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INFOCOMM INDIA REJUVENATES WITH NEW STAKES

Installation:
History of Henan Brought to Life with Dante Network Design



Interview:
Marc Remond
President - APAC, Kramer

Special Feature:
XR Studio - The Game
Changer



KDS-7

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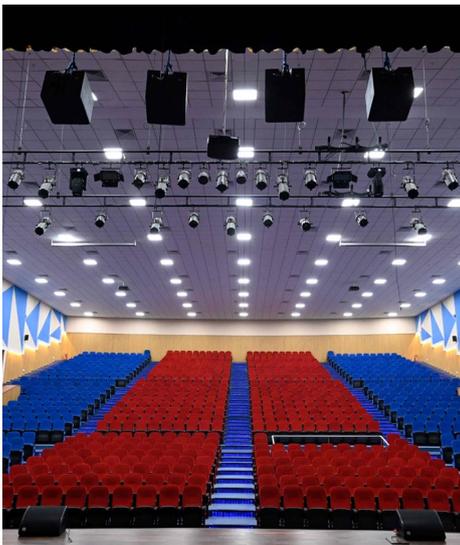
CONTENTS

Volume 21 Issue 10: OCTOBER 2022



10 NEWS

L-Acoustics Ensures Speech Clarity for At-Thohir Mosque Congregation



62 INSTALLATION

Audio-Visual Transcendence at Ahmedabad's Vastral Auditorium

04 FIRST WORDS

06 INTERVIEW

Transformation for Infinite Possibilities

39 SOLUTIONS UPDATE

48 SHOW REVIEW

InfoComm India Rejuvenates with New Stakes

58 SPECIAL FEATURE

XR Studio - The Game Changer

68 INSTALLATION

Inspiring 5,000-year History of Henan Brought to Life with Dante Network Design

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" If I speak from my own experience, IP is the future of AV. IP will become the next transform layer"

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Marc Remond
President, APAC, Kramer

To read more go to our
Interview article on page 6.

After over two and a half years, I finally stepped out of Singapore to India for the InfoComm India exhibition. I must admit that I had some trepidation about going to India. When I came out of the terminal, everything was as it was before COVID-19. Most people did not wear masks, and it was back to normal. Happy to say my visit went smoothly, and I returned healthily. The show itself went better than many might have expected. It was busy, and as you will read on the inside pages, the number of Made-in-India exhibitors stood out for the SI Asia team. Enjoy the read.



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Transformation for Infinite Possibilities

By Ram Bhavanashi

Kramer Electronics had been undergoing a transformation for a few months now- that is known across the industry rank and file. However, the Tel Aviv-headquartered AV gear manufacturer sprung a sort of surprise when it changed as well its Logo – an identity that stood for the Israeli AV major for over four decades – apparently as an indicative measure of the on-going developments in the company.



SI Asia caught up with Marc Remond, the company's newly-appointed President for APAC, during the recently held InfoComm India 2022 event in Mumbai- to know what the company is up with all those transformational developments. Excerpts:

SI Asia: Why did Kramer have to change its Logo ? This, after 40 years of successful business?

MARC: As part of the company transformation globally, we're looking at the transformation of the market as well. We are thinking carefully, how Kramer needs to go to market, in the backdrop of evolution of new, dynamic technologies. We have a very strong base of AV Systems Integrators throughout the region. While we value our Partners a lot, and continue to support them, we also need to acknowledge that there are also new players who are capable of providing unified communication solutions as well as IP-based solutions.

So, Kramer will expand the ecosystem of Partners in UC & Collaboration as also those strong in network integration providing end-to-end IP solutions including voice, video, network synergy to customers even as we continue to work with the existing partners who have helped us grow.

SI Asia: How does the new logo sync with Kramer's new philosophy?

MARC: Kramer has 41 years of experience in technology innovation and quality. We had been having very successful business for over four decades, but technology is changing, and company is changing as well. It is going through a transformation, and that transformation requires more than a change of the Logo. Logo is obviously the most visible sign of the transformation. It's more than just rebranding. We're talking about new Kramer, new culture, new strategy, and new energy as well.

Rebranding is our promise to our customers' empowerment as well. It's a value proposition to enable our customers with the delivery of superlative AV experiences that are engaging, and immersive by design.

SI Asia: It's more than evident now that the world is in 'hyflex' mode. What does Kramer intend to approach the industry with?

MARC: Kramer used to be AV in a box. As you can see the new Kramer Logo is more of software-centric,



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and motion-centric design. We are not looking at providing a product to customers, but end-to-end solutions which solve the challenges customers face. So, that is infinity look aimed at showcasing our vision, and our move towards software-oriented solutions architecture.

SI Asia: In the increasingly stereotypical world almost everyone is seen playing the game same way. How does Kramer intend to gain the edge?

MARC: The post-pandemic world is certainly hybrid. The pandemic has admittedly transformed the way we live, learn and work. Today, customers recognize the fact that whether one is in a classroom, meeting or at an event venue, one needs to engage not only with local audiences but also remote audiences at the same time. So, we're not looking at physical at one end, and digital at the other; we are rather at the juncture of physi-digi world, and we want to enable our customers with high quality, immersive AV experiences via an engaging connectivity between local and remote participants of the given setting.

So, it's a relevant timing for Kramer to provide end-to-end solutions to enterprise, education, government, hospitality and retail segments.

SI Asia: Kramer's product list has over 1000 items in total. Does an AV gear company need to make so many products? What is the philosophy?

MARC: Kramer is uniquely positioned. We are one of the very few companies that can provide end-to-end solutions to multiple industry segments. We also need to recognize the fact that different customers have different needs, and different markets are at different stages in terms of technology adoption. The breadth of our portfolio allows us to provide end-to-end solutions whether one wants full IP-based solutions, or HDBaseT as a transport infrastructure for audio and video signals, or even if one wants HDMI, we can do that or if one wants a mix of all the three, we can still do that.

We believe that we should have/use the right mix of infrastructure that is needed for the situation, or what is right for the space. Evidently, we have an extensive range of products from cable accessories and boxes, all the way up to matrix switchers, extenders, scalars and UC devices. I think the richness of our solutions is our strength.

As I just mentioned, different customers in different markets have different needs. The needs of customers in energy sector or enterprise sector in India are different from customers in similar segments in China and elsewhere. Just to give you an example, when you talk about AVover IP, China and Korea use 10G speed. But that may not be the case for India or even Singapore where customers are very happy with 1G speed, while customers in Indonesia or Thailand would still be preferring HDBasT solutions for the simple

fact that there is no high speed internet throughout the country. So, it makes sense for Kramer devise our solutions to cater to the needs of customers in respective markets.

SI Asia: Most of them must have become obsolete over time?

MARC: Obviously, part of this transformation is to look how extensive is our portfolio, and we need to make decisions to ascertain the life of various products. Yes, we are rationalizing our portfolio to be able have our solutions suitable for different needs of our customers. So, we will expand our portfolio for Controls, AVoverIP, UC, and the traditional ProAV as well. So, we want to maintain our edge to stay at the forefront of the market with end-to-end solutions for any segment of any level.

SI Asia: With the fast spreading high speed format 5G, how would it change the landscape of AV gear manufacturing? More so, for Kramer?

MARC: There is a lot of talk about 5G. It provides high speed Internet bandwidth, that everyone knows. So, what the most hungry application to run 5G is obviously video. And, 4K video. For Kramer, it doesn't really matter whether it is wired or wireless network to deliver high quality video or audio signal. We just have to look into the specific application. Not every customer requires a 4K60 to be delivered over 5G, but it does open the door to new applications, and new capabilities, that have not been possible until now. These solutions might be related to R&D, education, and telemedicine, just to name some of them.

SI Asia: The pandemic has pushed the envelope of ICT formats like Collaboration, IoT and UC further up. What other formats you think would come to the fore in the near future?

MARC: If I speak from my own experience, IP is the future of AV. IP will become the next transform layer. We have seen it on the voice side; I used to sell analog and digital PBXs. Voice moved from tanium-based to IP, now the voice of variety is everywhere. I have also experienced it in the world of VC that used to be based on ISDN, and other hardware-based infrastructure. It's now cloud-based and software-based running through IP networks.

So, I strongly believe the future of AV is IP. Every AV device moving forward would be the IOT-based device, connected to a network that can be monitored and centrally managed, and provide the data required.

SI Asia: With the threat of pandemic now largely diluted, and companies wanting their workforce coming back to offices, is the hype over "touch-less" AV over?

