



# Action Report

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## PROFESSIONAL AUDIOVISUAL INDUSTRY ACTIVITY REPORT

May 2023

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SOLOMON  
PARTNERS

May 2023

# SPECIAL HIGHLIGHTS IN THIS ISSUE

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- Solomon Global Media Group Summer Travel Schedule
  - Pro AV Industry Outlook
  - Key Industry Trends
  - Recent Earnings Summary & Commentary
  - Pro AV Industry Experiencing Consolidation
  - Trading and Valuation Update
-

# SOLOMON GLOBAL MEDIA GROUP SUMMER 2023 TRAVEL SCHEDULE



WORLD  
OUT OF HOME  
ORGANIZATION

JUNE 7-9

LISBON, PORTUGAL

Solomon Meet:  
June 8<sup>th</sup>



infocomm

JUNE 14-16

ORLANDO, FLORIDA

Solomon Meet:  
June 14<sup>th</sup>



JUNE 19-23

CANNES, FRANCE

Solomon Meet:  
June 21<sup>st</sup>



JUNE 27-29


CHICAGO, ILLINOIS

Solomon Meet:  
June 27<sup>th</sup>

TOKYO, JAPAN • AUGUST 31 – SEPTEMBER 1


# Recent Solomon Partners Transactions

MAY 2023  
\$275,000,000




Served as financial advisor to Wahoo Fitness on its out-of-court restructuring and growth financing

MAY 2023



Has been sold to



Solomon Partners served as financial advisor to Scene75

APRIL 2023

**VINCE.**

Majority sale of intellectual property to



Served as exclusive financial advisor to Vince

APRIL 2023



Sale to



Served as exclusive financial advisor to Prodigo Solutions

MARCH 2023

**Wilshire Indexes**

Received a strategic growth investment from



Served as financial advisor to Wilshire Indexes

MARCH 2023



Formed a China joint venture with and invested in



Served as financial advisor to DCP

FEBRUARY 2023



a portfolio company of



has merged with



Served as financial advisor to Pavement Partners

FEBRUARY 2023


**DESIGNER BRANDS** 

Has acquired



Served as financial advisor to Designer Brands


JANUARY 2023



Has sold a multi-decade lease of Times Square signage to



In partnership with



Served as financial advisor to Universal Branding Group

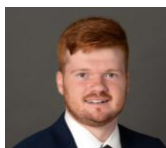
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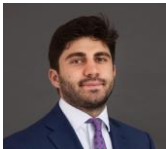
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Launching August 2023

# HOW AI COULD IMPACT THE ADVERTISING LANDSCAPE

Artificial Intelligence (AI) is transforming the world of advertising. With the increasing use of AI, media is undergoing a transformation in terms of advertising content, placement, and effectiveness.

The global market for AI in advertising is expected to reach more than \$100 billion by 2027<sup>(1)</sup>, driven by advancements in machine learning, natural language processing, and computer vision. AI has impacted advertising effectiveness; made advertisements more targeted, dynamic, interactive, measurable, and sustainable.

One of the main benefits of AI in advertising is the ability to analyze data and provide real-time feedback to advertisers. For example, by analyzing the demographic information of people viewing an advertisement, AI can adjust the advertisement to better suit the audience. This makes advertising more effective by targeting the right people at the right time with the right content and message. While demographic-based advertising is already widely used today, AI will effectively streamline this process by optimizing inefficiencies and removing middlemen.

AI has made advertising more dynamic and interactive. Digital screens with AI technology can change advertisements in real-time based on weather, traffic, and even the time of day. This means that advertisements can be more relevant and engaging and lead to a higher conversion rate. According to one study, using AI-powered dynamic outdoor advertising resulted in a 40% increase in ad recall and a 28% increase in brand awareness<sup>(2)</sup>.

AI has also enabled advertisers to measure the effectiveness of their campaigns more accurately. AI technology can track the number of people who have seen an advertisement, how long they viewed, and whether they took any action as a result. This information helps advertisers optimize their campaigns and improve their return on investment.

A study by a leading outdoor advertising operator found using AI to measure ad effectiveness resulted in a 25% increase in return on advertising spend<sup>(3)</sup>. Traditional measurement methods for outdoor advertising, such as counting vehicles or pedestrians passing a billboard, conducting surveys or polls, and measuring foot traffic, have limitations in providing accurate and detailed results due to the human error and efficiency constraints.

By analyzing consumer behavior and preferences, AI can help brands tailor their advertising campaigns to the specific needs and interests of their target audience. This can lead to a more personalized and engaging experience for consumers, which can improve brand loyalty and drive sales.

While the collection and use of consumer data may raise privacy concerns, AI in certain advertising channels, for example, outdoor advertising is safer compared to other mediums because it typically does not involve the collection of personally identifiable information (PII). In advertising, AI is primarily used for optimizing ad placement and targeting based on factors such as audience demographics, foot traffic, and weather conditions. This is typically done by analyzing aggregated data, such as foot traffic patterns, without collecting any personal information about individuals. In contrast, other advertising mediums like online advertising



and social media platforms collect a large amount of PII from users, including browsing history, personal preferences, and location data. This information can be used to target ads to specific individuals, which has raised concerns about tracking, privacy rights, data collection, and other issues with limited regulations. Advertisers need to be transparent about their data collection practices and ensure that they comply with relevant privacy laws and regulations. We expect this environment to grow increasingly more regulated, limiting the hyper-targeting data that the online advertising industry has leveraged to grow its share of the marketing mix in the last two decades.

Technology has undoubtedly advanced advertising, transforming its development and execution by

providing advertisers with indispensable tools for creating captivating campaigns and targeting the right audience. AI has the potential to further revolutionize advertising and media by making it more targeted, dynamic, interactive, measurable, and sustainable. However, as with the rapid outgrowth (and subsequent pullback) of data collection practices in digital advertising, advertisers must be cognizant of the potential concerns associated with AI's role in advertising. Advertisers especially must take steps to ensure they are collecting and using consumer data in a responsible and transparent manner. As AI technology continues to evolve, advertising is likely to become even more sophisticated and effective and provide brands with new and innovative ways to reach consumers.



1. Grand View Research; 2. Ocean Outdoor; 3. Clear Channel Outdoor

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# RETAIL MEDIA NETWORKS: A BOON TO DIGITAL SIGNAGE

Retail Media Networks (RMNs) are transforming the landscape of the retail industry as a source of additional revenue while enhancing the customer experience with more relevant advertising and promotions. Retail media is considered any form of advertising that occurs within a retailer's own properties, including a store's website or app – or even the store itself. eMarketer estimates that retail media ad spending will reach \$61.2 billion by 2024, accounting for approximately 20% of all digital ad spending<sup>(1)</sup>, with nearly three-quarters of brands now allocating dedicated advertising budgets to RMNs<sup>(2)</sup>. We expect the rapid growth in RMN ad spending will have continued benefits for numerous adjacent industries, notably digital signage companies that provide the technology to power in-store networks.

One of the major advantages of RMNs is their ability to track customer behavior and thereby collect first-party data. By monitoring which promotions and products customers engage with, retailers gain valuable insights into customers' preferences and buying habits. This data can be used to inform future marketing campaigns and product offerings. For consumer and retail brands that are looking for new ways to impactfully reach their target audience, RMNs provide a solution that is both effective and simple to implement. Food retailers are widely rolling out digital menu boards in place of static menu boards, allowing them not only to speak to consumers via motion and video, but also to customize offerings and advertisements based on time of day, weather, current promotions, and/or other contextual factors.

