





## We Empower Your Investigation!

HancomWITH is a research group that leads the world in the field of mobile and digital forensics. We have been dedicated to developing forensic solutions that support digital investigations for almost fifteen years. Our mobile and digital forensics solution, MD-SERIES, has been provided to hundreds of global investigative agencies since 2005. Since then, our products and technologies have satisfied and exceeded our clients' demands and expectations. We believe our sincere service and passion for the development of new technology are well recognized by our customers. We are constantly engaged with our clients and are now growing quickly to become one of the top mobile forensic companies across the globe.

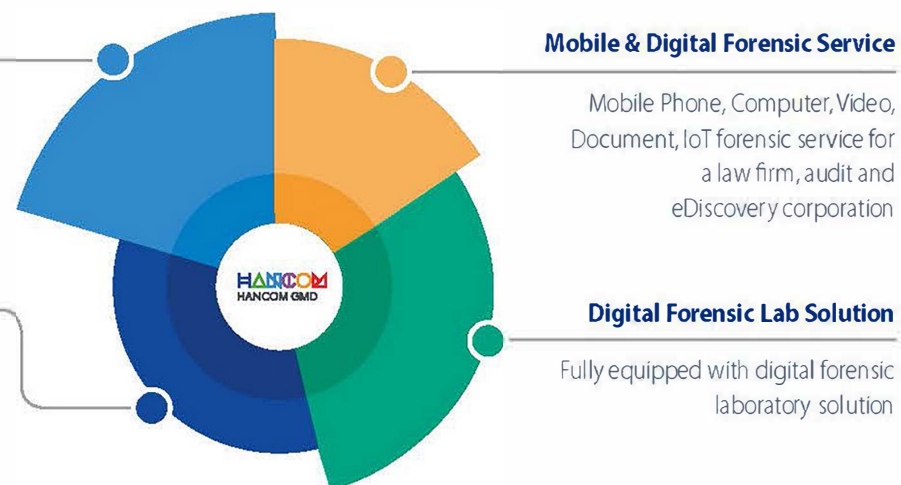
### BUSINESS AREA

#### MD-SERIES

Complete line of mobile and digital forensic products for data extraction and analysis

#### Training & Certification







Mobile forensic training courses for investigators and auditors



### OUR CLIENT



### WHY HancomWITH?

 <b>34,000 PIECES</b> OF MOBILE EVIDENCE PROVIDED BY OUR SERVICES ANNUALLY	 <b>15,000 MODELS</b> SUPPORTED BY OUR SOLUTIONS	 <b>2,000 Apps</b> FOR Android AND iOS SUPPORTED
 <b>150 AGENCIES</b> USE OUR SERVICES	 <b>15 YEARS</b> OF RESEARCH EXPERIENCE IN MOBILE FORENSICS	 <b>9 Patents</b> HANCOMGMD'S PATENTED INNOVATIVE TECHNOLOGY

01

Provides complete mobile and digital forensic solution that fits various investigation situation

02

Covers a wide range of global mobile phone models and apps

03

Specialized in Asian manufacturers' device and diverse apps

04

Forensic purpose built hardware products for JTAG and Chip-off

05

Mobile forensic package for Field Investigation and Academic Training

06

New digital forensic software solution; Cloud/Video/IoT/Drone/Vehicle

07

User-friendly UI with rich experience

08

Online package updates and subscription of new devices and the latest app version

09

In-depth mobile forensic training & certification courses

10

Experienced in mobile forensic laboratory establishment and management

## MD-SERIES PRODUCT OVERVIEW

Complete mobile and digital forensic product line for data extraction and analysis with integrated cutting-edge mobile forensic technology, supporting any type of mobile device

### Mobile Forensic software



#### MD-LIVE

Forensic Software Solution for Live Data Extraction and Analysis from Smartphones which supports the First responders

#### MD-NEXT

Forensic Software Solution for performing Data Extraction on Smartphone, Feature phone, Drone, Smart TV, Wearable device, IoT device, USIM card, SD memory card, JTAG, and Chip-off memory

#### MD-RED

Forensic Software Solution for Recovering, Analyzing, and Reporting on Extracted Mobile and Digital Data

### Mobile Forensic Hardware



#### MD-BOX

Forensic Hardware Solution for Extracting Data directly from the Motherboards of Mobile devices through the JTAG interface

#### MD-READER

Forensic Hardware Solution for Reading Data after performing Chip-Off Forensics – Extracting Data directly from a Detached Memory Chip pulled from the Motherboard of a Mobile phone

#### MD-MR

Package of Forensic Hardware devices for physically removing the memory chips from the motherboards of mobile phones when performing Chip-Off Forensics

### Digital Forensic software



#### MD-CLOUD

Cloud Forensic Software Solution for Extraction and Analysis of Cloud data

#### MD-VIDEO

Video Forensic Software Solution for Preview, Recovery, and Analysis of Video data

### Mobile Forensic Packages



#### MD-RUGGED

Mobile Forensics Package Solution for performing investigation in Portable Forensics Centers or Directly On-site at the crime scene

#### MD-PORTABLE

Portable Mobile Forensics Package Solution for performing Live data Acquisition and Analysis in the field

#### MD-ACADEMY

Academic Training Package, containing all the necessary equipment for Mobile Forensic Education

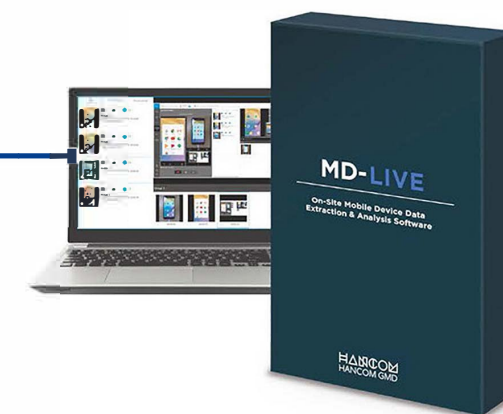
### MD-SERIES Selection Guide

Device type	Extraction HW	Extraction SW	Analysis SW
<b>Smartphone</b> Live data extraction and analysis in the field		MD-LIVE	
<b>Mobile device</b> Data extraction and analysis for Smartphone, IoT, Drone and Embedded HW		MD-NEXT	MD-RED
<b>JTAG board</b> Data extraction from board with JTAG interface	MD-BOX		
<b>Chip-off memory</b> Data extraction from physically removed Flash memory	MD-READER		



# MD-LIVE

Mobile forensic software for on-the-spot investigation performing live extraction and analysis on mobile devices



**MD-LIVE** is a mobile forensic solution for quickly performing logical extraction and data analysis on live mobile devices. It also supports a number of legal compliance features such as selective acquisition of evidence to ensure a suspect's right to privacy, as well as mirroring and recording the suspect smartphone's display during the forensic process. MD-LIVE also supports the use of a separate camera for recording the forensic process externally.

## SPECIFICATION

### PRODUCT HIGHLIGHTS

- Mobile forensic software solution for on-the-spot investigation and forensic triage
- The best forensic tool for acquiring data from witnesses' or victims' smartphones
- Selective acquisition of evidence data for privacy protection
- Mirroring, recording, and capturing smartphone display
- Supports the use of an external camera for recording the forensic process (for auditing or legal compliance purposes)
- Convenient and straightforward experience with an intuitive user interface
- High speed analysis engine allows for minimal work time and automated steps

### KEY FEATURES

#### Selective extraction and analysis of evidence data

- Data unrelated to the case can be excluded from selection and analysis
- Minimizing extraction of unnecessary data reduces the time spent on the site and protects the privacy of those involved
- Important apps can be scanned based on time and frequency of use

#### Processed evidence data presented just like a real smartphone display

- The view interface is themed and presented like a smartphone app, allowing users to quickly and intuitively identify evidence data

#### Integrated data viewers

- Users can view evidence files such as photos, videos, audio, documents, maps, and website browsing history directly in the software

#### Mirroring and remotely controlling smartphone display

- The smartphone display mirroring and remote-control feature can be used to circumvent a broken display or to prevent any unwanted operations won the device
- The mirrored display can be also captured and recorded as evidence

#### MD-LIVE software screen recording

- The PC screen recording feature can record forensic processes performed in MD-LIVE for reproduction and verification purposes

#### Easy and concise experience

- Post-extraction analysis is automated, making the investigation process even faster

#### Reporting features

- Supports report formats such as PDF, Excel, and SQLite DB
- Supports saving reports and dump images to USB/DVD

#### External standing camera (Option)

- Optional standing camera offered for taking photos of evidence device and its display or for recording the investigation procedure

#### System Requirements

OS: Windows 7/8/10 (64 bit)  
CPU: i5 or faster  
RAM: 8GB or above  
Storage: 256G or more  
Display: 1200x700 or higher  
USB: 2 or more USB 2.0 ports  
Microsoft.Net Framework 4.6.2

#### Product components

MD-LIVE Installation Software (CD/USB/Online)  
USB Dongle Key 1 EA  
Warranty 1 Year



