I SPY AFRICA LTD

Hi-G-Tek

AVL Reader

Hi·G·Tek

The Hi-G-Tek AVL Reader provides real - time monitoring of Hi-G-Tek locks, seals, data tags and other edge devices installed on trucks, containers, barges and other ships and vehicles. The AVL Reader works in combination with an external communications modem and a GPS Receiver to deliver real-time status updates of the cargo.

When installed inside the truck cabin, the reader is powered by the truck's battery, and backed up by an internal power source. It has read/write capabilities and wirelessly communicates with the patented portable electronic cargo/tank sensors (Hi-G- Locks, Hi-G- Seals or Hi-G-Tags) to simultaneously verify their disposition and status- which creates real-time "actionable" business information. At the core of every Hi-G-Tek device is the patented and trademarked "DataReader™" sensing system.

The AVL reader has an internal memory which is used to store events and other data that cannot be transmitted when modem connectivity is lost for whatever reason. Once modem connectivity is restored, the stored events are transmitted to the Hi-G-Tek ESP Software Platform.

The AVL Reader is equipped with a long range 2-way UHF wireless transceiver and optimized antenna for vehicular operation. It has two RS-232 serial ports for control and administration. In addition, an RS-485 serial port also supports up to two external display units.

The AVL Reader performs three major functions:

- Full Two-Way Communication and Monitoring of Hi-G-Tek edge devices over a UHF channel
- Transfers (two-way) information between the Hi-G-Tek edge devices and the Cellular modem
- Provides constant status to the Seal Status Display(s) Seal Communication

Seal Communication

The AVL Reader is capable of wirelessly communicating with multiple sensors (Hi-G-Locks, Hi-G-Tags, or Hi-G-Seals) on an external antenna. The AVL unit is able to detect missing seals, report on seal status and ensure the overall integrity of any given Hi-G-Tek seal or edge device.

Proven Operation

The AVL Reader has been successfully deployed in countless cargo monitoring,fuel monitoring and asset monitoring applications worldwide.

Features:

- Monitors and controls all Hi-G-Tek edge devices
- Internal power supply and storage to ensure reporting of all events
- Optimized vehicular antenna
- Rugged and robust mechanical design
- Over the air programming maintenance

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Technical Specifications

Applications
- Mobile vehicle operations

Connected to:
- External Modem and GPS Receiver

Communications:
- UHF Frequency: 433.92 MHz, 916.5 MHz (ISM Band)
- Range: Up to 100M (open space)

Serial Communications:
- 2 x RS-232: For administration and interfacing with the GPS/Cellular or Satellite Modems.
- 1 x RS-485: Communication port with display.

Physical Dimensions:
- 56x98x34mm (not including antenna)
- Weight: 350g

Power Requirements:
- External Supply: 9VDC ~ 32VDC vehicle supply.
- Power Consumption: 0.5W Maximum (Reader Only)

Environmental:
- Operating temperature: -20°C to 70°C
- Vehicle Conditions: As per SAEJ1455
- Humidity: 90% non-condensing

I/O's:
- 1 x External Interrupt Input
- 3 x Open Collector Outputs

Standards:
- 916 MHz Model: FCC Part 15 approved
- 433 MHz Model: CE and E-mark approved

Head Office - P.O. Box 83812-80100, Mombasa Tel: +254 789 789 789, +254 786 786 330,+254734 767 767Mombasa Branch– Off Airport Road, Changamwe, MombasaHotline No.s:(+254)0789 789 789,(+254)0786 786 330, (+254)0734 767 767Email info@i-spyafrica.com, sales@i-spyafrica.com

URL:www.i-spyafrica.com

Hi-G-Tek Inc.
1445 Research Blvd.
Suite 150
Rockville, MD 20850,
U.S.A
www.higtek.com
Info@higtek.com
Ofc. +1-301-279-0022
Fax +1-301-279-0055