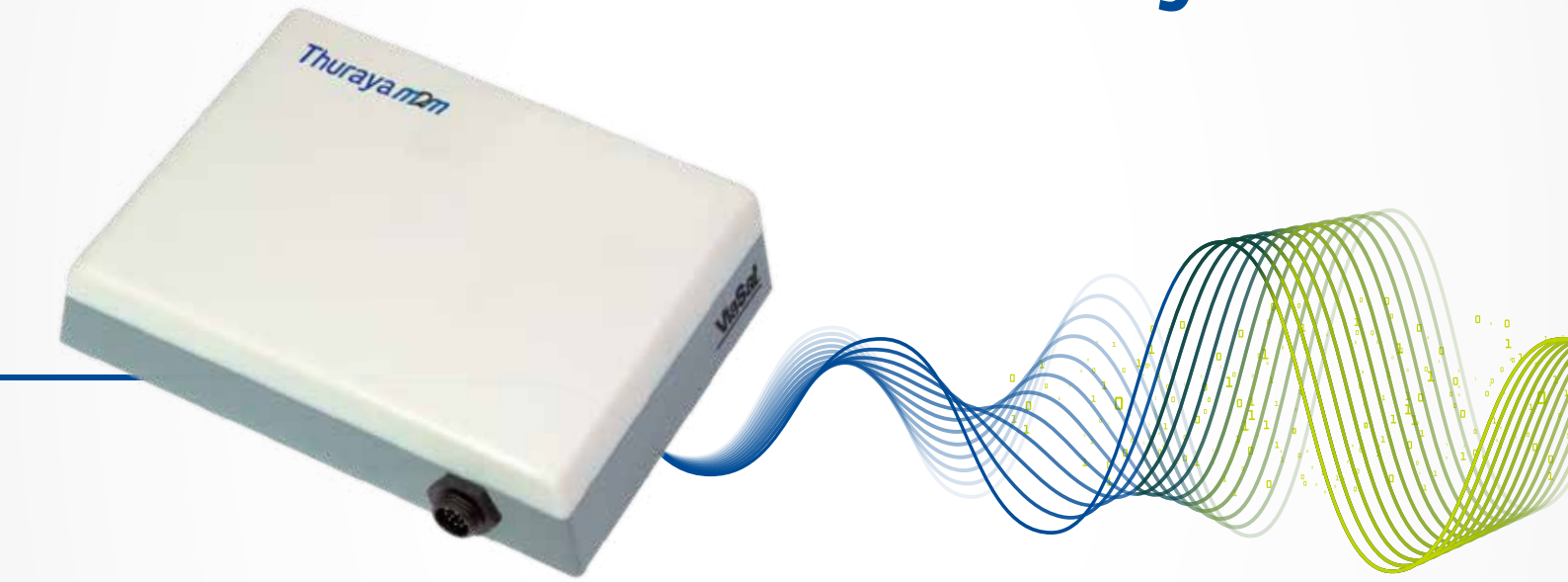
Thuraya m2m



FT2225 fixed applications M2M communications terminal

The FT2225 satellite M2M terminal enables connectivity for remote assets and sensors for monitoring, control and security of critical applications in the oil & gas, utilities, mining, banking and government sectors.
By utilizing our robust IP-based, highly secure, two-way communications Thuraya M2M network, you can extend the deployment of M2M and IoT applications in real-time beyond the traditional coverage areas of cellular networks. The FT2225 can also be used to provide redundancy and backup M2M communications for mission-critical applications via satellite in situations where highly resilient communications is required in times of crisis or natural disasters.

Real-time, secure, two-way communications

Thuraya M2M services enable real-time monitoring, management and control of remote assets and operations. Field devices, RTUs and sensors such as gas valves, smart grid sensors, water pumps, reservoir level indicators and recloser RTUs can be accessed and managed remotely in real time. In addition, the service provides cyber-security protection by using the same encryption as commercial Virtual Private Network routers as well as Asynchronous 256 bit encryption.

Flexibility of integration

The high performance FT2225 terminal supports a broad range of applications by enabling an interface agnostic approach. Thuraya M2M services deliver reliable, affordable connectivity, regardless of the infrastructure or environment, to manage assets and real-time information to quickly respond to events. Onboard memory enables the loading of local applications onto the terminal for added control and flexibility of your M2M solution.