# MD-NEXT

Data extraction software for smartphones, feature phones, drones, smart TVs, wearables, IoT devices, USIM cards, SD memory cards, JTAG boards, and chip-off memory



## KEY FEATURES

### The perfect data extraction tool for diverse mobile and digital devices

- Supports data acquisition for various global smartphone manufacturers (Samsung/Apple/LG/HTC/ZTE) models
- Support Chinese Manufacturer devices (Huawei/Xiaomi/Oppo/Vivo, etc.)
- Supports extraction of IoT device, AI Speaker, Smart TV and Drone

### Advanced physical extraction features

- Supports Bootloader, Fastboot, MTK, QEDL, Custom Image Android Rooted, iOS Physical, DL, JTAG, Chip-off, SD Card, Removable Media
- ADB Pro extraction which supports data acquisition using vulnerability attacks from Android-based devices
- JTAG pin map viewer and connection scanning with AP
- Drone data extraction - DJI (Phantom, Mavic), Parrot, PixHawk
- AI Speaker Chip-off extraction - Amazon Echo, Kakao Mini, Naver Clova

### Supports diverse physical data reader hardware

- JTAG Reader (MD-BOX)
- Memory Chip Reader (MD-READER)
- SD Memory Reader and USIM Reader

### Advanced logical extraction features

- Supports Android Live, MTP, iOS full filesystem Backup, Vendor backup protocol, Local backup, USIM

### Supports extraction and decryption of the latest Asian phone

- Physical extraction through all lock bypass (KNOX, FRP/OEM, Screen Lock): Samsung Galaxy S/J/A/Note series
- Unlock screen: Samsung Galaxy S/J/A/Note series
- ADB Pro physical KNOX bypass - Samsung Galaxy S/J/A/Note series
- Vendor Backup protocol extraction - Samsung, LG, Huawei
- Local backup extraction - Huawei, Xiaomi, Oppo, Gionee
- Physical extraction for Japanese manufacturer model - Sharp, Sony

### Supports the latest iPhone logical extraction

- iOS keychain extraction
- Logical extraction for iPhone up to XS/XR model
- The decryption of backed up data for the latest version of the iOS device

### Selective extraction for privacy protection

- Supports selective acquisition of partition, file, category, and app

### Special extraction features

- Supports user-defined extraction for unlisted models using pre-defined methods
- Supports Google cloud drive extraction

### Useful extraction utilities

- Supports auto recognition and decryption of partition table and encrypted partition
- Supports automatic firmware restoration and retrieval after restoration failure
- Supports pausing/resuming extraction
- Supports merging multiple image files - MDF and binary file
- Supports creating MDF file from PC backup

### Assures evidence data integrity

- Supports write-protection for every piece of evidence
- Supports ten different hash algorithms, including MD5, SHA1/224/256/384/512, RIPEMD128/160/256/320
- Excellent extraction performance - maximum 32GB/20min
- Support multiple device extraction
- Supports both simultaneous and sequential extraction

### User-friendly and easy to use

- Intuitive graphical user guide for each extraction method
- Features 'Recently Selected' models' List

### Data preview and save

- Supports preview of the extraction data - Hex viewer
- Sound alarm and TTS alarm for extraction status change

### Reporting features

- Extraction information - Hash value, Time, Method and Filename
- Supports 'Extracted File List' generation with a hash value of each file
- Generate 'Witness Document' Report

**MD-NEXT** is our forensic software solution for data extraction on a wide variety of mobile and digital devices. It supports both physical and logical extraction methods for Android, iOS, Windows OS, Tizen OS, and other mobile operating systems.

## SPECIFICATION

### PRODUCT HIGHLIGHTS

- Data extraction from smartphones, feature phones, IoT devices, smart TVs, drones, chip-off memory, and JTAG boards
- Powerful extraction tools for devices from Asian manufacturers (Samsung, LG, and Chinese brands)
- Supports all physical extraction methods - Bootloader, [...], and Removable Media
- Supports all logical extraction methods - Filesystem, [...], and MTP
- Unlock latest Samsung and Chinese phones (Oppo/Vivo/Huawei/Xiaomi)
- iOS backup file decryption and keychain extraction
- Selectively extract based on partitions, files, categories, and apps

### System Requirements

OS: Windows 7/8/10 (64 bit)  
CPU: i5 or faster  
RAM: 4GB or above  
Storage: 1TB or above  
Display: 1024x768 or higher  
USB: 2 or more USB 2.0 ports  
Microsoft .Net Framework 4.6.2

### Product components

MD-NEXT Installation Software (CD/USB/Online)  
USB Dongle Key 1 EA  
Warranty 1 Year

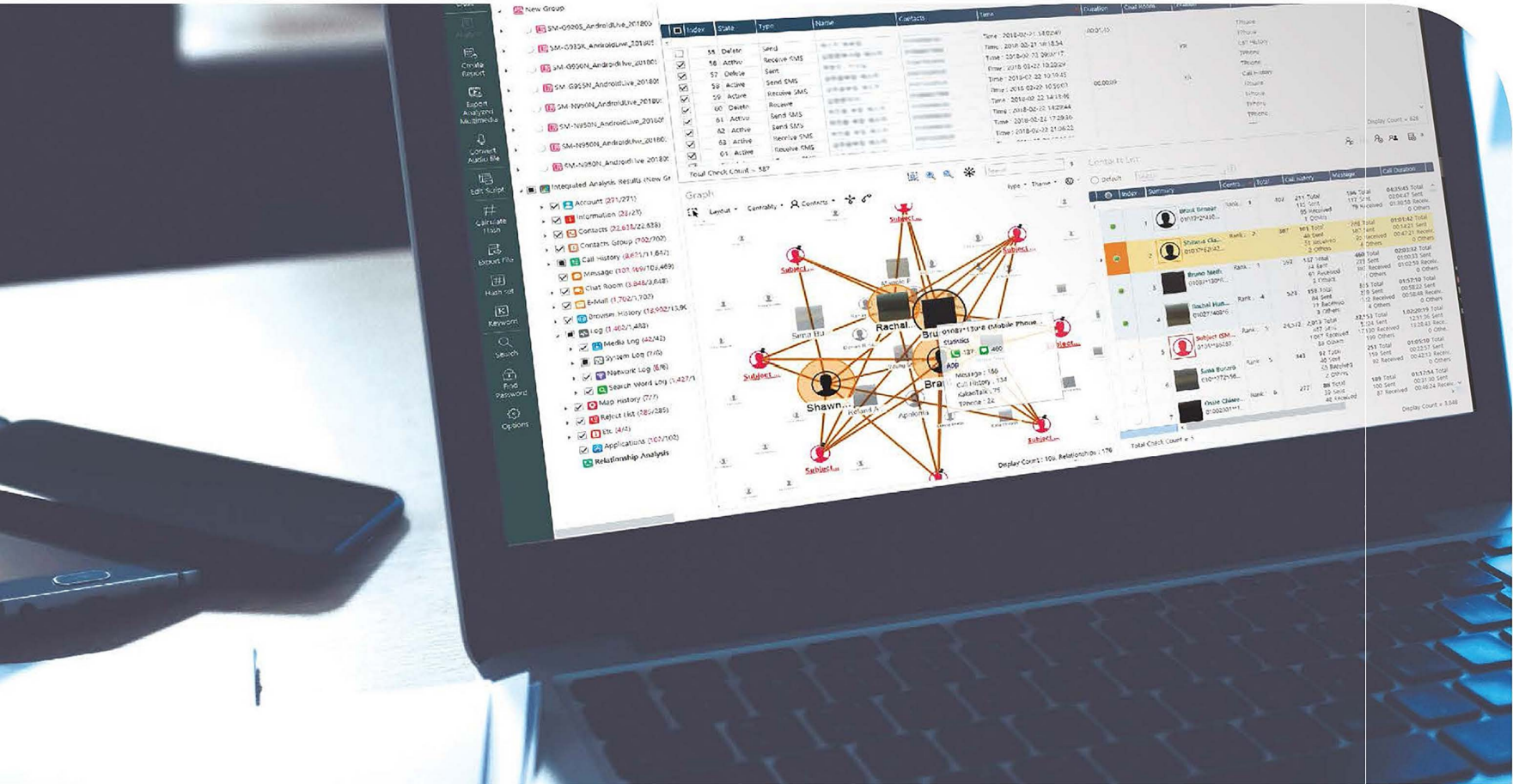


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# MD-RED

Data analysis software for recovering, decoding, decrypting, visualizing, and reporting evidence data from mobile and digital devices



**MD-RED** is our forensic software solution for recovering, decrypting, visualizing, performing analytic data mining, and reporting evidence data that's been extracted with MD-NEXT or another analogous extraction tool. The analysis results output by MD-RED can be exported as forensic reports for crime and accident investigations. In addition, as a result of our continuous ongoing research, MD-RED's mobile app analysis engine is constantly being updated with support for analyzing the latest apps.

