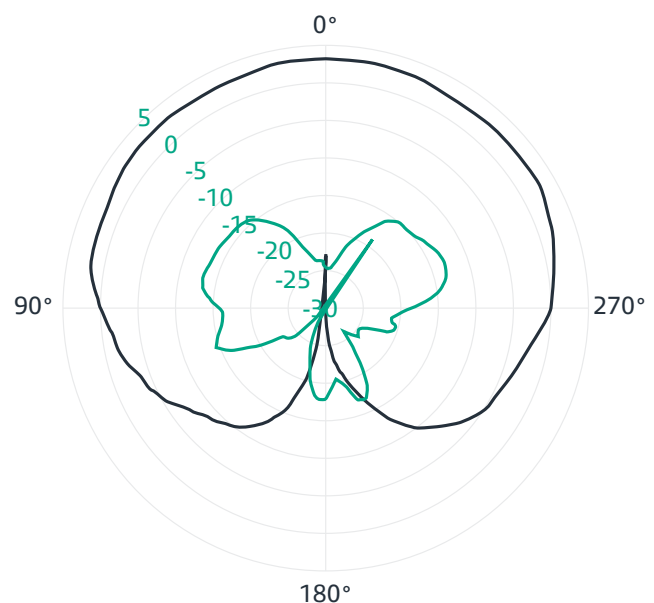
- Designed for L-Band Sat Com
- Low Size: - Ø104mm x 72mm tall
- Low Weight: 240g
- Data rates up to 200kbps, when paired with Gotonomi Velaris terminal (Regional Class 4)
- SMA jack connection
- Pair with Gotonomi Velaris Module (satcom) or Multi-Link Module (satcom and cellular)



Elevation 1 Polar Plot - Cut 1



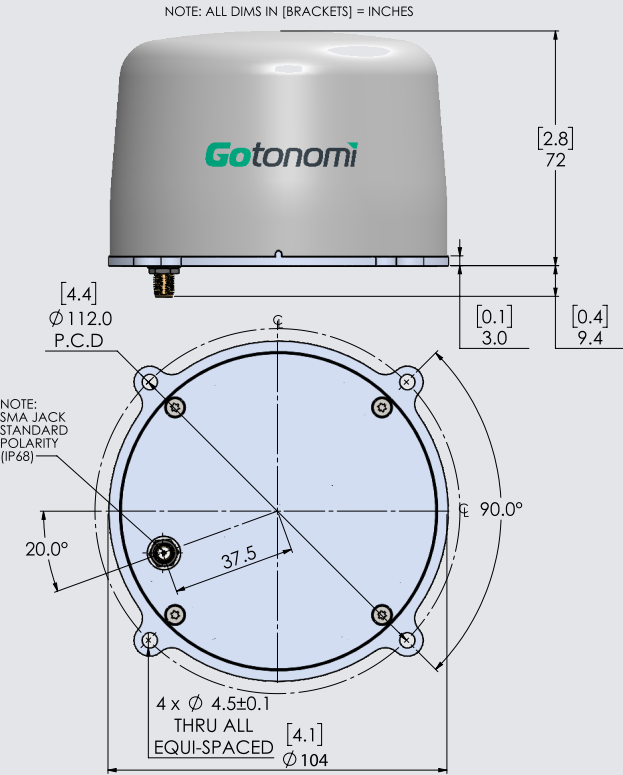
Elevation 2 Polar Plot - Cut 2 at 90 degrees



