Hi-G-Tek

Compact Data Reader

Features:

- **High-Frequency, long-range RF monitoring capabilities**

- **Simultaneous communication with numerous electronic sensors**

- **Range up to 200 meters**

- **Remote download via serial communication**

The Hi-G-Tek Compact Data Reader is a component of Hi-G-Tek's wireless monitoring system. The Hi-G-Tek system uses Highly Intelligent RFID (Radio Frequency Identification) wireless technology and hardware to provide automatic processing and real-time monitoring of cargo or assets whether in transit or in storage. The system combines the technological and operational advantages of patented portable electronic 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 Data Reader utilizes full 2 way communication, and interrogates the sensors over the high-frequency RF channel for their ID, status and user data. The Data Reader can work in two operational modes:

1) Support mode- the Data Reader performs interrogation cycles upon receiving a command from a host, and
2) Stand Alone Mode- the Data Reader executes a script of commands, controlling a group of sensors.

The Data Reader can also write and retrieve information to the sensors as well as logged information from the sensors. Each Data Reader can communicate with numerous sensors simultaneously, verifying their presence and status. Connecting multiple Data Readers allows coverage and protection for secured cargo or assets in large storage yards and ports. The Data Reader can communicate with sensors at distances up to 100 meters (open space), including in-transit applications at speeds of up to 90km/h. Using an isolated RS-485 interface, multiple readers can be easily networked together into a single controlling computer.

This allows enlarging even further the coverage area of the readers while keeping them synchronized within the field of application.

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Technical Specifications:

Communications:
Frequency Range:
• Frequency: 916.5MHz or 433.92MHz
• Range: up to 200 meters (open space)

Power Requirements:
• External Supply: 48V, 24V (PSC Power unit required)
• Power Consumption: 1W max

Serial Communication:
• RS485

I/O's:
• Unit: 3 isolated output, 1 isolated input

Physical Dimensions:
• Size: 150 x 150 x 80mm (5.9 x 5.9 x 3.15 inches)
• Weight: 1580gr (3.4 Lb)

Environmental:
• Operating Temperature: -40°C to + 70°C
• Storage Temperature: -40°C to + 80°C
• Installation Environment: Outdoor
• Protection Class Sealing: IP-65
• Vibration and Shock: Complies with MIL-STD –810D for mobile
  equipment and SAE J1455

Models:
• IG-CR-46D-433, Power: 24VDC, Operating Freq: 433.92 MHz
• IG-CR-86D-433, Power: 48VDC, Operating Freq: 433.92 MHz
• IG-CR-46D-916, Power: 24VDC, Operating Freq: 916.5 MHz
• IG-CR-86D-916, Power: 48VDC, Operating Freq: 916.5 MHz

Standards:
• FCC (for 916 MHz models):
Part 15C, sub part B- class B, sub part C.
• CE (for 433 MHz models):
  EMC /RADIO /SAFETY full compliance
• Safety cTUVus: UL 60950-1 / CSA CS22.2 60950 -1

Options:
• Power Supply and Communication Unit for external power.