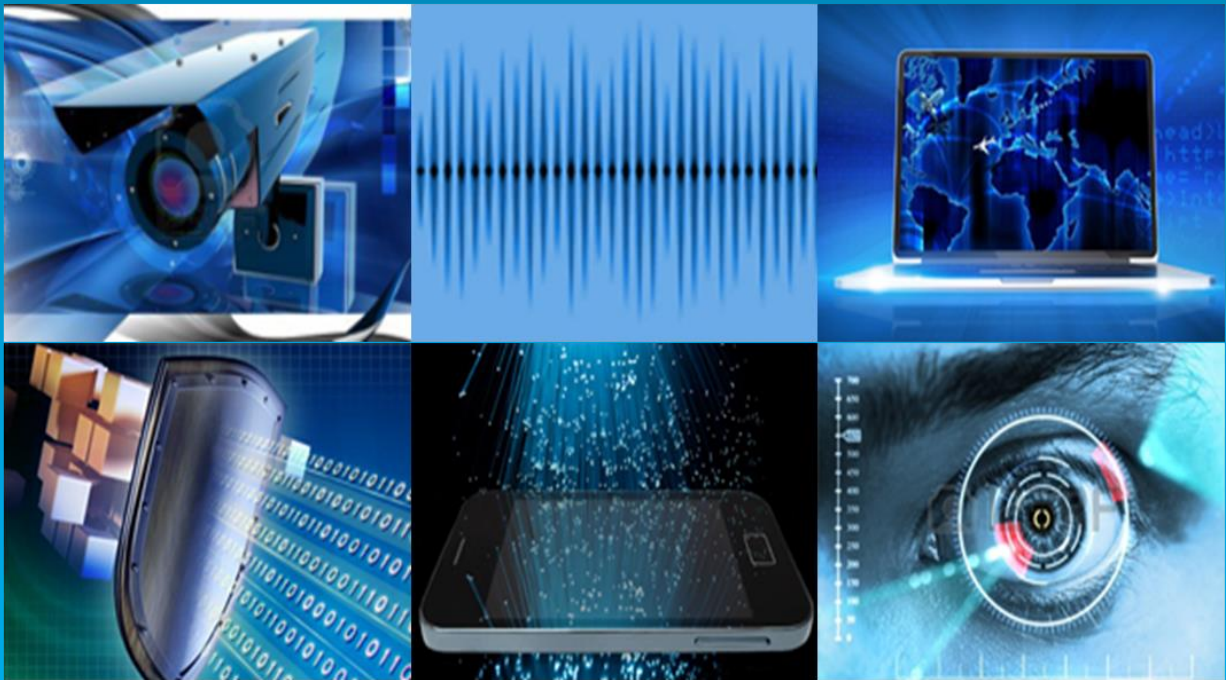




# Product Highlights

## Video/Audio/Specials



**Video Surveillance · Audio Surveillance · Monitoring  
TSCM · Forensics · Jammer · Special Products**

## Content

About us.....	3
Video Surveillance.....	4
COFDM Systems.....	8
Audio Surveillance.....	13
Digital Forensics.....	18
Tracking and Navigation.....	23
Countermeasures.....	25
Monitoring Systems.....	29
Satellite Monitoring.....	35
Special Products.....	38
Jammers.....	39

Vers. 2018-07-23

## About us



**SIM Secure Information Management** is a professional partner for Government Security in the following fields:

- Video and Audio Surveillance
- Communication and Monitoring Analysis
- Technical Countermeasure Solutions
- Special Solutions for Security Authorities

**SIM Secure Information Management** is a leading manufacturer and provider of professional video-, audio- and special-solutions. We work closely together with national and international security and defense authorities and develop our products especially based on application requirements of our customers. In addition, we complete our range with various products from our network partner companies. Professional consulting, product demonstrations and -tests are part of our services as well as technical support and training.

### Our product line includes:

- Video Surveillance
- Audio Surveillance
- Forensic, HDD + Mobile Phone
- IT and Communication Security
- Tracking
- TSCM
- Jammer
- Special Products & Systems

### Our customers are:

- Security Authorities in the Ministry of Interior and Foreign Ministries
- Ministries of Defense
- Special Units
- Selected Homeland Security Companies

**In a business based on trust and confidentiality,  
We offer fast response, reliable supply and long term service.**

Please note that these goods are subject to federal laws and export controls which may require the authorization of the German government prior to use, resale or export.

We reserve the right to change product specification without prior notice.

## Video Surveillance

### Night Vision HD Systems

#### CMOS 200 Camera with Colour and Black White Mode

Designed for high end surveillance applications where high resolution colour images are required in the lowest light conditions, the CMOS 200 camera and lenses provides 30fps colour images even at night. The excellent sensitivity of this camera is similar with EMCCD, but including megapixel resolution! The Night Vision HD-System can include an invisible laser illuminator working in fully darkness



Main Features CMOS 200 Camera	
Imaging Device	2/3" CMOS
Minimum illumination colour	0.005 Lux (30 fps)
Minimum illumination b/w	0.0001 Lux (30 fps)
Full HD resolution	1920x1080
Iris Control	DC
Video output	HD:HD-SDI/SD: NTSC, PAL
Remote Control	RS-485
Power consumption	less than 10W
Lens Mount	CS
Day and night	IR Cut Filter ON/OFF



#### Megapixel Lenses for CMOS 200

Model	Image Size	Focal length mm	Focus/Zoom	Iris Control	F value	FOV (H) grad
SIM-LM25	1"	25	Manual/-	AI-DC	0.85	21.8
SIM-LM35	1"	35	Manual/-	AI-DC	0.85	15.6
SIM-LM60	1"	60	Manual/-	AI-DC	0.8	9.1
SIM-LMZ10360	1/1.8"	10-360	Motorized/Motorized	AI-DC	1.9	51.3-1.5
SIM-LMZ14500	1/1.8"	14-500	Motorized/Motorized	AI-DC	2.9	46.4-1.1
SIM-LMZ20550	1/1.8"	20-550	Motorized/Motorized	AI-DC	4.6	27-1
SIM-LMZ20750	1/1.8"	20-750	Motorized/Motorized	AI-DC	4.6	27-0.7

# Video Surveillance

## Infrared Laser Illuminators

### Laser Illuminator

Our range of infrared laser illuminators extends the performance of sensitive video surveillance where visible illumination must be avoided.

The 810 nm lasers work with most CCD or CMOS cameras with removable IR cut filter. They are semi-visible to the human eye and can be detected with normal cameras.

The 960 nm lasers are truly invisible and can't be detected with normal cameras. They require IR-optimized cameras and lenses like SIM's CMOS-200.

The 1000 mW lasers with their motorized zoom optics employ innovative VCSEL technology to provide homogenous illumination across their field of view.



Starlight without Illumination



Starlight with Laser Illumination



### Laser Specifications

Model	Laser Type	Zoom	FoV	Wavelength nm	Output Power	Laser Class	Operating Range
<b>SIM-Li810/150</b>	LED	Manual	1 - 15°	810	150 mW	1	200 m
<b>SIM-Li980/50</b>	LED	Manual	1 - 15°	980	50 mW	1	100 m
<b>SIM-Li810/1000</b>	VCSEL	Motorized	1 - 12°	810	1000 mW	4	2 km
<b>SIM-Li960/1000</b>	VCSEL	Motorized	1 - 12°	960	1000 mW	4	1 km

# Video Surveillance

## Night Vision SWIR Camera

### SWIR Camera-640

**Super lowlight digital VIS-SWIR camera**, against fog, haze, smoke, and dust for video surveillance and also for identification of counterfeit documents. One of the best performing VIS-SWIR cameras in the world!

#### Features

- VIS-SWIR technology using 640 x 512 sensor
- Wavelength 0.4 up to 1.7  $\mu\text{m}$ , 15 x 15  $\mu\text{m}$  pixel pitch
- Enables highest resolution VIS-SWIR image
- Ultra-high intra-scene dynamic range
- Enables simultaneous capture of bright & dark portions of a scene
- On-board Automated Gain Control (AGC)
- high resolution, enables clear video in all light conditions
- Ultra-compact, low power, low noise

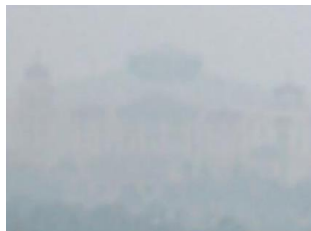


#### Applications-Surveillance

- 860, 1064 & 1550 nm laser line detection
- Active imaging
- Airborne payload
- Hand-held goggles
- Imaging through fog
- Document inspection
- Vision enhancement

#### Penetrate dust, haze, and fog

CCD



SWIR Camera

#### Lenses for SWIR Camera

Model	Focal length mm	Focus/Zoom	F value	Transmission	FOV (H) grad
<b>SIM-LM25SW</b>	25	Manual/-	1.5	Visible + SWIR	21.7
<b>SIM-LM50SW</b>	50	Manual/-	1.5	Visible + SWIR	10.9
<b>SIM-LM100SW</b>	100	Manual/-	1.5	Visible + SWIR	6.8
<b>SIM-LMZ30300SW</b>	30 - 300	Motorized/Motorized	2.8	SWIR only	22.6 - 2.3
<b>SIM-LMZ50500SW</b>	50 - 500	Motorized/Motorized	5	SWIR only	13.7 - 1.1

# Video Surveillance Covert Pinhole Cameras

## Miniature Pinhole Cameras

- Different screw and button models available
- Customized solutions available upon request



## Camouflaged lens kit

(For LLC Color camera and LLC B/W camera)

- 3 buttons with lenses (3 x 5 spare buttons included)
- 4 screws with lenses (4 x 5 spare screws included)
- 1 sticker holder with lens (3x3 stickers included)



	Color Camera	Color Camera Pinhole	Color Camera Cylindrical	LLC Color Camera	LLC B/W Camera	LLC Color Camera Pinhole	LLC B/W Camera Pinhole
<b>Sensor type</b>	1/3" Color			1/4" Color	1/4" B/W	1/4" Color	1/4" B/W
<b>Sensitivity</b>	0.01 Lux			0.005 Lux	0.003 Lux	0.005 Lux	0.003 Lux
<b>Resolution</b>	540 TVL			520 TVL			
<b>Lens type</b>	Flat pinhole, M6	Cone pinhole, M10	Cone pinhole, M12	Flat pinhole M6		Cone pinhole M10	
<b>Video-out standard</b>	PAL 25fps (NTSC 30fps on request)						
<b>FOV</b>	55° (H)	63° (H)	76° (H)	56° (H)	45° (H)	47° (H)	47° (H)
<b>Power consumption</b>	270 mW			280 mW			
<b>DC supply</b>	3.5-12 VDC						
<b>Operating temp.</b>	-20°C to 70°C			-30°C to 70°C			
<b>Cable</b>	Kevlar enforced						
<b>Connector</b>	Binder 5-pin (other connector on request)						
<b>Dimension</b>	11.2 x 12.7 x 8.5 mm	11.2 x 12.7 x 12.5 mm	Ø14 x 19 mm	11.2 x 12.7 x 7.8 mm	11.2 x 12.7 x 7.8 mm	11.2 x 12.7 x 12.5 mm	11.2 x 12.7 x 14.4 mm
<b>Picture</b>							

