

IDC MarketScape

IDC MarketScape: Worldwide Video Surveillance Analytics 2021 Vendor Assessment

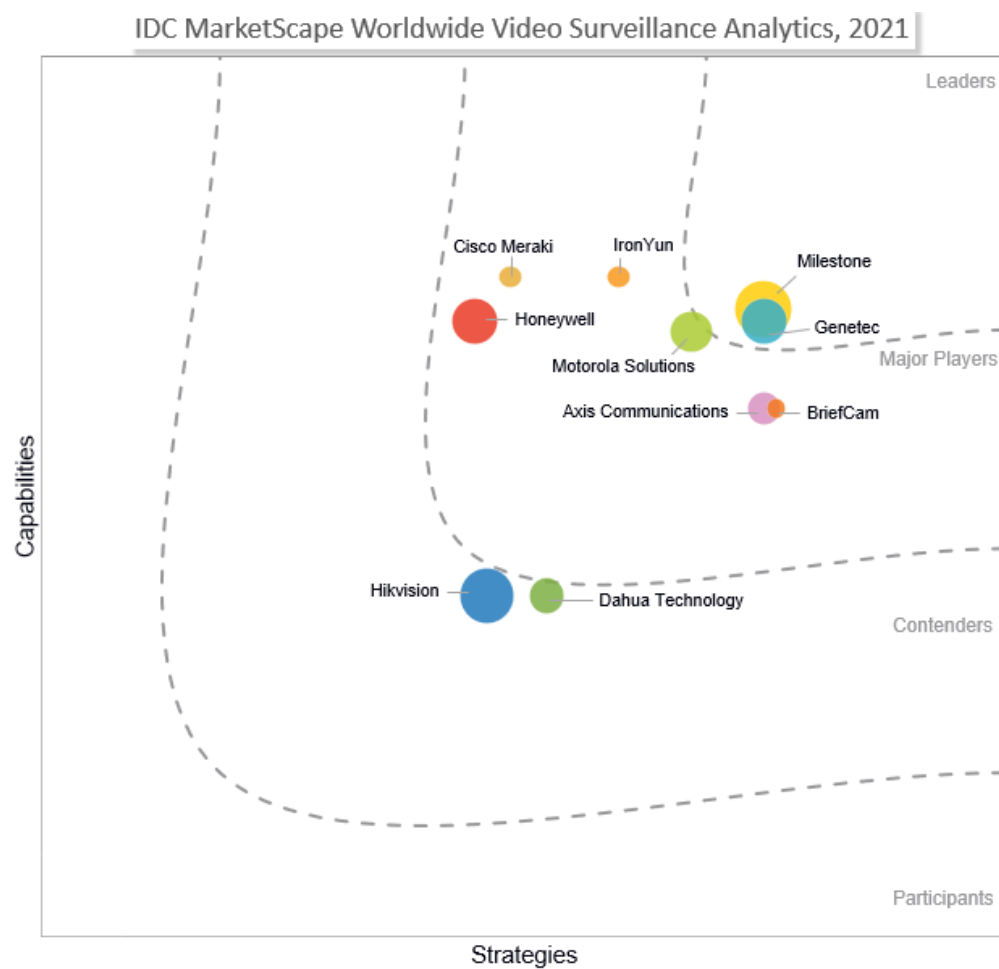
Mike Jude

THIS IDC MARKETSCAPE EXCERPT FEATURES: CISCO MERAKI

IDC MARKETSCAPE FIGURE

FIGURE 1

IDC MarketScape Worldwide Video Surveillance Analytics Vendor Assessment



Source: IDC, 2021

Please see the Appendix for detailed methodology, market definition, and scoring criteria.

IN THIS EXCERPT

The content for this excerpt was taken directly from IDC MarketScape: Worldwide Video Surveillance Analytics 2021 Vendor Assessment (Doc #US47659521e). All or parts of the following sections are included in this excerpt: IDC Opinion, IDC MarketScape Vendor Inclusion Criteria, Essential Guidance, Vendor Summary Profile, Appendix and Learn More. Also included is Figure 1.

IDC OPINION

The video surveillance market has been evolving quickly from a hardware-centric space to one that is dependent on software. The reason for this is simple: basic video surveillance has traditionally been based on human operators sitting before video monitors watching an analog video stream. When only a few cameras were involved, this was a sustainable approach. However, when many cameras are involved, this approach works less well. For video to scale, humans needed help.