MARC: I think the fear of COVID-19 is passé. Most people have either been vaccinated, or got infected and cured too, leading to herd immunity. Being here at the InfoComm event, we are no longer giving fist-bumps, but are happily sharing the handshakes. Having said that, technologies brought to the fore are here to stay. Whether we walk into a classroom, or meeting room, technology's job is to make it not only easy but experiential for the users.

Kramer

STEVE BADHAM
TECHNICAL SALES

EMEA



in the region including the Barcelona Football Club's Camp Nou Stadium and EAW's first UK multiplex cinemas. In his new role, Badham will be instrumental in the sales process, as the EAW sales team will rely on him for technical expertise and consultation. As a liaison, Badham will also directly advise customers on product features and configurations.

EAW Welcomes Back Technical Sales Industry Veteran Steve Badham

EMEA: Eastern Acoustic Works (EAW) has announced that Steve Badham will be returning to the company covering Technical Sales throughout Europe, the Middle East and Africa. Badham has a long history in the professional audio industry and in particular with EAW.

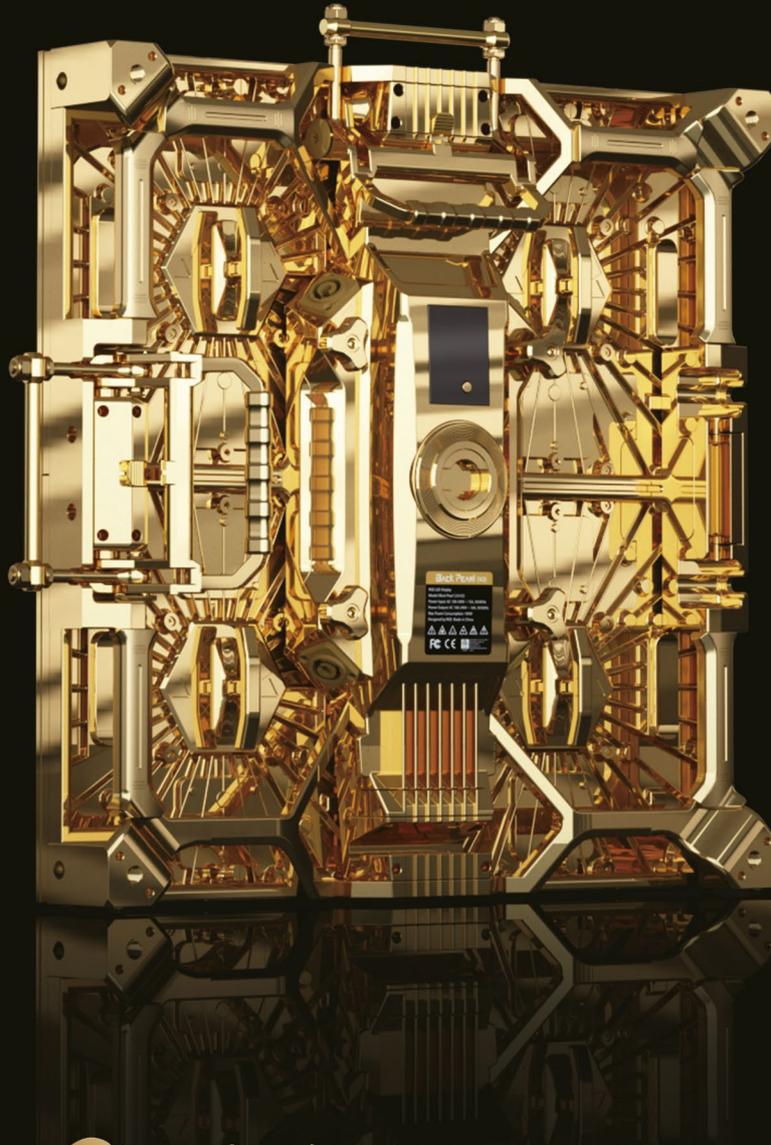
"We are excited to welcome Steve back to the EAW family," said EAW president, TJ Smith. "Steve's experience, product knowledge and technical savvy make him a great addition back to our team. With Steve's contributions and hard work, we look forward to continuing to grow the EAW brand in the EMEA territories."

Badham's association with EAW began about two decades ago when he held the position of European Technical Sales Engineer. During his time at EAW, Badham spearheaded several high-profile projects

"I have always liked the engineering aspect of EAW and am excited to be back with such a forward-thinking company," said Badham. "I firmly agree with EAW's core design philosophies such as focusing, symmetry of sources and spaced woofers for exemplary pattern control, and the broad product range gives me an enormous audio toolbox to work with. It's fantastic to be working with this talented and passionate group of professionals once again."

Badham has held previous positions in the pro audio and integration space throughout his esteemed career including Alcons Audio, Clearvoice Systems GmbH and Community Loudspeakers, and is also a member of the Institute of Acoustics (MIOA).

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Extron Connects Researchers with Peers Around the World at Korea Institute for Advanced Study

SOUTH KOREA: Korea Institute for Advanced Study - KIAS - was established by the government of South Korea to promote research in mathematics, physics, and computational sciences. The Institute is a destination for scientists from all over the world to conduct collaborative research. It hosts international meetings, seminars, workshops, and seasonal schools where participants exchange ideas across disciplines and disseminate research findings.

To further its collaboration goals, KIAS contracted with Seoul-based pro AV integrator Neuroo Digitech to design, install, and commission a professional VTC - video teleconferencing - system to connect its collaboration sessions, meetings, and seminars

to presentation spaces throughout the building and scientists around the world. Extron's NAV Pro AV over IP platform is at the core of the VTC system, providing a cost-effective and scalable solution to reach endpoints near and far.

KIAS required video teleconferencing connectivity between several meeting spaces within their building, plus the capability to connect overseas participants via the Internet. A 1 Gbps Ethernet switch performs AV matrix switching for the VTC system over the enterprise network. AV sources interface to the switch via NAV E 101 encoders which convert HDMI signals to Ethernet. The switch sends the selected sources to the desired displays through NAV SD 101 decoders which convert Ethernet to HDMI. Matrix switching and NAV encoder and decoder endpoint configuration are controlled by a NAVigator Pro AV over IP System Manager. Remote audiences participate via a VTC hardware codec and through Zoom.

Lectern mounted NBP 50 and NBP 200 Network Button Panels interfaced to IPCP Pro 250 and IPCP Pro 550 control processors turn displays on and off and adjust audio volume. Pre- and post-meeting AV

system configuration is performed via an interactive user interface on the lectern's iPad tablet, sending user selections through an IPCP Pro 350 control processor. The LinkLicense for User Interfaces upgrades on the IPCP Pro 350 implements the AV system control functionality on the iPad.

As they finalized the requirements for their video teleconferencing system, KIAS reached out to several AV system suppliers to explore options. Of all the suppliers KIAS approached, only Extron provided the level of support that KIAS felt their project deserved.

KIAS' comfort level with Extron was bolstered by the responsiveness and technical expertise of the people at Extron's nearby Seoul Regional Training & Support

Center. Extron's quotation was not the lowest bid, but KIAS recognized that the NAV AV over IP system was the most cost-effective solution for long-term needs. Once the VTC system was installed and fully operational, all stakeholders at the Institute were fully satisfied. In fact, according to Dong Hee Ahn, general manager at Neuroo Digitech, "Once KIAS decision-makers saw how the NAV Pro AV over IP design scaled so easily to accommodate meeting spaces of various sizes, they almost immediately began planning for future phased expansions of their VTC capabilities by adding more NAV Pro endpoints to extend the reach of their knowledge sharing events."

Extron

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AIMS
Alliance for IP Media Solutions

equipment, and we are now working hard to add more AV-over-IP products to our roadmap," said Manabe Yoshihito, executive general manager, Business Division, ASTRODESIGN. "IPMX is an open standard, and we believe it is an innovative solution that will lead the future."

AIMS Continues Growth with ASTRODESIGN, AVPro Edge, and Sencore

GLOBAL: The Alliance for IP Media Solutions (AIMS) has welcomed ASTRODESIGN, AVPro Edge, and Sencore as members. The three companies join AIMS as the adoption of SMPTE ST 2110 continues to accelerate in the broadcast market and as the alliance's Internet Protocol Media Experience (IPMX) set of open standards and specifications gains momentum in the Pro AudioVisual industry.

AIMS facilitates close cooperation between its members and leading standards bodies to ensure that the business and technical needs of broadcasters and AV professionals are met. In doing so, the alliance drives a comprehensive, ubiquitous set of IP standards that eliminate fragmentation and maximize interoperability.

