TELESPAZIO
a LEONARDO and THALES company

SCAN ANTENNA®

iridium® connected

IHM
Intelligent Hybrid Modem

IHM - INTELLIGENT HYBRID MODEM FOR YOUR M2M AND IOT APPLICATIONS

The Intelligent Hybrid Modem connects to machines and sensors, and provides reliable high-availability, global-coverage Internet connection through mobile networks and the Iridium Satellite Network. IHM is your communication solution for Smart and Digital applications in Agriculture, Construction, Mining, Asset Tracking, Drones and many more markets, where global communications are essential.

CONNECTIVITY

IHM automatically bridges phases of mobile connectivity gaps through the Iridium Satellites. The Iridium Satellite Constellation consists of 66 high-elevation satellites, connecting everyone to the things that matter most, from pole to pole. IHM provides continous two-way, on-the-move IP connectivity through the Certus 100 data service.

TECHNICAL SPECIFICATIONS

Internet: Iridium Certus 100, LTE, LAN
Data Interfaces: Serial, LAN, Wi-Fi, Bluetooth, LoRa
Satellite Data Rate: 88 kbps download, 22 kbps upload
Processor: 1.2 GHz Quad Core
Storage: 32 GB Flash Memory
Power Input: 9 - 36 V DC
Protection Class: IP65 case, IP67 connectors
Operating Temperatures: -20°C - 65°C
Certifications: Iridium, CE RED, FCC

OUTLOOK

IHM is developed within the Iridium NEXT Beta VAM partner programme. Commercial rollout is expected in mid 2022.

For more information contact ihm@telespazio-vega.de and follow us on LinkedIn.

CUSTOMER BENEFITS

- Connection to machines and sensors via cable, Wi-Fi, Bluetooth, LoRa
- Simple integration with existing telematics systems (wireless satellite gateway)
- Connection to Internet via mobile networks and satellites
- Global connectivity
- Two-way, on-the-move IP connectivity
- High flexibility through freely programmable controller
- Additional computational resources for running customer application software
- Replaceable user mobile SIM card
- Built-in global Iridium SIM card
- Rugged, ingress protected design
- Redundant communication channel, completely independent of mobile networks and ground infrastructure
- Certified quality (Iridium, CE RED, FCC)
- Hardware, Software, Interface customisations
- Custom solutions and business models

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SATELLITE COMMUNICATION

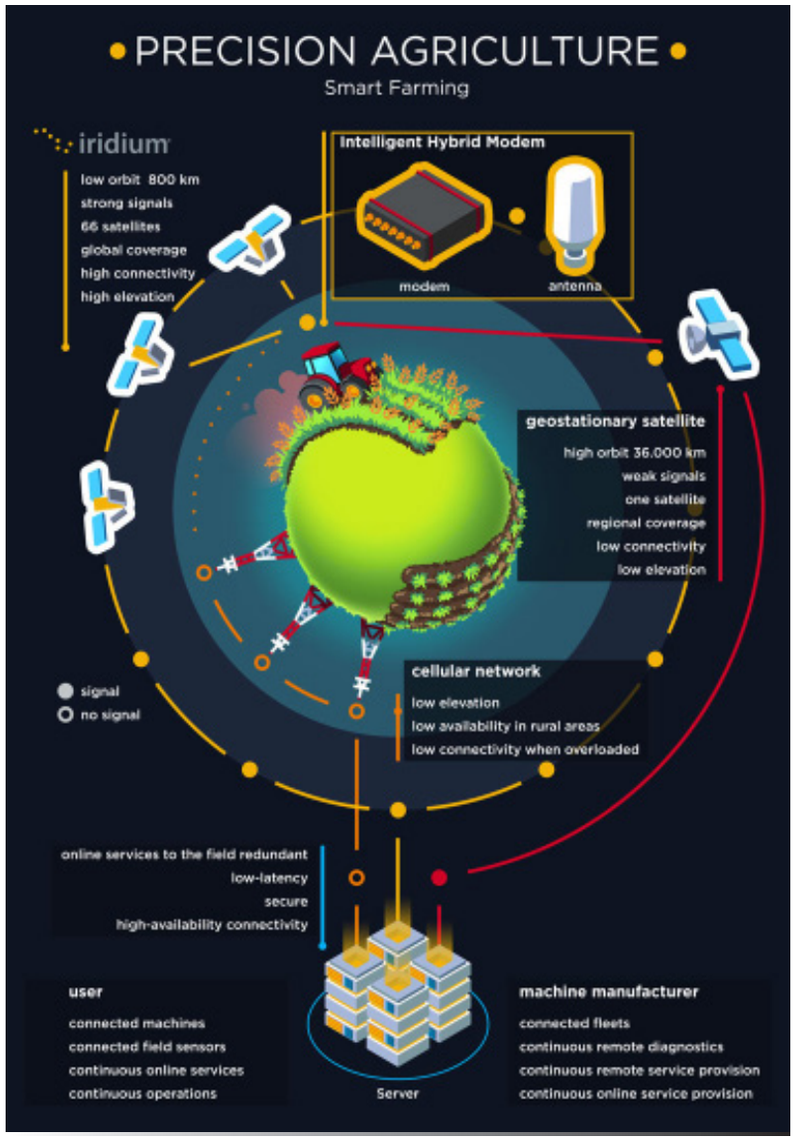
Satellites provide space-based, telecommunication networks, covering the whole globe, including rural areas, deserts, mountains, uninhabited regions, offshore, and oceans.

Mobile networks are the most common communication means for smart machines and sensors in M2M and IoT applications. However, they rely on ground network infrastructure. Therefore, although the availability is high in urban areas, but very limited in rural and remote areas and not available over the majority of the Earth surface.

Geostationary (GEO) satellites orbit the Earth along the Equator, 36,000 km above ground. They provide one-way data broadcast channels, for example, for high-accuracy positioning and automatic steering applications. With sophisticated antennas, they also provide two-way, on-the-move connectivity, or with stationary satellite terminals high-bandwidth Internet connection. However, at high/low latitudes, the satellites are only visible at low elevations and therefore prone to shielding, for example by buildings, terrain, and trees.

Low Earth Orbit (LEO) satellites cover the Earth by a constellation of many satellites, orbiting about 400 to 800 km above ground. From the user perspective, at least one of them is visible at high elevation, any time, which makes them less vulnerable to shielding by buildings, terrain, and trees. Moreover, due to their proximity to the ground, users receive strong signals, which allows reliable two-way, on-the-move connectivity with small antennas and terminals.

Numerous megaconstellation initiatives have been started to provide global satellite communications but the only operational one, since decades, is the Iridium Satellite Network.



IHM utilises Iridium Satellites to provide high-availability, pole-to-pole, two-way connectivity for on-the-move M2M and IoT applications; for machines, assets, field sensors, and drones.

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Contact:
ihm@telespazio.de
www.telespazio.de

Telespazio Germany GmbH
Darmstadt, Germany

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