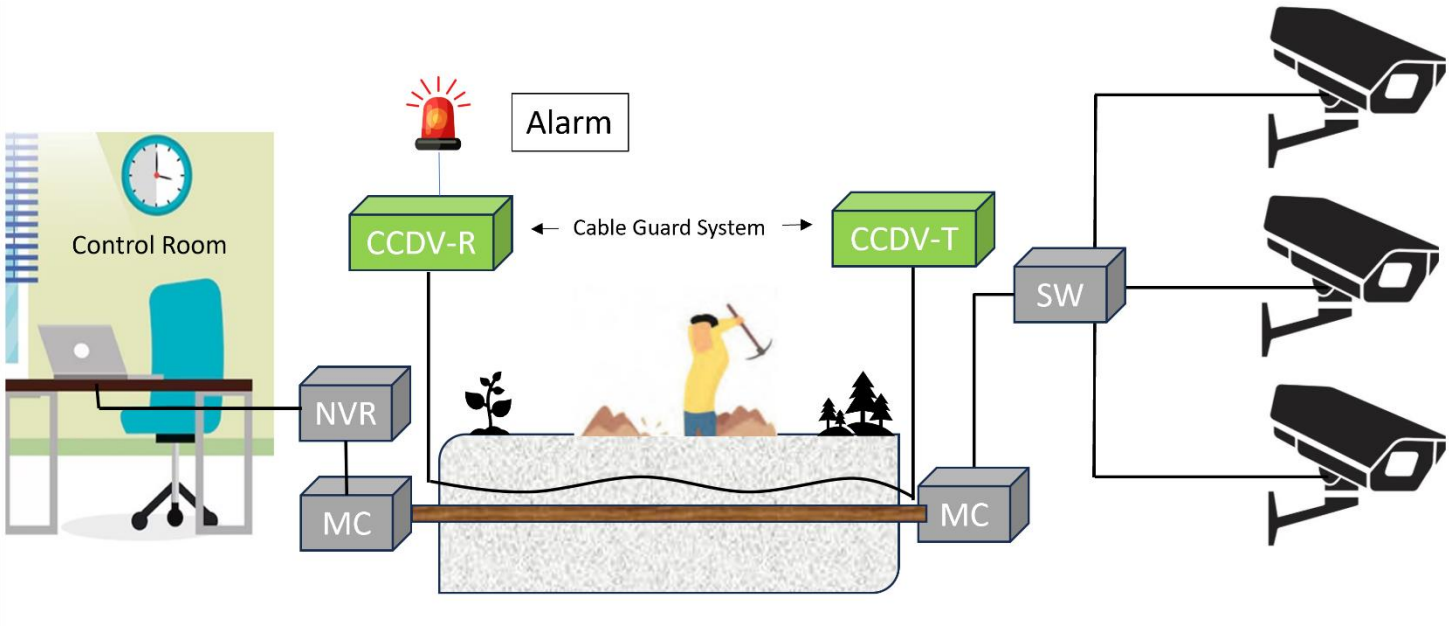
Teksurvy Private Limited

# CCDV

## CABLE CUT DETECTION SYSTEM WITH VIDEO

[Securing overhead/underground copper/optical fibre cables using CCDV]




"Jab tak tere paon chalenge, tab tak tere yaar ki saans chalegi." This is a film dialogue. But it is true for cables also, because our surveillance network, computers, communication etc run properly so long as cables are intact.

Our equipment is installed within four walls of a secured premise but cables which connect to this equipment, to bring valuable data, pass through uninhibited areas where these cables are vulnerable to damage caused by miscreants. Cut or damaged cable throw our equipment out of action for a long time. Thus, safety of cables is of utmost importance.

But a simple security system like CCTV camera cannot secure these cables, which run over several kilometres, installed underground or on the poles. **SecureCable** is a **made-in- India** system which can secure cables like OFC, CQC, telephone cables or Copper electric cables, running over several kilometres through any type of terrain conditions. **SecureCables** provides secure data and guaranteed continuous functioning of security equipment's.

**Contact below address for any query: -**

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## Why Use SecureCABLE System?

**SecureCable** has following distinctive features: -

- **Instant Alarm With Adequate Reaction Time**:

  Cable Cut alarm Systems generally, raises an alarm when miscreants are cutting or damaging the main data-cables. At that time, very less reaction time is available to stop the damage or cutting of the cable. In case of, **SecureCABLE,** a separate cable, called 'SENCA' is used to detect cutting of cable by miscreants. This cable is laid much above the main cable in under-ground arrangement. Thus, the system generates an alarm well before the main data cable is subjected to damage by the miscreants. The same is applicable to overhead cables also. Thus, Main-Data cable remains safe even when miscreants are attempting to cut or damage the Main Data-Cables.

- **Video-View Of Target Location:**

  **SecureCABLE** has a special feature to capture Audio/video of target near start point (Tx) and transmit this Audio/video through the sensing optical fibre cable to the receiver point (Rx). Thus, along with alarm, the user gets a video-view of the important locations for taking appropriate action.

- **Twist/Turn/Pull Alarm**

  SecureCABLE generates alarm, not only when the cable has been cut, but also when if the cable is pulled or twisted to damage/inactivate the cable. This adds a new dimension to the cable protection system.

- **Long-Distance-Sensor System**

  Communication cables or Electric cables **runs over long distances**, like 2 to 20 Kms and more. Hence, the system to protect these must also cover long distance without, using repeater etc. **SecureCABLE** use optical fibre which can cover up to 20 Kms at a stretch. Hence, places which are located more than 20 Kms apart and connected with cables, can easily use this system.

