



# CathexisVision Analytics Matrix

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## Introduction

This document details CathexisVision's Analytics Suite. The following table details the availability of the CathexisVision analytics features. In the Analytics Matrix table, specific algorithms are grouped by analytics trigger type. Each algorithm is then indicated to be either included in the CathexisVision Package, or available for purchase as part of the CathexisVision Analytics Suites (I, II, III). The first year of release and inclusion of the algorithm in CathexisVision Packages is included.

## Analytics Features



Available Option within algorithm suite.



Available with license purchase.

### Notes:

1. The triggers are categorised.
2. Smart VMD is included with Professional and Premium packages, however a license is required on Lite and Core CathexisVision Packages.
3. Line Count is included with the VMS, however there is no trigger. The line count is only a number displayed on the screen showing the number of times an object has crossed the line. To trigger on speed, purchase Analytics level III and load Advanced Analytics.
4. The 'filter and track objects specialised ...' are not duplicated, they are under separate category options.
5. The counters are included with the VMS, but do not have triggers, just as in (3) a license is required. **Note** the following counting licenses are required: a license for each counter camera, a base license per site, an Analytics license for each double line counter, and a counting license (one per direction).
6. The Background models are included, however a minimum of a Level I license is required to be able to use Dynamic Background.
7. License III includes the features of license II and I, license II includes License I features.
8. The Advanced Analytics suite includes basic and intermediate features, and intermediate includes basic features.
9. For Object Classification: video overlays and the object classification metadatabase are available in Basic, Intermediate, and Advanced, as well as Analytics 1, 2, and 3. Object Classification filters (humans, animals, vehicles etc) are available for event recordings in Advanced and Analytics 3.
10. CathexisVision has developed Analytics features to specifically meet the demands of the COVID-19 environment. These are Mask detection, people proximity detection, and occupancy all available in Analytics I, II, and III and Basic, Intermediate, and Advanced.
11. CathexisVision has also integrated with third party camera manufacturers to develop thermal detection capability, allowing the Cathexis Software to read temperatures in the wake of COVID-19. Thermal Camera integration is available in analytics III.

## Analytics Matrix

Trigger	Algorithm Suite					Analytics License			Notes
	First Release	Single ALG	Basic	Intermediate	Advanced	Analytics I	Analytics II	Analytics III	
<b>Motion Detection</b>									1
Basic VMD Included in VMS	2015								2
Smart VMD (Lite/Core) eliminate flares track lighting changes (shadows)	2015	<input checked="" type="checkbox"/>				■	■	■	
<b>Line Crossing</b>									3
Simple Single Line crossing single or both directions	2015		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	■	■	■	
Line Count Included in VMS	2016								
Line Trigger	2015		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	■	■	■	
Segmented Line	2015			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		■	■	
Double Line	2015			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		■	■	
Speed	2015				<input checked="" type="checkbox"/>			■	
Filter and Track Objects specialised width & height filter	2016				<input checked="" type="checkbox"/>			■	
Filter and Track Objects specialised direction filter	2016				<input checked="" type="checkbox"/>			■	
Filter and Track Objects specialised speed filter	2016				<input checked="" type="checkbox"/>			■	
<b>Presence</b>									4
Simple Presence in an Area	2015		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	■	■	■	
Enter/ Exit Area	2015			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		■	■	
Time in Area (loitering)	2015			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		■	■	
Stop in Area	2015			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		■	■	
Queue Length		<input checked="" type="checkbox"/>					■	■	
Still object (object left-object removed)	2015	<input checked="" type="checkbox"/>					■	■	
Filter and Track Objects specialised width & height filter	2016				<input checked="" type="checkbox"/>			■	
Filter and Track Objects specialised direction filter	2016				<input checked="" type="checkbox"/>			■	
Filter and Track Objects specialised speed filter	2016				<input checked="" type="checkbox"/>			■	
<b>Counting*</b>									5
Top Down Head Counter standard (no trigger) included in VMS	2016								
Top Down Head Tracker standard	2016	<input checked="" type="checkbox"/>						■	
<b>Background Model</b>									6
Adaptive Noise Suppression (Included in VMS)	2017								
Dynamic Background	2017		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	■	■	■	
Accurate Tracking (Included in VMS)	2017								
Fixed lighting Included in VMS	2017								
Find Motion in area in scene Included in VMS	2018						Motion Search		

Detect camera shift: defocus / covered included in VMS	2017							Camera tamper	
<b>Object classification</b>									
OC video Overlays and object classification MetaDB	2020		☑	☑	☑	■	■	■	7
OC filters (Human, animals, Vehicles) for event recordings advanced	2020				☑			■	
<b>COVID-19 Analytics</b>									
Mask Detection	2020		☑	☑	☑	■	■	■	8
Proximity	2020		☑	☑	☑	■	■	■	9
Occupancy	2020		☑	☑	☑	■	■	■	10
Thermal Camera Integration**	2020				☑			■	11

**\*\*Note:** The thermal camera integration requires third party integration with thermal cameras.

## Conclusion

In conclusion, this document details CathesisVision's main analytics suite. For details on our integration analytics consult our integrations manual or individual integration manuals and white papers(<http://cathesisvideo.com/>) . For queries, contact [support@cat.co.za](mailto:support@cat.co.za) .