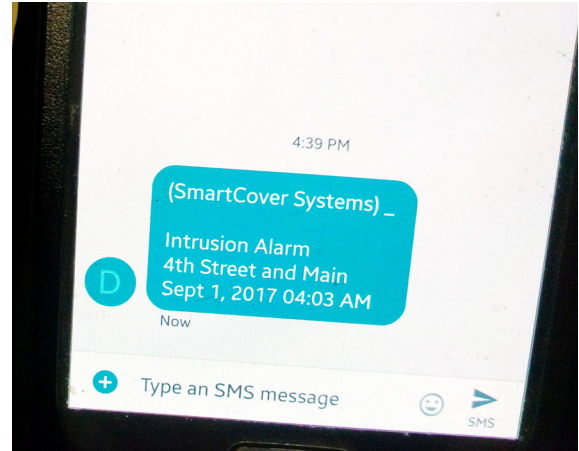


UnderCover Manhole Security System

UnderCover 2 is a real-time, self-contained, monitoring system providing intrusion detection along with alarms for sewer, water or storm water manholes, utility vaults, and other lid or manhole-accessed spaces. It is both a stand-alone intrusion detection system or can be used in conjunction with other sensors.

The **UnderCover** system includes four basic components:

- An entry sensor: MEMS device or limit switch
- Two-way wireless communications network
- Decision and action notifications
- Data storage and analysis



The **UnderCover** manhole security system is adaptable to multiple threats, and may be used for a number of applications under a variety of conditions.

- | | |
|--|---|
| <ul style="list-style-type: none"> • Intrusion Detection • Asset Protection at Critical Sites • Verify Field Work was Undertaken • Detect Unauthorized Dumping | <ul style="list-style-type: none"> • Monitor Vaults for Theft • Protect Remote Areas • Perimeter Protection • Border Monitoring |
|--|---|

Two-way wireless communications:

Advanced Iridium[®] satellite system that is unaffected by storms, and provides world-wide coverage. Can be enabled/disabled remotely.

Data storage, analysis, and fusion:

Cloud-based storage, high security, real-time analysis and fusion with other data. Map-based interface.

Decision support:

Support of operations and management decisions, work orders, alarms, alerts and advisories.

5 Year Battery: SmartCover PowerPack provides up to 5 years of remote power, depending on communication frequency and other factors.

User Benefits

- Reduce Operational Risk
- Know When and Where Your System Has Been Accessed
- Get Ahead of Potential Problems
- No Need for Local Power or Communications to Operate System - "off the grid"
- Monitor Remote Locations

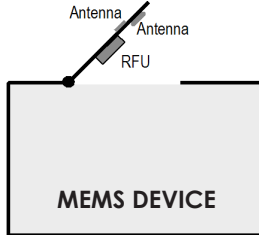


The UnderCover system includes an intuitive graphical map or satellite image user interface.
Green circles - no alarm
Red triangle - intrusion alarm

Configurations

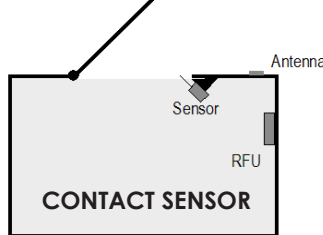
There are three standard configurations of the **UnderCover** System, offering options for the location of the remote field unit (RFU) and the sensor type:

DIRECT ATTACHMENT



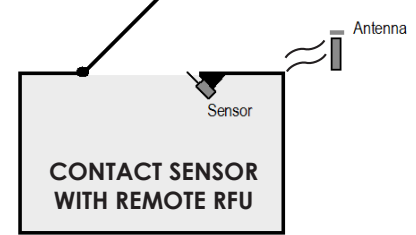
Direct attachment to manhole cover or lid. Dual antennae defeats external antenna disabling.
UnderCover 2.1 a/b

LOCAL MOUNT



RFU mounted internal to space and stealthy antenna mounted near opening.
UnderCover 2.2

REMOTE MOUNT



Remotely mounted RFU and antenna. Highest counter measures.
UnderCover 2.3

UnderCover Specifications

	Direct Attachment	Local Mount	Remote Mount
Site	Hinged cover or hatch lid	Removable cover	Removable cover
RFU Location	Mounted on cover or hatch	In manhole May be camouflaged	External to manhole May be remote or stealthy
Sensor	MEMS	Contact switches	Contact switches
Antenna	Stealth low profile Mounted on cover or hatch	Stealth low profile	Low profile or high gain, depending on location
RFU Enclosure	None	Environmentally appropriate enclosure	Environmentally appropriate enclosure
Installation	Simplest installation	Requires in-hole junction box	Requires remote cabling, conduit, location for RFU mounting
Defeat Risk	Low	Lower	Lowest
Other	N/A	Short antenna cable	Highest stealth

Selected Specifications

Installation Size (No Enclosure)	4.7" x 6.3" x 6.7"
PowerPack™ Lifetime	5 years (Nominal Usage)
Operating Voltage	3.6V
Operating Temperature Range	-20 °C to 60 °C
Environmental Protection Rating	IP-68/NEMA 6P
Intrusion Detection Latency (Maximum)	2.3 Seconds
Total Communication Latency (Minimum)	10 seconds

Local SmartCover Support Provided By

CCLYNCH
 & ASSOCIATES
 The Water Monitoring People

Phone: 1-800-333-2252
 Fax: 228-452-2563
 info@cclynch.com
 www.cclynch.com