RMNs also have the ability to provide customers with personalized content. By using data analytics, retailers can create targeted promotions and recommendations based on a customer's purchase history. Not only does this make the shopping experience more enjoyable for the customer, but it also leads to a higher and more measurable return on ad spend. A recent report found that 70% of advertisers reported higher returns from their retail

media network spend than other ad channels<sup>(3)</sup>, while another study found 89% of brands reported high satisfaction with their retail media network campaigns<sup>(2)</sup>. With these kinds of reported results, the wave of companies adopting retail media networks as part of their marketing strategies will only continue to grow.



70% of advertisers reported higher returns from their retail media network spend than other ad channels



89% of brands reported high satisfaction with their retail media network campaigns

As customers increasingly expect a frictionless and contactless experience when shopping, stores have leveraged RMNs to simulate this experience in physical retail locations, relying heavily on digital signage. Walmart has successfully leveraged its "digital" RMN, Walmart Connect, in its physical stores. Through its network's 170,000 in-store TV and point-of-purchase screens, Walmart Connect provides advertisers with access to millions of shoppers each week. By leveraging Walmart's customer data, brands can create targeted campaigns that reach the right people at the right time in the right stores. As noted in the company's Q4 earnings release, Walmart Connect grew over 40% in the period, helping Walmart's ad revenue reach \$2.7 billion for 2022, with Walmart's management affirming that "these improvements underscore Connect's strengths and position the business for continued growth."<sup>(4)</sup>

Target is another retailer that has embraced RMNs. Its network, which is operated through the

subsidiary company Roundel, provides customers with personalized content and recommendations based on their shopping behavior, both on its e-commerce platform and physically through a network of digital screens. Roundel drove more than \$1 billion in value in 2021 and the company expects that figure to double over the next couple of years, citing growth over 60% in the last two years as a driver for its continued investment to the platform<sup>(5)</sup>. In addition to displaying ads from over a thousand brand partners, Target has also used its network to promote its own products, resulting in increased sales and brand awareness.

Kroger is another retailer that has seen success with its RMN. Its network, Kroger Precision Marketing, provides brands sold in stores access to Kroger's customer data, allowing them to create targeted campaigns that drive sales. Since the network's inception in 2017, Kroger spun off the division into a separate company, which generated a large portion

of Kroger's \$1.2 billion in operating profit from alternative businesses in 2022<sup>(6)</sup>. In late 2021, Kroger also announced a private programmatic advertising marketplace and rolled out the 84.51° Collaborative Cloud platform that puts transaction-level data into a privacy-compliant hosted environment.

As RMNs continue to gain traction in the retail industry, the digital signage industry as a whole is likely to benefit from the shift toward this new model. Retailers will look for more sophisticated solutions that provide personalized content and valuable data, while advertisers will be eager to tap into the vast audience that these networks provide. Whether through additional demand for existing technology such as digital menu boards or QR codes, or new, interactive technologies such as AI and virtual reality, the rise of RMNs will continue to drive demand for digital signage and other in-store and online media and tech services solutions.

1. Insider Intelligence Trends, Forecasts & Statistics; 2. The Trade Desk; 3. McKinsey & Company; 4. Walmart; 5. Target; 6. Kroger



## SOLOMON PARTNERS GLOBAL MEDIA GROUP

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# AV Industry Closed Q1 Out Strong

The AV industry continues to progress and expand

## INDUSTRY OUTLOOK

- The AV Sales Index closed Q1 strong with March yielding 66.0, up 7.8% from December Q4 2022 close of 61.2
  - The gap between North America and the rest of the world shrunk in the initial April reading of the international sales index outlook
- Expect strong growth rates similar to pre-COVID levels going forward, particularly as supply-chain issues improve

## GROWTH OPPORTUNITIES

- The continuous advancements in software enable Pro AV to tap into new target audiences, seize a larger market share and launch into new industries
  - Advancements in AI voice technology have already revolutionized the patient experience in healthcare facilities and can facilitate seamless conversations in a plethora of industries, including customer service applications
  - In the Pro AV space, sound masking technologies are gaining traction as they offer privacy in office environments, enabling distraction-free work and confidential conversations
- Hardware upgrades allow Pro AV to better user experiences, create new product lines and foster substantial growth opportunities
  - AV as a Service (AVaaS) has gained popularity as a cost-effective solution, allowing companies to access modern AV hardware without a significant upfront investment
  - The increasing demand for all-in-one video bars (sound bars with integrated cameras, microphones and speakers) arises from the need to streamline virtual meetings and technology requirements, while enhancing virtual collaboration and bridging the gap between remote and in-person participants

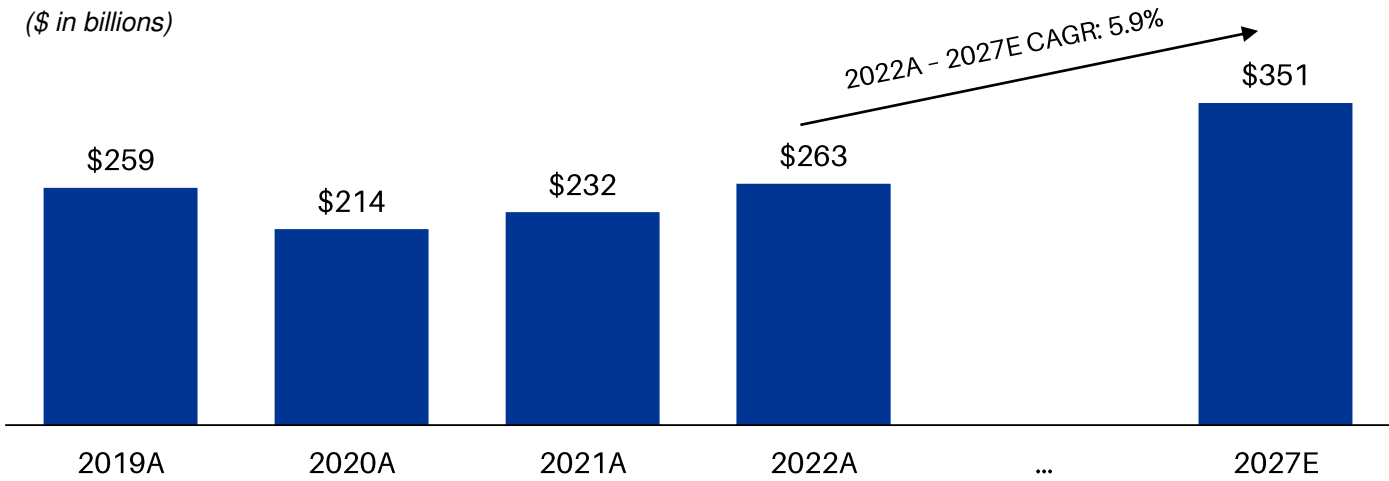
Source: AV Magazine, AVIXA, MarketScale and Pivium.

