GE introduces a tamper-proof Container Security Device (CSD) for freight containers featuring point-to-point tracking and unlimited sensor expandability.

The Commerce Guard CSD monitors container integrity by detecting door openings. If container's integrity is compromised by an unauthorized person, the CSD registers the event and stores it with a time stamp. When the CSD comes within range of a handheld or fixed reader, for example at an in-gate, the CSD sends out an alarm to the reader. Relevant authorities are then alerted, and the container can be halted, quarantined, and inspected.

The CSD works in concert with the rest of the CommerceGuard System to provide container access event and tracking information to supply chain participants and government officials.

Radio Communication

- Radio frequency: 2400-2483.5 MHz, license-free ISM band in all 3 ITU regions
- Modulation scheme: Direct Sequence Spread Spectrum (DSSS), 23 MHz (broadband)
  Data bit rate: 1 MB/sec.
- Reading range: 30m, (can be tuned up to 100m)

- Reading speed: 22 mph (36 km/h)
- Type approvals (pending): ETSI EN 300 328, ETS 300 826, FCC part 15.247
- Security protocol: Challenge/Response, IETF RFC2104

Computer memory

- User data: 2 KB read/write, e.g. B/L no, container no.
- Event log: 32 KB clear/readable, e.g. alarms, door open/closed

Sensors

- Internal sensors: Door proximity, and light
- External sensor port: Standard RS-232

Power supply

- Battery: Lithium/SOCl2 type AA (10 years)
- Duty cycle: 0.03%

Environmental

- Temperature range: -40° to +70° C

Miscellaneous

- Transportation class: UN 3091 (packing instruction 912)
- Size: 190 x 90 x 42 mm
- Weight: 230 g

Installation:

The CSD is affixed on the inside wall of the shipping container next to the door. Anytime the door is opened or closed, sensors in the device record the event which can be read by handheld or fixed readers.

Licensed by GE from

ALL SET

All Set Marine Security AB

Container Security Device

Radio Tagging Hardware

Door Proximity Sensors

Light Sensor

Expansion Serial Port

10 Year battery

Door Seal Guides