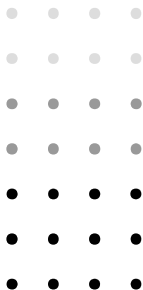




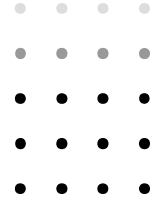
**PEGASUS**  
INTELLIGENCE

---

**SMART-D**  
Intelligent Eavesdropping  
Detection System



# Contents



## 01 Complete Product Portfolio

## 02 SMART-D At A Glance

## 03 Current Situation

The current status of bugging devices technology

## 04 The Importance

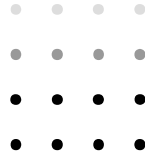
The necessity of 24/7 detection system

## 05 Product Introduction

Product characteristics



# Product portfolio



1

## SMART-D

24/7  
Intelligent Eavesdropping  
Detection System



25 kHz ~ 6 GHz  
Each device covers 150 m<sup>2</sup>

2

## ALPHA-H

Wireless Hacking  
Detection System

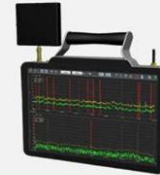


25 kHz ~ 3 GHz  
Each device covers 100 m<sup>2</sup>

3

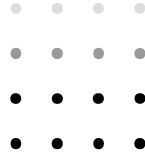
## ALPHA-P

Portable  
Radio Frequency  
Detector



20 MHz ~ 6 GHz  
Able to pin-point the location

# SMART-D At A Glance



## System Configuration & Specification

### Remote Terminal (SMART-D / RT)



Image	Type	Item	Specification
	RF	Frequency Range	25 kHz ~ 6 GHz
		Sensitivity	-100 dBm ~ -10 dBm
	Demodulation	Audio Demodulation	Wideband FM / Narrowband FM / AM
		Video Demodulation	NTSC / PAL / SECAM
	Interface	LED Panel	Power / Operation / LAN / Server / Alarm
		Serial Communication Port	1 Port (RJ11)
		Network Connection (NIC)	1 Port (1 GbE)
	Shape	Dimensions	272(W) x 232(D) x 72(H) mm
		Weight	3.1 kg
	Power Supply	Power Consumption	12 V, 5 A / 60 W
		AC-DC Adapter	AC 100 ~ 220, Free Voltage

### Controller SW (SMART -D / MT)



Processes & stores data collected from Remote Terminals  
\*Server HW not included  
(specifications may be changed at the request of the ordering agency)

# SMART-D

SMART-D is installed in important locations such as executive rooms, conference rooms, etc. to inspect for abnormal [frequency](#)

# SMART-D At A Glance

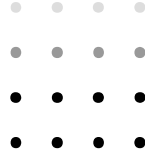


## Monitoring SW (SMART-D / MT)



Manages and controls RT/ MS / DS

\*PC not included  
(Specifications may be changed at the request of the ordering agency)