# Global Pro AV Industry Expected to Reach \$351B by 2027

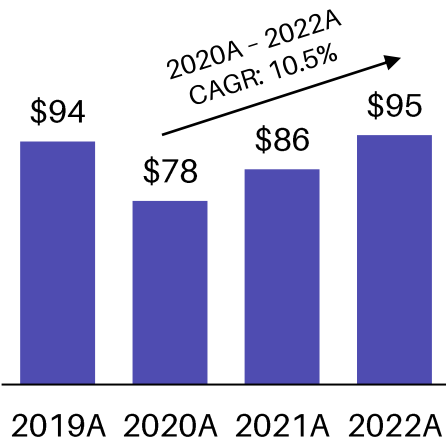
Despite macro economic conditions, the global AV market has seen a strong return of demand and recovery exceeding pre-COVID levels

## Global Pro AV Market Size Has Surpassed 2019

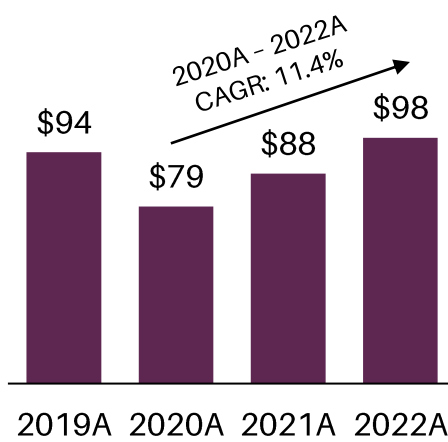
(\$ in billions)



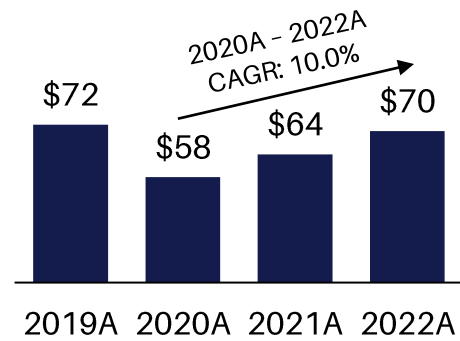
### Americas



### APAC



### EMEA



Rate of recovery varies across regions, with APAC as fastest growing region and EMEA facing greatest headwinds due to conflict in Ukraine

Source: AVIXA Market Report 2022.

# Pro AV End-Market Timeline to Recover

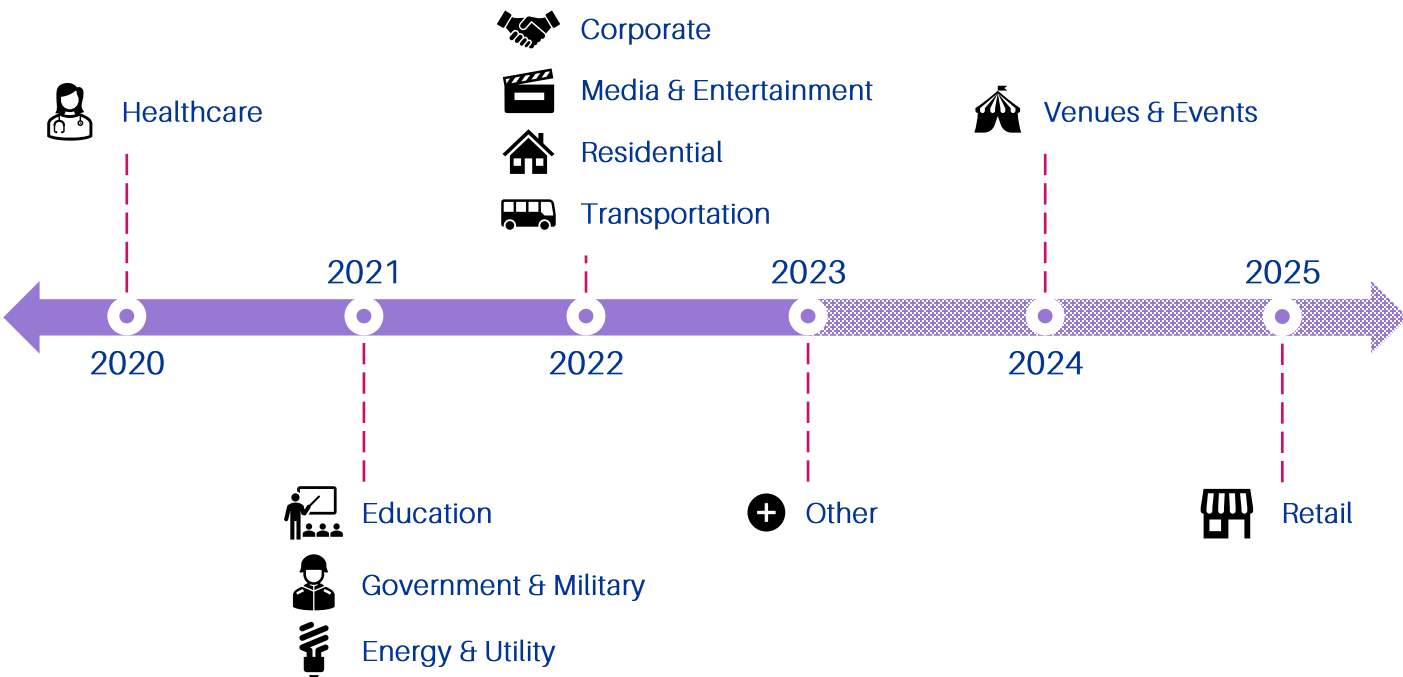
## Initial Recovery Phase (2021-2022):

- Gradual resumption of smaller-scale events and hybrid meeting
- Increased adoption of remote collaboration tools and virtual event platforms
- Market stabilization and early signs of demand resurgence

## Current Outlook (2023 and Beyond):

- Gradual return of large-scale events, conferences, and live entertainment
- Integration of emerging technologies (AR, VR, AI) into Pro AV solutions