Enter video management systems (VMSs). Using a VMS console, one human operator could manage many cameras and, although human observation was still required, video feeds could be selectively accessed, providing a force multiplication factor that increased the reach of video observation. For video to grow even further, and for video data to be utilized by business applications, more automation was required. This is where video surveillance analytics come in.

Video surveillance analytics utilize advanced algorithms, some involving artificial intelligence (AI) functionality, to offload the observation overhead from human operators. Automation can now detect threats, predict activity, track personnel, and perform other activities that previously required human interaction.

In this IDC MarketScape, IDC approached the market players from the perspective of the enterprise user. While it is tempting to compare vendors in some sort of absolute sense – treating this research exercise as a beauty contest of sorts – that is not the intent of this exercise. This research, instead, views the market players from the perspective of the enterprise customer. Based on survey data, IDC evaluated each vendor participant in terms of its ability to meet enterprise expectations for video surveillance analytics solutions. As a result, a company that might be a market leader when it comes to videocameras might not be evaluated as high when it comes to analytics. A company that has very advanced analytics capabilities might still be evaluated lower when viewed through the perspective of providing a complete continuum – VMS through analytics – of video capabilities. Ultimately, each vendor selected for this study is evaluated in terms of the user's needs.

One thing that will become instantly apparent is that the market is heavily skewed toward Major Players, with only a few Contenders and Market Leaders. The Market Leaders are not strongly in the lead, and the Contenders are very close to Major Players. The reason for this is simple: the video surveillance analytics market is relatively new and, from the perspective of technology buyers, there are no perfect solutions. This is both bad news and good news for technology vendors. On the negative side, it means that positions will change over time as technology buyers become more sophisticated.

On the positive side, however, it means that there is abundant opportunity in the market for both established companies and new entrants. IDC plans to revisit this market in two years with an updated

IDC MarketScape. It is expected that the next iteration will see major progress from the vendors featured in this study. Of course, user expectations will likely become more demanding between now and then as well.

IDC MARKETSCAPE VENDOR INCLUSION CRITERIA

One question that arises is why are only a few of the vendors for video surveillance analytics included? IDC currently tracks over 100 market players: trying to include all of them would have produced an ungainly analysis. Instead, IDC attempted to select the prominent players in this market – ones that satisfied the following criteria:

- Vendor supports VMS and/or video surveillance analytics capabilities at an enterprise scale and scope (more than 1,000 cameras).
- VMS capabilities either interface with or include video surveillance analytics.
- Video surveillance analytics capabilities supported include, at a minimum, object recognition, object counting, perimeter intrusion detection, and shape recognition.
- Video analytics include the capability to integrate machine learning and other AI capabilities.
- Sales to commercial and governmental customers of video surveillance analytics solutions totaled, at least, \$20 million (following generally accepted accounting principles [GAAP]) in CY20.

In addition, vendors were invited to participate, based on the criteria. Those included did so voluntarily and were instrumental in providing briefings, essential company information, and customer references. Ultimately, IDC believes that it received the support of the influential market participants and wishes to thank them for their assistance in preparing this study.

It does bear noting that there are several participants that IDC included but who never responded to requests for information or review. Because these players feature prominently in IDC research and since they are major influencers of the market, they were included, but the information utilized is primarily of a secondary nature. In these cases, however, intermediate analysis and evaluation results were provided to them for review.

ADVICE FOR TECHNOLOGY BUYERS

This study is not a beauty contest. It is an evaluation of technology providers with respect to user needs, as ascertained through market surveys. This approach tends to focus on market averages rather than market verticals. As a result, not every technology buyer's needs will be satisfied by any particular vendor. In fact, the video surveillance analytics market is characterized by integration, where various vendors' offerings are utilized to form a complete solution for a specific application. This means that this study graphic should only be used as a guide and then the specific vendors reviewed to determine the relevance of their offerings to the problem being addressed.

In spite of this approach, technology buyers can be assured that the vendors selected for review in this study are all capable of providing an end-to-end video analytics solution, some completely within their own product portfolio or through integration with other vendor offerings. It bears noting, though, that the more integration required, the more potential overhead associated with the analytics solution. Ultimately, this is a decision that is based on the acuity of the user need, with an eye toward the operational overhead to operate and maintain an analytic solution.

VENDOR SUMMARY PROFILES

This section provides profiles of the participant vendors. In each case, IDC wrote an initial profile and then invited the vendor in question to review the write-up and offer suggestions and comments. The intent here is to provide a brief overview of the vendor so that interested technology buyers can assess the vendor in relation to their needs. These profiles are not intended to be marketing collateral but are intended to give the vendor an opportunity to define its strengths and frankly identify weaknesses. Once again, these strengths and weaknesses are not absolute and must be assessed by the technology buyer in relation to specific needs.

