High performance IoT terminal FT2225

Real-time fixed IP satellite communications

The Internet of Things connects local and remote areas, through fixed and mobile platforms, enabling operational efficiencies for critical applications. IP-based services extend or augment cellular coverage to improve the quality of communications between people and between machines. Meshing communications technologies with embedded monitoring sensors in mission critical systems optimizes production or delivery efficiencies by reducing equipment downtime.

Real-time asset management and tracking

Viasat L-band Managed Service for fixed and mobile M2M applications provide real-time position tracking, management of remote assets and operations, and visibility into critical areas of the supply chain. The Viasat High Performance M2M Terminal FT2225 supports a broad range of applications including SCADA, warning systems, point of sales, monitoring oil, water or gas flow through pipelines, and more.

Reliable and affordable satellite connectivity

Viasat services offer reliable network connectivity, even in harsh weather conditions, and bring 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. The terminal includes embedded, beyond-line-of-sight voice connectivity, enabling direct communications between remote locations and with control nodes.

With an IP-based network architecture and multiple wired and wireless interfaces, the Viasat terminal easily integrates with your existing M2M system to support any real-time remote monitoring and control application.

Two-way secure networking for SCADA

For SCADA or intelligent infrastructure management, the system's two-way networking capability enables both real-time monitoring and real-time control. Field devices can instantly be assessed and adjusted remotely; such as gas valves, smart grid sensors, water pumps, and reservoir level indicators. In addition, the services provide cybersecurity protection by using the same encryption as commercial Virtual Private Network routers. Viasat managed services deliver reliable, affordable connectivity, regardless of the infrastructure or environment, to manage assets and real-time information to quickly respond to events.

M2M TERMINAL FT2225 FEATURES

Advanced technology

› IP-based networking
› Interface agnostic with Ethernet, Wi-Fi
› Two-way send/receive connectivity
› Low-latency for instant message transfer and real-time monitoring with no delays
› High reliability—even in harsh weather conditions
› Low service costs with bandwidth-efficient networking
› Embedded commercial GPS and GLONASS
› Netted Voice

Applications

› SCADA networks
› Oil and gas
› Pipeline monitoring
› Remote ATM services
› Remote PoS services
› Remote water well site monitoring
› Power distribution and transmission monitoring
› Smart grid communications
› Emergency warning communications

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SPECIFICATIONS

Antenna polarization	RHCP & LHCP, software configurable
Frequency band	
TX	1626.5 to 1675.0 MHz
RX	1518.0 to 1559.0 MHz
Transmission security	
Link encryption	AES-256
GNSS	GPS + GLONASS

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
Ethernet	Via multi-pin connector
GNSS	L1 frequency

MECHANICAL

Size (L x W x H)	178 x 130 x 42 mm
Weight	<1 kg

ENVIRONMENTAL

Temperature	
Operational	-40° to +71° C
Transport	-40° to +85° C
Storage	-40° to +85° C
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	IP 66 dust and spray proof in all directions
Wind	Wind speeds up to 200 km/hr
Air Pressure Transport	4500 m AMSL

ENVIRONMENTAL (CONTINUED)

Vibration	
Operational	Random vibration of 1.05 g rms in each of three mutually perpendicular axes
5 to 20 Hz Vibration	$0.02\ g^2/Hz$
20 to 150 Hz Vibration	-3 dB/octave
Survival	Transportation vibe per IEC 60068-2-64
Frequency	5 to 200 Hz
ASD	1.0 m2/s3
Shock	
Operational	IEC 60068-2-64, 50 m/s2, 11 ms
Survival	Transportation shock per IEC 60068-2-29, A = 180 m/s2, t = 6 mS

REGULATORY APPROVALS

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
RoSH	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