# COFDM Video Transmission

## Milan Quattro Series

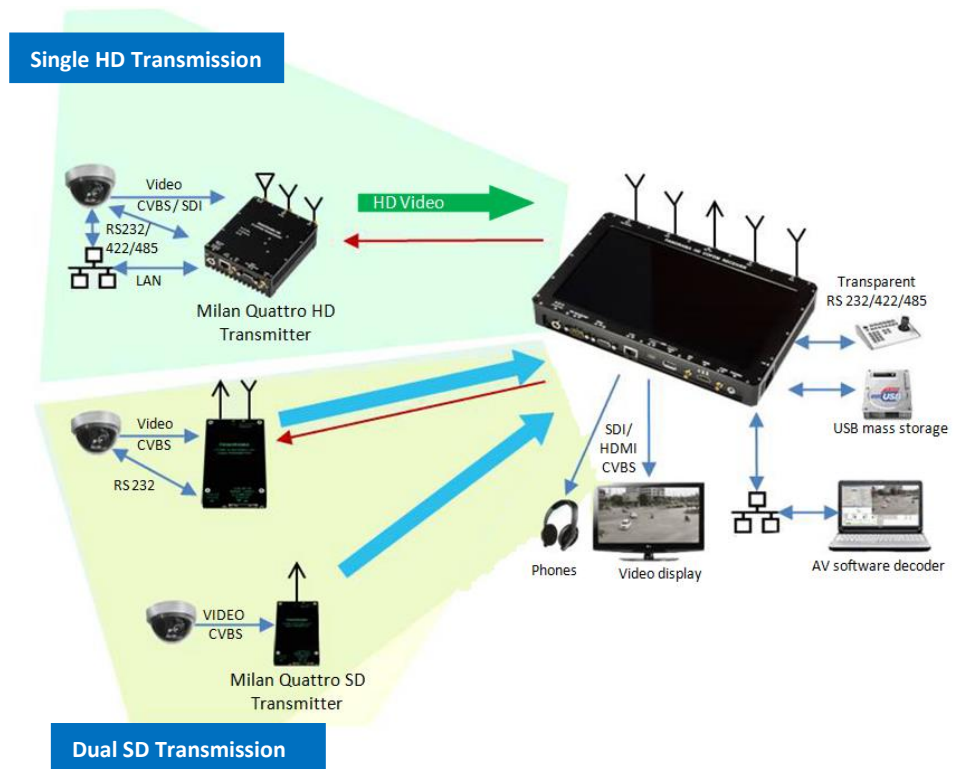
### Milan Quattro System

*Now also available in FULL HD*

The **Milan Quattro system** is a revolutionary and universal COFDM video/audio-transmission and streaming solution with integrated telemetry and high-speed store-and-forward function. The system offers an incredible software functionality serving VMD / CBR / RFDL / RFIP and covers all application needs in one device.

#### Main Features

- Standard Frequency bands 300, 800, 1200 or 2400 MHz (on demand: other bands 70 MHz to 3 GHz)
- Advanced COFDM-modulation for excellent radio propagation
- Video recording with RF download and real-time video/audio transmission
- RF download manual or timer controlled
- DVR with 64 GB onboard flash memory (48 hours video- and audio recording)
- Download 24 hours video or 90 days stereo audio in less than 2 hours
- VMD – Video Motion Detection
- Radio remote control for all parameters
- 4x diversity for unsurpassed reception



#### Additional Features/Options

- |   |  |   |
|---|--|---|
| <ul style="list-style-type: none"> <li>• Output power 100 / 150 / 250 / 1000 / 2000 mW</li> <li>• optional PA 10 Watt</li> <li>• Video Recording with RF Download and real-time video/ audio (Option)</li> <li>• Latest generation H.264/MPEG4 video codec</li> <li>• Scalable COFDM data rate (1.5 to 48 Mbit/sec)</li> <li>• Stationary HD receiver can simultaneously work with</li> </ul> | <ul style="list-style-type: none"> <li>• two transmitters on different frequencies and/or with different waveforms</li> <li>• HD transmitter can send video from two different cameras</li> <li>• AAC audio 16 kbit/s - 128 kbit/s</li> <li>• Scalable RF band width (1.7 to 20 MHz)</li> <li>• User-selectable video modes</li> </ul> | <ul style="list-style-type: none"> <li>• Integrated anti-jamming mode</li> <li>• High level AES encryption (option)</li> <li>• IP/Ethernet transmission</li> <li>• PAL/NTSC resolution</li> <li>• Full HD resolution</li> <li>• 128 GB Flash memory (option)</li> <li>• 2x or 4x diversity</li> <li>• Internal batteries</li> </ul> |
|---|--|---|



# COFDM Video Transmission

## Milan Quattro Series

### Additional Software Options

- **VMD** video motion detection activates transmission and/or TX-side recording
- **CBR** Cerberus Burst: burst transmission of audio-only recordings
- **RFDL** wireless download of recordings from TX-side memory
- **RFIP** wireless transmission from TX-side connected IP camera (asymmetric, not for general purpose IP)

Milan Quattro TX HD



Milan Quattro TX HD Micro



Milan Quattro TX SD 1000 / 2000



Milan Quattro TX SD Mini



Milan Quattro TX SD Micro



Milan Quattro TX SD Nano



	Milan Quattro TX HD	Milan Quattro TX HD Micro	Milan Quattro TX SD 1000 / 2000	Milan Quattro TX SD Mini	Milan Quattro TX SD MICRO	Milan Quattro TX SD NANO
<b>Video Input</b>	Composite HD-SDI		Composite			
<b>Video Norm</b>	max 1080p 30fps		PAL/NTSC 25/30fps			
<b>Audio Input</b>	2 channel microphone input					
<b>Data Connectors</b>	Ethernet, USB, RS232, RS485	USB, RS232	Ethernet, USB, RS232	USB, RS232		
<b>Output Power</b>	2000 mW remote adjustable	250 mW remote adjustable	1000/2000 mW remote adjustable	250 mW remote adjustable	150 mW remote adjustable	adjustable By USB
<b>Frequency</b>	300, 800, 1200 or 2400 MHz (0.3 - 3.8 GHz on request)					
<b>COFDM Data</b>	48, 24, 12, 6, 3, 1.5 Mbit/sec		19.2, 6, 3, 1.5 Mbit/sec			
<b>RF Bandwidth</b>	20, 10, 5, 2.6, 1.4 MHz		6.7, 3.4, 1.7 MHz			
<b>Recording</b>	64GB flash memory					
<b>Power Supply</b>	6-32 VDC	6-32 VDC, 3-4.2 VDC	6-32 VDC 7.5/10 W	9-18 VDC 2.6 W	3-4.5 VDC 2.1 W	3-4.5 VDC 2.0 W
<b>Temperature</b>	-20 to +50°C					
<b>Dimensions</b>	113 x 97 x 37 mm	78 x 58 x 24 mm	113 x 91 x 21 mm	100 x 54 x 8 mm -	70 x 45 x 6.7 mm	58 x 35 x 5.7 mm
<b>Weight</b>	530 g	160 g	310 g	74 g	60 g	50 g

# COFDM Video Transmission

## Milan Quattro Series

Milan Quattro RX TFT HD



Milan Quattro Tactical  
RX-OLED-HD



Milan Quattro  
OEM-RX-HD



Milan Quattro RX-TFT-SD



Milan Quattro Tactical  
RX OLED SD



Milan Quattro  
OEM-RX SD



	Milan Quattro RX TFT HD	Milan Quattro Tactical RX OLED HD	Milan Quattro OEM RX HD	Milan Quattro RX TFT SD	Milan Quattro Tactical RX OLED SD	Milan Quattro OEM RX SD
<b>Display</b>	TFT Touch screen 10"	OLED Touch screen 4.8"	-	TFT Touch screen 8"	OLED Touch screen 4.3"	-
<b>Video Output</b>	HD-SDI, HDMI, Composite	HD-SDI, Composite	HD-SDI, HDMI, Composite	Composite	Composite	Composite
<b>Audio Output</b>	Headphone, Line Out					
<b>Data Connectors</b>	Ethernet, USB, RS232	USB, RS232	Ethernet, USB, RS232	Ethernet, USB, RS232	USB, RS232	Ethernet, USB, RS232
<b>Diversity</b>	4x	2x		4x	2x	
<b>Frequency</b>	300, 800, 1200 or 2400 MHz (0.3 - 3.8 GHz on request)					
<b>COFDM Data</b>	48, 24, 12, 6, 3, 1.5 Mbit/sec			19.2, 6, 3, 1.5 Mbit/sec		
<b>RF Bandwidth</b>	20, 10, 5, 2.6, 1.4 MHz			6.7, 3.4, 1.7 MHz		
<b>Recording</b>	internal 64 GB Video + Audio					
<b>Internal Battery</b>	-	approx. 2.5 hours	-	-	approx. 2.5 hours	-
<b>Power Supply</b>	6-32 VDC				6-28 VDC	6-32 VDC
<b>Temperature</b>	-10 to +50°C					
<b>Dimension</b>	264x168x33mm	144x86x37mm	144x86x37mm	215x165x 29mm	111 x77x30 mm	111 x77x30 mm
<b>Weight</b>	1.700 g	630 g	630 g	1.380 g	450 g	450 g

# COFDM Video Transmission

## Milan Quattro Series

### Milan VIP Post

This 'docking station' turns your SIM Milan Quattro TX Mini transmitter into a rapid-deployment video observation post:

- Integrated color/bw video camera
- Integrated LED-IR infrared illuminator
- Integrated microphone
- For use with external 12 VDC power supply

### Milan Quattro Brio Bike Case Digital

Covert video observation system with digital video transmission.

- Quick deployed covert observation post in the street
- Plastic material not transparent for the human eye
- Pan-Tilt Zoom Camera and COFDM video transmitter Milan Quattro
- Telemetry channel for remote setup, Battery pack inside
- Receiving case with display, DVR and RC all in one box



### Milan Quattro VIP Camera RX4

- Receiver – 4 channel version
- Works with all SIM Milan Quattro transmitters
- 4 built-in 1.2 GHz COFDM diversity receivers
- Built-in OLED / Touch screen 4.3"
- Internal flash memory (4x 64 GB) for recording
- COFDM data speed 1.5 / 3 / 6 / 19 Mbit/sec
- RF bandwidth 1.7 / 3.4 / 6.8 MHz
- External battery for 8 hours
- External antenna system with dual LNA
- Dimension 470 x 360 x 180 mm
- Weight 8.5 kg / 18.7lb
- Supply 6 - 28 VDC / 20 W (max. 28 W)



### Touch Screen Control

- Wireless control of remote camera using the receiver's built-in touch screen
- RC-RF power max. 2 W