## SPECIFICATION

### PRODUCT HIGHLIGHTS

- Supports analysis and recovery for a number of filesystems and over 2,000 mobile apps
- Supports decryption of encrypted instant messaging apps
- Provides quick updates and rolling support for new versions of apps
- Supports social relationship analysis
- Supports drone and IoT analysis
- Supports post-analysis data visualization
- Includes built-in Python script editor for custom application analysis

### KEY FEATURES

- Supports wide variety of mobile operating systems and devices**
  - Supports Feature phones, Smartphones and various other digital devices
  - Supports iOS, Android, Windows, Tizen and other mobile operating systems
- Parsing and Recovery of various filesystems**
  - Support for FAT12/16/32, exFAT, NTFS, ext3/4, HFS+, EFS, YAFFS, FSR, XSR, F2FS, VDFS, XFS, DVR filesystems
  - Supports data carving of unused areas
- Supports analysis of mobile data over 2,000 popular mobile apps**
  - Multimedia files taken with device camera
  - Call logs, Address book information, SMS/MMS messages, emails, Memos, and Internet history
  - Social networking, maps, navigation, banking, health, and lifestyle apps
  - Detection of Anti-forensic apps
- Maximized performance**
  - High speed analysis achieved through multi-core CPU/GPU parallel processing
  - Supports running multiple instances of the program (i.e.: one instance for each open case)
- Data Decryption**
  - Supports identifying encrypted documents
  - Supports decryption of chat messages, emails, files, and other app data
- Deep analysis on popular messenger apps**
  - Deserialization, decryption, and recovery of data
  - Skype, Facebook messenger, Telegram, Wickr, QQ, KakaoTalk, Line, Zalo, Viber, Snapchat, and many more
  - WhatsApp – Multiple backup file analysis
  - WeChat – Multiple account analysis, rainbow table analysis
- Supports decoding screen lock and password information**
  - Supports decoding unlock patterns, PINs, and passwords
  - Supports brute force through GPU acceleration
  - Supports iPhone keychain data analysis
- Multimedia data recovery and analysis**
  - Supports frame recovery for deleted/damaged video files
  - Supports the use of Reference Data Set (RDS) for excluding over 6.7M known unusable images from analysis result data
  - Supports audio file conversion (From AMR/AUD/QCP/SILK to MP3/AMR/WAV)
  - Supports playing QCP files and SILK-encoded audio
- New digital device analysis**
  - Drone data analysis - Flight history, Multimedia data, Supports Manufacturer DJI/Parrot/PixHawk
  - IoT data analysis - AI Speakers, Smart TV, Car Navigation

- Log analysis**
  - Supports analysis of various logs: media, search word, system, and network logs (Bluetooth, WiFi, Cell towers)
- Social relationship analysis**
  - Provides Basic/Advanced modes for analyzing single/multiple phones
  - Supports call, messenger, and email communication data analysis
  - Supports filtering by app, time period, contact(s), and type(s) of communication
  - Supports community analysis
  - Supports relationship visualization and automatic re-organizing
- Embedded data viewers**
  - View extracted data directly in-application
  - SQLite databases, HEX, PLists, Documents (Text, XML, CDF, PDF, MS Office, ZIP, Executable, Encrypted), Photos, Videos, and Audio
- Visualization of analyzed data**
  - Map viewer for GPS and cell tower location data
  - Offline / Online map (Region / Country / City view levels)
  - Timeline view
  - Link viewer (social relationship visualizer)
  - Chat viewer
  - Web browser view (for internet browsing history)
- Advanced data filtering options**
  - Supports filtering by a variety of properties such as filesystem, signature, and time
  - Supports dynamic filtering operators, sorting, and grouping
  - Supports searching by regular expression
  - Supports keyword registration
  - Supports bookmarking selected data
- Python scripting IDE for user-defined analysis**
  - Includes a Python script editor
  - Supports generating, executing, and debugging code and includes sample scripts
- Case management and hash value verification**
  - Supports various case management features
  - Supports grouping extraction images
  - Supports hash value verification on a per-image basis
- Reporting features**
  - Supports hashing of individual files
  - Supports export of analyzed multimedia
  - Supports automatic report generation (PDF, Excel, HTML, and SQLite DB formats)
  - Supports 3rd party reporting formats like Nuix and Relativity

#### System Requirements

OS: Windows 7/8/10 (64 bit)  
CPU: i7 or faster  
RAM: 8GB or above  
Storage: 1TB or above  
Display: 1024x768 or higher  
USB: 1 or more USB 2.0 ports  
Microsoft .Net Framework 4.6.2

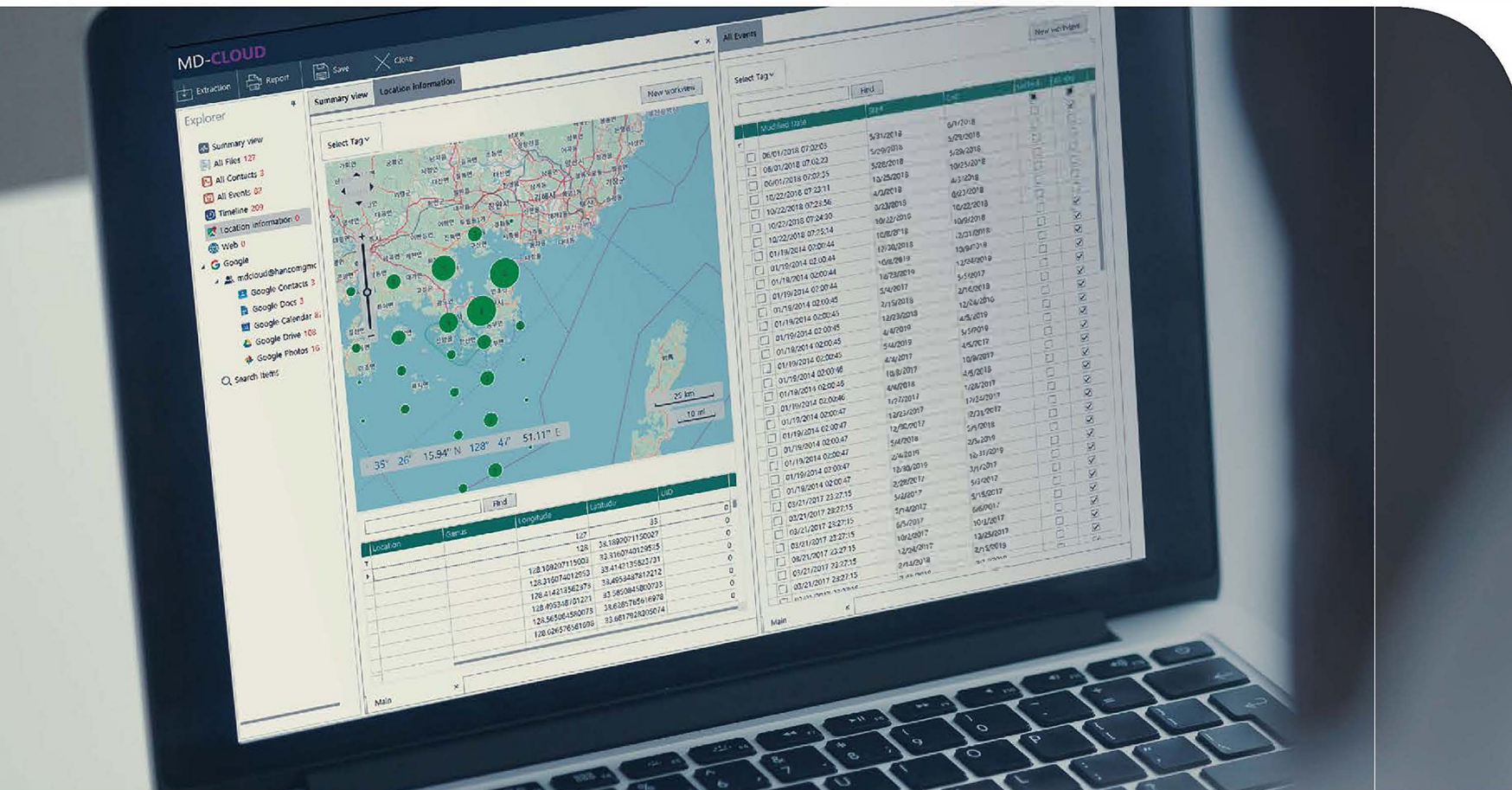
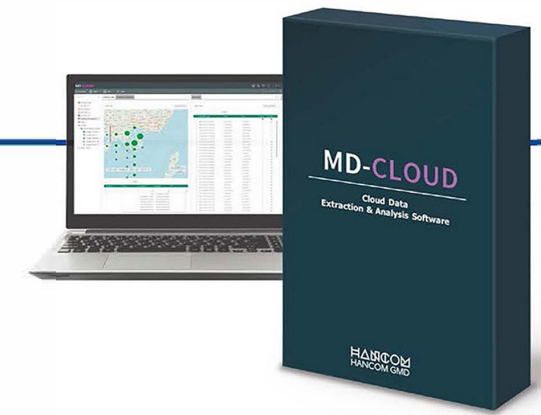
#### Product components

MD-RED Installation Software (CD/USB/Online)  
USB Dongle Key 1 EA  
External HDD for WeChat analysis  
Warranty 1 Year



# MD-CLOUD

Digital forensic software for extraction and analysis of cloud account



## SPECIFICATION

### PRODUCT HIGHLIGHTS

- Supports global cloud service
- Supports IoT cloud and Asian cloud service
- Authentication supports by ID/PASSWORD, 2-step security, Captcha and credentials
- Web capture feature
- Search with tag information
- Interwork with MD-RED

**MD-CLOUD** is the most intuitive digital forensic software tool that extracts and analyze the data from the cloud data storage. It supports a broad range of cloud services.