Specializing in real-time, high-speed digital signal processing technology, **ASTRODESIGN** has developed several "world's first" products, including its many 8K devices. "ASTRODESIGN is a manufacturer with long experience in designing and developing video

AVPro Edge specializes in full-bandwidth audio-video distribution. Working with HDMI, HDBaseT, and HDCP, the company develops uniquely engineered solutions for today's integrators. "AVPro Edge has always put an emphasis on pushing technology into tomorrow, by partnering with AIMS we are doing just that, working with others in our industry to converge the worlds of IT and AV. Our expanding lineup of AV-over-IP products has been a huge success for us, and we want to ensure our lineup follows the agreed-upon standards for this type of technology," said Jeff Murray, president, and CEO of AVPro Edge.

Sencore is a leader in the development of reliable, cost-effective signal transmission and content monitoring solutions for the broadcast, cable, satellite, and IPTV markets. "Being a part of the AIMS Alliance is important to Sencore as we drive forward with SMPTE ST 2110, NMOS, IPMX, and other IP technologies," said Aaron Doughten, senior product manager at Sencore. "It's vital that we participate in the industry group that is promoting these standards to drive what we like to call 'competitive collaboration' in our industry."

"It's exciting to see ASTRODESIGN, AVPro Edge, and Sencore become AIMS members, as growing involvement in the alliance reflects the momentum of IP adoption across both the broadcast and Pro AV industries," said Andrew Starks, AIMS marketing work group chair.

AIMS Alliance

DISCOVER

HOW PRO-AV SOLUTIONS ENABLE DIGITAL TRANSFORMATION ACROSS ALL INDUSTRIES

The world has emerged richer with never-before-seen technologies. Pew Research Center predicts that by 2025, the world will tele-everything – telework, telemedicine, virtual schooling, e-commerce and more. This necessitates greater reliance on AI to mitigate the consequent increase in security risk. All these are unfolding at unprecedented speed – driven by Professional AudioVisual (Pro-AV) technologies.

Discover the latest Pro-AV solutions that are transforming every industry. Learn how they can take your business further – beyond a post-pandemic future. Gain insights into trends and developments from technology experts and industry leaders.

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Marc Rémond, Kramer's president of APAC and Stephen Yu, president of Versatech International

Versatech International Selected as Distribution Partner for Kramer in the Philippines

PHILIPPINES: Kramer has selected **Versatech International** as the distributor for the company's industry-leading range of professional audiovisual products in the Philippines. This agreement authorizes and enables Versatech International to market, distribute, and support the entire Kramer solutions portfolio and to deliver, through its wide network of AV and IT resellers, the most intuitive end-to-end audiovisual experiences.

Kramer's president of APAC, Marc Rémond, said: "I'm very excited to partner with such a professional, structured, and competent distributor to represent

Kramer in the Philippines. Through Versatech International, both IT and AV resellers and integrators will get access to secure and reliable AV products and obtain the necessary professional certification enabling them to offer Kramer audio-visual experiences that power creativity, collaboration, and engagement in the Physi-Digi world".

Management from both companies met in Manila for an in-depth discussion of the partnership and vision, as well as the official contract signing. This appointment falls under the Kramer ENGAGE partner program which is soon to be launched across the Asia-Pacific region. The new Kramer channel partner program is designed to Enable their Network (of partners) to Grow, Accelerate, Gain and Excel, or 'ENGAGE'.

The main objective of the program is to accelerate growth and profit for accredited channel partners and to ensure the utmost customer satisfaction. It focuses on engaging distributors, system integrators and resellers around product portfolio adoption, training, certification, and marketing efforts. In return

for their dedication and investment in promoting Kramer solutions, accredited partners will enjoy various benefits and incentives such as marketing development funds and special equipment discounts.

Since the beginning of 2022, Kramer has undergone a business-wide transformation and now seeks to power engagement with the most intuitive end-to-end audio-visual experiences for the AV industry. Kramer is focused on providing products, solutions, and services with a customer-centric approach and, by constantly listening to the market, helping end-users become more connected than ever before.

Stephen Yu, president of Versatech International, concluded: "Because of how embedded it has become, audio-visual technologies must be part of the conversation during budget formation and strategic planning. Delaying or excluding AV discussions will only amplify the risks of what has become central to how our world uses technology. The fact of the matter is that we are being called to deliver AV technology, and we believe that Kramer is the answer. Our partnership will help foster the future of digital engagement in the Philippines."

Kramer

- 

Smooth 8K
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L-Acoustics team of application engineers with Certified Provider trainees

L-Acoustics Hosts an In-Person Training “Bootcamp” for APAC Certified Provider Engineers

THAILAND: With renewed energy, L-Acoustics welcomed Certified Provider partners to a technical boot camp in Bangkok, Thailand, for the first time in two years. Finally, after years of online-only sessions, technical referent engineers from partner companies based in ten countries in the Asia Pacific region could gather in person to learn about the latest technologies from L-Acoustics and update their skills with peers from the region.

Welcomed by Tim Zhou, CEO of L-Acoustics APAC, up to a dozen boot camp participants shared and presented project case studies on the first day, highlighting their work with L-Acoustics products for various deployments. Rounding off the day, Francois Montignies, Head of Education Programs at L-Acoustics, shared updates to the L-Acoustics Education Outreach Program. Then, Damien Juhasz, Application Project Engineer APAC, introduced the technical referents to L-Acoustics’ latest range of products.

Montignies explained, “At L-Acoustics, our global education program is essential. It allows us to keep our Certified Provider partners and their dedicated engineers up to date with our products and technologies to offer the best quality of service to their end users.”



Tim Zhou, CEO at L-Acoustics APAC and the team welcomed Certified Provider partners to the technical boot camp

All L-Acoustics Certified Providers receive official training from L-Acoustics. This ongoing training ensures that partner engineers are as well-trained as L-Acoustics application engineers and that they deliver the same quality to clients around the globe.

Day two began with Juhasz delving into the best practices on project delivery and support between partners and an L-Acoustics application engineer such as himself, as well as running through the efficient methods when implementing an L-Acoustics ecosystem. For the rest of the day, Montignies, along with Alvin Koh, Director of Application APAC, and Regional Application Engineers Chung Wah Khiew and Frieda Lee, spoke about a range of updates to processes in 3D room modelling, line source optimisation, Milan-AVB products, system calibration in LA Network Manager and 3rd party control.

Alvin Koh also presented L-Acoustics software platforms such as Soundvision, hardware engines like the P1 processor, and L-Acoustics' range of amplified controllers: "We have all these amazing tools for designing and calibrating the best sounding systems,

but it does not just stop at releasing them. Training our partner engineers allows for optimal operation of these excellent resources."

On the final day, Montignies tutored participants on the workflow of tuning a system using the M1 suite of measurement tools. Adapting calculations and measurements from the P1 processor to the M1 software, he demonstrated how an L-Acoustics system is calibrated to achieve optimum sound coverage for any project. Montignies then delved into immersive audio with L-ISA in a live sound setting. Next, Alvin Koh illustrated specific L-ISA features, such as preparing spatial fills for object-based mixing. Damien Juhasz then capped the day with a demonstration of how L-ISA's Ambiance virtual acoustics system captures the acoustic energy of a space and transforms it through the spatially aware L-ISA Room Engine.

Participating engineers brainstormed ideas for potential forthcoming projects and asked questions of L-Acoustics application engineers who shared their insights and suggestions.

"Our R&D team regularly releases robust updates to all our premium offerings, so we must consistently train our partners. Keeping them up to date and offering our technical support ensures they can be confident with L-Acoustics products and technological advancements. It is invaluable when they propose an L-Acoustics system to clients worldwide," concluded Zhou. "I think our partners are as pleased as we are to do this training again in a face-to-face setting."

L-Acoustics



Barco Chosen as Preferred Visualization Partner for Innovative Design Company Expansion

SOUTH KOREA: d'strict is a global design company that creates end-user immersive experiences by integrating both content and digital media technology. It's the company that created the famous ARTE MUSEUMS in Jeju, Yeosu and Gangneung characterized by their colourful media art exhibitions with impactful visuals, sensuous sounds, and elegant fragrances for a truly immersive experience.

In 2021, the Korean company relied on Barco's projection technology for the first time to enable

immersive multimedia experiences in Yeosu and Gangneung. Now the companies are announcing a continuation of their successful collaboration to support d'strict's international ambition of expanding the successful ARTE MUSEUM digital experiences to various sites across the world in the next four years.

The framework agreement designates Barco as the sole supplier of all the projectors for d'strict's upcoming international digital art museum projects in the next four years. With this major business partnership, Barco and d'strict confirm their joint mission to deploy stunning multi-media experiences by combining imaginative art and innovative technology.