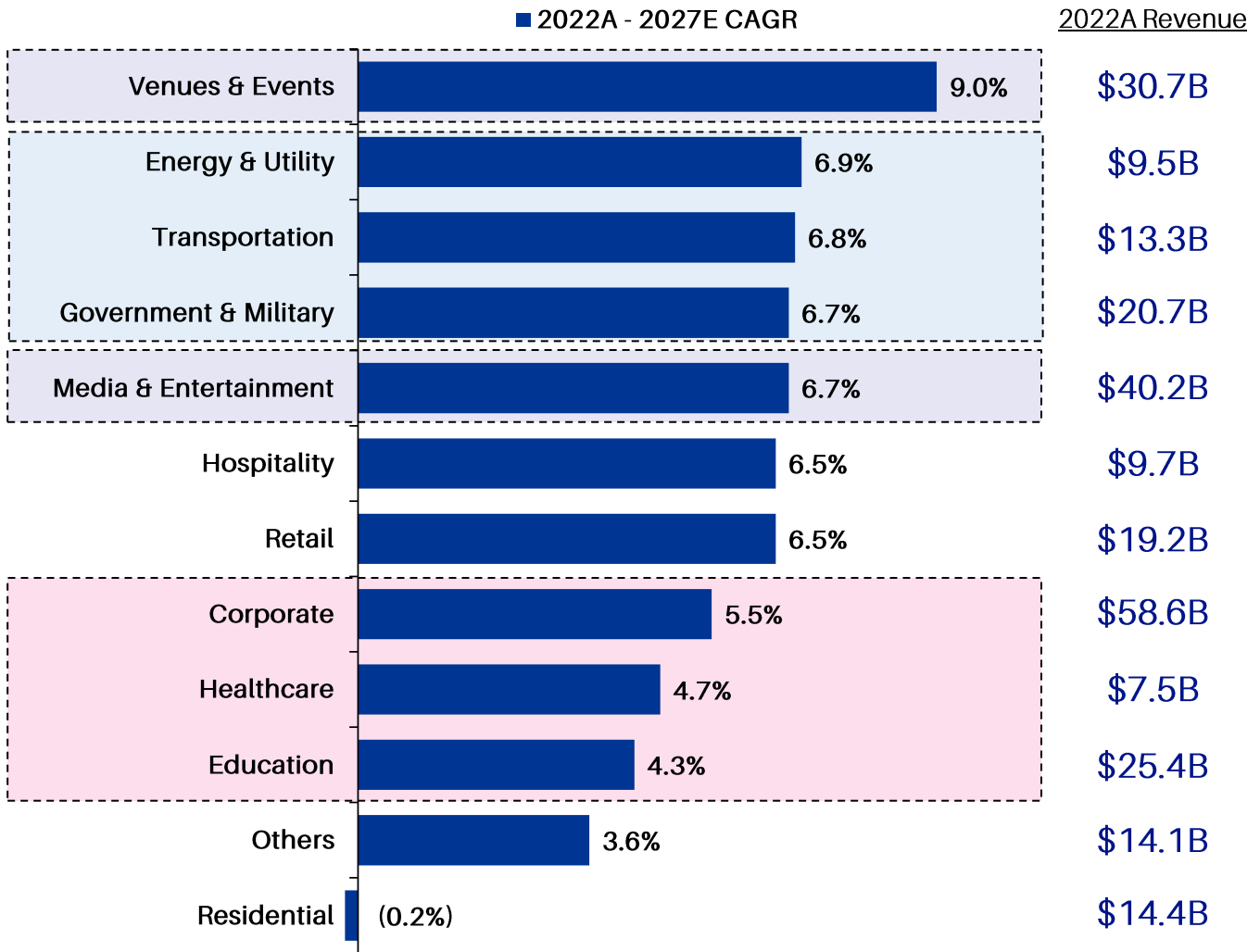
Healthcare and education responded to pandemic first, with lasting impacts to venues and retail reflected by longer recovery



Note: The recovery is the year in which revenues for pro AV exceed the peak values set in 2019.  
Source: AVIXA Market Report 2022.

# Pro AV End Market Growth

Investment shifting away from recovery with recession-resistant end markets among fastest growing



Total Pro AV Industry 2022A - 2027E CAGR: 5.9%

Performance / entertainment and live events solutions poised for growth


Recession-resistant end markets expected to benefit from stable investment

Growth expected to slow for adaptation solutions after strong investment made over past two years

Source: AVIXA Market Report 2022.

# AV Recent Earnings Summary & Commentary



3Q2023 Results <sup>(a)</sup>	<ul style="list-style-type: none"> <li>• 3Q23<sup>(a)</sup> Sales: \$185M               <ul style="list-style-type: none"> <li>• 32.5% YoY Improvement</li> </ul> </li> <li>• 3Q23 Adjusted Operating Income: \$11.7M</li> </ul>
(b)  Commentary	<ul style="list-style-type: none"> <li>• “The increase in gross profit for the third quarter of fiscal 2023 was primarily due to strategic changes in our prices beginning in late calendar year 2022 and throughout fiscal year 2023 and because of fewer disruptions during the third quarter of fiscal 2023...”</li> <li>• “Operating margin improvement was achieved because of a more stable environment, pricing actions that we took in light of supply chain conditions and inflationary pressures, product mix adjustments and prudent management of operating expenses.”</li> <li>• “The \$463 million of backlog coming into the quarter, coupled with easing in the supply chain, supported production stability and the third quarter’s record level of net sales.”</li> </ul>



YE '23 Results <sup>(c)</sup>	<ul style="list-style-type: none"> <li>• YE '23<sup>(c)</sup> Sales: £22,205M               <ul style="list-style-type: none"> <li>• 25.2% YoY Improvement</li> </ul> </li> <li>• YE '23 Adjusted Operating Profit: £655.7M               <ul style="list-style-type: none"> <li>• 11.3% YoY Improvement</li> </ul> </li> </ul>
Commentary	<ul style="list-style-type: none"> <li>• “From a geographic perspective...you see Continental Europe representing approximately 40% of the group, U.K. and Ireland, approximately 1/3 and then the balance is 26%, principally in North America.”</li> <li>• “Adjusted operating profit up 11.3% to just about GBP 656 million in the year, strong performance...with free cash flow conversion of 87% in the year. And again, keeping that progressive dividend approach that we’ve had over very, very many years in DCC with a 6.5% increase in our dividends.”</li> </ul>



YE '22 Results <sup>(d)</sup>	<ul style="list-style-type: none"> <li>• YE '22<sup>(d)</sup> Sales: £1,204M               <ul style="list-style-type: none"> <li>• 40.7% YoY Improvement</li> </ul> </li> <li>• YE '22 Adjusted EBITDA: £58.4M               <ul style="list-style-type: none"> <li>• 45.6% YoY Improvement</li> </ul> </li> </ul>
Commentary	<ul style="list-style-type: none"> <li>• “Our revenue was up 40% to GBP 1.2 billion...Half of our growth was organic and half through the acquisition of 2 businesses in the early part of last year. Our organic growth of about 20% was roughly double the rate of the market growth.”</li> <li>• “Nimans<sup>(e)</sup> joined the group in February last year, very long established, quite sizable business actually gives us further in relative the unified comms market on exposure to telecoms and particular networking and some other AV technologies.”</li> </ul>

a) Daktronics 3Q23 ended January 28, 2023.

b) On May 11, 2023, Daktronics secured \$100M in capital commitments, including a new three-year, \$75M credit line from JPMorgan Chase and a \$25M convertible debt financing agreement with major shareholder Alta Fox Capital Management. Daktronics’ credit line with JPMorgan Chase replaces the \$35M credit facility it had with US Bank.

c) DCC YE '23 ended March 31, 2023.

d) Midwich YE '22 ended December 31, 2022.

e) Nimans Limited is a UK based specialist distributor of unified communications, telecoms, collaboration and audio-visual technologies.