# COFDM Mesh

## CLAN Video/Audio/IP/HD

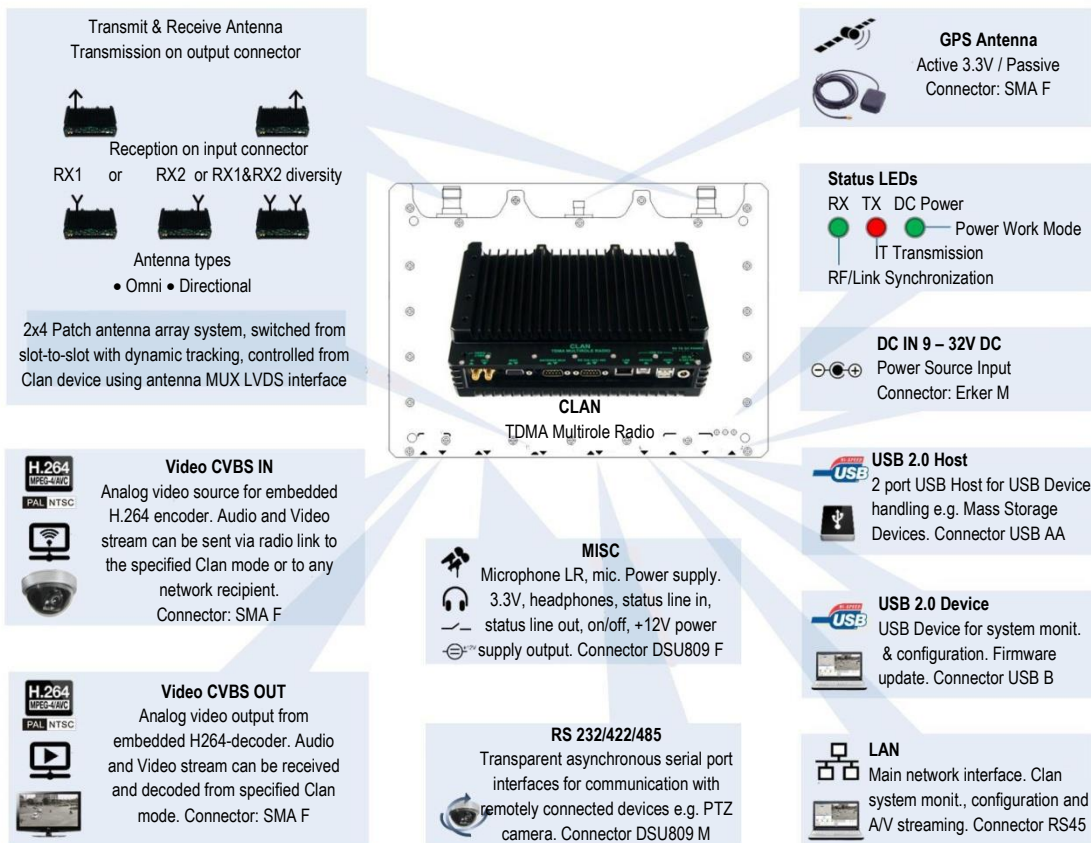
Advanced TDD/TDMA IP based multirole radio for fast data transmission.

- IP-based meshed radio for operation in hostile, mobile, and urban environments
- TDMA Multirole MESH Radio for video, voice, GPS and data
- Dynamic organization of all nodes within the MESH network
- Communication consistency even in critical environments
- Secured transmission by AES256 (Option)
- Proprietary Wide/Narrow-Band Scalable COFDM
- 1200 MHz 2x diversity of time-multiplexed TX/RX antennas



### Configuration for a group of 8 communicators

- System network designed for a team of 8 users; can be combined with other networks



# Digital Audio Surveillance

## Credit Card Size Smartcard Recorder BAR

### Smartcard Recorder BAR

#### Applications

- Compact professional digital voice-recorder that is designed to achieve the best performance possible in noisy or difficult acoustic conditions
- Recording is made by two built-in microphones
- Supplied with 2 GB of internal memory, up to 14 hrs. recording
- The recorded data can be stored for 10 years after the device is switched off



#### Data Protection

- Recorder Manager Software which protects the information from unauthorized use or disclosure
- Access to recorded information and functions of the device is granted after entering the user identification code (PIN)



A docking station enables charging of the recorder and transferring data.

#### Highlights

- Slim and strong case
- Compact size 85 x 53 x 2.9 mm
- Power supply – Li-Pol battery
- Activation by one switch or button
- Loop recording mode
- LED Indicator for status
- PCM 16 recording format; recording in maximum quality
- Effective recording distance: 10-12 meters
- Built-in Noise suppression software
- Digital signature for security
- Digital “Watermarks” guarantee the authenticity of the recorded data
- Uses standard USB computer connection interface

## Audio Transmission Systems

### Covert Audio Observation

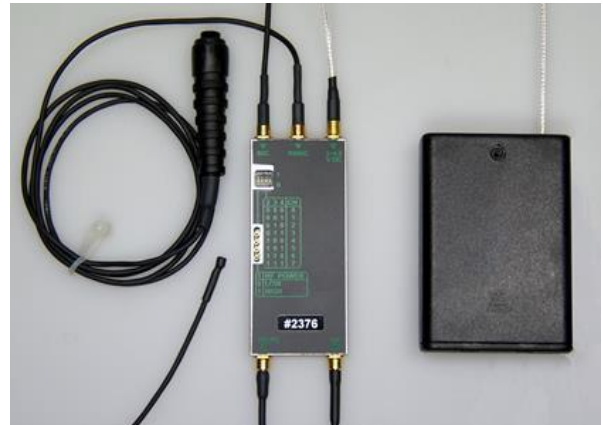
#### Dale

##### Digital Audio Transmitter System

- Remote controlled
- Tactical operations with audio transmission which must not be intercepted

##### Dale Transmitter

- RF power level 50 / 500 mW @ 300 MHz
- Data protection: 256 programmable key numbers
- Audio Encoding: CVSD at 156 kbps
- Audio bandwidth: 7 kHz
- Power consumption: 3.0 - 5.0 VDC
- Work: 70 / 400 mA (50mW / 500mW); Sleep: 1.5 mA



##### Dale Receiver

- Flat, small sized
- Digital recorder integrated in receiver (SD card, 1 GB / 14 hrs.) recording time
- Uncompressed audio data with date/time stamp, protected and tamper-proofed
- Digital USB interface for remote control and audio data download

#### ATX90

##### Miniature Long Range Audio Transmitter System

- Works with most FM receivers
- 18 x 9.5 x 4 mm
- RF power 50 - 150 mW, 315 - 355 MHz programmable
- High microphone sensitivity / AGC / VOX
- ATX-PSU power supply:
- 110 / 230 VAC to 3, 5, 9, 12 VDC



# Camouflaged Audio Surveillance

## Audio Surveillance using cellular networks

### Diamond 21 – Mobile Phone 2 in 1

Diamond 21 is a state-of-the-art mobile phone designed to offer audio room and telephone calls monitoring. It contains a GSM module integrated in battery pack not visible for others. Up to 10 hours monitoring time depending on configuration and type of mobile phone is possible.

#### Main Features

- GSM module integrated in the phone
- Normal usage of the original phone and second undercover built-in phone
- Up to 10 hours of monitoring time, depending on model
- Microphone amplifier adjustable via SMS
- Automatic reconnection on recharging of the battery pack
- Offers audio room monitoring and monitoring of telephone call



#### Main competitive advantages

- Covert room monitoring, covert operations
- Very good audio quality
- Microphone sensitivity up to 10m
- To start monitoring by dialup to the 2nd internal phone module from any point in the world
- Normal usage of the host phone
- Host phone's battery endurance reduced by <30%
- Audio transmission via GSM cellular networks
- Switching on/off by external magnet
- GSM typical transmission performance
- Available for GSM 900/1800/ 850/1900
- Remote function (GSM – position, battery level, Microphone sensitivity)

Diamond 21 Model	Monitoring Time	Panic Signal	Auto Call	GPS	Motion Sensor	Card holder
iPhone 7 32GB	> 10 h	o	o	-	-	-
iPhone 7 plus	> 10 h	-	-	-	-	-
iPhone SE	> 4.5 h	-	-	-	-	-
iPhone X		-	-	-	-	-
Samsung Galaxy S7 edge	> 10 h	-	-	o	-	-
Nokia 3310	> 4 h	-	-	-	-	-
CAT S30	> 4 h	-	-	-	-	-
Garage door TX	> 5 h	o	-	o	-	o
Webasto RC TX	> 2.5 h	-	-	-	-	-
VW Passat key	> 4 h	o	-	o	-	o
Audi A6 key	> 2.5 h	o	-	-	-	o
Credit Card	> 5 h	-	-	-	-	o
Charging Cradle iPhone 6	5-10 h	-	-	-	o	-
Power Bank 7.5Ah	> 50 h	o	-	-	o	-
Wallet	> 4 h	-	-	-	-	-
Electronic Cigarette IQOS	> 10 h	-	-	o	o	-
Headphones Beats Solo 3	> 5 h	-	-	-	-	-
Kindle Paperwhite	> 5 h	-	-	-	-	-
Computer Mouse	> 5 h	-	-	-	-	-
MacBook 12	> 15 h	-	-	-	-	-

o: optional



# Long Distance Audio Surveillance Devices

## OAM2000 – Optical Acoustic Microphone

### OAM2000

#### Optical Acoustic Microphone

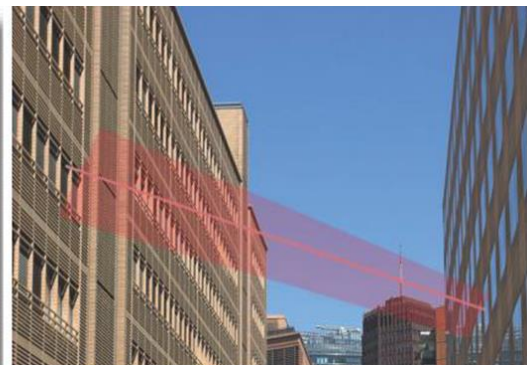
#### Options

- Opto Acoustical Laser Microphone
- Long-Distance Audio-Monitoring Device
- OAM-2000 10/18/35 mW
- Motorized Lens / 12 VDC
- Remote-version with COFDM-transmission, pan-tilt and lens control
- Digital adaptive audio-filtering



#### Main Features

- Acoustic surveillance and observation up to 300 m depends on output power
- The spoken word will be picked up from any cooperative material like paper, metal, plastic, textile, etc
- Independent from viewing angle to target
- Easy to control emitter and receiver in one optical unit
- Quick setup and targeting using an integrated, parallax-free camera
- Long operating distance with invisible eye-safe class 1 laser (10 mW)
- Reduced interferences from surrounding noises; not influenced by acoustic noise between sensor and target
- Allows monitoring through glass-windows into interior spaces like rooms, cars, aircrafts, etc.





# Long Distance Audio Surveillance Devices

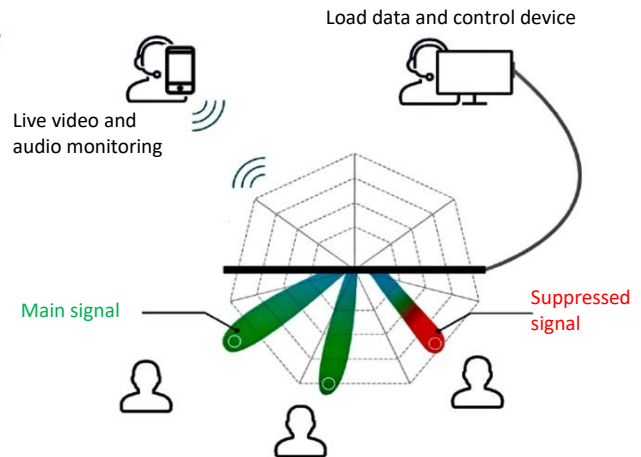
## BAM2000 – Beamforming Array Microphone

### BAM2000

#### Beamforming Array Microphone - Directional Microphone

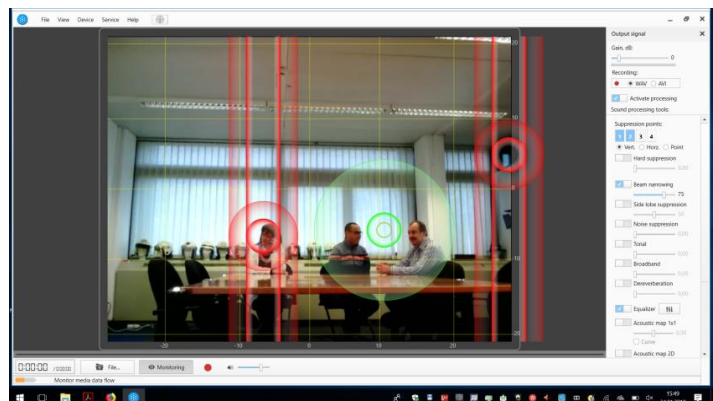
##### Main Features

- 66 Microphones, Built in camera for targeting
- Up to 50 m, beam angle 11°
- Selectable region of interest and filtering
- Live Audio and Video via Ethernet on Laptop
- Live Audio and Video via Wi-Fi on Android-App
- Recording onboard, 128 GB SD
- Battery internal for up to 8 hours



##### Applications

- **Audio zooming** Multiple microphones configured in an array coupled with audio processing algorithms significantly increase speech intelligibility coming from a target direction. The sounds outside the target direction are suppressed. Microphone array spatial resolution is ideal for audio surveillance and recording in noisy condition when conventional recording devices cannot be placed in an immediate proximity with the sound source.
- **Live mode** Plugged into a PC the microphone array can be fully controlled in a live mode. With BAM2000 software operator can steer audio beam remotely with visual control of a scene coming from built-in video camera. Audio processing results are immediately audible.
- **Built-in video camera** Built-in video camera records and/or transmits video from microphone array for pinpointing target audio direction and suppressing unwanted directions in the on-screen view.
- **Post-processing** In a recording mode BAM2000 records sound from all microphones plus video stream. Recording is done with a special processing unit and files are stored in microSD memory in .avi format. These multi-channel files can be processed and played back afterwards in BAM2000 software with all range of beam forming and audio processing tools. Enhanced files can be saved in .wav or .avi format.
  - **Noise suppression** Additional suppression of up to 4 unwanted sound directions is a very efficient tool to supplement spatial resolution of microphone beam forming BAM2000 software provides powerful noise suppression filters and parametric equalizer for advanced speech enhancement.