## System Features



24/7 Signal Detection



Scan detection frequency in one second



Detects UWB devices



Integrated control of multiple remote terminals

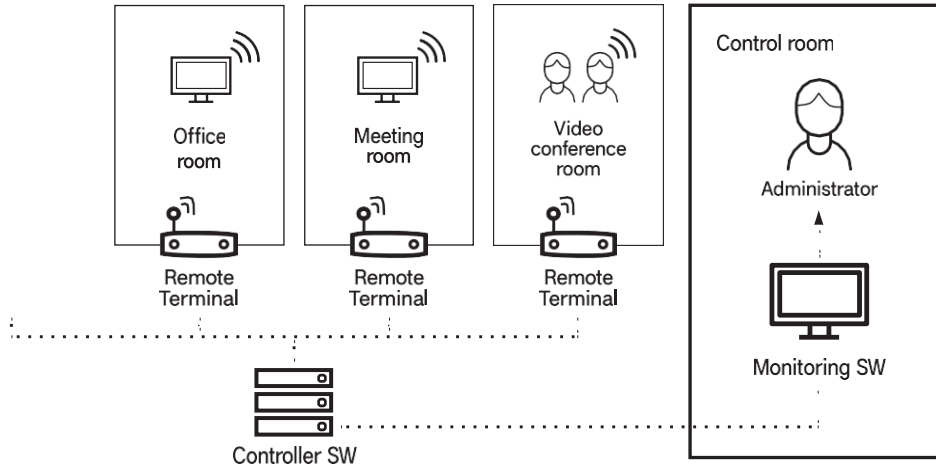


Detects frequency ranges of 25kHz to 6GHz

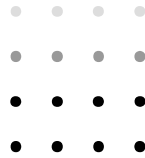


Easy use (remote diagnostics, updates, reports)

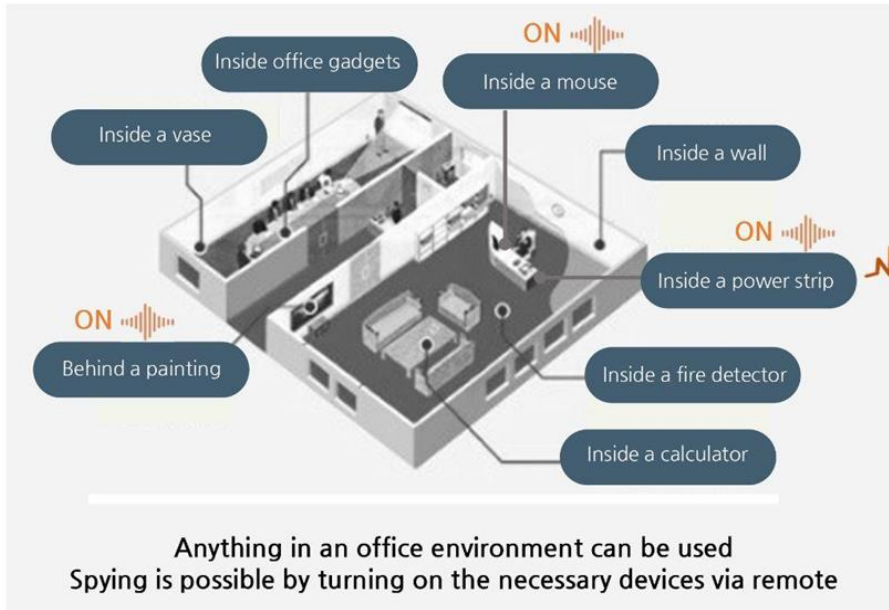
## System Architecture



# Current Situation



*The increasing threat of eavesdropping in everyday life*



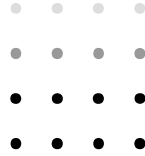
ON

OFF

Able to turn the devices ON/OFF from a remote location

Difficult to detect bugs and spy-cams with portable detectors

# Current Situation



*The increasing threat of eavesdropping in everyday life*

## Ultra Low Signal

Unable to detect with analog scanners



RF  
Transmitter

## UWB(Ultra-WideBand)

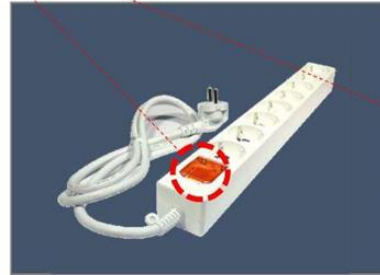
Unable to detect with normal scanners  
High Performance scanners are needed



Mouse type



Fire detector type

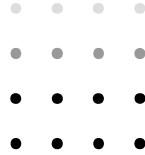


Power strip type



USB HUB type

# Current Situation



## Various wireless communication technologies

Some wireless transmission technologies can even send and receive data over tens of kilometers (km)