# Audiovisual Industry Continues to Consolidate

**SAMSUNG**

**eMagin**

- In May 2023, Samsung Display, a subsidiary of Samsung Electronics announced its acquisition of eMagin, an OLED microdisplay manufacturer headquartered in New York
- Strengthens Samsung's microdisplay and proprietary direct patterning (dPd) technology capabilities
- Partnership provides eMagin with the resources and expertise to expand product offerings and scale production

**Uniguest**

**BUNCH**  
and  
**Eversound**

- In May 2023, Uniguest acquired Bunch, a New York based enterprise video and collaboration provider specializing in delivery of video-based engagement solutions for businesses
- In May 2023, Uniguest acquired Eversound, a technology and content provider specializing in creating engagement for senior living communities
- Expands company's product offerings and introduces solutions to a wider audience

**Midwich**  
Group Plc

**nimans**

- In February 2023, Midwich Group Plc announced its acquisition of Nimans Limited, a UK based specialist distributor of unified communications, telecoms, collaboration and audio-visual technologies
- Strengthens Midwich's unified communication offerings and brings video security capabilities

**dancker**

**DBE Systems**

- In February 2023, Dancker acquired DBE Systems, an integrated technology contractor focused on delivering solutions for all connected technologies which communicate over copper, fiber and wireless
- Strengthens Dancker's ability to integrate architectural, furniture, technology and logistics solutions across its customer base

**AVI**  **SPL**

**ADTECH**  
SYSTEMS

- In January 2023, AVI-SPL announced its acquisition of Adtech, an audio-visual (AV) design and systems integration firm headquartered in Massachusetts
- Strengthens AVI-SPL's presence and operations in the Northeast
- Considerable opportunity from untapped demand for IT services, including unified communications (UC), collaboration and experience technology solutions

**AVI**

**neurilink**

- In December 2022, AVI Systems announced its acquisition of Neurilink, a full-service audiovisual design and integration business
- The acquisition expands AVI's service footprint in the northwest U.S. and allows the combined companies to bring AV and unified collaboration services to more customers across Idaho, Washington, Oregon, Montana and Utah

Source: Press releases, company filings and Wall Street research.

# Sector News

## Audio / Visual

- **5/16/23: Bang & Olufsen**  
announced new collaboration with Ferrari, one of the world's leading luxury brands, to make an exclusive series of co-branded audio products to be available in late 2023
- **5/11/23: Diversified**  
formally expands Partnership with Appspace to offer clients a unified workplace experience platform that can improve employee experience and achieve cost savings
- **5/3/22: ClearOne**  
launched eight new COLLABORATE® Versa® packaged hardware systems to provide optimized audio and video performance for office spaces with automatic voice tracking, face tracking and echo cancellation
- **4/20/23: Barco**  
announced partnership with National Amusements to bring Laser Projection by Cinionic to the circuit's theaters by gradually replacing legacy xenon equipment with state-of-the-art Barco laser solutions and integrated Barco Alchemy ICMP media servers
- **4/19/23: Sharp**  
introduced new line of value-priced AQUOS BOARD interactive displays that enable collaboration and communication in the workplace and classroom through precise 20-point, multi-touch functionality and versatile connectivity
- **4/18/23: Sonos**  
announced Sonos Pro, a new flexible software as a service (SaaS) offering that makes it easy for businesses to deliver great sound across each of their locations with remote monitoring and management, commercially-licensed music, personalized support and more
- **4/17/23: Exertis Almo**  
entered a distribution agreement to provide MicroTouch's full range of interactive touch displays, including its brand new 27-inch open frame touch monitors for retail and hospitality use, and new Mach series desktop and digital signage interactive touch displays
- **4/11/23: Bose**  
announced the sale of its commercial installation and conferencing businesses, the Bose Professional Division to Transom Capital Group, a leading operations-focused middle market private equity firm
- **4/10/23: JDI**  
will collaborate with HKC, a Chinese company, to develop a next-generation OLED display

## Digital Signage Hardware and Software

- **5/19/23: Sharp**  
launched its M751 large-format professional display, which offers a 75-inch screen, a high-haze antiglare panel with localized dimming capacity, variable content zoning, PQ/HLG/HDR10 support, integrated cooling fans and temperature sensors, integrated 10Wx2 speakers and compatibility with Energy Star 8.0
- **5/17/23: Intersection**  
launched Generative AI Integrations, a new AI-driven offering meant to increase effectiveness of digital OOH ads using the latest in artificial intelligence technology
- **5/17/23: LG Electronics**  
announced the launch of the LG CreateBoard series of digital whiteboard for educational environments, boasting a 40-point 1 multi-touch screen that provides smooth, interactive writing and drawing experiences and offers seamless collaboration with dedicated digital learning applications
- **5/16/23: Broadsign**  
announced the general availability of its Broadsign Ad Server platform, with aims to expand customer options for ad targeting, sales, and analytics in one-to-one digital out-of-home selling environments
- **5/5/23: Solotech**  
partnered with Papercast, an ePaper technology firm, to accelerate distribution of battery- and solar-powered ePaper displays by Papercast to North American bus stations
- **4/13/23: Creative Realities**  
announced a new agreement to deploy infrastructure solutions for up to 5,000 digital media assets for the Starlite Media network at large outdoor shopping centers anchored by big boxes and supermarkets throughout the United States
- **4/12/23: Unigest**  
releases Touchtown Digital Bulletin Board to deliver interactive content and drive resident engagement within senior living communities
- **4/3/23: Daktronics**  
selected by the Green Bay Packers to manufacture and install two main video displays, two auxiliary video displays and 60 concourse LED displays at Lambeau Field in Green Bay, Wisconsin

Source: Press releases, company filings and Wall Street research.

# Sector News

## Augmented Reality & Event Production

- **5/23/2023: DigiLens**  
is teaming up with Taqtile, a provider of augmented reality (AR)-based work instruction software, to provide a solution that will assist deskless industrial and defense workers to conduct maintenance, repairs, inspections and other procedures more efficiently, accurately and safely
- **5/17/2023: Campfire**  
announced the availability of its first-of-a-kind holographic collaboration system comprising a new multi-platform app for PC, Mac, and iPad and a specialized XR headset for PC
- **5/11/2023: Google**  
announced the launch of its new 'Geospatial Creator' tool that allows anyone to visualize, design and publish world-anchored immersive and augmented reality (AR) content in minutes, straight from Unity and Adobe Aero
- **5/3/2023: Taqtile**  
has developed an alternate approach to using physical QR codes with an always available option that uses reference points on physical objects instead
- **4/8/2023: Samsung**  
announced launch of Galaxy SmartTag+ that enables users to locate their items using augmented reality (AR) technology that visually guides them towards where their missing item is using their smartphone's camera
- **3/20/2023: Spatial**  
launched beta version of its Spatial Creator Toolkit to support gamification of immersive experiences
- **3/23/2023: Snapchat**  
announced it is launching AR Enterprise Services (ARES), a SaaS business, with its first solution Shopping Suite that includes virtual try-on features allowing customers to try on products like clothes, sunglasses and shoes

## Diversified AV

- **5/24/2023: Logitech**  
bolstered its range of conference cameras with the addition of an all-in-one appliance-based video bar, the Rally Bar Huddle, which offers built-in AI video intelligence and 4K image quality and is designed to deliver equitable video conferencing for rooms with up to six people
- **5/24/2023: LG**  
launched its new LG MAGNIT display for virtual production, capable of displaying digitally-rendered images in real time; synchronizing with monitors, cameras, camera trackers and production computers so that virtual and live-action elements can be seamlessly blended together
- **4/11/23: Sony**  
launched its measurement service and dedicated software for the 360 Virtual Mixing Environment ("360VME"), a spatial sound technology that uses headphones to reproduce the sound field environment of a reference studio with high precision
- **5/17/2023 Fulcrum Acoustic**  
announced the formation of Fulcrum Immersive following its acquisition of Venueflex to provide a complete set of hardware and software tools that enable designers and integrators to design and deploy immersive solutions in a modular, scalable manner from small to large
- **3/30/2023: Midwich**  
has opened a 1,200 sqft experience and demonstration facility in Edinburgh to showcase solutions from 15 vendors., allowing customers to experience the latest technology and leverage training, testing and demonstration facilities on site
- **4/27/2023: Panasonic**  
invests in Ubiden, an EV charging service startup, through Panasonic Kurashi Visionary Fund and will explore the potential for installation of EV charging facilities to be expanded to condominiums and other residential complexes, which has up to now been difficult to achieve for both physical and operational reasons

Source: Press releases, company filings and Wall Street research.