**Sound intensity map**  
 Sound intensity map yields a colorful picture of all sounds picked up by microphone array even if they are out of the camera view. This function allows for more precise beam positioning

# Mobile Phone Forensics

## EAGLE – Data Recovery

### Eagle

#### Smartphone and Tablet Data Recovery - USB or Chip Off the board

Directly reading the memory chip will let you dump:

- Broken phones (tampered, water damage, no powering on)
- Chinese unknown units (unsupported by standard software)
- ID locked smartphones (unsupported by standard software)



The software included will create an image file with MD5 hashing and will allow checking data integrity. The image file is a raw byte level copy and can be analyzed with forensics tools managing physical dumps

**Eagle** can extract data:

- Address book / Images / erased images
- Video, photo, text message, erased text message
- Call register (incoming-outgoing-missed call)
- Complete files system from the memory of the phones



#### Data acquisition of functional Smartphone through USB-port



Easy data acquisition through USB-port if smartphone or tablet has been detected by the tool.

#### Data acquisition of damaged Smartphone Chip-off reading



Use appropriate adapter available by SIM to proceed with reading if tablet or smartphone is not powering or is damaged after un-soldering the chip.


# Mobile Phone Forensics

## Face, Picture, and Voice Evaluation


### Data Analysis for Mobile Phones

The devices are able to detect suspicious multimedia files, as pictures, audio files, and video recording. The files will be scanned and analyzed for hash values, picture content, frames, faces and voice-prints related to terrorist activities, weapons or any other threats.



Recall	Precision	Time per image (GPU)	Time per image (CPU)
93.85%	97.47%	0.056s	12.04s



Recall	Precision	Time per image (GPU)	Time per image (CPU)
99.95%	99.9%	0.029s	13.09s



Recall	Precision	Time per image (GPU)	Time per image (CPU)
96.63%	99.93%	0.055s	12.76s

Device	Function	Specification
	<p>Handheld device</p> <p>Analyzing of audio and video based on hash values</p>	<p>MAX Support 3 devices at the same time</p> <p>The single device check time is less than 2 minutes</p> <p>Signature generated from 60K+ sample files</p> <p>User Signatures can be added</p>
	<p>Analyzing audio and video based on content (picture content, frames, faces and voice-prints)</p>	<p>Support 8-16 mobile phones in parallel</p> <p>Throughput : 600M/S</p> <p>Retrieval speed : 0.18 s / 10,000 minutes</p> <p>Audio &amp; video format support: more than 22 kinds</p> <p>False positive rate &lt;5%</p> <p>False negative rate &lt;5%</p> <p>Signature generated from 60K+ sample files</p> <p>User Signatures can be added</p>

# HDD Forensics and Repair

## FLAME – HDD Recovery

### Flame

#### HDD Data Recovery

Flame is a hardware and software complex combining a PCI Express card and 2 USB boxes with modular software designed to repair HDD and/or copy using direct hardware control over the disk. Flame supports to manage data recovery phases from the diagnosis to drive restoration and copy to a healthy drive.



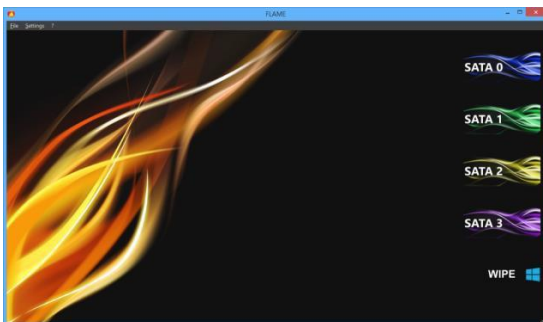
### Highlights

We offer every needed tool for making up a complete data recovery laboratory (for all the phases) offering tech support, better performances and training, increasing data recovery success rates making autonomous such laboratories that can't outsource the jobs (law enforcement).

### New!

The main hardware configuration of Flash based devices is made by one controller chip and one more flash memory chip(s).

Even decapsulating a monolithic device (with laser equipment) we will find the same configuration to mirror the dates.



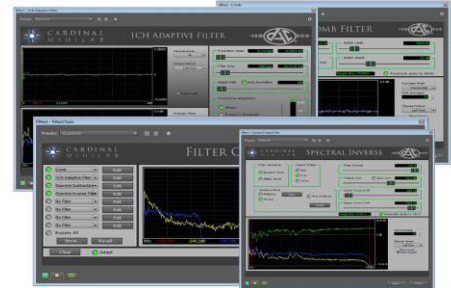
## Audio & Video Forensics

### Cardinal Minilab & Videofocus Pro

#### Cardinal Minilab, Noise filtered audio recording

##### Noise filtering and audio recording station with automatic speaker identification

**Cardinal Minilab** Advanced Suite provides comprehensive forensic audio clarification capabilities to any Microsoft Windows-based audio/video editor supporting VST plug-ins, and includes numerous preset solutions to real-world noise problems.



##### Main Features

- Familiar adaptive audio filters and methodology, known to forensic audio experts worldwide
- Operates within many popular audio/video editors, including Adobe Audition / Premiere, Sony Sound Forge / Vegas, Acon Acoustica, iZotope and Audacity
- Reduces many noises common to audio surveillance recordings, including tonal noises, room “rumble”, hum, engine noises, motors and fans, static, hiss and background interferers such as radio and television sounds
- Reverses acoustical and equipment effects that degrade voice intelligibility, such as muffling, spectral coloration, echo/reverberation, near/far party level differences, microphone concealment issues and poor frequency response of the recording/transmission equipment
- Special Filter Chain plug-in allows any combination of up to eight Minilab filters to be previewed and applied simultaneously, and saved as a preset for future use; also includes numerous Factory Preset solutions to common noise problems
- Dual-trace, high-resolution spectrum analyzer included within every plug-in, allowing visual before and after comparison both for the overall filter arrangement and for each individual filter.

#### Videofocus Pro, Video and Audio Clarification

**Videofocus Pro** is a comprehensive yet easy-to-use Microsoft Windows-based video forensics application, providing numerous video and audio clarification filters and supporting many standard multimedia and proprietary DVR file formats.



##### Main Features

- Imports any of over 200 standard multimedia and proprietary DVR file formats, with more than 170 video and 140 audio codecs built-in
- Captures video and audio from any application running on same computer, or digitize external analog sources using low-cost hardware
- Modifies spatial and temporal properties of video, including frame rate, aspect ratio, and splitting interlaced fields to separate frames; also adjusts channel configuration and synchronization of audio channels
- Demultiplexes interleaved video to separate camera views
- Extracts higher resolution still images with patented Super-Resolution filter
- Processes video and images with sharpen, blur, levels adjust, grayscale, equalize, and stabilize filters
- Clarifies audio with noise reduction, EQ, gain, and complete CARDINAL MINILAB Advanced Suite (see above) filters all built-in
- Edits finished video presentations from multiple sessions using cut, copy, paste, and title insertion functions
- Exports end-product videos, stills, and/or audio to standard file formats
- Organizes work with case management and audit trail

# Forensics Systems

## FAREMA – Face Recognition

### Tactical Face Recognition Machine

#### Suggested Scenarios

- Tactical on-site face recognition
- Where online operation is not possible/desirable
- Casualty identification e.g. at emergencies or accidents
- Temporary, portable surveillance
- Site security at large-scale events
- Analysis of video recordings



#### Product Features of Core Engine

- Powerful. Through the connection of external devices, it can process ID verification, 1: N comparison, capturing facial images automatically, real-time blacklist surveillance, docking video management platform.
- Supports three basic application modes:
  - 1:1 Compares two different photos and gives quantitative measure based on invariable biometric features whether these photos show the same person
  - 1:N Searches a data base for a particular person
  - n:N Compares two data sets of photos and/or videos and returns all persons that occur in both of them
- Max. size of data base: 3.000.000 persons (for servers: 3.000.000 per server instance)
- Max. size of blacklist: 300.000 (for servers: 300.000 per server instance)

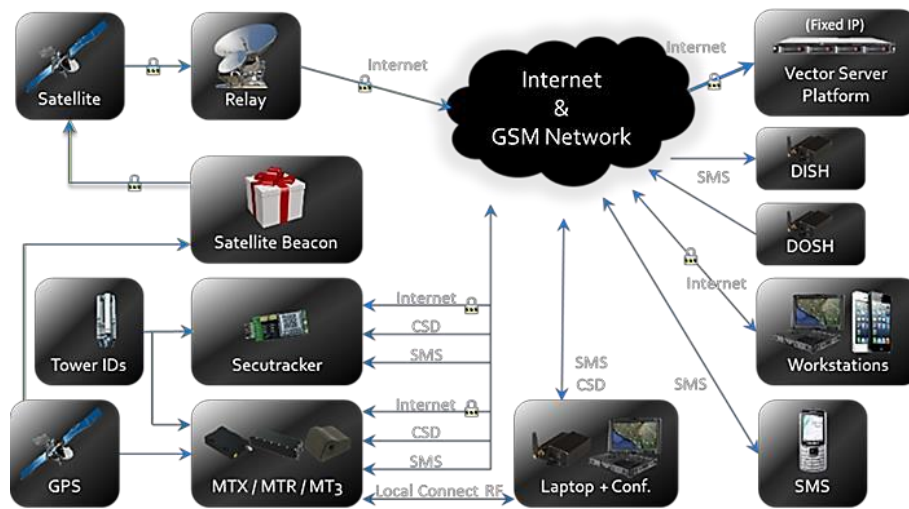
FAREMA Model	Hardware	Typical Applications
Forensics (mobile)	1x Notebook PC	Forensics unit on location has to analyze digital evidence (images, video) from external drives (USB Flash, Smartphone, HDD, SSD etc.), comparing it to their own mugshot list. A detailed analysis might follow at the HQ.
Tactical-1 (mobile)	1x Notebook PC + 1x Camera	Scenario as above, plus: Police unit can use FAREMA as a rapid deployment unit (for nomadic use like a speed camera) near a crowded street/place to match the live feed from a camera with their own list of mugshots and photos of wanted persons, missing people etc.
Tactical-4 (mobile)	1x Portable PC + 4x Camera	Scenario as above, plus: Simultaneous feeds from 4 live cameras
Server-N (stationary)	Nx Server PC 19" rack-mountable	Data center solution for fixed installation at CCTV systems of airports, train stations, security premises etc.