### Wi-Fi

- Frequency : 2.4GHz, 5GHz
- Transfer Speed : 2~54Mbps



### Zigbee

- Frequency : 868MHz, 900~928MHz, 2.4GHz
- Transfer Speed : 250Kbps



### Bluetooth (5.0)

- Frequency : 2.4GHz
- Transfer Speed : 125Kbps~2Mbps



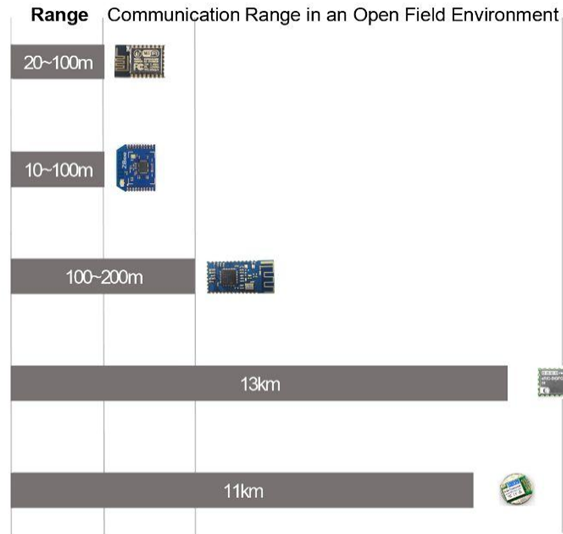
### SigFox

- Frequency : 868MHz, 915MHz
- Transfer Speed : 100bps



### LoRa

- Frequency : 867~928MHz
- Transfer Speed : 0.2~50Kbps

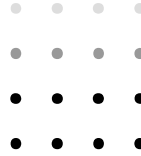


These are only some examples of widely used commercial protocols  
It is important to **scan all frequencies** in order to prevent wireless eavesdropping





# Current Situation



*Eavesdropping and spying methods are becoming smarter by the day*

## Jokowi says he's been **bugged** since December

The Jakarta Post, 2014.2.20

Governor Joko 'Jokowi' Widodo unveiled on Thursday that he had been bugged since at least December last year.

'I've known since December but I didn't want to make a fuss out of it. I was surprised, but no hard feelings. My colleagues were apparently very angry', he said in Jakarta.

Earlier in the day, **Indonesia Democratic Party of Struggle (PDI-P) secretary general Tjahjo Kumolo said his party staff had found three bugging devices installed in Jokowi's official residence in Menteng, Central Jakarta.**

Jokowi said the devices were found in his bedrooms, guest room and dining room, where he usually held meetings.

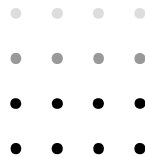
## Exclusive-Suspected Chinese **hackers stole camera footage** from African Union

REUTERS, 2020.12.16

Longstanding doubts over Beijing's role at the AU spilled into the open in 2018, when French newspaper Le Monde reported here that AU employees had found that the servers at the new conference center were **sending copies of their contents to Shanghai every night and that the building itself had been honeycombed with listening devices.**

