astrocast

Astronode S

Unlock the potential of your IoT assets from anywhere

BIDIRECTIONAL

The Astronode S sends your messages, gets them acknowledged and receives your control commands.

COST-EFFICIENT

The Astronode S total cost of owhnership is up to 3 times lower than traditionnal satellite IoT alternatives.

LOW-ENERGY

The Astronode S protocol is optimized for low energy operation, with the lowest peak power available.

Product description

The Astronode S is a satellite communication module, connecting your IoT devices to Astrocast's network. It enables the monitoring and control of devices with bidirectional satellite communication and up to 10 years lifetime off a single battery.

The module features an SMT castellated pads form factor for trouble-free integration and soldering onto a PCB.

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Typical use cases

Maritime
Container tracking, Fishing buoys

Agriculture
Fuel management, Precision farming

Environment
Weather data, Flow monitoring

Satellite IoT network

Astrocast's nanosatellite LEO network has brought together sustainability and state-of-the-art technology. Our satellite IoT network is designed to enable low latency global transmission of messages with additional unicast and multicast downlink capability. Our Swiss-made satellites are equipped with propulsion, giving us greater control of the entire network and the ability to avoid unlikely collisions with space debris, whilst assisting with the deorbiting of end-of-life satellites.

Antenna

Astrocast supplies a low-cost patch antenna with the Astronode S for fully integrated designs. The recommended ground plane size for the antenna is 65mm by 65mm. Should you need an application-specific antenna implementation, we will be happy to support you with our expertise.
As Astrocast's RF bands are positioned either side of the GNSS band, our patch antenna can be shared with a GNSS module for position tracking within a very compact form factor.

Technical specifications

Dimensions	35mm x 31mm
Supply voltage nominal	3.3V DC +-5%
Peak power consumption (in TX mode)	<0.35W
Deep sleep current	<500nA (LPUART deactivated, wake up pin available)
Operating environmental range	-20°C to 70°C / -4°F to 150°F
Serial interface	UART
Encryption	2-level 256-bit AES with unique device keys
Variable user payload size per message (Total messages no. subject to data plan)	1-160 Bytes
End to end network latency [1]	15min, location dependent, with full network deployed
Data access	API or online portal
Certified	CE & FCC RoHS & REACH

Questions?
Get in touch