# Audio / Visual M&A

Recent deals in the Audio / Visual market

(\$ in millions)			EV as a Multiple of:		
Date Announced	Acquiror	Target	Enterprise Value	LTM Sales	LTM EBITDA
May-23	Samsung	eMagin	\$218	7.3 x	NM
May-23	Uniguest	Eversound	NA	NA	NA
May-23	Uniguest	Bunch	NA	NA	NA
Apr-23	Transom Capital	Bose Professional	NA	NA	NA
Feb-23	Midwich	Nimans	\$30	0.2 x	9.3 x
Feb-23	Dancker	DBE Systems	NA	NA	NA
Jan-23	Key Code Media	Access A/V	NA	NA	NA
Jan-23	C10 Media	ANC	NA	NA	NA
Jan-23	AVI-SPL	Adtech Systems	NA	NA	NA
Dec-22	AVI Systems	Neurilink	NA	NA	NA
Dec-22	AVI-SPL	Multimedia	NA	NA	NA
Nov-22	Uniguest	MediaStar Systems	NA	NA	NA
Nov-22	Solutionz	Spinitar	NA	NA	NA
Oct-22	Groove Technology Solutions	Ekho Comm	NA	NA	NA
Sep-22	ACT Entertainment	Ultimate Support Systems	NA	NA	NA
Jul-22	Livewire	Avico	NA	NA	NA
Jul-22	Sennheiser	Merging Technologies	NA	NA	NA
Jun-22	TPV Group	Philips Digital Signage	NA	NA	NA
Jun-22	Uniguest	CPI Global (Hospitality Division)	NA	NA	NA
Jun-22	Uniguest	Otrum AS	NA	NA	NA
Jun-22	AVI-SPL	Sonics AVI	NA	NA	NA
May-22	Spectrio	Ping HD	NA	NA	NA
May-22	AVI Systems	CIM Audio Video / CCS	NA	NA	NA
Mar-22	HP	Poly	\$3,300	2.0 x	14.7 x
Mar-22	Crestron	1 Beyond	NA	NA	NA
Mar-22	Disguise	Polygon Labs	NA	NA	NA
Feb-22	AVI Systems	Onsite AV Service Partners	NA	NA	NA
Feb-22	Kramer Electronics	UC Workspace	NA	NA	NA
Feb-22	Corbett Technology Solutions (CTS)	Systems Electronics	NA	NA	NA
Jan-22	RoomReady	Wired Technologies	NA	NA	NA
Jan-22	Utelogy	CloudThinQ	NA	NA	NA
Jan-22	Snap One	Staub Electronics	NA	NA	NA
Jan-22	Audinate	Silex Insight (Video Business)	NA	NA	NA
Jan-22	Solotech	XR Studios	NA	NA	NA
Dec-21	DCC Technology	Almo	\$610	0.5 x	8.1 x

Source: Press releases and company filings.

# Market Indicators

## Share Price Performance

	Stock Price 5/19/23	1-Week % Change	1- Month % Change	LTM % Change
<b>Audio</b>				
B&O	\$1.81	4%	30%	(21%)
Dolby	\$83.60	(1%)	(2%)	11%
Sonos	\$15.22	(3%)	(25%)	(29%)
VOXX	\$9.48	(21%)	(36%)	33%

	Stock Price 5/19/23	1-Week % Change	1- Month % Change	LTM % Change
<b>Visual</b>				
Barco	\$27.29	(1%)	(7%)	23%
Japan Display	\$0.29	(4%)	(17%)	(43%)
Konka	\$0.69	(1%)	(6%)	(3%)
Sharp	\$6.26	(6%)	(12%)	(26%)
TCL	\$0.52	1%	(9%)	(10%)

<b>Audio Median</b>		(2%)	(14%)	(5%)
<b>Audio Mean</b>		(5%)	(8%)	(1%)

<b>Visual Median</b>		(1%)	(9%)	(10%)
<b>Visual Mean</b>		(2%)	(10%)	(12%)

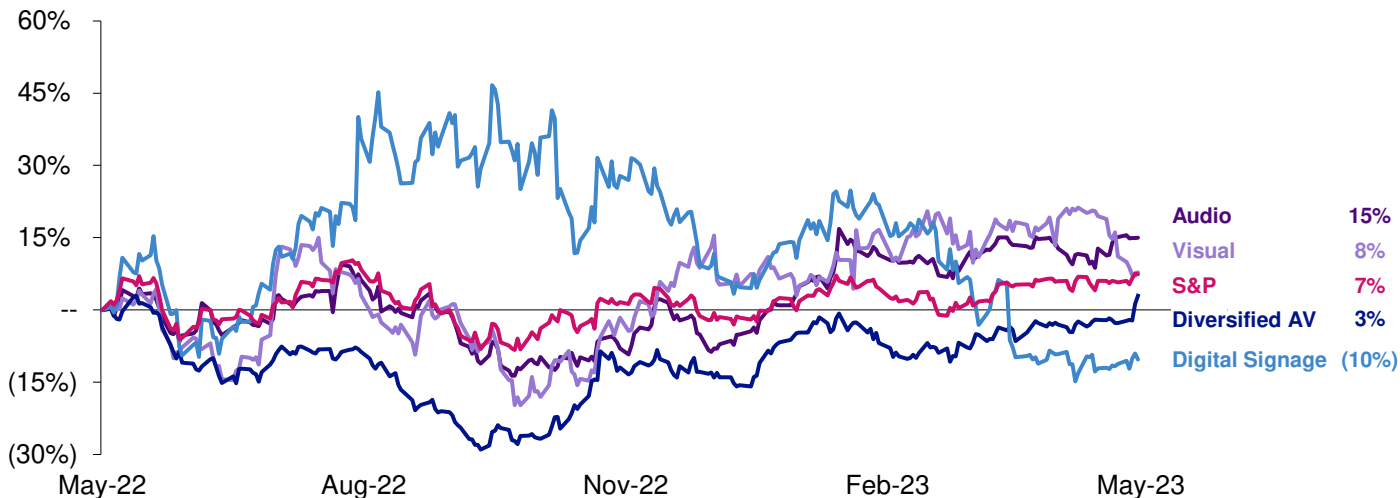
<b>Diversified AV</b>				
Creative Realities	\$2.42	(9%)	1%	15%
DCC	\$62.01	5%	4%	(12%)
Hisense	\$3.19	(2%)	2%	87%
Hitachi	\$60.31	4%	6%	17%
LG	\$85.59	3%	1%	7%
Logitech	\$65.76	4%	14%	12%
Midwich	\$5.83	(4%)	0%	(15%)
Panasonic	\$10.64	5%	11%	22%
Philips	\$20.44	(0%)	10%	(17%)
Samsung	\$51.63	8%	5%	(3%)
Sony	\$98.74	5%	8%	10%
Toshiba	\$32.69	1%	(0%)	(25%)