Cisco Meraki

Cisco Meraki is positioned in the Major Players category in the 2021 IDC MarketScape for worldwide video surveillance analytics.

As a provider of smart video surveillance cameras, Cisco Meraki embeds VMS and analytics in the cameras and then provides a cloud-based platform for managing them. IDC estimates that Cisco Meraki has captured approximately 2% of the global video surveillance analytics market.

The Cisco Meraki MV smart camera solution set is subscription based, and for each camera purchased, a subscription is required to enable the VMS and to enable the analytics that are on board the camera. With integrated VMS and analytics, this makes setup and configuration easy and enables a wide variety of management to be accomplished through the same dashboard. Since the analytics applications reside in the cloud, access can be enabled from any web-connected device.

Cisco Meraki provides a complete solution in its MV smart cameras, which have integrated analytics, storage, and management. VMS and analytics applications are supported in the cloud over the Meraki dashboard and the Meraki Vision portal. Analytics are run at the edge on each camera and include motion analytics; motion heatmaps; object detection, for people and vehicles; audio analytics, including siren and alarm detection; and office occupancy.

Strengths

MV cameras perform advanced analytics, such as object detection and motion heatmaps, out of box and with no servers or extra software. These analytics are securely transmitted to the Meraki cloud to enrich interactions with recorded video; users can filter for camera events with people, adjust retention schedules based on areas of interest with motion, and set alerts for persons detected outside of business hours. Motion events are composited into a single image to provide minutes of video at a glance. For advanced use cases, simple configuration allows customers to transmit real-time analytics from one or thousands of MV cameras using MQTT and APIs. Meraki's partner ecosystem has 70+ applications built on top of MV analytics and can be deployed quickly, significantly reducing the customer's time to value.

Since its introduction, MV analytics have been computed directly on the device. This seamless cloud management with edge analytics means no servers to buy, install, and manage over time. Advancements in edge computing and machine learning will further improve the intelligence MVs can provide to customers.

Challenges

Cisco Meraki is one of several market participants that has adopted a subscription-based model for delivering VMS and analytics. This approach means that in order to derive the value of VMS and analytics from the camera hardware purchase, a subscription is required. At the same time, this integrated approach greatly simplifies setup and support. The downside is that the customer is restricted to a single vendor for its video surveillance analytics capabilities, unless the customer chooses to integrate RTSP, Meraki MV Sense detection APIs, or Snapshot API.

For midsize enterprises that are just adopting video analytics, this is probably not a major issue; however, for large enterprises that may have significant investments in existing video infrastructure, this could be somewhat problematic. In addition, since video is stored in the cameras, integrating video with third-party analytics applications is somewhat more complicated than with a strictly cloud-based solution.

Consider Cisco Meraki When

Enterprises that are adopting video surveillance analytics solutions to enable safety and security will be attracted to the ease of use that Meraki provides. Although the analytics set is not as extensive as that provided by some of the pure-play analytics vendors, the breadth of the analytics that Meraki delivers out of the box will be sufficient to cover many of the immediate use cases. For use cases that are addressed beyond what the dashboard-level analytics can provide, Meraki offers APIs and RTSP features that users can use. The flexible licensing and wide variety of cameras of Cisco Meraki also lend itself to businesses that want to implement analytical functionality with a minimum of hassle.

APPENDIX

Reading an IDC MarketScape Graph

For the purposes of this analysis, IDC divided potential key measures for success into two primary categories: capabilities and strategies.

Positioning on the y-axis reflects the vendor's current capabilities and menu of services and how well aligned the vendor is to customer needs. The capabilities category focuses on the capabilities of the company and product today, here and now. Under this category, IDC analysts will look at how well a vendor is building/delivering capabilities that enable it to execute its chosen strategy in the market.

Positioning on the x-axis, or strategies axis, indicates how well the vendor's future strategy aligns with what customers will require in three to five years. The strategies category focuses on high-level decisions and underlying assumptions about offerings, customer segments, and business and go-to-market plans for the next three to five years.

The size of the individual vendor markers in the IDC MarketScape represents the market share of each individual vendor within the specific market segment being assessed. These are somewhat subjective as many vendors cannot share their specific product revenues.

As will be noted, the graph segregates technology vendors into several broad nonlinear categories: Market Leaders, Major Players, Contenders, and Participants. These categories reflect the way in which video surveillance analytics vendors meet user needs in both the VMS and analytics continuum. As a result of this, vendors that are Major Players in aligned discrete markets – video analytics is an example – might not score as high in a space that looks at both VMS and video analytics.