"After the first two installations, we've built a strong and trusted relationship with Barco," said Sean Lee, CEO d'strict. "They bring superior and innovative technology, service reliability and fleet connectivity. Three important elements in our global expansion

journey! This agreement gives us the guarantee that when extending our ARTE MUSEUM footprint globally, we can always give our visitors the same breathtaking experience - wherever whenever."

The agreement also places Barco as the sole projection technology partner for existing and future projects on both sides of the Pacific. The deal, with a total value projected to exceed 15 million euros, includes a hardware delivery of UDM and G-series DLP projectors, access to Barco's Insights Management Suite for global fleet management and a tailored high-standard service offering which is streamlined for all geographies.

"It's a true honour to be part of d'strict's international mission!" concluded Ta Loong Gan, global sales VP, Immersive Experience at Barco. "The size of the hardware agreement and the global nature of the service contract makes this one of the largest agreements ever for this market in Barco history. An important win in line with our ambition to keep on enabling immersive experiences all around the world."

Barco

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- High refresh and high brightness, clearer display
- Sport live video system, scoring system, perimeter system
- High protection, stable signal, guaranteed live broadcast

Get Ready for World Cup 2022



Vertiv Expands Distribution Agreement with Ingram Micro, Covering Key Southeast Asia Markets

SEA: Vertiv, a global provider of critical digital and continuity solutions, has expanded its go-to-market relationship with **Ingram Micro Inc.**, a global technology business leader, to cover Singapore, Malaysia and Thailand.

“We are pleased and excited about our new and growing relationship with Vertiv in this key regional

market,” Luis Lourenco, vice president and chief country executive for ASEAN and HK, at Ingram Micro, commented. “Throughout the years, we have seen increasingly strong demand for reliable, sustainable and highly-efficient power and cooling solutions for critical infrastructures and data centres. The addition of Vertiv’s solutions portfolio in our offerings will truly be beneficial for our channel partners and their customers.”

With this announcement, Ingram Micro’s regional channel partners can join the Vertiv Partner Program (VPP), and sell Vertiv’s enhanced suite of edge-ready products and comprehensive portfolio of IT technologies and services. This includes Vertiv’s Geist rack power distribution units (rPDU), Liebert uninterruptible power supplies (UPS), Liebert rack cooling systems, and dedicated software and services for partners and customers in the region.

Last year, Vertiv signed a distribution agreement with Ingram Micro covering the Australia and New Zealand markets and has continued to grow its relationship within the Americas. “This expanded agreement completes our regional alliance with Ingram Micro in Asia. We are looking forward to working together to address the digital infrastructure demands in the region,” said Daniel Sim, senior director for channel business at Vertiv Asia.

The expanded distribution agreement provides channel partners with industry-leading support solutions during a time when digitalization, 5G, IoT and other trends are driving growth and spending within today’s small and mid-size businesses to the largest of enterprise data centres.

“As businesses around the globe have now shifted to a digital-first approach, maintaining a resilient IT infrastructure has become more important than ever. With the help of Ingram Micro’s extensive distribution network, Vertiv endeavours to expand the reach of its infrastructure solution portfolio to help as many businesses as possible achieve and maintain business continuity,” said Paul Churchill, vice president for Southeast Asia at Vertiv Asia.

Vertiv

Combine & Capture AV Sources into Software



- Fuse camera and wired screenshare sources into engaging presentations for remote education, virtual conferences, and more
- Multi-input video capture hardware with switching and layout control
- Switch between sources or combine two inputs (picture-in-picture or side-by-side)
- Capture into popular Windows®, Mac® and Linux® software via USB 3.0
- Tablet app for advanced presentation features including annotations and media files



Avocor Partners with SISS to Grow Business in Key Target Verticals

INDIA: Avocor, one of the fastest growing global interactive display companies, has signed a new long-term partnership in India with Shree Info System Solutions Pvt. Ltd (SISS), a pioneer in IT product distribution in the region.

Headquartered in the USA, Avocor creates interactive solutions that enable people to communicate and collaborate more effectively together. The company is committed to developing products that stimulate engagement and teamwork, improving the way the world works and learns including in India, the fastest growing economy in the APAC region.

Avocor has built an impressive ecosystem of strategic partnerships with Google Meet, Microsoft Teams, RingCentral, Zoom, Logitech and other leading collaboration brands. The agreement with SISS will help to amplify these strategic product partnerships in India and drive new business opportunities.

Dana Corey, SVP and GM of Global Sales at Avocor is excited by the new partnership: "I'm delighted that we're partnering with SISS in India, a well-established and successful distributor of IT and AV products across the Indian subcontinent," he says. "The deal with SISS strengthens our existing presence in India and will allow us to implement our ambitious regional growth strategy for our market-leading interactive displays."

Avocor

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L-Acoustics Ensures Speech Clarity for At-Thohir Mosque Congregation

INDONESIA: Strategically located on the perimeter of the Podomoro Golf Complex in a leafy suburb of Jakarta, At-Thohir Mosque was built by the extended family of automotive magnate, the late Teddy Thohir. The graceful house of worship features 29 domes meant to signify family. The building, which can accommodate up to 1,900 worshippers, is a gift from a government minister to the local community and was inaugurated this spring by Indonesia's president.

Wishing to maintain the grandeur of the building—its clean white interior, tastefully adorned with gold calligraphy representing the 99 meanings of Allah—the

mosque's technical committee required a powerful and pristine sound system that would discreetly fit into the building's aesthetic. With recent government guidelines putting a cap on sound volumes at 100 decibels and limiting amplified audio to inside buildings, it complicated the sound system choice. To help them face the challenge, the committee turned to local Jakarta-based pro-audio supplier, PT Gracia Auvindo.

Hendra Halim, project manager and systems engineer at **PT Gracia Auvindo**, explained that in addition to the aesthetic and SPL requirement, installation options were limited in the 28.5m by 28.5m main prayer hall. Halim said, "In addition, the hall is constructed of marble and granite, creating reflective surfaces throughout, compounded by the inner side of a dome-shaped roof."

Halim worked with L-Acoustics Application Project Engineer APAC, Chung Wah Khiew, using L-Acoustics'



Soundvision to design a system that would minimize reflections by keeping sound on the audience area, avoiding the domed roof and reflective walls. “We mapped a Syva design in Soundvision and found that its 50-metre throw capacity would be more than sufficient for the 30-metre-deep prayer hall,” he explained. The graceful lines of Syva would also melt into the architecture, so Halim brought the design proposal to the mosque committee, noting that the system would be white to match the venue.

The final system design installed in the main prayer hall consists of 2 x Syva placed 4m high and serving as the main system. 4 x 5XT coaxial speakers serve as front-fill, while an X8 serves as centre-fill. Two additional Syva, mounted at 3.5m, serve as delay speakers. “The two Syva delays allow the mosque to avoid driving the main Syva at full power, thereby reducing reflections,” revealed Khiew.

Four additional 5XT coaxial speakers are installed in the antechamber, while two further 5XT are installed in the mosque’s basement, both of which are used for celebratory functions.

With the new sound system calibrated, the mosque committee is pleased with its excellent intelligibility and congregation members have commented on the clarity of the prayer services. “Working as a team with L-Acoustics and the At-Thohir committee, we’ve succeeded in overcoming important challenges to getting great sound in this space,” Halim enthused.

“Soundvision was especially helpful in ensuring that our team proposed and installed the ideal system, and the satisfaction of the committee and the congregation are a great honour for the PT Gracia Auvindo team and me,” he concluded.

L-Acoustics



Suzhou Bay Cultural Center Shines with ETC

CHINA: The Suzhou Bay Cultural Center has served as a benchmark for the city's successful economic and cultural development. Located at the shore of Lake Tai, one of the largest freshwater lakes in China, Suzhou Bay Cultural Center is one of the signature development projects initiated by Suzhou city through the Wujiang Lakefront Masterplan. The 215,000 m² centre consists of two wings, the Suzhou Opera House in the North, and Wujiang Exhibition Center in the South.

The two magnificent buildings are connected by a long rooftop ribbon-like arch. This huge ribbon waves and intertwines from the North wing to the South, forming a giant figure eight. The ribbon represents the silk and water sleeves of the Kunqu Opera and shows the cultural richness of the city. It also serves as a bridge

for pedestrians to enjoy the spectacular view of Lake Tai and the heart of Suzhou CBD.

The North wing features an Opera House, a black-box theatre hall, rehearsal rooms, art space, cinemas, and restaurants. The Opera House is an international opera theatre which has a 1600-seat capacity. Different from the neatly arranged auditoriums of a traditional theatre, this Opera House adopts an asymmetrical design. The seating area on the upper deck is designed like several small petals stacked on top of each other. The petal-like auditorium is a unique and poetic design that brings the audience a natural immersive and enjoyable experience. The theatre hall serves as a multi-function black-box theatre which has a capacity of 600 seats. The stage setting and auditorium will be specially arranged based on the requirement of each performance.