### KEY FEATURES

#### Supports various cloud services acquisition

- Google, iCloud, Samsung Cloud, Naver cloud, IMAP/POP3, Evernote, One Drive, Twitter, Baidu

#### Specialized in Asian Cloud service

- Baidu cloud in China
- Naver cloud in Korea

#### Acquisition of cloud accounts for IoT devices

- IoT data extraction from AI speaker and Smart home equipment
- Public or non- public APIs authentication

#### Supports various authentication methods

- ID/PASSWORD authentication
- Captcha security authentication
- 2-step security authentication
- Authentication using credential information

#### Web capture feature

- Supports web capture when cloud acquisition does not offer API

#### Real-time acquisition status check

- Monitors data acquisition in real time

#### Easy user-friendly use

- Intuitive user interface and quick data extraction

#### Interwork with MD-RED

- Acquire data with credentials information analyzed by MD-RED

#### Simple search using 'Tag' feature

- Supports easy and fast search with pre-categorized 'Tag'

#### Various built-in viewers

- Supports preview of Image, video, document, web page, and email

#### Snapshot of filtering option

- Supports snapshot of the filter and sort configuration for reuse in the workspace

#### Assurance of evidence data integrity

- Guarantees integrity of evidence data based on powerful hash algorithms such as MD5 and SHA256

#### Reporting features

- Supports report format such as PDF and Excel

#### System Requirements

OS: Windows 7/8/10(64bit)  
CPU: i5 or faster  
RAM: 4GB or above  
Display: 1024x768 or higher  
USB: 1 or more USB 2.0 ports  
Network: Internet connection via wired or wireless LAN

#### Product components

MD-CLOUD Installation Software (CD/USB/Online)  
USB Dongle Key 1 EA  
Warranty 1 Year

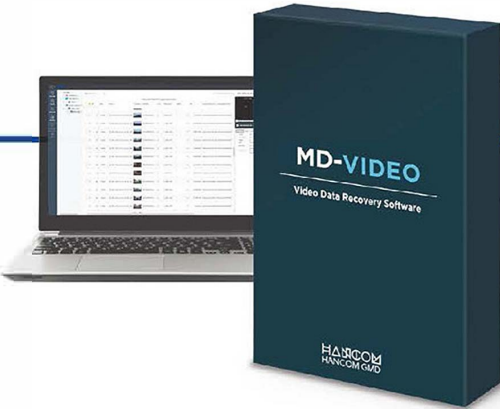


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# MD-VIDEO

Digital forensic software for video preview, recovery, and analysis of video data



## KEY FEATURES

**Video data forensics from CCTV, car black box, smartphone, media storage**

- Global manufacturers' IP-CCTV and key manufacturers' Car Dashboard Camera, Smartphone, Desktop, Server, Camera, Camcorder and Drone, Wearable device and Embedded system

**3 types of video data input**

- Supports mounted storage like hard disk by physical connection
- Supports binary disk image of DD, E01, BIN, and MDF
- Supports file or folder which has damaged or deleted files

**3 types of video recovery**

- Filesystem recovery
- Video file signature recovery (DAV, MP4, MOV, MKV, MPEG, SSF, AVI, ZAV, PS)
- Video frame recovery (H.264, H.265, MPEG-4, M-JPEG)

**Supports various file system**

- Supports auto-detection of the filesystem
- FAT 12/16/32, NTFS, exFAT, HFS+, EXT3/4, TAT16, HIKVISION, DHFS4.1, XFS, F2FS, VDFS
- Supports DVR manufacturer's filesystem - HikVision, Dahua, Zhiling, Samsung, Bosch, Honeywell, Sony, Panasonic, etc.

**Supports various video codecs**

- Supports H.264, H.265, MPEG4, M-JPEG
- H.264 resolution adjustment for recovery
- HEVC (H.265) recovery and iOS 11 or higher model media playback
- Supports sampling codec from the video file and smartphone codec
- User-defined codec parameter setting

**Supports video file scanning**

- Frame and file format scan
- Deleted and damaged file scan

**Recovery of video frames**

- Reconstructs the frame of video files
- Extracts image frames with pictures
- Supports thumbnail preview and image view

**Supports audio file recovery**

- Supports audio file recovery for SILK format

**Recovery of the selected partition**

- Supports auto-scanning of partition
- Supports recovery of the selected partition

**Multi-core CPU/GPU acceleration**

- Recovery acceleration with multi-core CPU
- Detection of object acceleration with multi-core GPU (Planned)

**Bookmark, filtering, indexing**

- Supports bookmarking for examination and report
- Supports arraying, filtering, and indexing of files and frames

**Extracts time information**

- Get time information for image files through metadata analysis of each frame

**Inbuilt video player**

- Multi-channel videos playback
- Play speed control (1/10X, 1/2X, 2X, 4X, 8X)
- Supports more than 300 image formats (MP4, AVI, MKV, WMV, MPEG, etc)
- DVR video file (DAV, ZAV, SSF)
- Video stream playback
- Audio play (QCP, SILK, etc)

**Data viewers**

- Frame picture viewer
- Hex viewer
- File viewer

**File/Format converter**

- Export original or converted file
- Supports multi-channel image separation storage when extracting files
- Supports recovered frame to convert to JPG and PNG format
- Supports video file convert to AVI and MP4 format
- Supports audio file convert to MP3 and AMR format

**Assurance of evidence data integrity**

- Guarantees integrity of evidence data based on powerful hash algorithms such as MD5 and SHA256

**Reporting features**

- Supports report format such as PDF and Excel

## SPECIFICATION

### PRODUCT HIGHLIGHTS

- Supports preview, recovery and analysis of video data from CCTV, Car Dashboard Camera, Camcorder, and Smartphone.
- Supports various DVR filesystems, video formats, video codecs
- Regenerate video with recovered video frame

**MD-VIDEO** is the digital forensic software for extracting and recovering video data directly from the media storage like a disk, memory card and damaged video file.

### System Requirements

OS: Windows 7/8/10 (64bit)  
CPU: i7 or faster  
GPU: 1 or more multi-core GPU card for acceleration  
RAM: 32GB or above  
Storage: 8TB or more  
USB: 2 or more USB 2.0/3.0/3.1 ports  
Microsoft.Net Framework 4.6.2