# Tracking and Navigation

## VECTOR – Tracking Solutions

### GPS tracking via smart server solution

The Vector Server Platform is the main platform for all vector products. Our different product lines are represented by multiple server modules. By default the platform offers everything needed for tracking purposes.

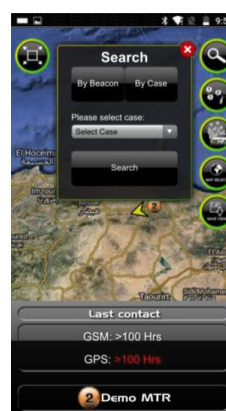


### Applications

- Web based live beacon viewing and history analysis tool
- Mapping of real-time situations, case or single beacon (Offline / Online) from different mapping sources
- User management for configuring user specific beacon rights
- Reverse Geocoding database
- Professional HP ProLiant Server, RAID SAS storage  
Optional: Venom module (Server GSM / UMTS monitoring product range support)
- Optional: VAMP module (Server Wi-Fi product range support)

Works on:

- Smartphone
- Laptop
- Tablet



# Integrated Solution for Tracking HUNTER – WiFi-MAC Catching, IMSI Catching

## Hunter

### IMSI/IMEI/MAC Grabber and GPS Positioning

The new Hunter beacon adds IMSI- and WiFi-MAC catching capability to the SIM VECTOR tracking solution. Put this remote controlled beacon into a car and control the wireless devices in its surroundings.

### Main functions

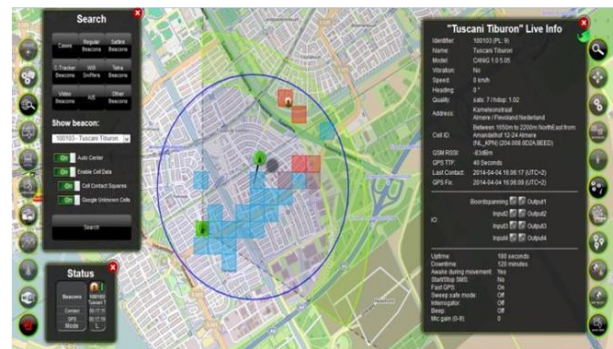
#### LTE / UMTS / GSM IMSI-Catcher

- High-speed scanning
- 700 MHz – 2.7 GHz, GSM, UMTS, LTE coverage
- Locator function optional
- GPS Positioning
- GPS frequency stabilization



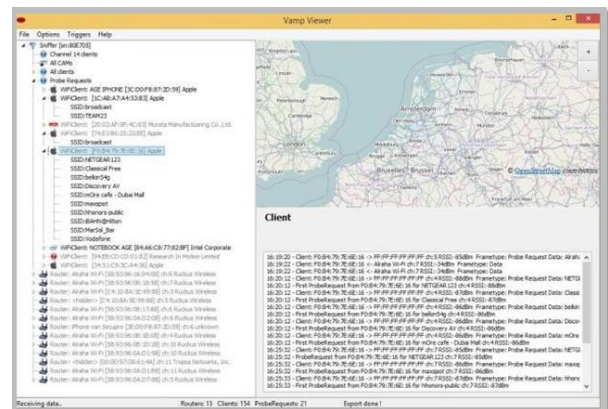
#### Catch, Identify, Localization, selective hold

- Catch and release all
- Catch and release VIP
- Catch and hold all
- Catch and hold VIP
- Catch and downgrade (LTE to UMTS to GSM)



#### WiFi / MAC Grabber

- Fully operational with encrypted networks
- Intelligent channel hopping or lock to specific channel
- Positioning based on Wi-Fi access points
- Selective jamming of wireless clients
- Trigger on specific MAC addresses
- Undetectable while sniffing
- Real-time information in the application
- Trigger on specific MAC addresses





# Countermeasures for Cellular Networks

## Cellular TSCM Devices

### Cell Scanner

Detects any networks in LTE, UMTS and GSM  
 Fast scanning in all available bands for 2G, 3G and 4G  
 Records all information about (legit and fake) mobile base stations in its neighborhood and thus works also as a 'catcher-catcher'.

#### Available information

Date, Time, Radio Access Technology  
 RF-Channel, Provider Name, MNC, MCC  
 LAC, RAC, Cell ID, BSIC  
 Field Strength/Quality (RSSI, RSRP, RSRQ )  
 Neighbor list, scrambling code

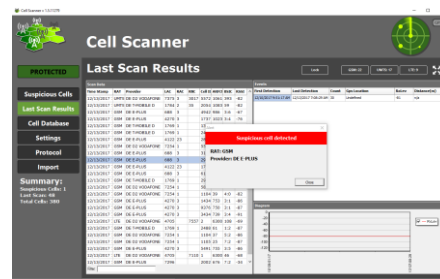
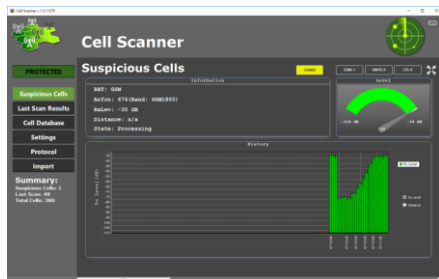


#### Application

- Geo localization of base station in a certain area
- Checking coverage of GSM/UMTS/LTE in an area
- Localization of selectable BTS with a accuracy of few meters

#### Option

- Detecting of suspicious cells (IMSI catcher detection systems)
- Live operation with mobile phone connected by Wi-Fi or long term recording mode selectable



### Kingfisher 3 TSCM

The Kingfisher TSCM can be used to detect, identify and localize any illegal listening devices using GSM, UMTS or LTE transmission. The Kingfisher TSCM is scanning the environment; based of the results a round-robin detection of illegal devices will be started. It will run through all available providers/frequency bands/radio access technologies automatically. Any devices using the mobile network to transport information will be shown and identified with IMSI and IMEI. The exact position of the devices can be evaluated by silent call, using the optional direction finder DF 800.

#### Application

- Localization of GSM/UMTS/LTE bugs
- Using unique Android Application
- Windows GUI available
- Settable working distance by control of output power




#### Option

- Direction Finder DF-800
- Broadcast SMS to suspicious phones
- Dual BTS version with increased speed



# Countermeasures - Cyber Security

## Deep Packet Inspection Devices

High performance, Large Flow	Depth analysis of telephone signaling	Depth analysis of enterprise network security
		
Network Security Incident Monitoring and Detection X2/UU, 2/3/4G (b/luPs/S1-MME 4G VoLTE)		2U 80Gbps without packet loss Analyze and predict network security incidents and timely detect security threats
Backbone, ISP	Communication Core Network	Enterprise Intranet

### Features and advantages

Dual streams, not single stream  
Capture packets while event obtained  
Compatible with SNORT engine

### Detection capability

- Web intrusion, SQL injection , XSS, etc.
- Web shell
- Scanning
- Malware
- C&C
- Anormal traffic
- Exploits
- Covert channels

### IOC for TIP (threat intelligence)

#### APP Signatures

- 15 million white samples
- 2 million black samples
- 30 million suspected samples

#### URL Signatures

- 240 million malicious websites
- 20 million IP record information
- Ten billion URL information

#### Vulnerability Characteristics

- 30 million vulnerability features
- 100,000+ vulnerabilities POC
- 1,000+ industrial loopholes
- 20 million patch information

<b>User plane resolving</b>	<ul style="list-style-type: none"> <li>• Collect protocol logs, especially http, mail related protocols, DNS protocols</li> <li>• Identify user behavior from application layer</li> <li>• Restore the files, Executable files, installation files, media files</li> </ul>
<b>Signaling plane resolving</b>	<ul style="list-style-type: none"> <li>• Establish &amp; maintain mapping relationship between GUTI-TMSI-IMSI-IMEI-MSISDN</li> <li>• Supports end-to-end signaling association and backfill blank field</li> <li>• Support resolving data that be encapsulated, such as GTP</li> <li>• Support resolving data that be encrypted, such as NAS (S1-MME &amp; S6a)</li> </ul>
<b>Support for session control</b>	<ul style="list-style-type: none"> <li>• Block, based on TCP RST</li> <li>• Redirect / Navigation/Toolbar</li> <li>• Instruction based on IP, Domain name, URL, MSISDN, key words, etc.</li> <li>• needs an access point to inject the control signals, such as Gi, SGi</li> </ul>

## Technical Countermeasures

### Radio Monitoring, Counter Surveillance, Debugging Equipment

#### Ares NLJD 3600 Dual Version 900/3600

##### Non-Linear Junction Detector

- 3600 MHz version high power (20 W, FoV 16°)
- for extended distance with pin pointing the location of detection
- Dual version for 900 and 3600 MHz (20 W, FoV 16°)



#### Protection

##### Modular Faraday cage with acoustic insulation

The EMC-system consists of 1x2m sized panels which can be freely assembled to any secure meeting room according to your needs. They provide effective protection against any kind of RF-radiation and bugging threats as:

- Wireless transmission (RF-bugs, GSM/UMTS etc.)
- Wired transmission
- Mains transmitters
- Telephone transmitters
- Twin wire transmitters
- Classical Laser-microphones
- Cellular telephone



#### Kite 20

##### Detection of Optical and Opto-Electronic Devices

Lens Detection Device  
Quick and easy-to-use  
Detection Range 20m

Processor controlled handheld unit for the detection of hidden lenses. The unit flashes LED light pulses, which will be reflected by any lens. This handheld unit provides a detection range of up to 20 m. FoV: 14° (4x Magnification), operation time with CR123: 4 hrs



##### Provides

Sniper detection  
Paparazzi detection (unwanted film & photo shooting)  
detects optical surveillance operations  
detects weapon's scopes  
detects laser microphone systems

# Technical Countermeasures

## Radio Monitoring, Counter Surveillance, Debugging Equipment

### OSCOR Blue and Green Spectrum Analyzer

#### Portable RF Detection & Analysis

The **OSCOR Blue** is a portable spectrum analyzer with a rapid sweep speed of 24 GHz in one second and functionality suited for detecting unknown, illegal, disruptive, and anomalous rogue transmissions across a wide frequency range. Designed to detect illicit eavesdropping signals, perform site surveys for communication systems, conduct radio frequency (RF) emissions analysis, and investigate misuse of the RF spectrum.

The **OSCOR Green** Spectrum Analyzer has the same size and most features, but comes without OSCOR Blue's high resolution Trace Data Recorder.



#### Applications

- Technical Surveillance Countermeasures (TSCM)
- Counter Surveillance
- Radio Frequency (RF) Detection and Analysis
- Spectrum Analysis
- Signal Analysis
- Intelligence Protection
- Executive Protection
- Eavesdropping Detection
- Surveillance Equipment Detection
- Electronic Surveillance Detection

### ANDRE™ Advanced Kit

#### Detect Electronic Transmitters

The ANDRE is a handheld broadband receiver that detects known, unknown, illegal, disruptive or interfering transmissions. The unit locates nearby RF, infrared, visible light, carrier current and other types of transmitters (electrical and optical sensor heads included). Quickly and discretely identify threats using the ANDRE Advanced Kit's wide range of accessories specifically designed to receive transmissions across a 10 kHz to 6 GHz frequency range. Technical security specialists will appreciate its portability and responsiveness. In addition, it is an **excellent complement to an OSCOR Spectrum Analyzer** as a preliminary non-alerting tool.