ETC gear including consoles, luminaires, dimmers, and networking systems are installed in the Opera House and a theatre hall. Two GIO consoles with 24K outputs are installed in the Opera House, and two GIO



@5 consoles with 4K outputs are used to control the lighting of the theatre hall. The venue's owner was impressed by the powerful magic sheet functionality which makes managing the fixture layout, and control and programming of buttons, faders, colours, and gobos, easier. The magic sheets also provide flexibility for the user to adjust the control to fit the needs of a variety of performances.

To enjoy world-class power and dimming control, ETC's Sensor3 ThruPower Dimmer and Relay modules are installed in the venues. These modules are popular in the theatrical industry as they are famous for their reliability and stability in smoothly controlling the intensity of all types of fixtures. Using the Sensor3 ThruPower module enables users to switch freely between constant circuits, on/off switching with true air-gap relays, and dimming the lighting loads. Luminaries from ETC "have been recognized as the standard lighting fixtures in the industry" and are widely used in theatres. This was the reason given for Suzhou Bay Cultural Center selecting Source Four LED Series 2 and ColorSource Spot fixture with CYC adapters as the stage lighting of the Opera House and theatre hall.

The lighting designer found Source Four LED Series 2 favourable as it brings high brightness from a variety of positions while having a low power consumption, thanks to its LED light engine. The lighting designer was also amazed by the rich and smooth wash of colour brought by ColorSource which can enhance the moods of every scene.

To have a reliable data distribution for all lighting technology in the venue, Response Mk2 DMX Gateways from ETC are installed to securely connect the sACN network to the DMX runs. They are also interoperable as it meets industry-standard protocols such as ANSI E1.31 (sACN) and ANSI E1.20 (RDM) using standard Ethernet cabling and infrastructure. Response Mk2 DMX Gateways once again impressed the venue owner as they offer a powerful, fast, and stable data distribution by the use of ETC's network technology.

ETC representatives said the company "was honoured to be selected to offer a comprehensive range of lighting technology to Suzhou Bay Cultural Center and be part of the city's cultural and artistic development journey".



ETC



ITL Technologies Installs HH Electronics Loudspeakers for Major School Redevelopment Project

NEW ZEALAND: Onehunga High School is a state co-educational secondary school serving one of the oldest suburbs in Auckland, New Zealand. Overlooking the Manukau Harbour, it was established on its Pleasant Street site in 1959 and enjoys a strong sense of tradition and continuity.

As well as providing a wide-ranging curriculum for its students, the School also provides lifelong learning for the local community through its Adult Learning Centre and English Language School. A significant redevelopment of the School was completed early in 2022 at a cost of approximately \$30 million, which saw the creation of multiple cutting-edge facilities. Two state-of-the-art teaching facilities were

constructed, one of which houses a two-basketball-court gymnasium with an exercise room, locker rooms and teaching spaces. The other is a technical block catering to the sciences, woodwork, metalwork, art, food technology and nutrition. Two commercial-grade kitchens and an atrium space completed this building.

An essential element of the new facilities was the provision for a flexible, high-quality audio system which could deliver clear powerful sound and excellent coverage. ITL Technologies of Auckland was awarded the AV contract and chose loudspeakers from UK-based HH Electronics. A combination of ceiling and wall-mounted speakers was installed to provide a competitively priced solution.

For teaching areas with suspended ceilings, ITL installed HH TNi-C4 ceiling speakers. Designed and engineered in the UK and delivering premium audio, the TNi-C4 is a passive 4" coaxial speaker with a fully enclosed backcan and ported enclosure to extend low-frequency response. A six-position power tap selector located under the front steel grille allows swift output adjustment once installed. With connectivity for 70V/100V and 8-ohm low impedance lines, the TNi-C4 delivers a highly flexible solution.

In areas where suspended ceilings were not present, audio continuity was maintained with the versatile HH TNi-W4 passive 4" wall-mounted unit. The TNi-W4 delivers professional audio output within a compact enclosure and features 4 power tappings ranging from 1.5W - 30W and can be connected to 70V/ 100V lines. With a wide array of connections within a single unit, the Tni-W4's multi-angled mounting bracket ensured quick and simple installation.

A total of 97 X HH loudspeakers were installed at the school. The gym block saw 19 units installed across 10 spaces, whilst in the technical block, 63 units were deployed across 20 teaching spaces. A further 15 units covered 6 spaces in ancillary areas. Onehunga High

School now enjoys audio to match its twenty-first-century facilities.

Ian Wright, global sales director at HH Electronics, is very proud that a significant number of HH speakers were installed at Onehunga High School for a solution that met the qualitative and budgetary requirements of its brand new, cutting-edge facilities. Adding, "The provision of excellent audio in education settings is an absolute essential for the successful delivery of a modern teaching and learning environment. We're very proud Thank you to our NZ distribution partner NSL and ITL technologies for choosing HH to be a part of this impressive project."

HH Electronics

PRAESENSA

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PRAESENSA combines the benefits of 90 years of Bosch PA experience with extensive customer insights. The result: a single system, fully IP-based and scalable, for more flexibility. It provides intuitive ease of use and adaptive amplifier power allocation, while saving up to 50% energy. PRAESENSA, designed to meet the demands of today, and tomorrow.



8 Channel Amplifier

Flexible channel output and built-in redundancy

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Desktop LCD Call Station

Graphical user interface for optimum user guidance and feedback



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Multifunction Power Supply

A versatile and efficient multifunction power supply

"The PRAESENSA Desktop LCD Call Station is characterized by very simple operability and confidence-inspiring control functions."

- Red dot jury statement



All components of the system are IP-networked for **highest flexibility and scalability**



No single point of failure with **built-in redundancy** is core to the system concept



Comprehensive system **adapts to changing needs**



Innovative amplifier architecture allocates power intelligently for **lower cost of ownership**



User-centric design delivers an intuitive interface with **feedback on progress and status**



Learn more at www.boschsecurity.com/praesensa





New Delhi's Zooey Goes Wild with Martin Audio

INDIA: Intimate and mysterious is South Delhi's latest culinary bar – Zooey. Located at the upmarket and bustling Defence Colony area, Zooey has quickly gained repute for its bespoke menu that spotlights a wide range of options that span pan-Asian, European and Mediterranean dishes – all of which are perfectly complemented by a heady range of cocktails and straight spirits that have been put together by star mixologist Yangdup Lama.

Spread across two floors, with lavish decor and interiors—think velvet sofas, chandeliers and brass statues—the space caters to those who enjoy outdoor seating under the evening sky, as well as those who

prefer a warm and comfortable ambience indoors. According to the venue's directors Vishnu Midha and Prem Chugh, "Zooey offers an escape from the everyday mundane, with scrumptious food, delectable cocktails and energy enhancing live gigs that will make you want to spill your secrets".

Being extremely passionate about the project and emphasizing the need to acquire only the very best of everything for their venue, it comes as no surprise that the directors desired a 'top-of-the-line audio system for Zooey. The idea and objective was to provide a space that delivered upbeat music both indoors as well as outdoors, without being too 'heavy' on the ears. And after much deliberation, the management chanced upon local system integration services specialist Bassline, represented by Varun Dua, who then teamed with Anurag Khurana of VMT Enterprise to propose a detailed design for the venue that

spotlighted a comprehensive system from niche audio manufacturer – Martin Audio.

The finally approved audio solution features an impactful front-of-house system in the indoor section that includes multiple units of the Martin Audio Blackline X15 loudspeakers paired with Martin Audio Blackline SX218 subwoofers. The combination of the dual-driver SX218 high performance subwoofers and the powerful X15 two-way loudspeakers provides a truly pristine sonic experience for patrons seated within the indoor section. Multiple numbers of the Martin Audio CDD5 compact surround speakers have been deployed as fills to efficiently cover ‘drop zones’ while discreetly blending in with the architectural ambience.

Moving outdoors, the main system features the use of Martin Audio’s SX118 subwoofers coupled with multiple units of Martin Audio’s CDD12WR weatherized loudspeakers. The combination of the compact SX118 high performance subwoofers and the CDD12WR two-way loudspeakers provides for an exceptional soundscape, while offering the assurance of consistent performance even in testing outdoor conditions thanks to the CDD12WR featuring a water and particle resistant grille made from zinc plated mild steel with powder coated finish. Multiple numbers of the weatherized CDD5TX-WR compact two-way passive micro speaker have also been deployed in the section to act as fills; with the entire loudspeaker system controlled and managed through the Martin Audio DX0.5 loudspeaker management system.