— Co-polar
— X-polar

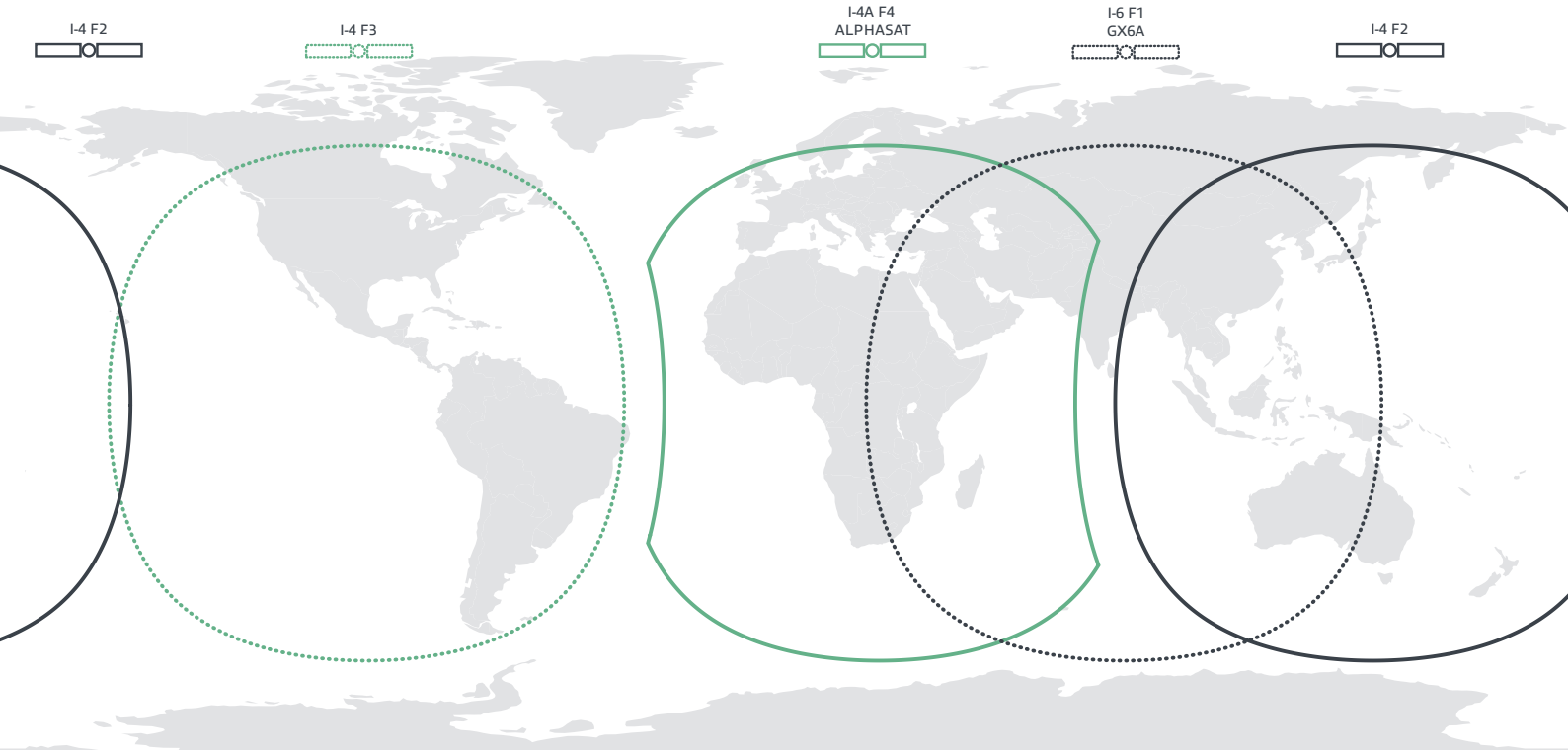
200-A Omni Antenna

Specification



Electrical & RF	
Frequency	1.518GHz – 1.675GHz
Gain (Nom.)	2.5dBiC Nom
Gain (RHCP for elevation $\geq 20^\circ$)	2dBiC $\leq$, ≤ 3.5 dBiC
Polarisation	Right hand circular
Beamwidth	(-3dB) 170 degrees approx
Axial Ratio	< 2.3 dB, for 1.518GHz – 1.675GHz Az(360 degrees) and El(≥ 20 degrees)
VSWR	1.5:1 Max
Power Rating	10W
Dimensions	
Height	72mm 2.8"
Diameter	104mm typ., 122mm max. 4.1" typ., 4.8" max.
Weight	240g 8.5 oz
Weather & Ingress Protection	IP67 rating

Regional Class 4 Coverage





Velaris Inspection Bundle

Single product bundle to enable you to start BVLOS Inspection and Surveillance operations today