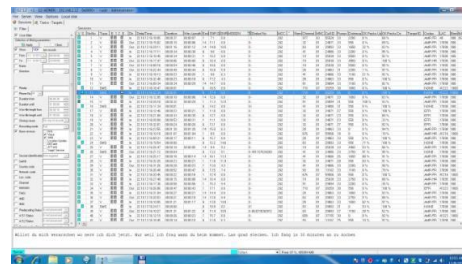
- **Histogram display** The ANDRE features a signal strength histogram displaying RF levels
- Over user-selected time intervals ranging from 5 seconds to 24 hours. Observe differences between digital, analog and burst signals and set alert thresholds with audio and haptic feedback.
- **Zoom view** In-zoom mode, only a 30 dB segment of the histogram is displayed. This reduced scale enables users to easily see small changes in RF signal activity.
- **Signal information and band details** The ANDRE frequency counter automatically generates a signal list from the strongest signals. Signal frequencies are listed beginning with the strongest signal, and can be designated as threatening, friendly, or unknown. Double-tapping a signal provides more details including band classification information.
- **Audio mode** demodulation and playback live analog audio. Ten seconds audio files can be recorded, stored, and played back. The live audio screen displays a bar graph showing received signal strength.
- **Post-investigation resource** Review time chart screenshots, playback demodulated audio and review captured signal lists on a PC while writing your report

# Cellular Monitoring

## PGSM – passive GSM-Receiving and Decoding System

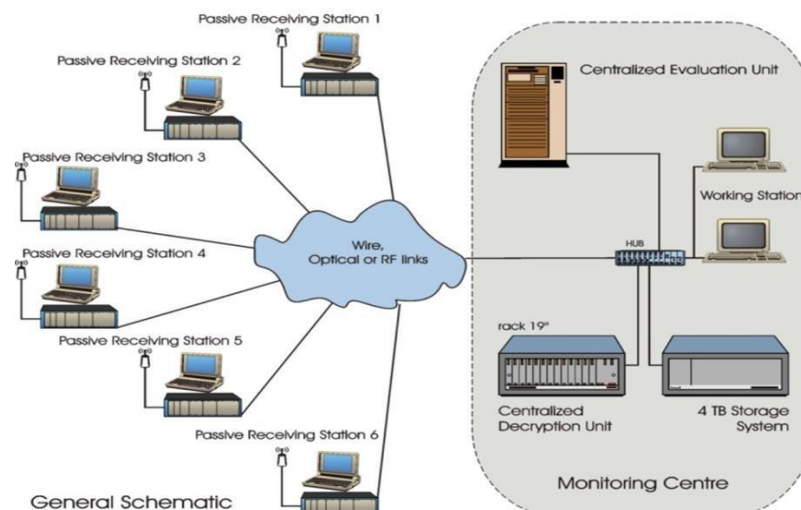
### PGSM passive GSM-Receiving and Decoding System

The system is a state-of-the-art system designed to monitor and decode radio signals of cellular networks based on the GSM/DCS protocols. One receiving unit covers all frequencies of GSM-bands.



### Main Features

- Monitoring of all 548 duplex or 1096 single frequency channels in one system
- Simultaneous reception of 5760 (full rate) / 11520 (half rate) channels
- Automatic Cell detection (scan mode)
- Easy Target creation and target list function
- Filter Options (IMSI, TMSI, IMEI, ...)
- Handover of targets from cell to cell during a monitoring session
- Database with search functions
- All intercepted data stored on the local server
- The passive receivers can be linked by TCP/IP-connection with a central evaluation unit.
- Option: Deciphering A5.2 and A5.1



# Cellular Monitoring

## Kingfisher 3-Series

### Kingfisher 3-IMSI-Catcher

Kingfisher 3 IMSI-Catcher can be used to catch, identify, localize and selectively hold of mobile phones. It works multiband with several 2G, 3G and 4G bands.

#### Catch, identify, localization, selective hold

- 1 W standard, 2 W version optional
- built-in scanner and GPS receiver
- 2 hours battery operation time

#### Options

- Locator function
- Wideband Power Amplifier, 100 Watt
- Direction finder
- Wi-Fi catcher
- geo-localization with mapping

#### Applications

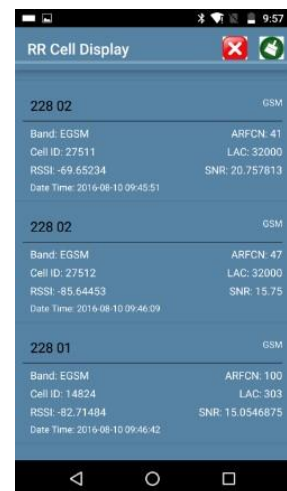
- Covert IMSI / IMEI acquisition
- Covert identity capture at check points
- Sweeping Rooms for cellular phone based devices
- Mobile phone localization

#### Main Features

- Ultra-small, light, easy to handle, requires minimal operator training
- Works with any Android-Smartphone with a proprietary applications software
- Highly portable ruggedized self-contained battery powered system which can be operated covertly via Bluetooth
- Ultra-fast detection and identification of local GSM/UMTS devices in a radius up to 250 m

#### Functions

- Catch and release all: Catch and release VIP
- Catch and hold all: Catch and hold VIP
- Catch and downgrade (UMTS to GSM): Locate VIP



# Cellular Monitoring

## Kingfisher 3-Series

### Kingfisher 3 – Multichannel Channel LTE/UMTS/GSM IMSI-Catcher

- 4 (8, 12) channel GSM/UMTS/LTE BTS SDR
- Built-in scanner and GPS
- Multiband, several 2G, 3G and 4G band
- Optional narrow band power amplifiers modules 20 or 40 Watts
- Remote covert operation
- Real time cross matching
- Real time correlation
- Export to data base
- Real time alert
- Native LTE / UMTS / GSM direction finding (with optional DF800)



### Kingfisher DF800 – 2G 3G 4G Direction Finder

Pocket size six-band direction finder DF800 aimed to precisely detect the physical location of target cellular phone captured by IMSI and IMEI catcher, covertly operating at known uplink ARFCN channel.

#### Main Features

- Lightweight and adapted for pocket use
- Three types of target cellular phone status reporting
- Operates across six GSM / UMTS / LTE bands
- Can be used with all known types of IMSI and IMEI catchers
- Extended operation using high capacity replaceable battery
- Averaging mode allowing to increase the detection accuracy
- Built-in attenuator for increased dynamic range



Highly sensitive receiver module allows extending the search radius to 50-250 meters, combined with target phone detection accuracy of up to 1 meter. Receiving panel antenna is sized 140x140x15 mm. It can be placed covertly either under a suit or inside a small hand bag or briefcase along with the receiver. It is assembled in a waterproof plastic case. Android smartphone is managing DF-800 receiver over Bluetooth interface. It provides two types of feedback for the user: through a headset or using built in telephone speaker.



# Cellular Monitoring

## ALFA – Search and Rescue

### Alfa

**NEW: Native 3G interception of Voice, SMS and Data without the necessity of downgrading to GSM**

**Tactical real time monitoring System for GSM, UMTS/3G and LTE with catch and divert function.**

#### Main features

- Network controller for target blocking and cloning functions
- Real-time VOICE/SMS and DTMF (incoming and outgoing) monitoring
- Location finding capability with optional direction finder (DF)
- Complete Monitoring System with BTS
- Real Time listen-in function
- Up to 8 communications can be monitored at the same time

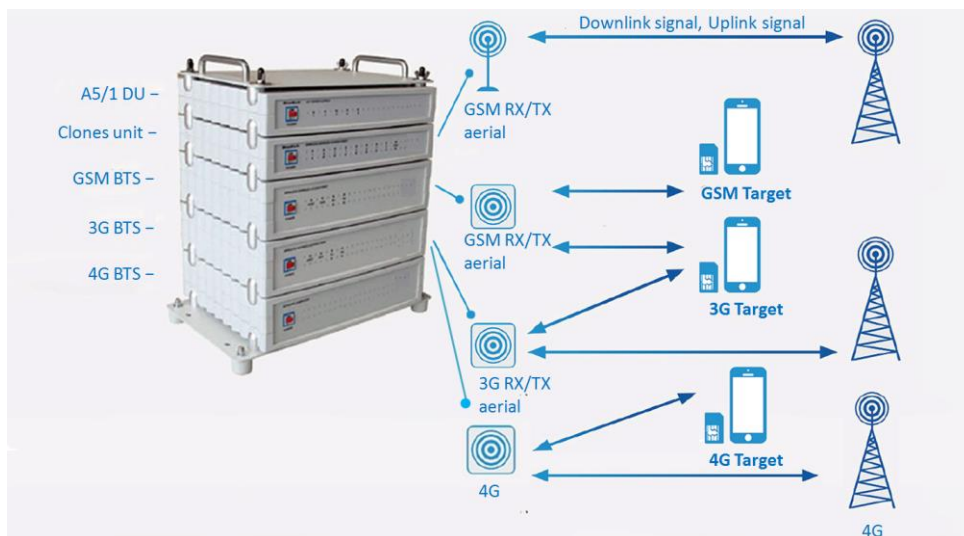


#### Applications

- Covert IMSI / IMEI acquisition
- Covert identity capture at check or any entry-points
- Sweeping Rooms for cellular phone based devices
- Searching for victims by capturing their cellular phones after disasters like avalanches, earthquakes, etc. especially when/where regular mobile networks fail
- Mobile phone localization (Option)

The ALFA system is designed for transparent real time GSM monitoring. The basic units of the system are GSM and UMTS modules which provide communication with the corresponding types of mobile phones.

Each of these units creates a fake BTS with the best operation parameters (GSM/UMTS/LTE) for communication. Once the mobile phone has registered within the BTS all connections can be monitored by the system. 4G mobile phones will be downgraded to UMTS or GSM operation mode and can be intercepted by monitoring system





# Cellular Monitoring

## SS7 Remote Investigation System

### Localization and Interception of Mobile Phones based on SS7 access

This new type of remote investigation system is based on the SS7 mobile communication core network. It uses the SS7 standard interface to access the public mobile communication network in order to gain access to the target user location and other key information. Being suitable for GSM, CDMA, WCDMA and TD-SCDMA networks, it can be also extended to LTE.

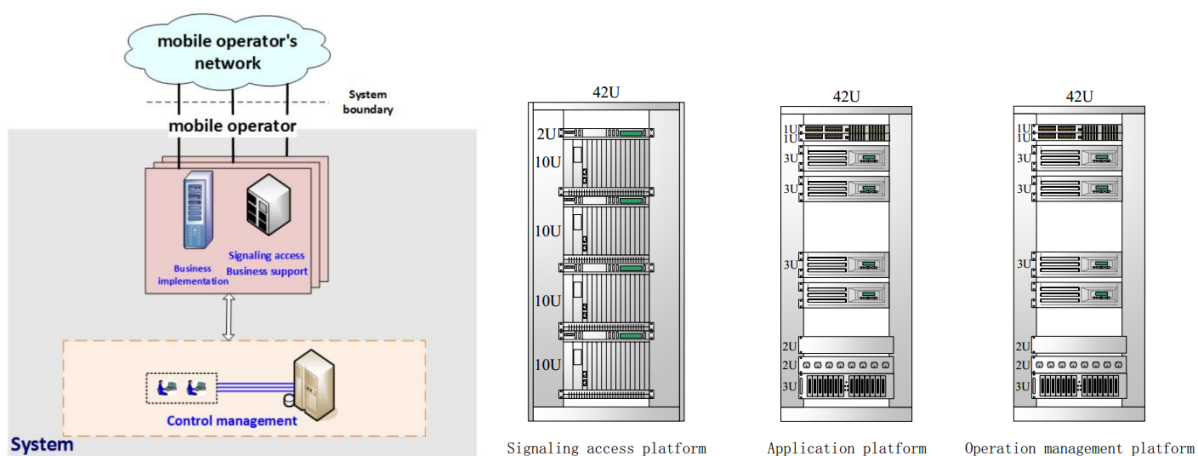
By tracking mobile phone numbers, the system can provide real-time positioning data (based on cellular base station IDs) and present real-time road addresses on the digital map.

