

美国 Visualint 威视林特摄像机

智能分析

此功能的意义：这是计算机图像视觉技术在安防领域应用的一个分支，是一种基于目标行为的智能监控技术。区别于传统的移动侦测(VMD - Video Motion Detection)技术，智能视频分析首先将场景中背景和目标分离，识别出真正的目标，去除背景干扰（如树叶抖动、水面波浪、灯光变化），进而分析并追踪在摄像机场景内出现的目标行为。

此功能可以联动摄像机 ALM OUT 接口和警报快照邮件推送功能。

在摄像机设置页面找到 VCA（智能分析）。

1. Alarm Info

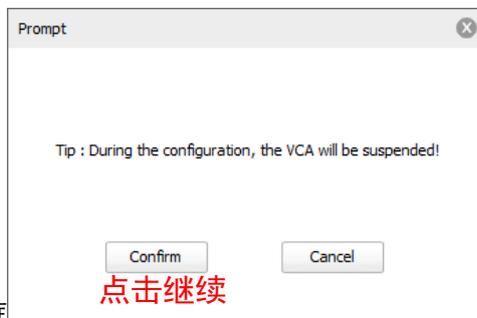
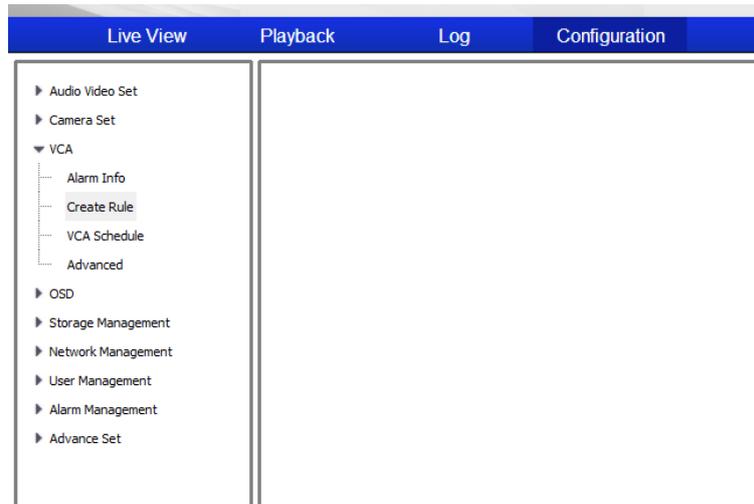
警报信息，可以查看历史警报的信息。

The screenshot shows the Visualint VIM-4350 web interface. The top navigation bar includes 'Live View', 'Playback', 'Log', and 'Configuration'. The left sidebar menu is expanded to 'VCA', with 'Alarm Info' selected. The main content area is titled 'Alarm Info' and features a 'Scene Number' dropdown set to '1' and a checked 'ON' status. Below this are 'Event' and 'Rule ID' dropdowns, both set to 'All'. A table displays a list of alarm events with columns for Alarm Time, Chn No., Scene Num..., Rule ID, Rule Name, Event, and Alarm Capture Images. The table contains 18 rows of data, including events like 'Loter', 'Missing Object Dete...', 'Object Abandoned', 'Tripwire', and 'Perimeter'. At the bottom of the table are 'Clear' and 'Reset' buttons.

Alarm Time	Chn No.	Scene Num...	Rule ID	Rule Name	Event	Alarm Capture Images
09:53:09	1	1	6	Mode6	Loter	
09:52:56	1	1	6	Mode6	Loter	
09:50:10	1	1	5	Mode5	Missing Object Dete...	
09:44:19	1	1	5	Mode5	Missing Object Dete...	
09:35:01	1	1	4	Mode4	Object Abandoned	
09:34:03	1	1	1	Mode1	Tripwire	
09:33:18	1	1	1	Mode1	Tripwire	
09:33:13	1	1	1	Mode1	Tripwire	
09:33:10	1	1	1	Mode1	Tripwire	
09:32:09	1	1	3	Mode3	Perimeter	
09:32:05	1	1	1	Mode1	Tripwire	
09:31:56	1	1	1	Mode1	Tripwire	
09:31:20	1	1	3	Mode3	Perimeter	
09:31:09	1	1	3	Mode3	Perimeter	
09:31:03	1	1	1	Mode1	Tripwire	
09:30:43	1	1	1	Mode1	Tripwire	
09:30:28	1	1	1	Mode1	Tripwire	
09:29:48	1	1	1	Mode1	Tripwire	
09:28:32	1	1	1	Mode1	Tripwire	

2. Create Rule

新建警报规则。



弹出提示框

Create Rule



弹出弹出提示框

弹出规则的设置页面。

Create Rule



Please active VCA and Rule ID first!