Reliable and affordable satellite connectivity

The Thuraya M2M network offers reliable L-band connectivity, resilient to harsh weather conditions, and brings dependable performance to locations where existing wireless and terrestrial systems are overloaded or inoperable. The terminal relies on remarkably efficient bandwidth usage, low-latency IP networking, and optimized power consumption, to make real-time remote monitoring and communications more affordable than ever and lower your total cost of ownership throughout the lifetime of an M2M project.

Key advantages

- IP-based networking
- Low-latency for instant message transfer and real-time monitoring with no delays
- AES 256 encryption
- Two-way send/receive connectivity
- Low Total cost of ownership with bandwidth-efficient networking and no minimum billing increment or overhead charges
- Multicast and broadcast capability enabling efficient mass polling and message distribution
- Embedded GPS and GLONASS
- Ruggedized highly reliable terminals for operation in harsh weather conditions
- Interface agnostic with Ethernet and Wi-Fi, support for other interfaces such as USB, serial, Modbus, CAN Bus is also possible

Examples of applications that can be supported

Government, Safety and Security

- Perimeter monitoring and surveillance
- First responder rescue operations monitoring and support
- Track various assets in the field from command and control interface
- Emergency warning communications

Mining

- Remote worker and field safety
- Asset tracking
- Maintenance and operations cost optimization
- Integration of field operations with back-office services

Oil and Gas

- Wellhead monitoring
- Cathodic protection
- Flowmeters
- Chemical or water injection
- Security
- Asset monitoring and control

Utilities

- Meter reading
- Water flowmeters
- Power recloser control
- Substation automation
- Leak detection

THURAYA

Specifications

Terminal specifications

SATELLITE COMMUNICATION	
TWO-WAY COMMUNICATIONS	
Narrowband IP	UDP and TCP/IP supported
Frequency Band	TX 1626.5 to 1675.0 MHz R X 1518.0 to 1559.0 MHz Typical latency <2 sec 100 bytes
Transmission Security	Link encryption AES-256
INTERFACES	
GNSS	GPS + GLONASS (L1 frequency)
EXTERNAL INTERFACES	
Power	10 to 32 VDC, via multi-pin connector, short circuit and surge protection
Wi-Fi	IEEE 802.11 B/G, 2.4 GHz
External interfaces that can be supported	Ethernet, Serial, CAN Bus, Modbus and USB 2.0 Via multi-pin connector
MECHANICAL	
Size	(L x W x H) 178 x 130 x 42 mm
Weight	<900g
ENVIRONMENTAL	
Solar Radiation	1120 W/m2 p per IEC-60068-2-5
Relative Humidity	Up to 100% condensing at 45° C, per IEC 60068-2-30
Ingress Protection	IP66 dust and spray proof in all directions
Wind Speeds	Up to 200 km/hr
Air Pressure Transport	4500 m AMSL
TEMPERATURE	
Operational	-40° to +71° C
Transport	-40° to +85° C
Storage	-40° to +85° C
VIBRATION	
Operational	Random vibration of 1.05 g rms in each of three mutually perpendicular axes 5 to 20 Hz vibration: 0.02 g2 /Hz 20 to 150 Hz vibration: -3 dB/octave
Survival	Transportation vibe per IEC 60068-2-64 Frequency 5 to 200 Hz ASD 1.0 $m^2/s3$
SHOCK	
Operational	IEC 60068-2-64, 50 m/s^2, 11 ms
Survival	Transportation shock per IEC 60068-2-29, A = 180 m/s^2, t = 6 mS
CERTIFICATIONS	
CE	Per R&TTE Directive 1999/5/EC, Low Voltage Directive 2006/95/EC
FCC	Title 47 Section 15, Title 47 Section 25
RCM	AS/NZS CISPR 22:2009 Safety IEC/EN/AS/NZS 60950-1, IEC/EN/AS/NZS 60950-22
RoHS	Per European Union Council Directive 2011/65/EU
REACH	Per European Union Council Directive 1907/2006/EC
WEEE	Per European Union Council Directive 2012/19/EU

Thuraya Customer Care Center
From Thuraya network: 100
From other networks: +88216 100 100
Fax: +971 6 8828444
Email: customer.care@thuraya.com
www.thuraya.com

THURAYA