

TTS (TermTech Security) – BVR ATM Camera & Fraud Detection

In the recent years, the number of ATM fraud cases is rapidly increasing world wide. The increased number of fraud cases causes tremendous losses both for Banks and Bank customers. Inadequacy of existing systems lead the Banks to look for new technologies in order to prevent fraud.

TermTech provides a manageable camera system, an advantageous camera recording infrastructure and a powerful system which enables fraud detection by ensuring ATM security with **BVR (Beyond Video Recording)** which includes **ATM Fraud Detection Management (Guardian)**. Besides all of these, BVR provides advantages that reduce Banks' operational costs.

TermTech has developed **BVR** system solely with its very own know how. **TTS (TermTech Security)** product family operates integrated with **Rodimus** software and if desired allows remote management by other ATM monitoring software.

Advantages of **BVR (Beyond Video Recording)**:

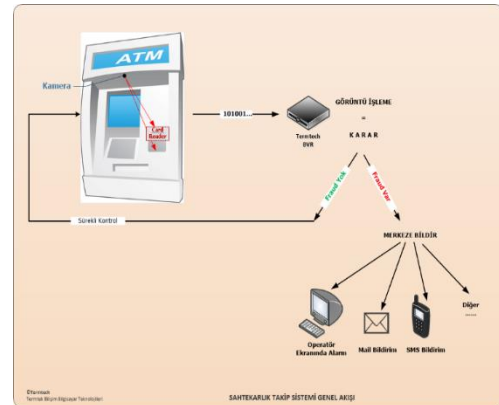
✓ Central end-to-end system management along with following settings:

- Positioning and monitoring of ATM on Turkey map,
 - Determination of multiple fraud areas on ATM,
 - Definition with map support to determine impact of light and sun for location,
 - Recording period and disc for recording,
 - Display settings (brightness, color, sharpness, background lighting etc.),
 - Video parameters,
 - Motion detection,
 - Display masking (for ATM keypad),
 - Parameter settings for vandalism alarm,
- can be set completely centrally.

✓ Fraud notices are sent to relevant users or desired systems;

- With e-mail and/or SMS by detecting changes in fraud areas with TermTech's Image Processing Algorithms,
- As an attachment in an e-mail by merging the pre- and post-fraud images as a single image,
- By integration with bank monitoring systems or

third party monitoring centers.



- ✓ Management of camera tracking system which is mandatory for ATM's and at the same time an integrated system solution which detects and prevents ATM fraud cases such as card/password copying, retention of paid money is provided. Thus, with a single infrastructure the necessity of having two separate systems (camera and fraud management) is eliminated and project costs are minimized.
- ✓ By helping law enforcement to catch imposters who attempt fraud, deterrence is achieved.

- ✓ The image of the transaction is accessed rapidly with the card used for the transaction and matching can be performed. This way, great convenience is achieved for resolution of transaction reconciliation issues and customer complaints.
- ✓ By integration with bank's Card System, the cards with which transactions are performed are switched to closed status temporarily after detection of the fraud.
- ✓ It is effective in reducing physical attacks against the ATM.
- ✓ In case of failures such as loss of camera signal, disk failure or line status, system monitoring is facilitated by sending automatic failure e-mails and/or SMS's to specified users.
- ✓ It can function separately from ATM system and shortens operation process with easy service management.
- ✓ Application changes can be performed remotely in batches and can be reported.
- ✓ Images captured via the cameras on ATM are saved to the disk based on specified criteria.
- ✓ Images which are recorded on ATM can be monitored in real time or retrospectively on monitoring screens.
- ✓ If previous camera records are needed, they can be downloaded to the directory preferred by the user.
- ✓ Camera records can easily be converted to avi format through the monitoring program.

Solution Package:

- **TTS-B** (with BVR Kit "Guardian" software)
- **TTS-BC** (BVR Kit + with Fascia Camera Package)

Supported Peripherals and Sensors:

- 4 Analog Cameras
- 1 motion sensor

BVR HW Technical Specifications:

- RAM : 1 GB RAM
- Storage : 8 GB Internal EMMC Storage
8 HDD support & SDMMC card support up to TB
- CPU : ARM Cortex-A7 Dual-Core 1 GHz
HW H264 Encoder & Math processor (NEON)
- GPU : ARM Mali400
- Ethernet : 100 Mbit
- Operating System : Embedded Linux
- USB : 2x USB 2.0
- Display: 1x HDMI, 1x VGA
- Power : 12V
- Sensors : Temperature, Humidity