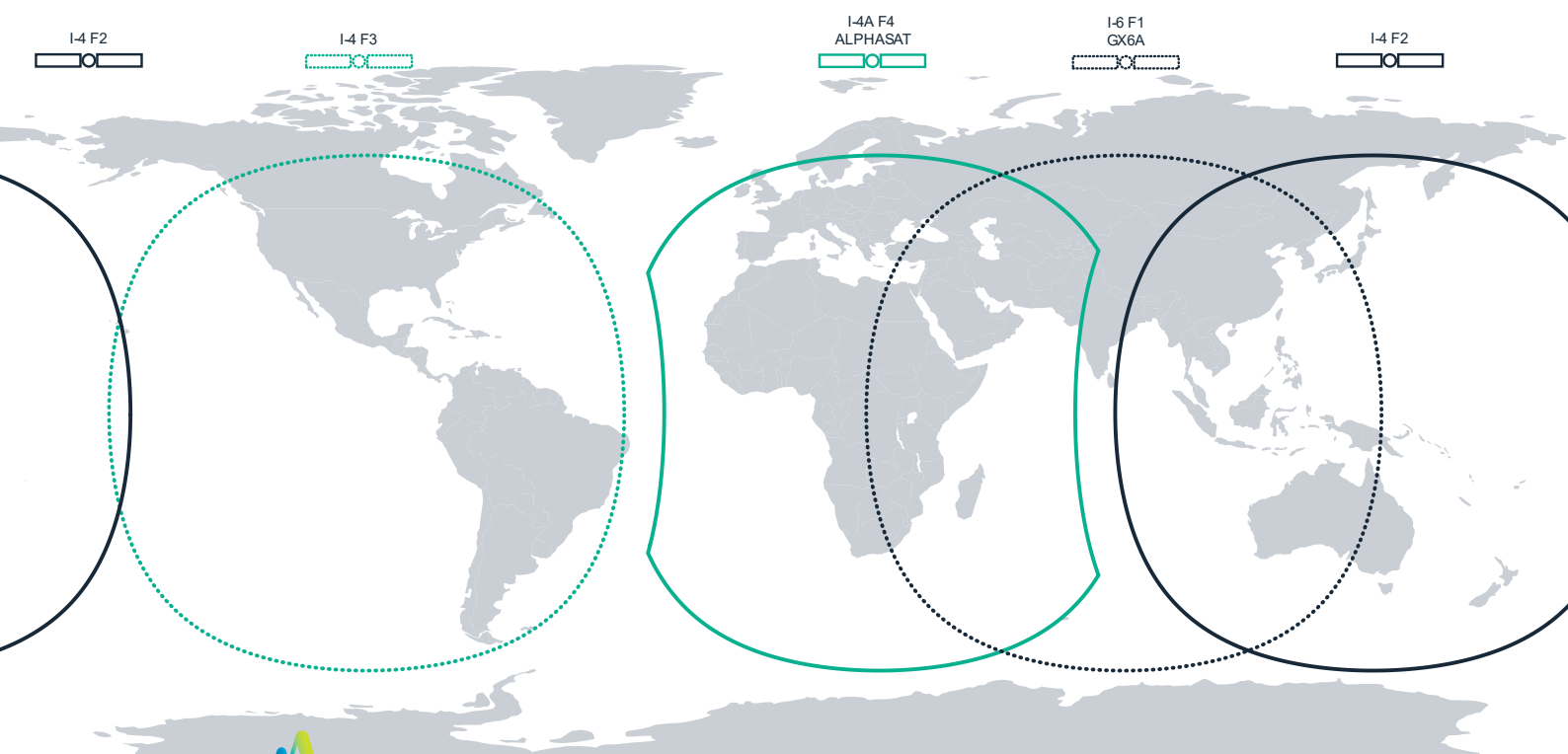
A complete low SWaP-C modular BGAN satellite data unit and stand-alone omni-direction antenna, for use with Viasat Velaris data services. Videosoft Global video compression software embedded on an integrated SOM enabling live video streaming.

Videosoft's Low Bandwidth Video platform is an easy-to-use system for encoding and transmitting real-time video over wireless networks with bandwidth-managed encoding at ultra-low bitrates (from 1kbps) to full high resolution.

Key features

- Data rates up to 200kbps (Regional Class 4)
- Live video feed down to 1kbps possible with Videosoft's ultra-low bandwidth video streaming software
- Low SWaP-C Satcom terminal – 18W average power and integrated GNSS receiver
- Low SWaP-C Omni-Directional Antenna
- 500MB per month air-time package
- 12-month subscription to Videosoft license and Viasat airtime

Regional Class 4 Coverage



Manufacturer Part Number: 200800100040000005

Velaris Edge Module	Specification		
Dimensions:	Height:	15mm	0.6"
	Area:	140 x 95mm	5.5 x 3.7"
	Weight:	230g	8.1 oz
Power (average):	Network idle:	0.65W	
	Receive:	3.7W	
	Average power consumption:	17.8W	
	Peak power consumption:	27.5W	
BGAN Class:	Viasat Regional Class 4 (up to 200kbps) between 20° & 90° elevation Class 16 (up to 100kbps) between 5° & 90° elevation – future development, factory upgrade		
Power supply	Input: 18 – 36V DC Baseline: suitable for operation directly from 6s and 8s LiPo battery packs or regulated 28V avionics supply		
RPAS interface	DC power supply and Ethernet data connection: Samtec T1M-10-GF-DH BGAN RF: SMPM female		
Software interface	RESTful API AT interface On device Web GUI		
RF frequencies	L-Band: 1518 - 1559 MHz, 1626 - 1675 MHz GNSS systems operating: 1575.42 MHz		
SoM	NXPi.MX 8M MINI application processor SOM module enabling edge processing		

200-A Omni Antenna	Specification		
Electrical & RF	Frequency:	1.518GHz – 1.675GHz	
	Gain (Nom.):	2.5dBiC Nom	
	Gain (RHCP for elevation >=20):	2dBiC < =, <=3.5dBiC	
	Polarisation:	Right hand circular	
	Beamwidth:	(-3dB) 170 degrees approx	
	Axial Ratio:	<2.3dB, for 1.518GHz – 1.675GHz Az(360 degrees) and El(>=20 degrees)	
	VSWR:	1.5:1 Max	
	Power Rating:	10W	
Dimensions	Height:	72mm	2.8"
	Diameter:	104mm typ.,	4.1" typ.,
		122mm max.	4.8" max.
	Weight:	210g	7.4 oz
Weather & Ingress Protection	IP67 rating		



Videosoft key features:

- Ultra-Low bandwidth video encoding from 1kbps up to full HD
- Ultra-low latency glass to glass
- Multiple streams from a single device
- Multiple areas of interest from multiple or single cameras
- Total Recall™ – Hi-res snapshot and video retrieval even over low bitrate connections
- FIPS compliant AES128 bit and AES256 encryption
- High-resolution recording to local media
- PTZ, Events and AI integration