The venue’s directors Vishnu and Prem, both agree on the fact that the Martin Audio system installed at Zooley does deliver high-performance value and

a rich sound experience, as they affirm, “The diners are extremely enthralled by the sound. The system provides smooth coverage throughout the venue and brightens up the atmosphere. We are extremely satisfied with service and really happy with the system design.”

Speaking about the experience of successfully commissioning this project, Varun comments, “The fact that this venue has such an exuberant vibe is absolutely amazing. I have been more than satisfied with VMT’s, creativity and detail to design a system geared exactly to fit the venues needs. The system consistently delivers as promised.”

The sentiment of camaraderie is reciprocated by Jeff Mandot of VMT Enterprise, who shares, “It’s always a pleasure working with Varun and his team. Their fondness towards audio has enabled Martin Audio to enter the most luxurious venues in the city; and Zooley is another feather in our cap.”



Martin Audio



VuWall PAK Video Wall Node Now Compatible with Samsung The Wall MicroLED Video Wall

GLOBAL: VuWall is expanding the benefits of its PAK Video Wall Node Series with proven compatibility with Samsung's The Wall MicroLED video wall technology. The certification process tests critical functions and integration, providing peace of mind when selecting certified video wall processors with The Wall. Consultants and integrators will benefit from a simple integration experience and user-friendly control over The Wall, providing their clients with ideal picture quality so operators can stay focused on their mission.

"When we introduced the certification program last year, we collaborated with VuWall, as market leaders in the control room market, and set the standard for simplifying the design and deployment of video walls," said Simon Jackson, vice president at Samsung Electronics Europe Display. "We're pleased to add

VuWall's latest PAK solution to our growing roster of certified devices that work out of the box with The Wall."

Samsung's certification program aims to facilitate control room design, deployment, and operations to provide seamless integration and operation while delivering a fully optimized visualization experience. Throughout the certification process, Samsung and VuWall

have focused on the simplicity of the design and deployment of video wall projects, offering integrators a "control room in a box" solution.

In addition to signal compatibility, the certification also verifies the ability to manage non-standard resolutions, aspect ratios, and communications with The Wall, while maintaining outstanding picture quality and control over image parameters such as brightness and contrast.

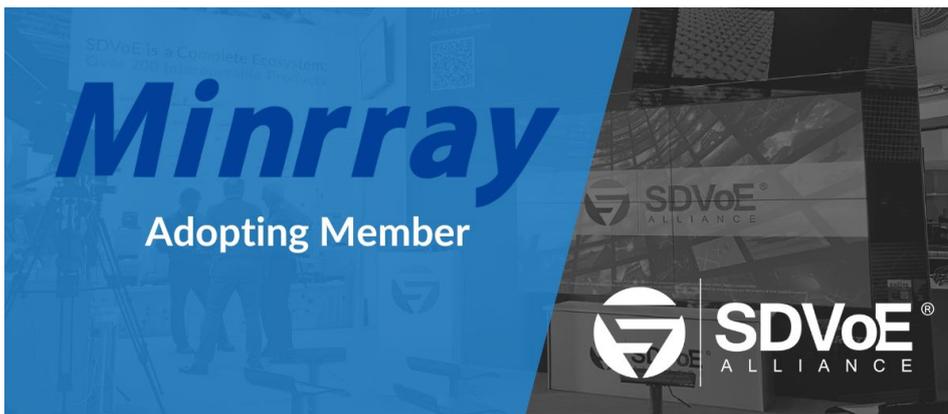
"Our goal is to continuously simplify control room design, which includes understanding how our solutions interact with the industry's leading video wall displays," said Paul Vander Plaetse, founder and CEO of VuWall. "The Samsung certification program is an invaluable service to integrators and control room operators who need to ensure that The Wall displays and other control room devices will work together flawlessly. PAK's certification is not only another exciting benefit in its development but a testament to our commitment to interoperability and simplicity."

VuWall's PAK offers an innovative way to deploy and manage modular video walls in AV-over-IP environments. PAK is a networked multi-decode node

that can also operate efficiently as a stand-alone device. For large displays, PAK nodes can be easily stitched together to build an IP-based video wall that is infinitely scalable and can function as a single large canvas. PAK simplifies video wall integration by reducing the need for long video cables and eliminating single points of failure to minimize risk and improve reliability.

As part of VuWall's ecosystem, PAK is managed by the TRx software platform. Today, it's possible to build a reliable, flexible video wall system quickly and cost-effectively over a distributed network with PAK, making it ideal for multi-room visualization, situational awareness, control room operations, and security applications.

VuWall/PAK Video Wall



SDVoE Alliance Welcomes Minrray as an Adopting Member

GLOBAL: The SDVoE Alliance, a nonprofit consortium of technology providers collaborating to standardize the adoption of Ethernet to transport AV signals in professional AV environments, announces that Minrray has joined the SDVoE Alliance as an adopting member.

"The SDVoE Alliance is pleased to welcome new member Minrray who supports SDVoE's sustainability

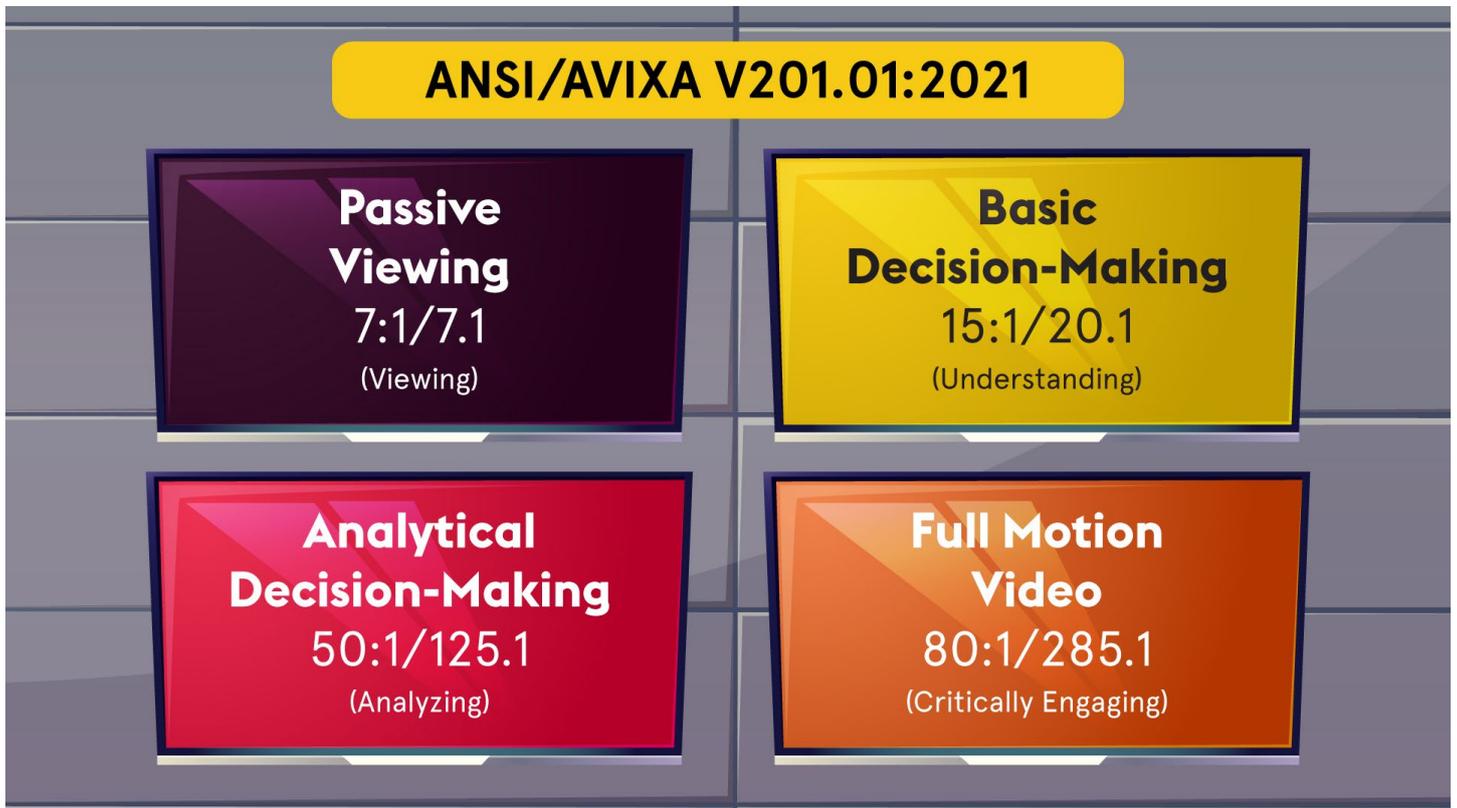
goals with their commitment to quality first and green manufacturing process," noted Justin Kennington, president of the SDVoE Alliance.