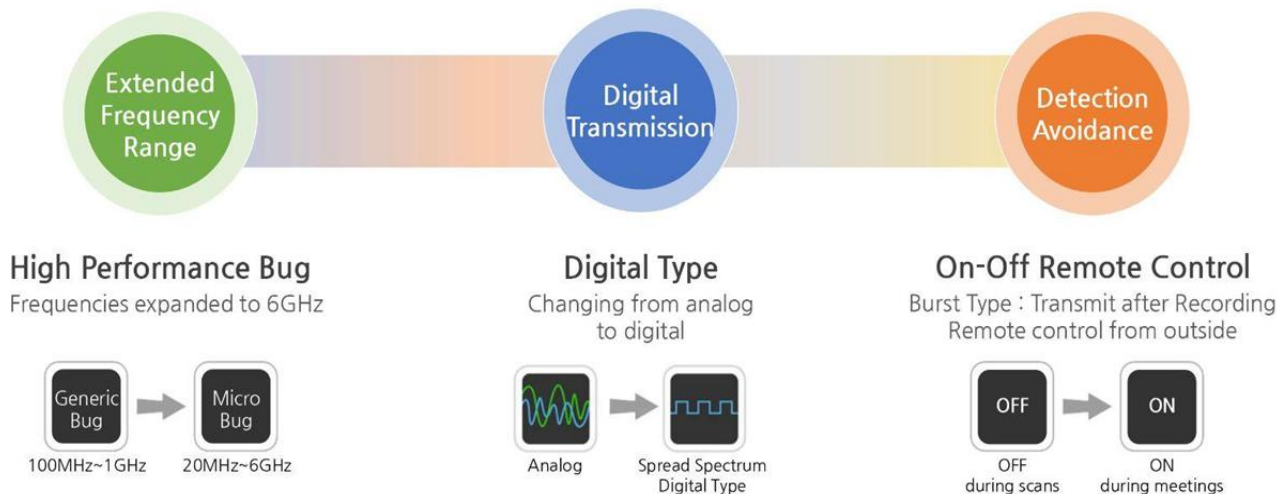
Both the AU and the Chinese government vehemently denied the report at the time, but a former AU official told Reuters the article in Le Monde was accurate and had put officials there on high alert over cyberespionage.

# The Importance

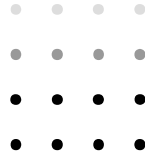


*Newest bugs cannot be detected with a portable detector*

As eavesdropping technology evolves, portable detectors are becoming less effective  
**24/7 Intelligent Eavesdropping Detection System is necessary to be protected from the newest threats**



# Product Introduction



## 24/7 Intelligent Eavesdropping Detection System

Intelligent Eavesdropping Detection System is able to detect all RF attacks with real-time scans



Real-time Detection of All Radio Frequencies

### Remote Terminal

- Real-time detection : 24/7
- Coverage area of 150m<sup>2</sup>
- Analysis via signal detection algorithm : Instant detection of abnormal RF signals



Receives Data from the Remote Terminal

### Controller S/W

- Management of data collected by the Remote Terminal
- Management of frequency information and provide statistics