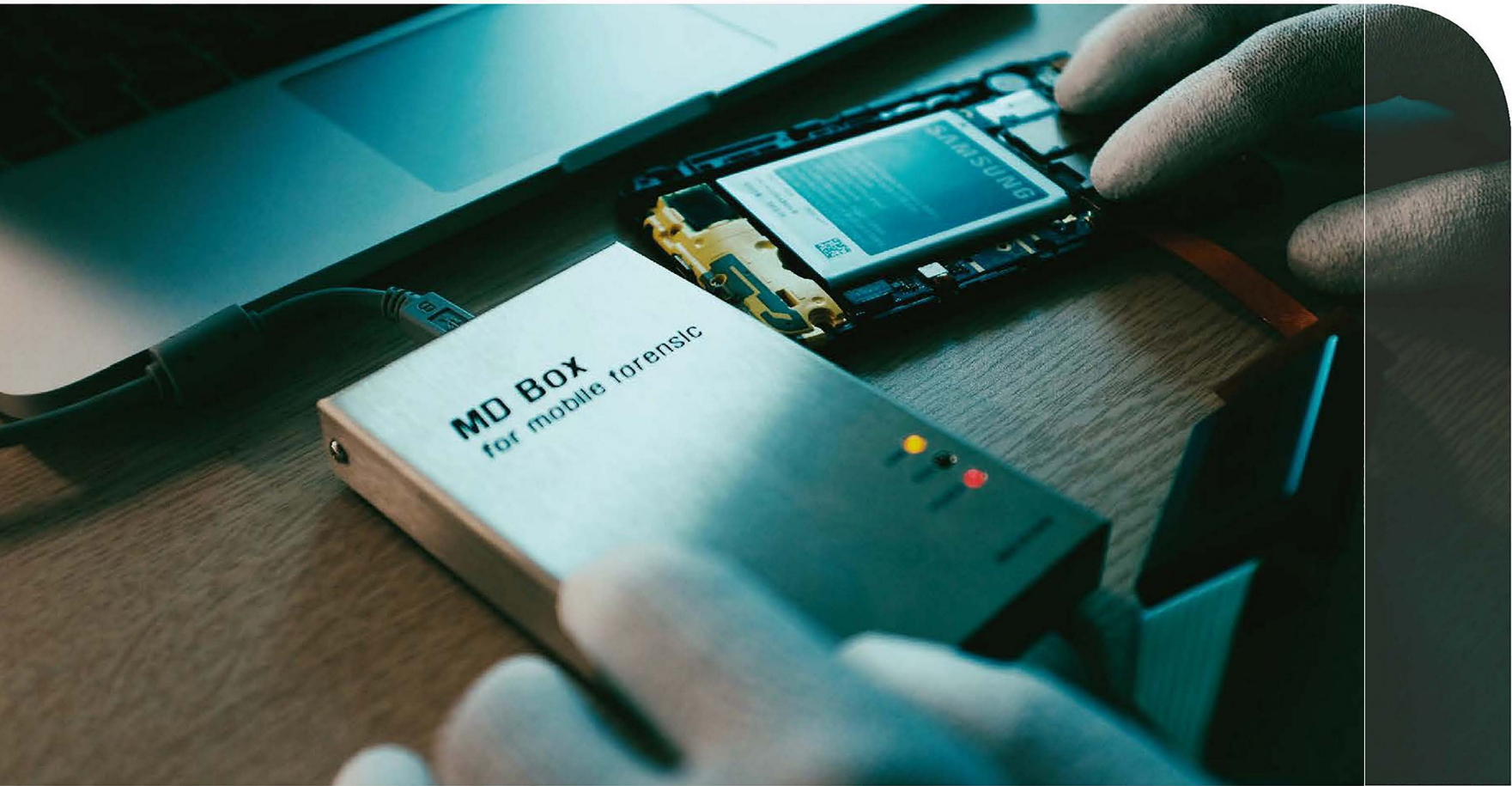
### Product components

MD-VIDEO Installation Software (CD/USB/Online)  
USB Dongle Key 1EA  
Warranty 1 Year



# MD-BOX

Digital forensic hardware for extracting data directly from mobile phone motherboards through the JTAG interface



**MD-BOX** is our forensic hardware solution for extracting data directly from a phone's motherboard through the JTAG interface. In cases where the motherboard of a mobile device has survived despite external damage to the phone, a forensic examiner can use MD-BOX to connect to it through the JTAG interface. From there, the data can be accessed through the 'JTAG Extraction' feature provided by our software solution, MD-NEXT.

## SPECIFICATION

### PRODUCT HIGHLIGHTS

- Physical extraction for the mainboard with JTAG
- Applicable to the damaged mobile device
- The various Mobile CPU support
- Faster and robust extraction feature
- Write protection and evidence integrity
- Data image file save with MD-NEXT



### KEY FEATURES

#### Data extraction from the board with JTAG interface

- Forensic hardware for reading data directly from the main board of the mobile device using JTAG interface

#### Advanced extraction features

- Supports auto-scanning of partitions
- Supports the selected partition extraction
- Supports extraction without reference voltage
- Supports DMA (Direct Memory Access) type extraction
- Supports resumption of extraction from the halted point

#### Mobile CPU support

- MSM6XXX, MSM7XXX, APQ, Exynos, OMAP, Cortex-A, Xscale series CPU family

#### Excellent extraction performance

- Max. 1MB/sec extraction performance

#### Assurance of evidence data integrity

- Supports write-protection of the evidence data
- Supports 10 hash algorithms such as MD5 and SHA256

#### JTAG cable support

- Supports FPCB connector cable sets, MD-Cable Suite
- Supports manual connection by soldering work

#### Image file save using MD-NEXT

- Saves data as MDF image file with MD-NEXT software

#### Product components

MD-BOX Hardware 1 EA  
Probe connector 1 EA  
Power adapter 1 EA  
USB cable 1 EA  
Warranty 1 Year  
MD-Carrier (Option)  
FPCB Cable Suite (Option)

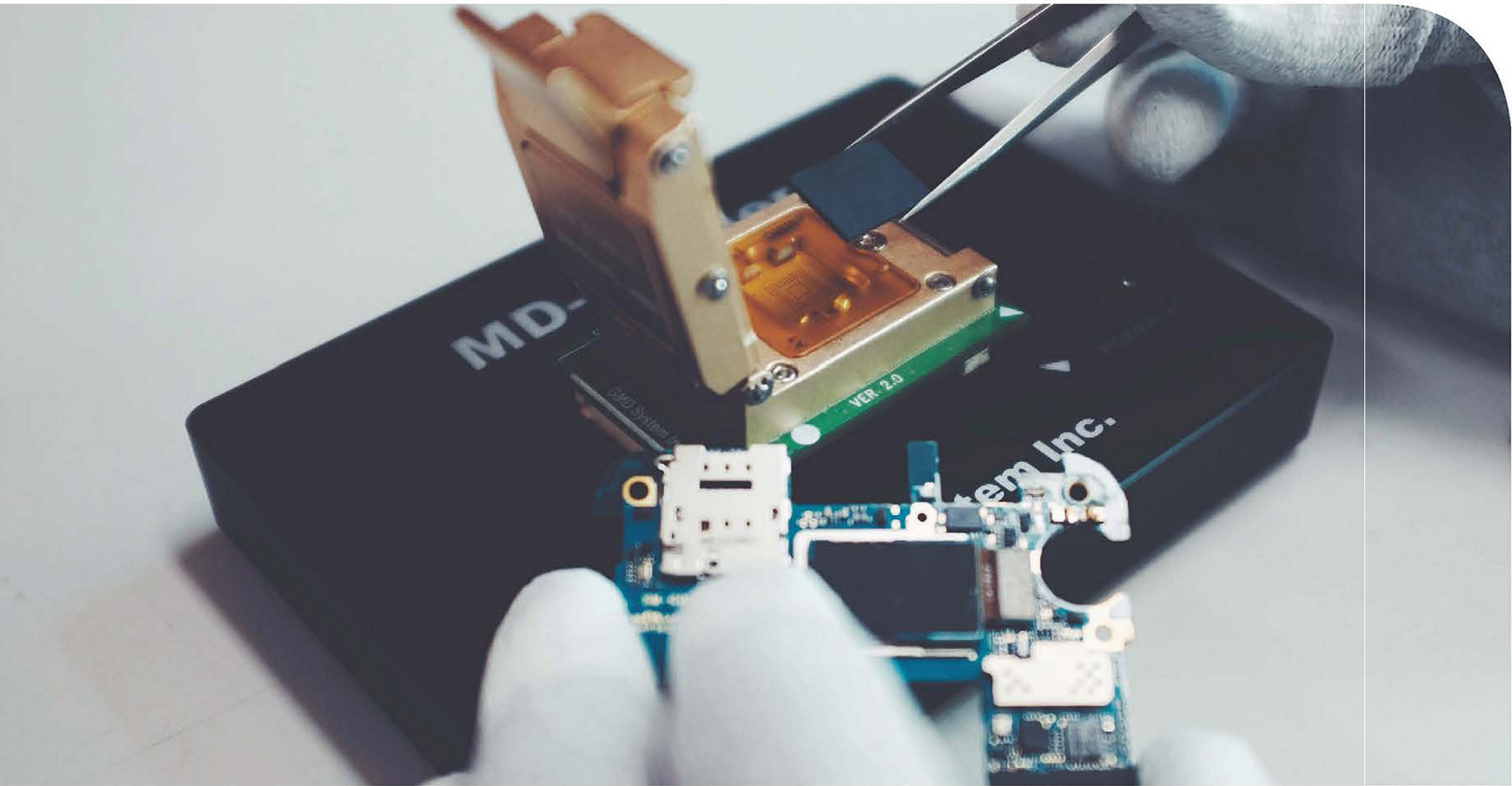
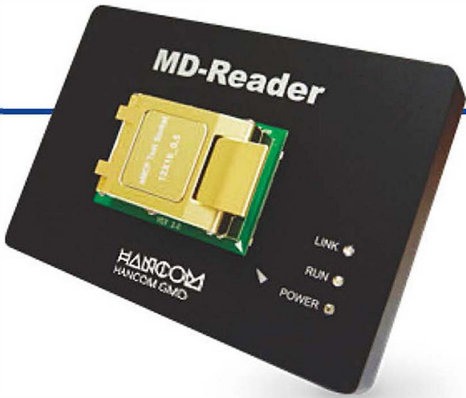
#### Hardware Specification

CPU: ARM9  
RAM: 64Mbytes  
Input Voltage: DC 5V/2A  
JTAG Clock: 1KHz ~ 50 MHz  
Connector Type: 20 Pin Connector  
Target Voltage: 1.8V ~ 5.0V  
Size: 75 x 120 x 18mm



# MD-READER

Digital forensic hardware for extracting data from Chip-Off memory



**MD-READER** is our forensic hardware solution for extracting data directly from flash memory extracted during Chip-Off forensics. After mounting the flash memory into one of MD-READER's memory sockets, examiners can extract data through the Chip-Off feature provided by MD-NEXT.