IDC MarketScape Methodology

IDC MarketScape criteria selection, weightings, and vendor scores represent well-researched IDC judgment about the market and specific vendors. IDC analysts tailor the range of standard characteristics by which vendors are measured through structured discussions, surveys, and interviews with market leaders, participants, and end users. Market weightings are based on user interviews, buyer surveys, and the input of IDC experts in each market. IDC analysts base individual vendor scores, and ultimately vendor positions on the IDC MarketScape, on detailed surveys and interviews with the vendors, publicly available information, and end-user experiences in an effort to provide an accurate and consistent assessment of each vendor's characteristics, behavior, and capability.

Generally, this form of research is characterized as neither qualitative nor quantitative since it incorporates both, as well as the judgement of the analyst. This form of research is known as qualitative quasi-deductive (QQD) and depends on the triangulation of multiple data sources.

It is also important to note that, in this analysis, IDC takes the position of a representative technology customer. An important part of the analysis, therefore, is the ability of the vendor to succinctly state and defend a value proposition. This can be challenging, especially in a technology-heavy product; however, if a customer is making a technology purchase decision, it is often the simplest proposal that wins. Vendors that require the customer to conduct extensive research into their product offerings typically find themselves at a disadvantage simply because of decision-maker time and resource constraints.

Market Definition

This IDC MarketScape reviews the video surveillance analytics market. Video surveillance analytics are those products that enable the command and control of video surveillance camera constellations as well as the reduction of data from those cameras to actionable information. These products include video management systems (VMSs) and video analytics applications that interface with such systems. Video management enables such capabilities as video data collection, setting video recording settings, retrieval of video surveillance data, motion detection, and enabling camera control features such as pan, tilt, and zoom. Video analytics applications can include object recognition, object counting and perimeter intrusion detection, smoke and fire detection, shape recognition, and facial recognition. Video analytics can also enable postrecording forensic analysis as well as people and vehicle tracking.

LEARN MORE

Related Research

- *Worldwide Video Surveillance Camera Forecast, 2021-2025* (IDC #US46354621, July 2021)
- *IDC PlanScape: Video Surveillance Analytics* (IDC #US45516820, July 2021)
- *Worldwide Video Surveillance Analytics Market Shares, 2020: A Growing Market, But Messy* (IDC #US47132321, May 2021)
- *The State of the U.S. Video Surveillance Market: Results from IDC's 2021 Video Surveillance Survey* (IDC #US47639221, April 2021)
- *IDC TechScape: Worldwide Video Analytics, 2021* (IDC #US45516620, April 2021)

- *Video Surveillance Backhaul: Preparing for the Video Surveillance Deluge* (IDC #US46355021, April 2021)
- *Video Surveillance in Vertical Applications: Assessing Value of Video Telemetry in Non-Security Applications* (IDC #US47337420, January 2021)
- *Video Surveillance and Machine Vision in the 2020 Global DataSphere and StorageSphere* (IDC #US46847520, September 2020)
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Synopsis

This IDC study looks at those vendors that provide video management solutions as well as video analytics capabilities either natively or through integration with third parties. As this IDC MarketScape points out, the market is nascent and evolving quickly to more extensive capabilities. As a result, there are few prominent companies, with many companies poised to contend for market dominance. Potential video surveillance analytics buyers need to carefully consider their intended application of this technology, their potential uses of it in the future, and their tolerance for integration overhead before selecting vendors in this market.

According to Mike Jude, Ph.D., research director for IDC's Video Surveillance and Vision Applications research practice, the video surveillance analytics market is an exciting one that is rapidly adopting new technologies. Jude notes: "Video surveillance analytics is an early adopter of AI capabilities and is demonstrating that AI and other cutting-edge technologies can be applied to deliver better security and valuable business intelligence. Yet the market to deliver these capabilities is still evolving, and there are many players with excellent solutions. It is up to the business technology decision maker to determine what the intended uses of such technology will be and select vendors that can help address those use cases."

About IDC

International Data Corporation (IDC) is the premier global provider of market intelligence, advisory services, and events for the information technology, telecommunications and consumer technology markets. IDC helps IT professionals, business executives, and the investment community make fact-based decisions on technology purchases and business strategy. More than 1,100 IDC analysts provide global, regional, and local expertise on technology and industry opportunities and trends in over 110 countries worldwide. For 50 years, IDC has provided strategic insights to help our clients achieve their key business objectives. IDC is a subsidiary of IDG, the world's leading technology media, research, and events company.

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