Founded in 2002, Minrray integrates manufacturing, research, and sales to provide

comprehensive solutions to its customers. Backed by a professional technical team with deep knowledge, Minrray has been awarded many patents in the fields of ISP algorithm, image processing, and encoding technology. With a focus on product development and technology research, Minrray is continuously working on higher resolution, better integration, and more intelligence.

"Minrray is pleased to become an SDVoE alliance member so that we can utilize the advanced technology and promote SDVoE technology and our SDVoE-enabled products," shared Robert Zeng, product director for Minrray.

SDVoE Alliance



AVIXA Launches New Image System Contrast Ratio Standard

GLOBAL: AVIXA, the Audiovisual and Integrated Experience Association, has released its standard Image System Contrast Ratio (ISCR). This standard defines acceptable minimum contrast ratios for AV presentation systems relative to their stated purpose or application.

“Presentation technology has fundamentally changed since the original PISCR (Projected Image System Contrast Ratio) standard was released,” said Jonathan Brawn, CTS, principal, Brawn Consulting, and co-chair of the standard’s task group. “Previously, while

direct-view displays were a strong part of the industry, projection-based display technology still influenced the majority of large format installations at that time. Today, direct-view technologies like very large format LCD, LCD video walls, and increasingly, DVLED have not only maintained being mainstream but are now the dominant technology in most instances. This drove a true need to update the original PISCR standard to reflect current technology.”

This standard replaces the PISCR standard published in 2011, which applied to projection only. As direct-view displays became more prevalent, AVIXA assembled a task group to assess the technological characteristics of direct-view displays to determine whether the differences in technologies would affect how image system contrast was assessed.

The task group concluded that the measurement used in the original PISCR standard was equally appropriate for direct view displays. However, the addition of sequential (also called full on/off or inter-frame) testing was deemed necessary to accurately characterize the image system's contrast for any technology. Sequential testing enables AV professionals to effectively measure high-performance display technologies that can create high contrast ratios in a wider range of environments.

The new ISCR standard is designed to facilitate informed decision-making for projector, screen, and direct view display selection relative to location and stated purpose. Additionally, the metrics (the contrast ratios) and classifications (the viewing categories) in this standard may be used to establish design criteria for new systems. Requirements of this standard apply to:

- Planning and designing image system installations
- Setting minimum and optimum contrast ratios relative to stated purposes
- Testing and signing off on completed image system installations
- Determining remedial solutions for a system not conforming with this standard or inadequate for the stated purpose.

The standard's four contrast ratios are based on the following content viewing requirements:

- Passive Viewing
- Basic Decision Making
- Analytical Decision Making
- Full Motion Video

"This standard helps our industry to address our customers' needs," Justin Watts, CTS, senior AV design engineer, and co-chair of the standard's task group.

"In new systems, we can deliver a superior experience by providing display solutions that meet or exceed the performance requirements for the core applications we represent. It's also a powerful tool for existing systems, where we can evaluate their performance and provide sometimes needed justification for updates, upgrades, or changes to [the] environment to maximize investments."

To learn more, register for the webinar "**Leveraging the AVIXA Image System Contrast Ratio (ISCR) Standard**" led by Jonathan Brawn and Justin Watts on October 12 2022.

The ISCR standard is free for AVIXA Premium and Elite members. Click [here](#) to download it.

AVIXA is an ANSI-accredited Standards Development Organization (SDO). The work of preparing standards is carried out through AVIXA Task Groups with oversight by the AVIXA Standards Steering Committee and governed by the AVIXA Board of Directors.

AVIXA



LianTronics Fine-Pitch LED Walls Feature in Qatar's Largest Television LED Display Project

QATAR: Alaraby TV began broadcasting in its new headquarters in Lusail city, Qatar on August 30th 2022. And it is within this new studio facility that IDEAL SYSTEMS - the official systems integration partner for the entire project - have successfully commissioned over 430sqm of LianTronics' fine-pitch LED walls. As it stands right now – the new Alaraby studio facility currently holds the distinction of playing host to the largest television LED display project in Qatar. Launched in 2015, Alaraby TV is a public TV channel that broadcasts high-quality content including news, social, political, cultural, and entertainment programs for a dedicated Arab audience. After years of operations in London, Alaraby TV officially announced its move to Qatar, with the view to get closer to the Arab public, and allow for more seamless coverage

of the region and its current affairs while maintaining a commitment to high standards of ethics and objectivity.

A giant curved LED video wall embeds a semi-annulus-shaped studio, with 23 sets of smaller rectangular LED screens scattered on both sides extending to the control area. These video walls are assembled using LianTronics VF1.5 fine-pitch LED video walls that feature high refresh rate of 3840Hz to deliver ultra-smooth broadcasting of the content that's been captured through various camera sources. What's more, the LED walls adopt specialized nano-coating craftsmanship to improve resistance capabilities against dust and moisture; thereby offering a more stable run cycle.

It is also worth mentioning that there is another movable ceiling-to-floor curved video wall in front of the shooting area; which is composed of 3 individual screens and set with a special slide-away mechanism. This customized LED wall can be split or spliced together without seams to offer extended flexibility in use, for different shooting scenarios.

The same floor also houses another studio that is primarily used to shoot the morning news; and this space also utilizes LianTronics VF1.5 series LED display of 39mm ultra-slim cabinets that blend perfectly into the wall, particularly embedding a right-angle convex and concave on the left side. Foreground stands another LED screen with inner curved shape, interplaying with the lighting from the top and ground to modernize the studio.

LianTronics

IDEAL SYSTEMS

New Christie HS Series Projector Models Reach Brightness Levels of Up to 23,650 Lumens



Christie has launched the next generation of its popular HS Series 1DLP projectors with three new models. Ranging in brightness from 15,750 lumens to 23,650 lumens, the new models feature enhanced colour performance for bright, bold visuals with the Christie BoldColor+ technology.

The DWU15-HS, DWU19-HS and DWU23-HS are 15,750, 19,150 and 23,650 lumens respectively, increasing the range of brightness while maintaining the legacy of reliability, quiet operation, and cost-efficiency of the original HS Series. With the addition of the BoldColor+, colours in the new generation of HS Series projectors are brighter and bolder with deeper blacks and more natural and realistic on-screen images.

In addition to three new HS Series models, Christie is also introducing the DWU1400-GS, a new 14,250 lumen GS Series 1DLP projector featuring Christie

RealBlack, which delivers stunning visuals with 4,000,000:1 contrast. The new HS Series models and the DWU1400-GS all come with a 5-year warranty.

The DWU19-HS and DWU23-HS models support passive polarized 3D out of the box, and all models include onboard Christie Twist for warping and blending and are compatible with Christie Mystique. Mystique is an automated camera-based alignment and recalibration software solution to quickly install, align, calibrate and maintain multi-projector systems. Additionally, accessories for the first generation of HS Series, including lenses and mounts, are compatible with the new models.

Christie DWU15-HS, DWU19-HS and DWU23-HS are available for order now and will ship in late 2022, and the Christie DWU1400-GS will begin shipping in October 2022.

[Christie/DWU15-HS](#)

Key Digital Makes Mosaic Video Wall Creation Simple and Cost-Effective



Mosaic display positions are commonly offset vertically and/or horizontally, and the displays may be spaced with gaps between them with the video flowing across the entire canvas. Monitors used may also be oriented either horizontally or vertically or in a mixed combination of both orientations. The displayed video moves smoothly across the mosaic video wall, disappearing in blank spaces and appearing on the monitors.

Compelling and attention-grabbing mosaic video walls are becoming increasingly popular, both for branding and to artistically decorate large spaces, in venues including hotels, restaurants, luxury retailers, and houses of worship.

Key Digital has released cost-effective, scalable technology that, combined with the wide availability of high-resolution video monitors and televisions at commodity pricing, brings the creation of captivating mosaic video wall displays within the budget of most any project.

With a traditional monitor-based video wall, several video monitors are configured together to multiply the display area, creating a large, often huge, display. With a mosaic video wall, a rectangular display 'canvas' size is defined, and the image is scaled for that canvas; however, the displays mounted within the canvas boundaries are not limited to filling the canvas.