## SPECIFICATION

### PRODUCT HIGHLIGHTS

- Supports data extraction of Chip-off flash memory
- Supports heavily damaged mobile phones or digital device
- Supports 10 types of eMMC/eMCP memory sockets
- Supports universal SD memory card socket
- Excellent extraction performance
- Write protection and evidence integrity
- Data image file save with MD-NEXT

### KEY FEATURES

#### Data extraction from Chip-off flash memory

- Supports data extraction from the flash memory of mobile phones or digital device heavily damaged by fire, water, or external shock

#### Supports 10 types of eMMC/eMCP memory sockets

##### eMMC memory sockets (5 Types)

- BGA153 eMMC - 11.5x13x0.5mm
- BGA169 eMMC - 12x16x0.5mm
- BGA169 eMMC - 14x18x0.5mm
- BGA100 eMMC - 14x18x1.0mm (Option)
- BGA136 eMMC - 10x10x0.5mm (Option)

##### eMCP memory sockets (5 Types)

- BGA186 eMCP - 12x16x0.5mm
- BGA221 eMCP - 11.5x13x0.5mm
- BGA162 eMCP - 11.5x13x0.5mm (Option)
- BGA254 eMCP - 11.5x13x0.5mm (Option)
- BGA529 eMCP - 15x15x0.5mm (Option)

#### Universal SD memory card socket

- Supports SD Card, Mini SD Card, Micro SD Card

#### Selective data extraction

- Supports auto-scanning of partitions
- Supports extraction of the selected partition

#### Excellent extraction performance

- Max. 12MB/sec extraction performance

#### Assurance of evidence data integrity

- Supports write-protection of the evidence data
- Supports 10 hash algorithms such as MD5 and SHA256

#### Image file save with MD-NEXT

- Saves data as MDF image file with MD-NEXT software

#### Product components

MD-READER Hardware 1 EA  
Sockets of eMMC or eMCP 5 EA (5+ sockets as option)  
Universal SD memory card socket 1 EA  
Power adapter 1 EA  
USB cable 1 EA  
Monthly update license for new models  
Warranty: 1 Year

#### Hardware Specification

CPU: Samsung S5PV210  
RAM: DDR256M  
Memory: NAND 512M  
Input Voltage: DC 5V  
Size: 110x140x35mm



# MD-MR

Digital forensic hardware package for detaching memory from motherboards of mobile phones and other digital devices



**MD-MR** is our forensic hardware package solution for detaching memory from the motherboard of a mobile phone or other digital device. When a device has sustained damage from physical force, fire, or water exposure, MD-MR can be used to prepare it for Chip-Off forensics. MD-MR includes five flash memory sockets for MD-READER, a heat blower, a soldering station, a fume extractor, and a microscope along with optional components such as the mobile device dryer, rework system, and mobile device safety box

## SPECIFICATION

### PRODUCT HIGHLIGHTS

- Essential devices for manual memory removal
- Optional automatic rework machine, mobile device dryer, and safety box

### KEY FEATURES

#### MD-MR Standard devices

- 5 flash eMMC/eMCP memory sockets for MD-READER
- Heat blower for disassembling work
- Soldering station for manual soldering
- Fume extractor for soldering work
- Microscope - Zoom Stereo, 3.5X~180X, Lighting equipment
- Digital microscope with HDMI/USB for PCB inspection

#### MD-MR Optional devices

##### Rework Station

- Rework station for small PCB (BK-350S)
- Optimized for mobile phone rework

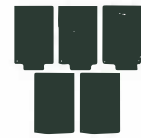
##### Mobile device and PCB Dryer

- Dryer for PCB board and small digital device (RG-202)
- Convective drying maintains a stable temperature inside
- Safe circuit to prevent the override of the heater

##### Mobile device Safety Box

- Mobile device storage for smartphone and tablet
- Battery charge during storage
- Sterilization
- Digital locking system

#### Standard devices



➤ 5 flash memory sockets



➤ Heat blower for disassemble work



➤ Soldering Station



➤ Fume Extractor



➤ Microscope



➤ Digital microscope with HDMI/USB

#### Optional devices



➤ Rework station



➤ Mobile device dryer



➤ Mobile device Safety Box

#### Package basic components

- 5 flash memory sockets for MD-READER 1 SET
- Heat blower for disassembling work 1 EA
- Soldering Station 1 EA
- Fume Extractor 1 EA
- Microscope with lighting 1 EA
- Digital Microscope for PCB inspection 1EA

#### Package option components

- Rework station 1 EA (Option)
- Mobile device dryer 1 EA (Option)
- Mobile device safety box 1 EA (Option)
- Warranty 1 Year



# MD-RUGGED

Rugged mobile forensics hardware and software package for frontline investigators



**MD-RUGGED** supports professional on-site investigation. Data can be both extracted and analyzed with MD-RUGGED directly at the scene of the crime.

## SPECIFICATION

### PRODUCT HIGHLIGHTS

- MD-NEXT/MD-RED Pre-installed laptop
- All-in-one mobile forensic package for the investigation at the field
- Customizable package components

### KEY FEATURES

#### Supports data extraction at the laboratory level

- Supports all logical and physical extraction capabilities at the field

#### Supports temporary command center

- Workable as a mobile forensic control tower at the very spot where the accident took place

#### External camera for Chain of Custody

- Photographing evidence and recording of investigation process with external camera for Chain of Custody

#### Supports all the necessary forensic accessories

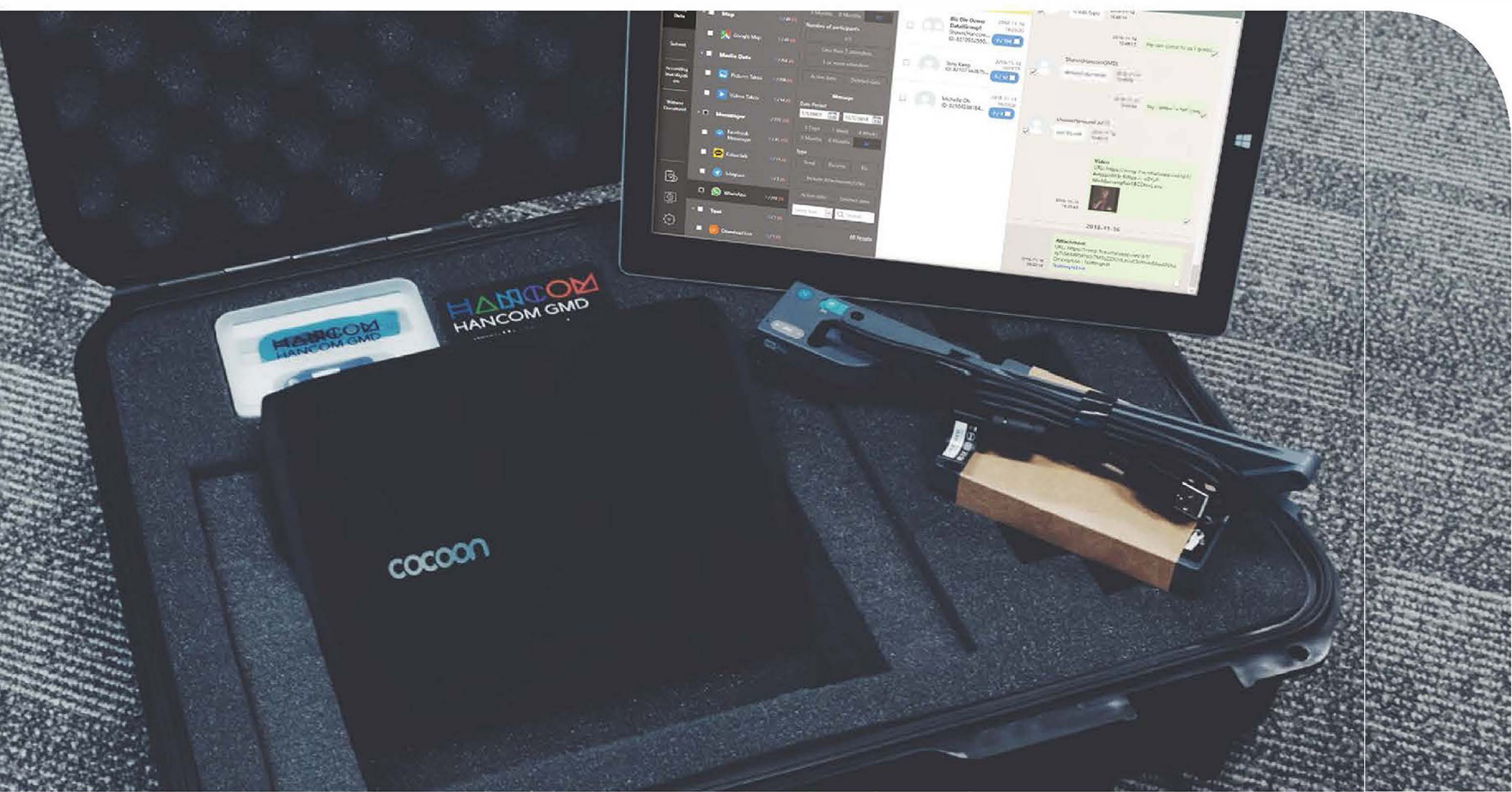
- A USB cable, SD reader, USIM reader, USB hub, External camera, and External HDD