VCA: Enable

Enable Arithmetic: Behavior Analysis

Video Detection Audio Detection

Save

Arithmetic: Behavior Analysis

Rule ID: 1 **规则的系统 ID 号** Valid **勾选启用规则**

Rule Name: Mode1 **规则名称** Rule Clear

Event Set: Tripwire **规则类型**

Alarm Color: Red

No Alarm Color: Green

Min. Percentage: 5

Max. Percentage: 40

Show Alarm Count **在直播界面显示警报次数**

Show Alarm Rule **在直播界面显示警报规则**

Two-way Alarm **双通道警报**

Display Target **显示警报对象**

Save Next

物体触碰/占据规则的最小百分比 ←

物体触碰/占据规则的最大百分比 ←

系统提供最多 8 个自建规则。

Please active VCA and Rule ID first!

VCA: Enable

Enable Arithmetic: Behavior Analysis

Video Detection Audio Detection

Save

Arithmetic: Behavior Analysis

Rule ID: 1 Valid

Rule Name: 1 **1** **2** **3** **4** **5** **6** **7** **8** Rule Clear

Event Set: 1

Alarm Color: 1

No Alarm Color: Green

Min. Percentage: 5

Max. Percentage: 40

Show Alarm Count

Show Alarm Rule

Two-way Alarm

Display Target

Save Next

规则类型分为 Tripwire(单线), Double Tripwire(双线, 物体通过 2 个单线), Perimeter (区域, 可在 Detect Mode (执行模式) 内选择 Intrusion (侵入), Enter (进入), Leave (离开) 等工作模式), Object Abandoned (物体移动), Missing Object Detection (物体消失), Loiter (徘徊)。

Please active VCA and Rule ID first!

VCA: Enable

Enable Arithmetic: Behavior Analysis

Video Detection Audio Detection

Save

Arithmetic: Behavior Analysis

Rule ID: 1 Valid

Rule Name: Rule Clear

Event Set: Tripwire

Alarm Color: Tripwire

No Alarm Color: Double Tripwire, Perimeter, Object Abandoned, Missing Object Detection, Loiter

Min. Percentage: 5

Max. Percentage: 40

Show Alarm Count

Show Alarm Rule

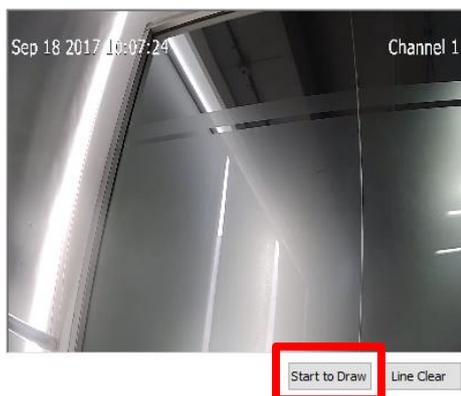
Two-way Alarm

Display Target

Save Next

选择完警报规则，在左侧摄像画面上点击“Start to Draw”在画面上画出使用规则的区域。画完区域点击 Save 保存规则。

Create Rule



点击 Start Draw 在监控界面绘制需要警报的区域。双击鼠标左键停止绘画

Please active VCA and Rule ID first!

VCA: Enable

Enable Arithmetic: Behavior Analysis

Video Detection Audio Detection

Save

Arithmetic: Behavior Analysis

Rule ID: 1 Valid

Rule Name: Mode1 Rule Clear

Event Set: Tripwire

Alarm Color: Red

No Alarm Color: Green

Min. Percentage: 5

Max. Percentage: 40

Show Alarm Count

Show Alarm Rule

Two-way Alarm

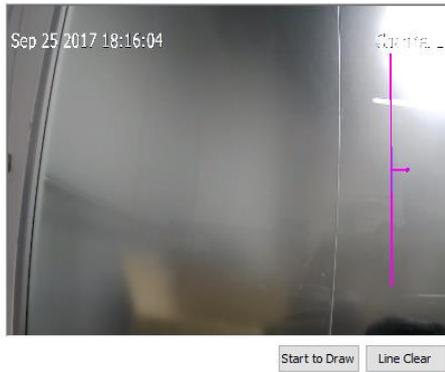
Display Target

Save Next

2.1 Tripwire 单线警报

当有物体触碰到所画的虚拟线时，发出警报。

Create Rule



Please active VCA and Rule ID first!