### Major function

- Detecting and controlling domestic and foreign moving targets;
- Detection and control of the IMSI of the target device;
- Locating and tracking of the target for detection and control;
- Obtaining the message and voice communication of the target ;
- Ability to block the target communication;
- Ability to send false messages to the target user;
- High reliability, high safety function.

### Main performance indicators

- Detection and control information range: mobile target location information, SMS (Receive ), voice (Called);
- Ability to detect and control target: the system can control > 100'000 targets and can implement voice detection for 1000 target users at the same time;
- Information scope: mobile target can be located by MSC, cell-ID;
- Message rate on a single 64 kbps signaling link is not less than 16 times per second;
- Command response time is less than 20 seconds;



# WiFi Monitoring

## HORNET – passive WiFi Analyzer

### Hornet

**Sets new standards in covert Wi-Fi intercept solutions.**

Hornet is a small self-contained covert device combining technical surveillance, monitoring and wireless communications interception.

### Applications

- **One Touch Boot-Up** Designed for an operator to power on and leave.
- **Intuitive Interface** Hornet can be operated by any device with a web browser.
- **Wi-Fi Survey** Hornet identifies all wireless networks in its vicinity and MAC addresses of any connected devices.
- **Wi-Fi Repeater** Hornet has the capability to masquerade as a free Wi-Fi hotspot, a WPA/WPA2 encrypted network or open Wi-Fi network that a target device has previously connected to.
- **Wi-Fi De-Auth** Hornet has a built-in Wi-Fi De-Auth function that can force target devices to disconnect from their wireless networks.
- **WPA/WPA2 Lookup** Hornet has installed rainbow tables and the option to crack WPA/WPA2 encryption.
- **Traffic Recorder** Data being transmitted to/from the internet by target devices connected to Hornet can be captured and downloaded for further analysis.

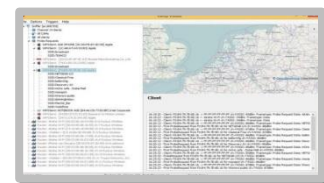


### Vamp

**Passive logging of the Wi-Fi environment. Analyses the complete Wi-Fi environment in real time. Undetectable while scanning**

### Applications

- Real time information in the application
- Trigger on specific MAC addresses
- Selective jamming of wireless clients
- Monitor your own Wi-Fi network for unwanted guests
- Positioning based on Wi-Fi access points
- Intelligent channel hopping or lock to specific channel
- Fully operational with encrypted networks
- Capable of detecting wired devices
- GPS receiver



### Who is where and where is who?

- Undetectable while scanning
- Link Wi-Fi access points to GPS locations
- Automatically dump data through trusted Wi-Fi access points
- Internal logging



# Satellite Monitoring

## 3-in-1 Tactical System for Thuraya, Inmarsat-3 and iSatPhone Pro

### Tactical Satellite Monitoring System TSMS

*We provide tactical and strategic satellite monitoring systems for Thuraya, Inmarsat, iSatPhonePro/2, Iridium, VSAT, SLMS.*

A single TSMS unit can be used to monitor any one of the 3 satellite networks (Thuraya, Inmarsat-3 and iSatPhone Pro). The system can do monitoring of Thuraya, Inmarsat-3 and iSatPhone Pro services sequentially by loading different software and connecting an appropriate L-band antenna set. Two-side interception (uplink + downlink) is possible only when the target is in direct line-of-sight. In other cases, one-side (downlink) interception is provided.

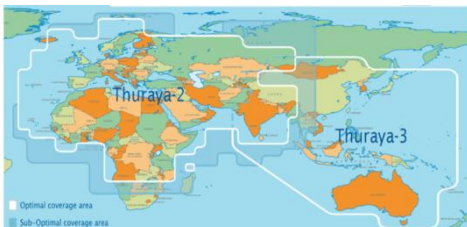
### Monitoring capabilities of Thuraya subsystem (1 of 3)

- Call Content including Voice, SMS, Fax and Data
- Date and Time of Call
- TMSI of the called MES
- The IMEI of the MES
- Phone number dialed by the MES
- Calling Line Identity Presentation (CLIP)
- Country / Region
- Event Type
- 4 or 6 digit sub-set of the MES IMSI
- Terminal Type
- Current Spot Beam ID, GPS-position (co-ordinates) of geographic Centre, and operating frequency
- List of adjacent Spot Beams, their GPS-positions and operating frequencies
- Random Reference Number (call ID)
- Max. 16 duplex (32 simplex) calls

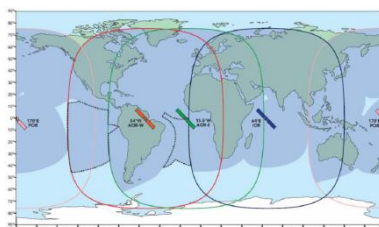


### Monitoring capabilities of Inmarsat-3 and iSatPhonePro on request

**Thuraya Coverage**



**Inmarsat Coverage**



**iSatPhonePro Coverage**

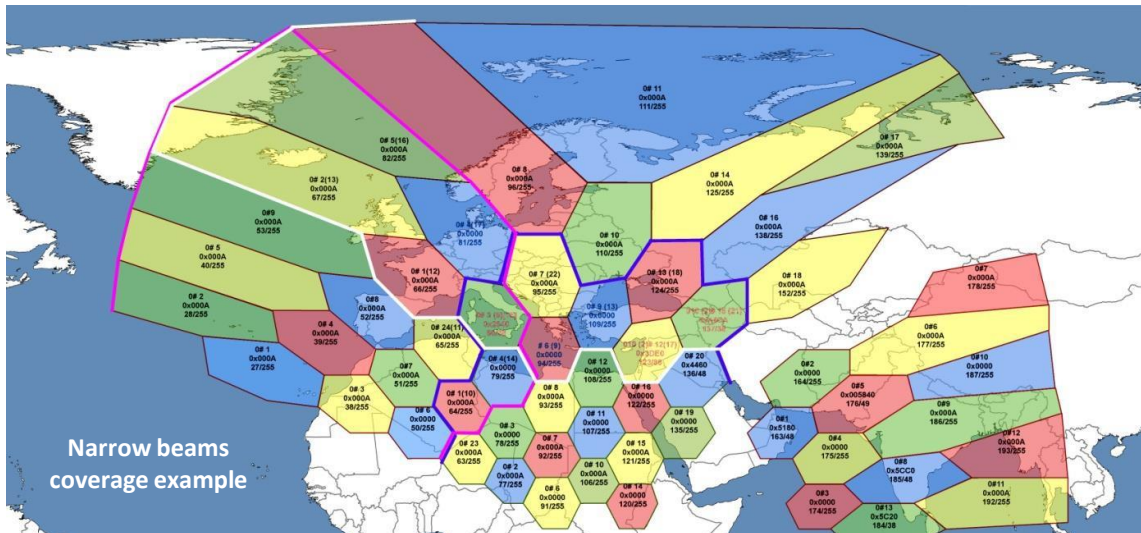


# Satellite Monitoring Strategic iSatPhone Pro/2

## Strategic iSatPhone Pro/2

Monitoring system for interception and recording of iSatPhone Pro/2 sessions

*We provide tactical and strategic satellite monitoring systems for Thuraya, Inmarsat, iSatPhonePro/2, Iridium, VSAT, SLMS.*



### Monitoring capabilities

The system provides the User with the following information about every call on every monitored spot beam:

- Call Content including Voice, SMS and Data
- Date and Time of Call
- IMSI and IMEI of the MES
- The telephone number dialed by the MES
- Calling Line Identity Presentation (CLIP)
- Telephone number of the call originator is available on many calls
- Mobile location of the MES
- Location Area Code (LAC)
- List of adjacent Spot beams

### Technical capabilities

The following technical characteristics are provided:

- Monitoring of L/C-band signaling information within the regional spot beam of the Monitoring Centre (home cluster). Monitoring of every session within the narrow spot beam of the Monitoring Centre and the adjacent narrow spot beams in L/C-band.
- Monitoring of L-band signaling information within the regional spot beam of the remote subsystem (remote cluster). Monitoring of every session within the narrow spot beam of the remote subsystem and the adjacent narrow spot beams in L-band.
- Complete information about every call (call related data, CRD) on every monitored spot beam mentioned above (a list of such information is presented above).
- Interception of all simultaneous calls at home cluster and remote cluster (up to 32 voice sessions per active frequency of narrow beam).
- Real-time deciphering (TCH/FACCH and part of the SDCCH/SACCH channels are encrypted).
- Requires a tracking antenna for geostationary satellites in L/C-band with 7-9 m diameter

# Satellite Monitoring

## VSAT

### VSAT Strategic Monitoring System

*We provide tactical and strategic satellite monitoring systems for Thuraya, Inmarsat, iSatPhonePro/2, Iridium, VSAT, SLMS.*

#### Main functions

**VSAT** is a hardware and software solution (System) for continuous monitoring, reception and analysis of signals and information from VSAT satellite communication networks designed for fixed and mobile systems (including systems being used on vessels, marine facilities, etc). The system is designed for use with antennas 3.8 – 7 m diameter with C- and Ku-band LNB and is able to control antenna rotating and receiver systems, automatically scan and collect signal from VSAT channels, hosting info from satellites.

The System is designed for processing signals from the following VSAT equipment:

- iDirect NetModem
- iDirect iNFINITI
- iDirect Evolution
- Hughes TES
- Hughes PES
- Hughes HX/HN
- Hughes DirecWay



It automatically scans frequencies, detects and processes OutRoute and InRoute VSAT channels and supports FDMA, TDMA, D-TDMA, MF-TDMA multiple access modes. The modulation types that are supported are BPSK, QPSK, 8PSK, 16APSK, 32APSK including DVB-S2 ACM mode with symbol rate up to 70 MS/s. Effective processing of network protocols such as TCP, UDP, RTP, FTP, HTTP, POP3, IMAP, SMTP, VoIP (SIP, H.323, MGCP, SDP) and others are provided by sophisticated software. The System is able to operate stable and continuously 24/7, receive, process and store all information messages, including messages containing vessels location information (if available).

#### Main Features

- Smart scanning: scanning of the whole or partial frequency band of a satellite for finding of carriers of the VSAT channels and their parameters
- Reception of up to 48 VSAT channels by a single multi-channel receiver
- Reception of time division multiple access mode signals: the system can provide reception of TDMA (D-TDMA, MF-TDMA) signals from VSAT user terminals
- Scalability of the processing resources
- Hardware synchronization and real-time processing of control channel with user channels for obtaining of 2-way communication sessions
- Capability of simultaneous reception of more than one control channels along with appropriate user channels of VSAT
- Modularity of software: ability to build a distributed processing system
- Centralized control and monitoring of the whole system

# Special Products

## Non-destructive Entry & Drilling

Please ask for extra catalogue.

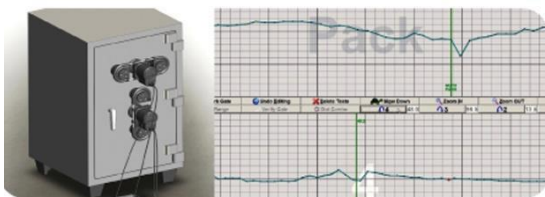
### Drilling

- Low Noise Drill
- Fast Drill
- Gas Abrasive Pinhole Kit
- Wall Radar



### Opening Technologies

- Mechanical locks
- Hotel cards
- Car key fob
- Safe manipulation
- Vehicles
- RFID / Keyless Entry



### Sound Wave Decoder

The **Sound Wave Decoder** is a miniaturized ultra-sound lock-decoding system. It provides an ultra-sound scan of the pin tumblers within the lock in less than 2 minutes.