- **No Electricity, No Spark in the cable**

  Sensitive places like explosive stores (Magazines), fuel storage like petrol pump, are sensitive to any spark or fire. In SecureCABLE system, there is no current flowing through the Optical Sensing Cables and hence there is no chance of any short circuit or spark etc. There it is most suitable for installation in hazardous places.

- **Cost-Effective**

  Being made in India and covering long distances with OFC, it is a cost-effective option for various security applications.

## (A) CCDV Transmitter

| OPTICAL PARAMETERS | |
|---|---|
| **Connector** | SC/APC |
| **Launched Power** | +10dBm |
| **Wavelength:** | 1310nm |

| POWER REQUIREMENTS | |
|---|---|
| **Power Supply** | 220 V AC, 10 V to 12 V DC |
| **Power Consumption Unit** | 6 Watt |
| **Surge Protection** | 560V/1200MA |
| **Encloser Dimension** | |

| VIDEO INPUT SIGNAL SPECIFICATIONAS | |
|---|---|
| **Video Input** | 1V PP, Composite |
| **Audio Input** | 0.7 V PP |
| **Connector Type** | RCA |
| **Impedance** | 75π |

| VIDEO OUTPUT SIGNAL SPECIFICATIONS | |
|---|---|
| **Video Resolution** | 1080P: 1920 x 1080 |
| **Frame Rate TVI/AHD/CVI** | 1080P @30fps, 1080P @25fps, 720P @30fps, 720P @25fps, CVBS: PAL NTSC (to be specified) |
| **Shutter time PAL** | 1/25s-1/50000s NTSC: 1/30s-1/50000s |

| ENVIRONMENT | |
|---|---|
| **Working Temperature** | -10°C to 50°C |
| **Relative Humidity** | 85% no condensation |


## Description of CCDV TX

This unit is used to inject testing signals into the sensing cable. This is a light signal and can travel upto many kilometres. This testing signal is processed at another end of the sensing cable to detect any disturbance or damage to the sensing cable. Thus, the signal acts like a sentry, raising alarm if there is anyone damaging the cable.

Moreover, this is a Smart signal as it can carry video or audio with it and deliver at another end.

## (B) CCDV Receiver

| OPTICAL PARAMETERS | |
|---|---|
| **Connector** | SC/APC |
| **Launched Power** | -8dBm to + 5dBm |
| **Wavelength:** | 1310nm |
| **Receiver Sensitivity/ Working Range** | -10dBm to 6dBm/ cut off -18dBm |

| POWER REQUIREMENTS | |
|---|---|
| **Power Supply** | 220 V AC, 10 V to 12 V DC |
| **Power Consumption Unit** | 4 Watt |
| **Surge Protection** | 560V/1200MA |
| **Encloser Dimension** | |

| ALRAM INDICATORS | |
|---|---|
| **VHF (Very High Frequency) Range** | 175 To 224 MHz |
| **Modulation Type** | PAL |
| **Channel Bandwidth** | 7MHz |
| **Signal Level** | 100db ab 0db optical PW |
| **Impedance** | 75π |

| VIDEO OUTPUT SIGNAL SPECIFICATIONS | |
|---|---|
| **Video Resolution** | 1080P: 1920 x 1080 |
| **Frame Rate TVI/AHD/CVI** | 1080P @30fps, 1080P @25fps, 720P @30fps, 720P @25fps, CVBS: PAL NTSC (to be specified) |
| **Shutter time PAL** | 1/25s-1/50000s NTSC: 1/30s-1/50000s |

| RF SIGNAL SPECIFICATIONS | |
|---|---|
| **VHF (Very High Frequency) Range** | 175 To 224 MHz |
| **Modulation Type** | PAL |
| **Channel Bandwidth** | 7MHz |
| **Signal Level** | 100db ab 0db optical PW |
| **Impedance** | 75π |

| ENVIRONMENT | |
|---|---|
| **Working Temperature** | -10°C to 50°C |
| **Relative Humidity** | 85% no condensation |


**Description of CCDV Rx.**

This unit is used as a receiver. The test optical signal generated by the CCDV Tx unit travels down the sensing cable, collecting information about all activities sensed enroute. These details are demodulated and deciphered by the CCDV Rx and an Audio-Visual alarm is raised to alert the security team to stop damage to the main cables.

Receiver or CCDV Rx also demodulates to recover Video and audio signals Sent by transmitter. This can be viewed by connecting a TV set with this unit.

## Components and Working of SecureCABLE System

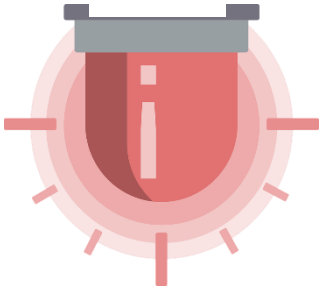
Schematic diagram of SecureCABLE system to protect an underground copper/optical fibre cable is given on the front page. For an overhead cable system, the cable to be protected will pass through a conduit pipe and the sensing cable is wrapped over the conduit pipe. In both the arrangements, the sensing cable will be cut or damaged before the main cable and hence an advance alert is received in the control room to limit further damage to copper/fibre cables. This will not only help to avoid theft cases of costly cable like CQC or copper electric cables but also help to keep the system up and running without disrupting. SecureCABLE will use following components when installed on the ground

**CCDV Rx & TX Units**


**REMOTE ALARM**


**Sensing Optical CABLE**

**SIREN**



**JOINT ENCLOSER BOX**

**CONDUT PIPE FOR OVERHEAD CABLE**

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MADE IN INDIA