Package components	Laptop Specification
Rugged Carrier 1 EA MD-NEXT/MD-RED Installation Software (CD/USB/Online) USB Dongle Key 1EA High-Performance Laptop 1 EA 5 Types of smartphone cables (5, 8, 20, 30, C-typed pin) HD External Camera 1 EA External HDD 1 EA (for Wechat multi-account analysis) SD Reader 1EA USIM Reader 1EA USB Hub 1 EA Portable Printer 1 EA (option) Warranty 1 Year	OS: Windows 7/8/10 (64 bit) CPU: i7 or faster RAM: 8GB or above SSD: 1TB or more Display: 1024x768 or higher USB: 2 or more USB 2.0/3.0/3.1 ports Microsoft.Net Framework 4.5



# MD-PORTABLE

Mobile forensic portable package with MD-LIVE for the first responder or triage at the crime scene



**MD-PORTABLE** supports to quickly respond to the field request by a faster and selective collection of the evidence data using MD-LIVE. Triage of mobile evidence and selective acquisition without privacy disclosure can be available with MD-LIVE.

## SPECIFICATION

### PRODUCT HIGHLIGHTS

- MD-LIVE Pre-installed tablet
- All-in-one package for the first response in the field
- Customizable package components

### KEY FEATURES

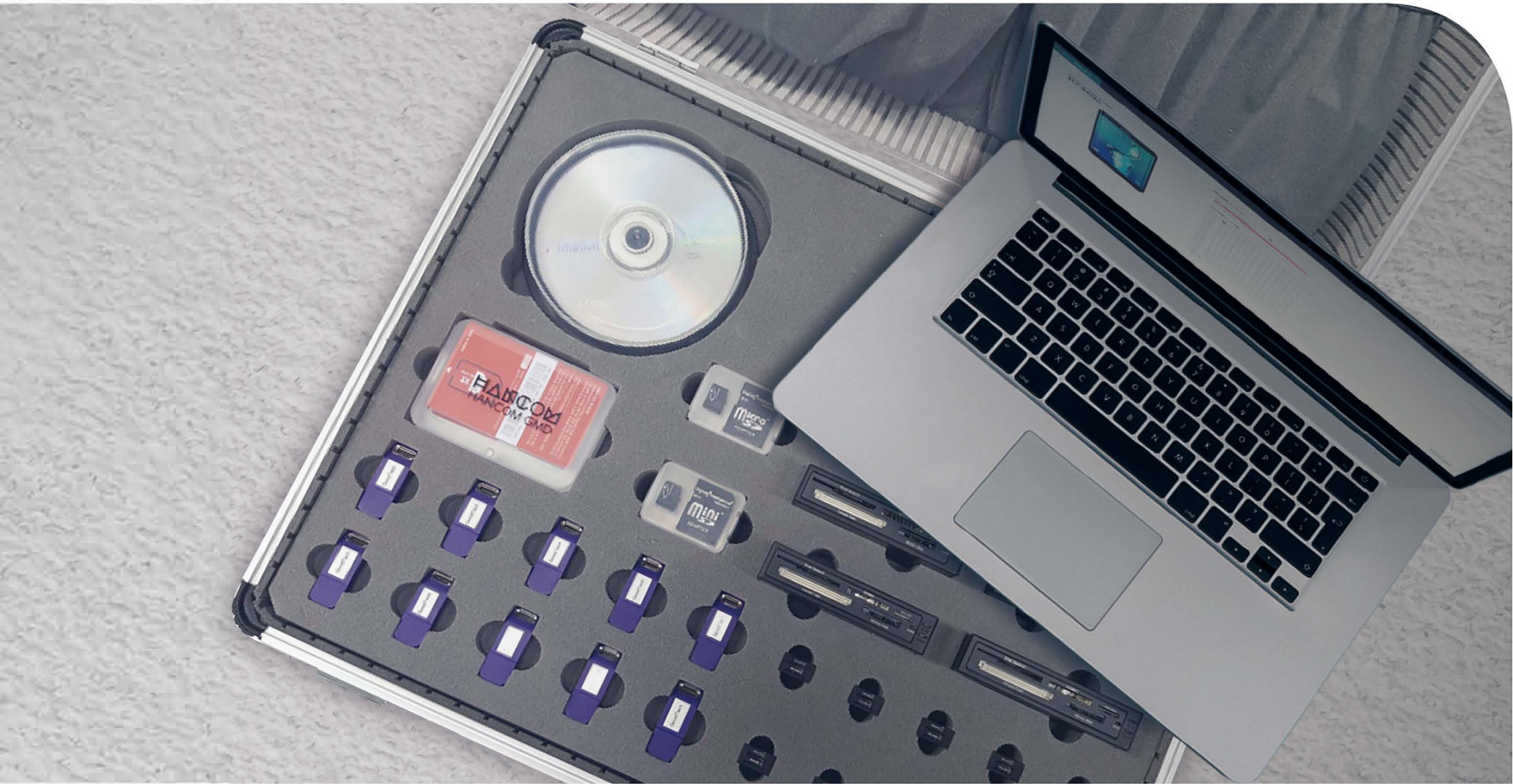
- Portable mobile live forensic tool for onsite use**
  - Portable tablet with MD-LIVE software supports rapid response onsite and data acquisition on the move
- Supports faster and secured forensic process**
  - Fast acquisition of selective data using MD-LIVE to secure the privacy of phone owner
- Mirroring and remote control of smartphone display**
  - Smartphone screen mirroring and remote control can be used when smartphone display is broken or the prevention of unwanted operation on the phone.
  - The mirrored screen can be captured and also recorded as an evidence
- Screen recording of MD-LIVE software**
  - PC screen of MD-LIVE recording to reproducing and verify its forensic process
- External camera for Chain of Custody**
  - Photographing evidence and recording of investigation process with external camera for Chain of Custody
- Supports all the necessary live forensic accessories**
  - USB cables, External camera, Tablet, Portable carrier

Package components	Tablet Specification
Portable Carrier 1 EA MD-LIVE Installation Software (CD/USB/Online) USB Dongle Key 1EA Touch Tablet 1 EA 5 Types of smartphone cables (5, 8, 20, 30, C-typed pin) HD External Camera 1 EA Portable Printer 1 EA (option) Warranty 1 Year	OS: Windows 7/8/10 64bit CPU: i5 or faster RAM: 8GB SSD: 512G Display: 1024x768 or higher USB: 1 or more USB 2.0/3.0/3.1 ports Microsoft Net Framework 4.5



# MD-ACADEMY

Complete set of mobile forensic tools customized for education and training



**MD-ACADEMY** is the complete set of mobile forensic tools customized for mobile forensic education. MD-ACADEMY is composed of the test materials and the academic version of MD-NEXT, MD-RED for in-depth mobile forensic training and education of the latest mobile forensic technology.

## SPECIFICATION

### PRODUCT HIGHLIGHTS

- MD-NEXT, MD-RED Academic version
- License and materials set for 1, 5, 10, 20 users
- SD reader, USIM reader, Chip-off memory reader
- Customizable package components
- Textbook and video for the lecturer

### KEY FEATURES

#### Complete set of mobile forensic training

- Training material of manual, basic theory and practice guide
- The academic version of MD-NEXT
- The academic version of MD-RED

#### Designed for mobile forensic practice

- Smartphone and memory samples, forensic readers and guide video

#### Practical analysis using the provided sample data

- Provided sample data enable analysis training to be more effective

#### The customized package set for 1, 5, 10 and 20 users

- MD-ACADEMY package can be customizable by user numbers (1/5/10/20 users)

Package components	Optional components
MD-ACADEMY Carrier for 1/5/10/20 users' package	MD-READER demo set
MD-NEXT, MD-RED (Academic version)	Mobile forensics textbook copies
USB Dongle Keys (1/5/10/20 users)	Mobile forensics training video
Sample USIM Cards	Sample smartphones
Sample SD Cards	Sample Chip-off memory
SD Memory Readers	
USIM Readers	
5 Types of smartphone cables (5, 8, 20, 30, C-typed pin)	



# TRAINING & CERTIFICATION

Maximize your skills, knowledge and mobile forensic capabilities with HancomWITH

HancomWITH provides an extensive set of certified courses composed of certification courses, mobile forensic training courses, webinars and other training materials. Covering all levels of knowledge from beginner to expert, each course provides students with a detailed understanding of mobile forensics as well as up-to-date forensic knowledge. If you are looking for an education in mobile forensics, our training team is waiting for you. Select a course suited to your level and obtain what you need here.