## Special Products

### SIM X-Protect S/H, SIM N-Protect S/H – Detection Systems

**SIM X-Protect** Protects sensitive environments from explosive threats

**SIM N-Protect** Protects sensitive environments from narcotic threats

Both are available in either (H) handheld or (S) stationary version

#### Ease of use and low cost of operation

X-protect can be operated by people without specialized knowledge. Samples are collected directly from a surface or using sample traps. With low total cost and high operational availability.

#### Sensitive and fast response

The sensitivity of X-protect is up to nanogram ( $10^{-9}$ ) level and picogram level. It can identify the suspect substances in less than 10 seconds. Internal automatic cleaning and calibration will promote the efficiency of security check during rush hour at airports, railway stations, etc.



#### Applications

Airports / Subways / Railway stations / Customs / Border security / Frontier and port / Police / Courts / Prisons / Post Offices / Public places & venues

<b>Technology</b>	Ion Mobility Spectrometry (IMS)	
<b>Explosives Detected</b>	Most commercial available and military explosives, such as TNT, DNT, RDX, PETN, NG, BP, Tetryl, HMX, Semtex, C4, AN, etc. Additional substances can be added	
<b>Narcotics Detected</b>	Cocaine, Heroin, Amphetamine, Methamphetamine, MDA, THC, etc.	
<b>Sensitivity</b>	Particle: nanogram to picogram level; vapor: ppt (three models)	
<b>Analysis Time</b>	Typical $\leq 2$ and up to 10 seconds for special application	
<b>Sampling Method</b>	Non-contact vapor collection, particulate collection via wiping	
<b>Alarm</b>	Visual and audible alarms with the substance's name displayed on the LCD screen. False alarm rate $\leq 1\%$ detection rate $\geq 99\%$	
<b>Working Condition</b>	Temperature: $-10^{\circ}\text{C} \sim 55^{\circ}\text{C}$ , relative humidity: $\leq 99\%$ non-condensing	
	<b>Handheld Version</b>	<b>Stationary Version</b>
<b>Data Display</b>	3.5" color TFT display	10.5" color TFT display
<b>Interface</b>	USB, RS 232	USB, Wireless keyboard (optional), transmit data and print test results via Bluetooth
<b>Power</b>	110/220V AC, 50/60 Hz	110/220V AC, 50/60 Hz
<b>Battery (Optional)</b>	Rechargeable lithium-ion battery (4 h of operation)	Rechargeable lithium-ion battery (12 h of operation)
<b>Dimensions (L x W x H)</b>	417 x 135 x 45 mm	320 x 320 x 320 mm
<b>Weight</b>	3.4 kg (incl. battery)	10.0 kg
<b>Warm-up Time</b>	Less than 15 min (hot-start $\leq 5$ min)	Less than 8 min (hot-start $\leq 5$ min)

# Intelligent Jammer

## SmartShield

### SmartShield

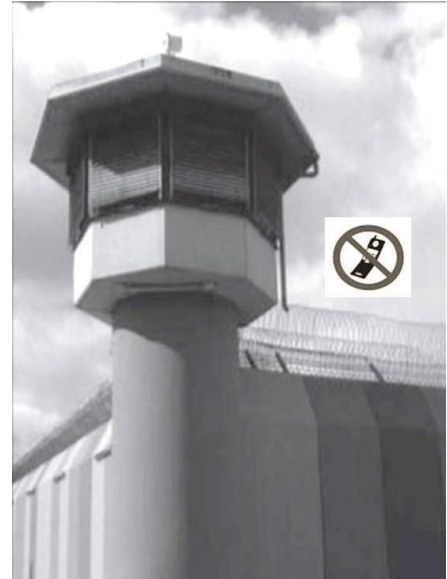
**Selective Cellular Identification Jamming and Localization System. Modular system for up to 6 providers. Bands GSM, UMTS and LTE.**

**SmartShield** can choose targets to shield and allows selected mobile phones to communicate normally, while the other, unauthorized subscribers are disconnected and cannot communicate (this will not show up on their phone display). Smart Shield mobile phone communication shield can be employed in various circumstances such as:

- **Sensitive meeting:** to avoid incoming calls frequently interfering with the meeting, Smart Shield can shield the mobile terminals in the meeting, but allow VIPs still to communicate normally.
- **Prison:** to avoid incoming/outgoing calls from prisoners, but allow the jailer, prison employees and visitors still to communicate normally on demand.

Conventional 'dumb' jammers must produce an electromagnetic noise level way beyond the local signal level of the existing cellular networks and thus require high output power or provide only short range.

SmartShield is 'smart' because it acts as the strongest cellular base station within the protected area. This requires much lower output power so 1 or 2 SmartShield units can cover a whole prison.



### Main Features

- Designed for prisons, governmental buildings and secure facilities
- Smart Jamming System with White List / Black List
- Simultaneous detection of all active mobile phones in the locality
- Remote configuration and maintenance
- Easy VIP numbers management
- Simple and easy installation (no cost through cabling)
- Full coverage of the surveillance zone, no blind spots
- No health hazard, no permanent high-power radiation like from cw-Jammer

Up to 4000 numbers can be entered into Smart Shield to be allowed to communicate through the created electronic shield.

### Options

- Interception of selected phone calls, SMS, DTMF
- Localization of mobile phones
- Search equipment for phones in power-off mode (i.e. hidden devices in prison cells)
- Car kit





# Mobile Phone Jammer

## ATV-50, Laptop PeliCase Format & ATT-100, Trolley Format

### ATV-50



- Antennas**  
High Gain directional Patch
- Energy Unit**  
2 Hours NiMH Battery  
DC/DC Adapter + Charger Unit
- Jammer**  
6 band jammer

### ATT-100



The **ATV-50** mobile phone jammer is a compact 4-6 band low power multirole jammer, which can be remote controlled by LAN (optional), ready to block the downlink frequencies of most common mobile phones or other communication devices. It is designed for non-stationary operation by a single operator and equipped with NiMH batteries for 2 hours of continuous operation time. Once switched from “Off” to “Stand-By” mode internally, it can be operated simply by an external switch.

The **ATT100** trolley format jammer is the latest releases of our well-proven Multiband digital jammer with 30W power in each band. It covers combinations of VHF/UHF bands and of 50-6000 MHz bands, for a total of 6 bands in each system. This compact easy-to-handle trolley model supplies high power in respect to its size and weight. Equipped with the efficient GaN-technology power amplifiers, high-tech Li-ion rechargeable batteries, high-gain directive internal antennas and digital jamming technology, the ATT100 is one of the most complete transportable systems in the market.

	ATV-50	ATT-100
<b>Max number of bands</b>	6	
<b>Jamming Technology</b>	Direct Modulation Over Synthesized Signal	
<b>Temperature Range</b>	-10°C – 55°C	-10°C – 50°C
<b>Output power per band</b>	3 Watts ± 1.5 dB + Antenna Gain	30 Watts ± 1.5 dB + Antenna Gain
<b>Summary output power</b>	18 Watts	180 Watts
<b>Antennas</b>	Internal 4-8 dBi Hi-Gain Patch antennas	Internal 4-8 dBi Hi-Gain Patch antennas for mobile phones frequencies External whip Antenna for V/UHF frequencies
<b>Range</b>	Up to 25m with signal < -80 dBm	Up to 100m with signal < -80dBm
<b>Battery Duration</b>	1.5 - 2 hrs	1 hr
<b>Power Supply</b>	Internal rechargeable NiMH batteries + AC adapter/charger and universal 10-32VDC / Charge in	Hi-tech Li-Ion light weight batteries or external power supply 10-32 VDC
<b>Dimension</b>	480 x 360 x 180 mm	350 x 545 x 230 mm
<b>Weight</b>	Max. 10 kg	Max. 20 kg

# Drone Jammer

## DJ120

### DJ120

#### 4 Band 120 Watt Anti Drone / Anti Quad Copter Jammer



The Drone Jammer Model DJ120 is a countermeasure system which protects against drone intrusion. Lightweight and easy to use, it is the latest application of our well proven digital jammers and technology.

It can be used for fixed installation or with our new, manually aimed antenna gun.

#### Key Features

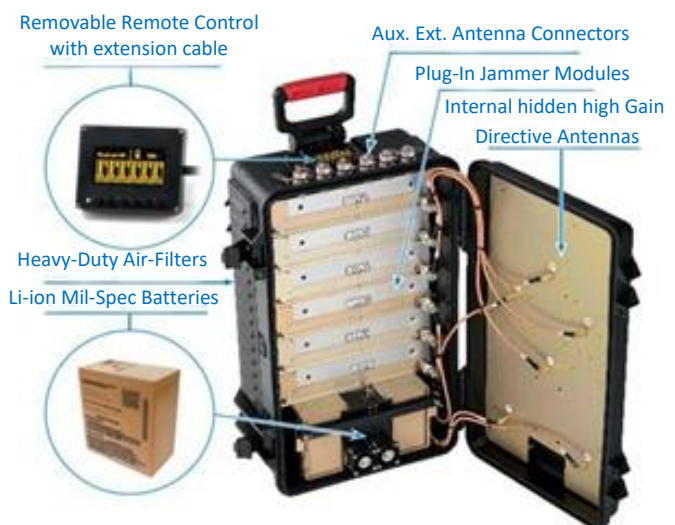
- Four bands/30 W each
- Light weight
- Simple command by remote control
- Easy to use and transport
- IP 65 carbon fibre enclosure
- Manpack or mobile trolley

#### Jammer frequencies and power output

- 30W -- GPS L1 / 30W -- GPS L2
- 30W -- 2.4 GHz Wi-Fi
- 25W -- 5.8 GHz video link
- All Bands switchable
- Helix or Yagi antennas

#### Applications

- Securing critical infrastructures (government premises, nuclear power plants, airports, etc.) against terrorist attacks or information leakages
- Military and Homeland Security
- Protection against espionage attacks
- Protection of prisons against bringing weapons and communications devices into the facilities
- Protection of borders against smuggling



# Convoy Jammer System

## DRAGO

### Drago

180 W Cabin-size active / reactive Convoy Jammer

Customized solutions for all bands.



### Key Features

- High power & small dimensions
- Fully programmable by end user
- Multiple bands, upgradable
- Configurable modular Jammer
- Full coverage to 6 GHz
- GaN amplifier technology – best efficiency and reliability



### General Description

We are specialized in manufacturing custom convoy jammer solutions for clients with specific requirements and budgets. Thanks to our range of jammer models and specific knowledge in this field it always has satisfied our Military, Governmental and VIP clients around the world.



Frequency Module

You may select

- 20 frequency modules; each module up to 120W
- 20 antennas with up to 15 Directive or Omni-Directional antennas hidden in a Thule roof bag or with a low profile aluminum roof frame plus 4 whip antennas on the front/back bumper
- Preset or fully programmable by end user
- Fixed or Semi-mobile Installation
- Touch Screen Remote Control or Traditional Switches and LED Remote



Battery Pack

**Secure Information Management GmbH**  
**Chemnitzer Straße 2 • D-67433 Neustadt**  
**Tel. +49-6321-9127-0 • Telefax +49-6321-9127-220**

[info@sim-secure.de](mailto:info@sim-secure.de)  
[www.sim-secure.de](http://www.sim-secure.de)



© SIM Secure Information Management GmbH (2018 – 2020) - All rights reserved