<b>Digital Signage</b>				
Acuity Brands	\$159.17	1%	(2%)	(5%)
AU Optronics	\$0.57	3%	(5%)	(22%)
Daktronics	\$5.89	9%	6%	85%
Dialight	\$2.85	0%	8%	(31%)
Ennostar	\$1.59	4%	(9%)	(26%)
Everlight	\$1.52	11%	16%	(1%)
Leyard	\$0.97	3%	(4%)	3%
LSI	\$13.06	6%	(1%)	95%
NEC	\$45.99	1%	21%	12%
Unilumin	\$1.42	6%	5%	63%
Wolfspeed	\$44.03	10%	(23%)	(39%)

<b>Diversified AV Median</b>		3%	4%	9%
<b>Diversified AV Mean</b>		2%	5%	8%

<b>Digital Signage Median</b>		4%	(1%)	(1%)
<b>Digital Signage Mean</b>		5%	1%	12%

## LTM Indexed Market Capitalization Performance

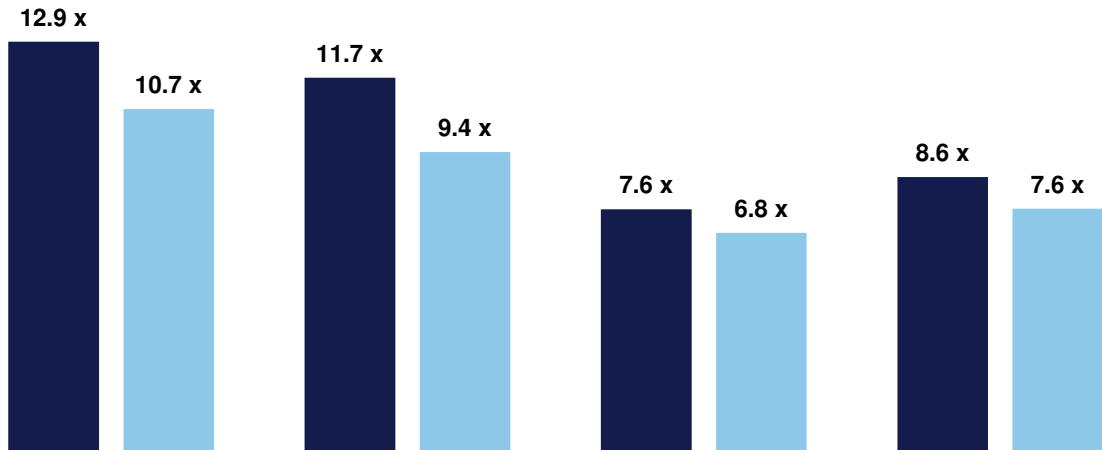


Source: Capital IQ as of May 19, 2023.

# Valuation Summary

Current market trading multiples

EV / 2023E EBITDA    EV / 2024E EBITDA



## Audio



SONOS



## Visual



KONKA

SHARP



## Diversified AV



Hisense

HITACHI



Panasonic

PHILIPS

SAMSUNG

SONY

TOSHIBA

## Digital Signage



Dialight

Ennostar



NEC

Unilumin

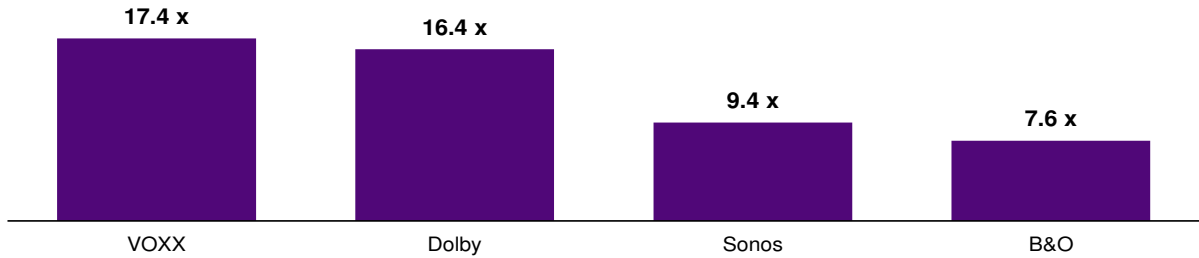


Source: Capital IQ as of May 19, 2023.

# EV / 2023E EBITDA

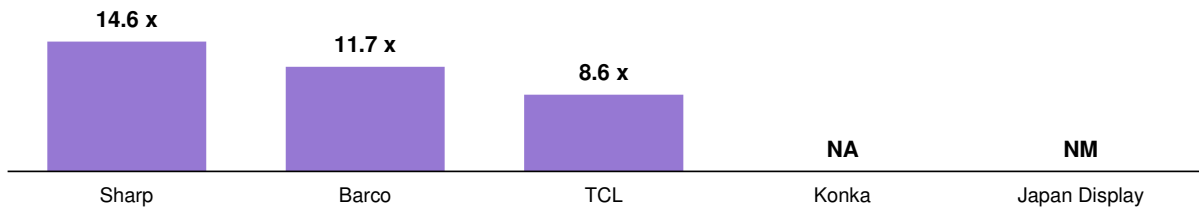
## Audio

Median: 12.9 x



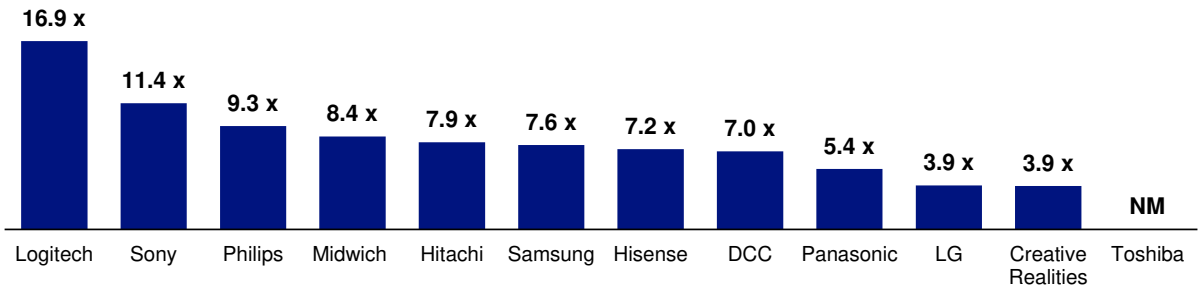
## Visual

Median: 11.7 x



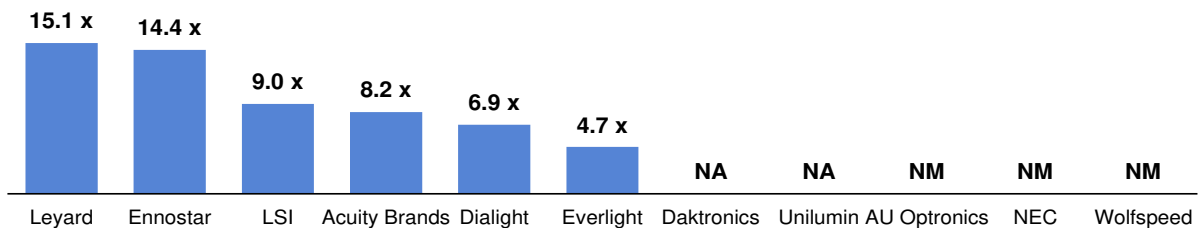
## Diversified AV

Median: 7.6 x



## Digital Signage

Median: 8.6 x



Source: Capital IQ as of May 19, 2023, Bloomberg and Wall Street Research.