VCA: Enable

Enable Arithmetic: Behavior Analysis

Video Detection Audio Detection

Save

Arithmetic: Behavior Analysis

Rule ID: 1 Valid

Rule Name: 1 Rule Clear

Event Set: Tripwire

Alarm Color: Red

No Alarm Color: Green

Min. Percentage: 5

Max. Percentage: 41

Show Alarm Count

Show Alarm Rule

Two-way Alarm

Display Target

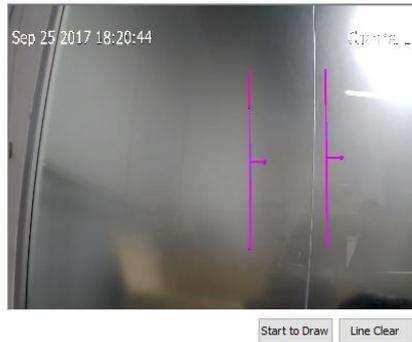
Save Next



2.2 Double Tripwire 双线警报

在设定的间隔时间内有物体触碰到 2 条所画的虚拟线时，发出警报。

Create Rule



Please active VCA and Rule ID first!

VCA:

Enable Arithmetic: Behavior Analysis

Video Detection Audio Detection

Save

Arithmetic: Behavior Analysis

Rule ID: Valid

Rule Name: Rule Clear

Event Set: Double Tripwire

Alarm Color: Red

No Alarm Color: Green

Max time interval: 最大间隔时间 Seconds

Min time interval: 最小间隔时间 Seconds

Min. Percentage:

Max. Percentage:

Show Alarm Count

Show Alarm Rule

Two-way Alarm

Display Target

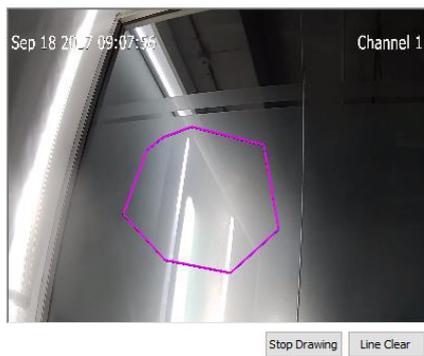
Save Next



2.3 Perimeter 区域警报

当有物体侵入/进入/离开所画区域是，发出警报。

Create Rule



Please active VCA and Rule ID first!

VCA:

Enable Arithmetic: Behavior Analysis

Video Detection Audio Detection

Arithmetic:

Rule ID: Valid

Rule Name:

Event Set:

Detect Mode:

Invasion Time(s):

Alarm Color:

No Alarm Color:

Min. Percentage:

Max. Percentage:

Show Alarm Count

Show Alarm Rule

Display Target

选择此项功能时，可以选择 3 种触发警报的模式。

Event Set:

Detect Mode:

Alarm Color:

Intrusion（侵入，可以根据 Invasion Time(s) 物体在区域内停留的时间设定触发警报）；
 Enter（进入）；
 Leave（离开）。



2.4 Object Abandoned 物体移动警报

当有物体出现在所画区域内（物体必须静止）超过了设定的停留时间，并移动位置但还在图像内时，发出警报。

Create Rule



Please active VCA and Rule ID first!

VCA: Enable

Enable Arithmetic: Behavior Analysis

Video Detection Audio Detection

Save

Arithmetic: Behavior Analysis

Rule ID: 4 Valid

Rule Name: 4 Rule Clear

Event Set: Object Abandoned

Alarm Color: Red

No Alarm Color: Green

Alarm Time(s): 物体停留时间

Min. Percentage: 5

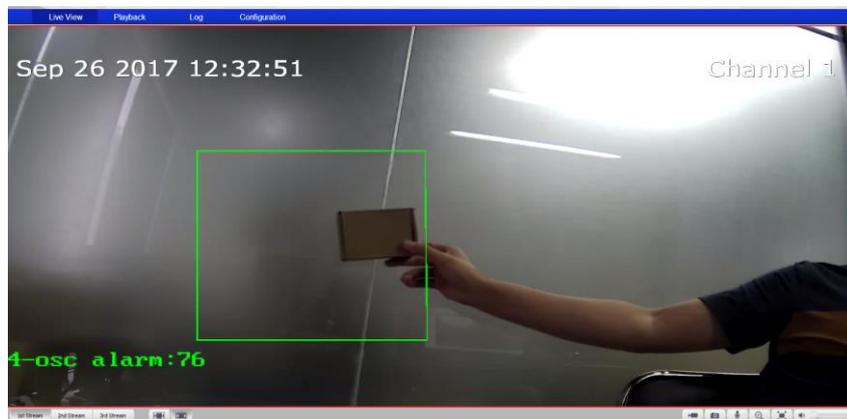
Max. Percentage: 40

Show Alarm Count

Show Alarm Rule

Display Target

Save Next



2.5 Missing Object Detection 物体丢失警报

当有物体出现在所画区域内（物体必须静止）超过了设定的停留时间，并移动位置且不在图像内时，发出警报。

Create Rule



Please active VCA and Rule ID first!