## HancomWITH Certified Mobile Forensic Professional HCMP

HCMP certification will equip you with basic mobile forensics knowledge and teach you to make practical use of HancomWITH's mobile data extraction and analysis software. This certification is aimed at practitioners who are new to mobile forensics. Those who hold this certification are given the opportunity to advance their careers in the mobile forensics industry.

Curriculum
<ul style="list-style-type: none"><li>· The basic theory of mobile forensics</li><li>· Training for mobile forensic tools; MD-NEXT, MD-RED, MD-LIVE, MD-VIDEO</li></ul>



## HancomWITH Certified Mobile Forensic Examiner HCME

HCME certification is designed to train mobile forensic examiners in the use of both HancomWITH's MD-Series hardware and software products. This certification deals with high level techniques for handling Android and iOS-based smartphone forensics and various kinds of analysis methods. An HCME certification certifies that an examiner is equipped with a vast depth of understanding and expertise in the use of HancomWITH's complete mobile forensic solution.

Curriculum	
<b>Physical data extraction</b> <ul style="list-style-type: none"><li>· JTAG forensics (MD-BOX)</li><li>· Chip-off forensics (MD-READER)</li><li>· Memory removal (MD-MR)</li></ul>	<b>Advanced mobile forensic</b> <ul style="list-style-type: none"><li>· Android/iOS Forensics</li><li>· Database structure, SQLite, Filesystem and Multimedia analysis</li></ul>



## HancomWITH Certified Mobile Forensic Specialist HCMS

HCMS certification certifies that an examiner has successfully completed all the contents of the certification course and mastered in-depth mobile forensic investigative methodology. Recognized by investigative agencies as a skilled specialist in the mobile forensics sector, an HCMS certified examiner can manage matters of all sizes, including real-world application analysis based on Python scripting.

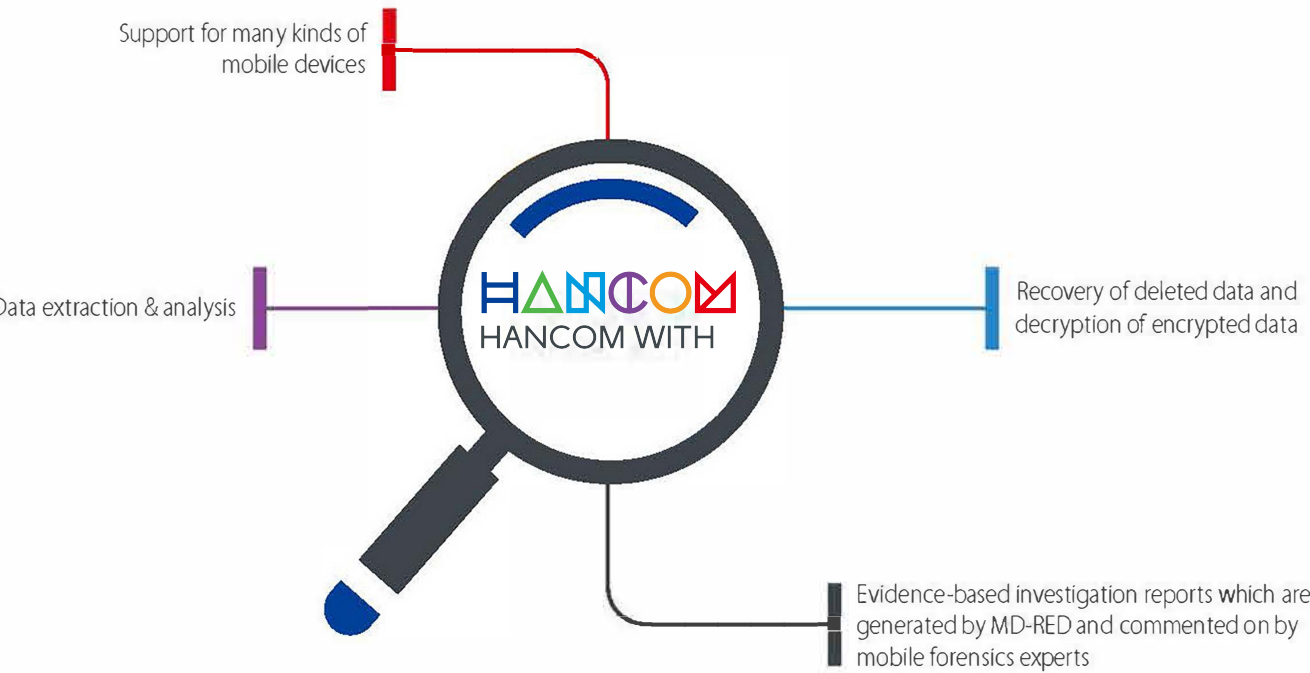
Curriculum	
<b>Advanced mobile forensic theory II</b> <ul style="list-style-type: none"><li>· SQLite analysis II</li><li>· Filesystem analysis II</li><li>· Multimedia analysis II</li><li>· Messenger decoding/decryption</li><li>· APK analysis</li><li>· Reverse engineering</li></ul>	<b>Python analysis scripting</b> <ul style="list-style-type: none"><li>· App analysis trends and issue</li><li>· Script programming basics</li><li>· Script programming API</li><li>· Script programming practice</li></ul>



# MOBILE & DIGITAL FORENSIC SERVICE

HancomWITH provides one-stop forensic service for a law firm, audit, and eDiscovery corporation. It's comprehensive mobile and digital forensic service which includes evidence data acquisition from a Smartphone, Tablet, PC, CCTV/DVR, Drone, Car, IoT device, Cloud service and data analysis on various mobile data, apps, videos, audios, documents and so on. Data analysis report and investigation consulting service are provided according to the specific client's inquiry.

## Service Highlights



## Key Services

- 01

**One-stop mobile and digital forensic service**  
A comprehensive forensic service that provides a complete forensic solution. It provides evidence data acquisition, data analysis from a wide range of mobile and digital devices, and analysis report, including entire process recording for a chain of custody.
- 02

**Unlock service & Data extraction**  
Data extraction service including screen unlock and decryption for encrypted data partition from the Smartphone, Tablet, PC, CCTV/DVR, Drone, Car, IoT device, and Cloud service. It warrants the integrity of all extracted evidence data.
- 03

**Data analysis & Analysis report**  
Analysis of extracted data, data recovery, decrypt encrypted data, and provide analysis reports.
- 04

**Forensic investigation support service**  
Provides a complete forensic investigation service according to the specific client's inquiry.
- 05

**Legal advisory service for forensic investigation**  
Being in partnership with law firms, we provide legal advice on security audit and all the consulting service related to forensic investigation.
- 06

**Customized service**  
Provides customized forensic service package according to each client's requirement, including corporate audit, corruption investigation, and an eDiscovery forensics.



## DIGITAL FORENSIC LAB SOLUTION

Fully equipped digital forensic laboratory solution for forensic investigators to handle a massive variety of different mobile device safe and efficiently

Our digital forensic lab is equipped with the all needed tools and hardware to analyze, identify, preserve, recover, and present facts and opinions about the information at hand efficiently.

The digital forensic laboratory supports investigator to handle a vast variety of different mobile and digital device with reliable and efficient solutions. It will help your team to analyze evidence in the most efficient way and forensically sound manner.



### Physical rework desk

- MD-READER/MD-BOX Hardware
- MD-MR package
- MD-CARRIER package
- MD-Cable Suite for JTAG connection
- USIM reader, SD reader
- Air ventilation for soldering work

### Data extraction work desk

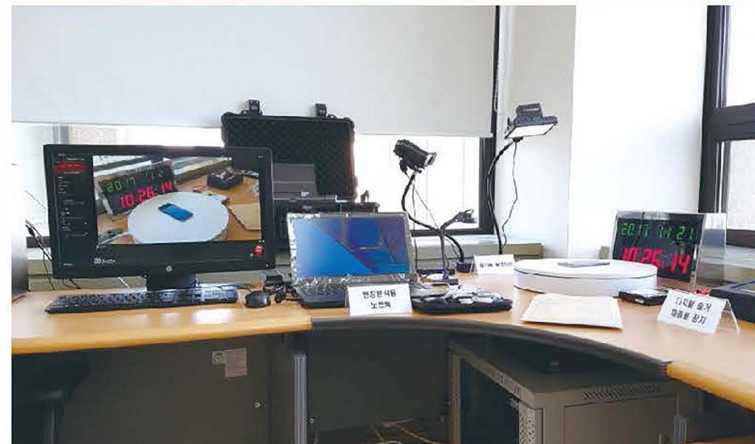
- MD-NEXT/MD-LIVE Software
- Workstation/Laptop/Tablet
- Video recording system
- Lighting system
- Cables set

### Data analysis work desk

- MD-RED, MD-VIDEO, MD-CLOUD Software
- GPU Workstation/Workstation/Laptop
- NAS storage rack
- 10G network device

### Digital devices management

- Smartphone and tablet storage
- Disk storage
- Flash memory storage
- Accessories for smartphone - battery recharger, smartphone cable
- CCTV and door lock





MEMO