# Valuation Metrics

(\$ in Millions, Except Per Share Values)

	Stock Price 5/19/23	52-Week Low	52-Week High	Equity Value	Enterprise Value	Valuation Multiples		Growth	
						EV / Revenue	EV / EBITDA	'21A - '23E	CAGR
						CY 2023	CY 2023	Revenue	EBITDA
<b>Audio</b>									
B&O	\$1.81	\$7.79	\$16.70	\$1,493	\$1,462	0.5 x	7.6 x	(0%)	9%
Dolby	83.60	63.44	86.41	7,984	7,175	5.5 x	16.4 x	2%	9%
Sonos	15.22	13.90	23.20	1,953	1,658	1.0 x	9.4 x	(2%)	(3%)
VOXX	9.48	6.21	14.70	220	215	0.4 x	17.4 x	(10%)	(28%)
<b>Audio Median</b>						<b>0.7 x</b>	<b>12.9 x</b>	<b>(1%)</b>	<b>3%</b>
<b>Audio Mean</b>						<b>1.9 x</b>	<b>12.7 x</b>	<b>(3%)</b>	<b>(3%)</b>
<b>Visual</b>									
Barco	\$27.29	\$20.11	\$30.34	\$2,469	\$2,205	1.7 x	11.7 x	18%	94%
Japan Display	0.29	0.28	0.53	1,327	1,137	0.7 x	NM	(16%)	NM
Konka	0.69	0.65	0.96	1,272	3,679	NA	NA	NA	NA
Sharp	6.26	5.38	8.45	4,066	7,533	0.4 x	14.6 x	(10%)	(39%)
TCL	0.52	3.28	4.37	67,305	277,372	1.5 x	8.6 x	8%	(1%)
<b>Visual Median</b>						<b>1.1 x</b>	<b>11.7 x</b>	<b>(1%)</b>	<b>(1%)</b>
<b>Visual Mean</b>						<b>1.1 x</b>	<b>11.6 x</b>	<b>0%</b>	<b>18%</b>
<b>Diversified AV</b>									
Creative Realities	2.42	\$1.70	\$2.71	\$18	\$31	0.5 x	3.9 x	NM	NM
DCC	62.01	\$48.88	\$73.13	\$6,123	\$7,796	0.3 x	7.0 x	11%	8%
Hisense	3.19	1.54	3.40	4,098	3,131	0.4 x	7.2 x	(2%)	36%
Hitachi	60.31	42.26	60.31	56,545	66,905	1.0 x	7.9 x	(14%)	3%
LG	85.59	54.55	90.37	14,603	22,008	0.3 x	3.9 x	2%	(1%)
Logitech	65.76	43.25	67.45	10,479	9,312	2.3 x	16.9 x	(17%)	(28%)
Midwich	5.83	4.86	7.79	515	675	0.4 x	8.4 x	18%	37%
Panasonic	10.64	6.94	10.64	24,826	30,101	0.5 x	5.4 x	(2%)	1%
Philips	20.44	11.84	26.23	18,020	25,645	1.3 x	9.3 x	0%	30%
Samsung	51.63	36.79	54.76	344,287	277,519	1.4 x	7.6 x	(7%)	(28%)
Sony	98.74	63.21	99.02	121,817	145,101	1.7 x	11.4 x	(1%)	(9%)
Toshiba	32.69	30.08	45.72	14,141	(79,376)	NM	NM	(9%)	(11%)
<b>Diversified AV Median</b>						<b>0.5 x</b>	<b>7.6 x</b>	<b>(2%)</b>	<b>1%</b>
<b>Diversified AV Mean</b>						<b>0.9 x</b>	<b>8.1 x</b>	<b>(2%)</b>	<b>3%</b>
<b>Digital Signage</b>									
Acuity Brands	\$159.17	\$146.36	\$200.08	\$5,014	\$5,170	1.3 x	8.2 x	7%	7%
AU Optronics	0.57	0.46	0.78	4,354	5,069	0.6 x	12.4 x	(23%)	(66%)
Daktronics	5.89	1.75	5.99	268	281	NA	NA	NA	NA
Dialight	2.85	2.36	4.40	94	134	0.6 x	6.9 x	13%	62%
Ennostar	1.59	1.26	2.21	1,193	924	1.2 x	14.4 x	(23%)	(50%)
Everlight	1.52	1.04	1.55	673	519	0.8 x	4.7 x	(16%)	(12%)
Leyard	0.97	0.75	1.09	2,464	2,468	1.7 x	15.1 x	1%	(2%)
LSI	13.06	5.53	15.88	359	408	0.8 x	9.0 x	13%	37%
NEC	45.99	31.59	46.26	12,249	15,607	0.7 x	5.9 x	(6%)	34%
Unilumin	1.42	0.75	1.45	1,544	1,403	NA	NA	NA	NA
Wolfspeed	44.03	39.48	122.07	5,481	6,266	6.8 x	NM	23%	NM
<b>Digital Signage Median</b>						<b>1.2 x</b>	<b>8.6 x</b>	<b>1%</b>	<b>2%</b>
<b>Digital Signage Mean</b>						<b>4.1 x</b>	<b>9.7 x</b>	<b>(1%)</b>	<b>1%</b>

Source: Capital IQ and Wall Street Research as of May 19, 2023.

# Upcoming Events

Dates	Name	Location	Description
June 7 – 9, 2023	<b>World Out of Home Organization Congress*</b>	Lisbon, Portugal	<ul style="list-style-type: none"> <li>The World Out of Home Organization's annual conference is scheduled for June 7th - 9th, 2023, in Lisbon, Portugal. The conference will feature leading industry speakers from across the globe representing all aspects of the OOH ecosystem</li> </ul>
June 14 – 16, 2023	<b>InfoComm*</b>	Orlando, FL	<ul style="list-style-type: none"> <li>InfoComm 2023 is the largest professional audiovisual trade show in North America, with thousands of products for audio, unified communications and collaboration, display, video, control, digital signage, home automation, security, VR, and live events</li> </ul>
June 19 – 23, 2023	<b>Cannes Lions Festival*</b>	Cannes, France	<ul style="list-style-type: none"> <li>The Cannes Lions International Festival of Creativity has championed creative excellence since 1954, providing the definitive benchmark for creativity that drives progress</li> </ul>
June 27 – 29, 2023	<b>P2PI Retail Media Summit*</b>	Chicago, IL	<ul style="list-style-type: none"> <li>P2PI's Retail Media Summit brings together the commerce community to help CPG brands and retailers navigate the complicated, rapidly shifting digital commerce landscape</li> </ul>
October 9 – 13, 2023	<b>Out of Home New York*</b>	New York, NY	<ul style="list-style-type: none"> <li>Out of Home New York, f.k.a. Digital Signage Week, is a week-long mix of conferences, showcases, cocktails, open houses, breakfast debates, tours and other ad-hoc activities</li> </ul>
December 2 – 5, 2023	<b>Digital Signage Experience*</b>	Las Vegas, NV	<ul style="list-style-type: none"> <li>Digital Signage Experience explores every aspect of digital and interactive display technology, from concept and design to content and analytics</li> <li>2023 event will be co-located with Questex's Live Design International (LDI), the preeminent event for the live events industry</li> </ul>

Stay tuned for additional Solomon Media events...

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\*Solomon to host cocktail/networking event



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