VCA:

Enable Arithmetic: Behavior Analysis

Video Detection Audio Detection

Arithmetic:

Rule ID: Valid

Rule Name:

Event Set:

Alarm Color:

No Alarm Color:

Alarm Time(s): **物体停留时间**

Min. Percentage:

Max. Percentage:

Show Alarm Count

Show Alarm Rule

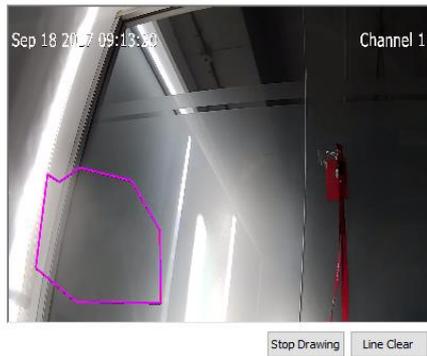
Display Target



2.6 Loiter 徘徊警报

当有物体在所画区域内徘徊，发出警报。

Create Rule



Please active VCA and Rule ID first!

VCA: Enable

Enable Arithmetic: Behavior Analysis

Video Detection Audio Detection

Save

Arithmetic: Behavior Analysis

Rule ID: 6 Valid

Rule Name: Mode6

Event Set: Loiter

Alarm Color: Red

No Alarm Color: Green

Alarm Time(s): 10

Sensitivity: 2

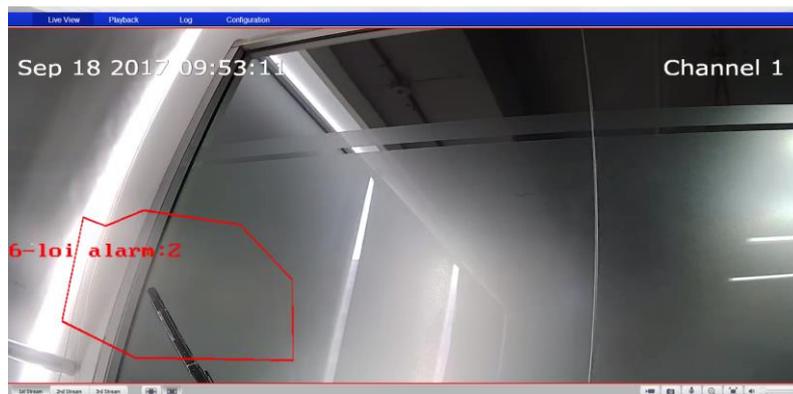
Min Area: 3%

Show Alarm Count

Show Alarm Rule

Display Target

Save



3. VCA Schedule

VCA 使用计划。

3.1 Rule ID, 查看所有建立的警报规则, 并选择需要的警报规则 ID。

Alarm Set

3.2 Schedule, 规则使用的时间。同一个规则 ID 一天内最多支持设置 4 个时间段, 也可以把一天的使用时间复制到多天。

Alarm Set

VCA Enable

Rule ID: 1:Tripwire

Rule Name: Mode1

Event: Tripwire Enable

Schedule:

- Monday
- Sunday
- Monday
- Tuesday
- Wednesday
- Thursday
- Friday
- Saturday

00:00 ~ 00:00

Copy To: All Sun Mon Tue Wed Thu Fri Sat

Link Type: Alarm Output

Output Port: All 1

3.3 Link Type, 警报关联动作

设置完成后点击 Save 保存, 警报规则使用配置完成, 摄像机会按照规则执行警报方案。

Alarm Set

VCA Enable

Rule ID: 1:Tripwire

Rule Name: Mode1

Event: Tripwire Enable

Schedule:

- Monday 00:00 ~ 23:59
- 00:00 ~ 00:00
- 00:00 ~ 00:00
- 00:00 ~ 00:00

Copy To: All Sun Mon Tue Wed Thu Fri Sat

Link Type:

- Alarm Output
- Alarm Output
- Link Rec
- Link Snap
- VisualInt Event

警报接口
录像
快照
VisualInt 事件

4. 警报输出设定 Alarm Output

如需要此功能需要布线至摄像机的 ALM 接口。

Mode Set: ON (摄像机内 ALM OUT 接口长开, 有警报闭合), OFF (摄像机内 ALM OUT 接口长闭, 有警报断开)

Delay Time: 闭合或打开的持续时间

The screenshot shows the 'Alarm Output' configuration page. The interface includes a top navigation bar with 'Live View', 'Playback', 'Log', and 'Configuration' tabs. A left sidebar menu lists various system settings, with 'Alarm Management' expanded to show 'Visualint Event Output', 'Alarm Input', 'Alarm Output', 'Mask Alarm', and 'Email Alarm'. The 'Alarm Output' section is active, displaying three configuration items: 'Output Port' (set to 1), 'Mode Set' (set to ON), and 'Delay Time(s)' (set to 10). Each item has a dropdown arrow and a red label: '警报输出端口', '端口模式', and '警报持续时间' respectively. A 'Save' button is positioned below the settings.

5. 邮件推送请查看《美国 Visualint 威视林特-摄像机邮件推送》文档