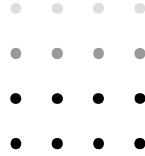


Real-time Monitoring by the Admin

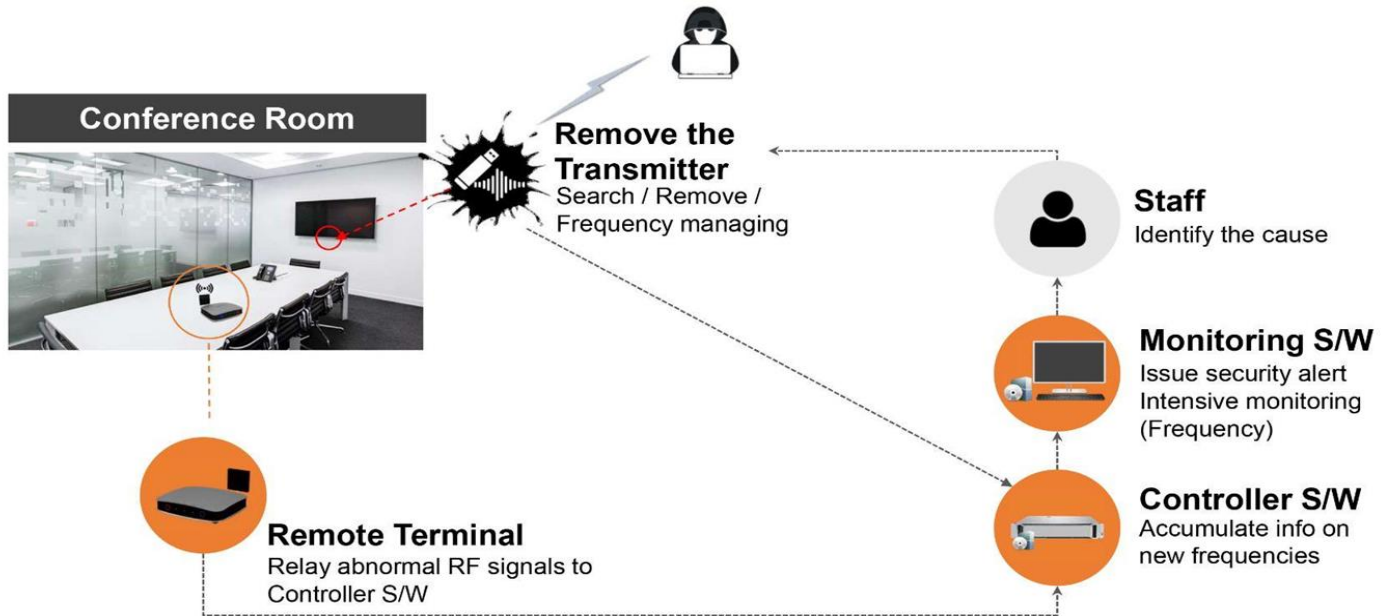
### Monitoring S/W

- Management of multiple Remote Terminals (More than 1,000 different locations per S/W)
- Real-time status monitoring and alert management
- Check statistics & Create detection reports

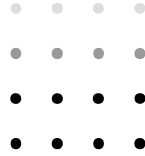
# Product Introduction



*Security Process of Our Intelligent Eavesdropping Detection System*



# Product Introduction



## Monitoring S/W Interface & Functions

The screenshot displays a complex monitoring interface. On the left, a 'Remote Terminal Management' panel lists various rooms and terminals. The central area features a 'View Real-Time Spectrum' plot showing a frequency domain graph with a green signal trace. To the right, a 'Remote Terminal Info' panel provides details for a specific terminal, including its SN and status. Below this, there are controls for signal area, frequency, and manual attenuation. At the bottom, a table lists detected signals with columns for terminal SN, name, stored signal, inferred as video, digital wide band, number, center frequency, bandwidth, max signal, appearance time, disappearance time, detected signal, and frequency info.

**Remote Terminal Management**  
Single S/W manages all the Remote Terminals

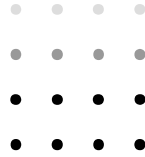
**Abnormal Activities Log**  
Triggers an alarm when an abnormal RF signal is detected

**Statistics Report**  
Provides statistics and reports

**Abnormal RF Signal**  
Checks for abnormal RF against reference frequencies

**Demodulation**  
Available for audio and video

# Product Introduction



## Features of our Intelligent Eavesdropping Detection System

1	Wideband Detection	25kHz ~ 6GHz	<ul style="list-style-type: none"><li>Against all frequencies where illegal transmissions may take place (20MHz ~ 6GHz)</li><li>Meets the Korean Government's Required Operational Capability (ROC)</li></ul>
2	Ultra-fast Detection	1 second	<ul style="list-style-type: none"><li>High performance : Ultra-fast signal detection</li></ul>
3	High tech Detection	UWB (Ultra Wide Band)	<ul style="list-style-type: none"><li>Detects UWB wireless signals that cannot be found with normal detection methods</li></ul>
4	Central Control	Integrated Control More than 1,000 units	<ul style="list-style-type: none"><li>Integrated under one software (VIP &amp; Executive's Office / Conference Rooms)</li></ul>
5	Unmanned Surveillance	Full Automation	<ul style="list-style-type: none"><li>Runs efficiently even without having a dedicated operator</li><li>Convenient features such as Self Auto Setup and Remote Health Check</li></ul>
6	Reliability	Government Certified	<ul style="list-style-type: none"><li>Excellent Product Designation by the Public Procurement Service</li><li>Performance Certification from the Korean Government</li></ul>