The Key Digital hardware used to facilitate a mosaic video wall installation is the KD-IP1022ENC AV over IP Encoder and the KD-IP1022 Decoder. In typical installations, the source video is input to and processed for display by, a single KD-IP1022ENC. A KD-IP1022DEC decoder per monitor is used to extract the mapped image for each monitor in use. Interconnection and power are provided by a managed gigabit switch with Power Over Ethernet (POE).

Any HDMI source content can be fed to the mosaic video wall via the encoder input. Additional KD-IP1022ENC Encoders can be added to a system where it might be desirable to alternate content on a select monitor or monitors in the mosaic video wall, such as a live sporting event or a static image like a logo or event graphic

As with all of its AV over IP product applications, Key Digital provides simple ways for users to preconfigure

their projects. For mosaic video walls, an easy-to-use spreadsheet tool lets users define a canvas and virtually place as many monitors as they like within that canvas based on a pixel map of display and monitor bezel dimensions. Templates are available for the most commonly used mosaic video wall configurations such as an offset horizontal “brick” layout using landscape-oriented monitors, or portrait-

oriented monitors offset vertically to form a “zipper” pattern.

Key Digital’s System Design Group is a phone call or web request away to help customers build custom layouts. System configuration programming is performed by Key Digital based on customer input.

Key Digital/ KD-IP1022ENC AV over IP Encoder

RTI Touchpanel With Built-in Processor Simplifies Single-Room Commercial Installations



The new RTI KX4 touch panel combines a 4-inch capacitive touchscreen and five-button interface with a control processor for fast and cost-effective installations in all single-room environments. With a built-in processor, the KX4 simplifies installations that require both on-wall control and processing power, such as in boardrooms and lecture halls, to control multiple devices.

For front panel control, the KX4’s high-resolution capacitive touch display can be customized with RTI’s Laser Shark engraving. The built-in control processor delivers robust capabilities to maximize integration with connected devices, including support for two-way drivers, the RTIPanel Mobile App, and use as either a stand-alone processor or as a secondary processor in larger configurations. Back panel connections enable direct control of connected devices via IR; IP; two RS-232, six voltage sense ports with sense-event capabilities; and four relays for control via contact closure.

The KX4 leverages the full power of the RTI driver library and the company’s Integration Designer programming platform so integrators can meet virtually any client demand with a customized solution. The KX4 is now available for pre-order from RTI and RTI distributors.

RTI/KX4

Magewell Releases Advanced Live Encoder for IP Workflows and Streaming



Magewell has announced a potent new flagship model in its Ultra Encode line of all-purpose live media encoders for applications like IP-based production, AV-over-IP, and live streaming.

The Ultra Encode AIO builds on the flexibility of the company's original Ultra Encode models with expanded features including HDMI and SDI input connectivity in a single unit; 4K encoding and streaming from the HDMI input; simultaneous multi-protocol streaming; higher streaming bitrates; file recording; and much more.

Excited to expand the Ultra Encode family, Magewell representatives noted that the Ultra Encode AIO takes the capabilities of its siblings to a whole new level for advanced professional use cases, from recording and 4K encoding to greater flexibility for multi-destination streaming.

Ultra Encode AIO supports multiple video encoding formats – including H.264, H.265 (HEVC), NDI|HX 2, and the new NDI|HX 3 – and a wide array of delivery

protocols including RTMP, RTMPS, SRT, RTSP, RTP, HLS, and TVU's ISSP technology. Video can be encoded at resolutions up to 4096x2160 at 30 frames per second from HDMI sources, or up to 1080p HD at 60 fps from the device's 3G-SDI input.

The single-channel Ultra Encode AIO can encode one live input source – either HDMI or SDI – or mix video from the HDMI and SDI inputs (picture-in-picture or side-by-side) into a combined output. Video can be encoded at bitrates up to 32Mbps, while up to eight channels of audio can be encoded in AAC format. Two concurrent encoding profiles with distinct combinations of resolution, frame rate, and bitrate can be specified, and up to eight user-configurable overlays – including text, images, and a clock – can be applied to each profile.

Configurable presets enable easy streaming to YouTube Live, Facebook Live, Twitch, or custom targets. Ultra Encode AIO can stream to up to six different target destinations simultaneously, including the ability to stream concurrently in multiple protocols. Inputs can also be recorded as files to an SD card, USB-connected storage device, or networked storage (NFS, CIFS or SMB).

For IP production workflows and AV-over-IP signal distribution architectures, Ultra Encode AIO supports NDI|HX 3, the latest version of the high-efficiency, low-bandwidth option in the popular NDI® IP media transport technology platform. NDI|HX 3 improves video quality while enabling very low latency. Ultra Encode AIO also supports the earlier NDI|HX 2 for broad compatibility.

Ultra Encode AIO can be configured, monitored, and controlled through its browser-based web interface – accessible through any computer or mobile device, with an optimized layout for smartphones – with centralized management of multiple units available through the Magewell Cloud software. In addition to manual control, scheduled streaming and recording are also available through the web UI, while the unit's touchscreen LCD screen provides status information and snapshot previews. HTTP-based APIs are also available for systems integrators and third-party developers to incorporate Ultra Encode AIO into their solutions.

Ultra Encode AIO devices measure 214.9mm (8.46 inches) by 128.2mm (5.05 inches) with a height of 44.55mm (1.75 inches). Pairs of units can be rack-mounted together with included mounting hardware. The device can be powered via PoE (Power over Ethernet) or the included power adapter. In addition to HDMI and SDI video input and loop-through connections with embedded audio support, Ultra Encode AIO also offers line-level analogue audio input and output. For network connectivity, the encoder features built-in Wi-Fi and an RJ-45 Gigabit Ethernet port, as well as support for optional, third-party 3G/4G broadband modems.

The existing Ultra Encode HDMI and Ultra Encode SDI models continue to be available for customers needing only a single input connectivity standard and who do not require the additional advanced capabilities of Ultra Encode AIO. Meanwhile, Magewell's Ultra Stream encoders remain the gold standard for non-professional or less experienced users with fairly straightforward live streaming and recording needs.

[Magewell/Ultra Encode AIO](#)

Audinate Dante Domain Manager 1.4 Now Encompasses All Dante Audio and Video Products

Dante Domain Manager now supports systems with any combination of audio and video devices thanks to the addition of Dante Video products, such as PTZ cameras, HDMI encoders and decoders, providing AV and IT managers with the information they require at the precise moment they require it.

With Dante Domain Manager, AV-over-IP systems get IT-level monitoring, security and control. Dante Domain Manager secures Dante networks by enforcing user authentication and roles to ensure that only trusted people can make changes to the system. It provides organizational tools that allow Dante devices to be split into functionally independent groups (domains) that correspond to rooms, spaces, buildings and more for easier routing and security.

Dante Domain Manager coordinates clocking across the entire network, enabling routing of audio and video across IP subnet boundaries for large systems that must span large buildings, multiple studios, or campuses. The Dante Domain Manager dashboard and alerts provide instant status reports on any issues, anywhere on the network.

For current Dante Domain Manager users with active support agreements, the update to version 1.4 is free and available at the URL below.

[Audinate/Dante Domain Manager v1.4](#)

NEXT Audiocom Introduces Adaptable Pro Series to Support Professional Market

Pro Series

clarity. power. elegance.



The new Pro Series from NEXT Audiocom is comprised of both active and passive point-source speakers for installations and portable solutions with a modern and trendy design. The Series is aimed to be an affordable option for the professional market because of its ability to produce high output and dynamics, exceptional linearity, and fidelity at a very low cost.

These speakers can be used in a variety of settings, including hotels, dining establishments, pubs, lounges, conference rooms, DJs, and performers. Additionally, their adaptability allows them to be used as a flying

system with a variety of rigging points, a floor monitor (Pro12 and Pro15 only), or on tripod supports.

The Pro12A and Pro15A have a 2-channel mixer, Bluetooth included and 5 presets available to select and fill your spaces with quality audio. You can connect any instrument, microphone, CD Player or audio mixer to the active Pro Series input. The Pro speakers can be connected using the "Mix Out" connector. An active external subwoofer can be added to extend the system frequency response. The Pro12 and Pro15 speakers are equipped with two NL4 speaker connectors located on the back plate providing reliable connections with easy link-through to cabinets.

The cabinets are constructed using premium-quality 15mm plywood with polyurethane coating. Front and speakers' protection is assured by an acoustically transparent powder-coated steel grill with acoustical foam. The optional U-bracket allows mounting the cabinets both horizontally and vertically with a total angle adjustment span of 115°. Depending on the adjustment bolt used, the final speaker's angle may vary (100° to -15°, 10° to -105° or -80° to -195°). Also, a two-axis wall bracket can be used on the Pro12 passive speaker. The adjustment angle span will vary according to the selected pan and tilt angles (max. 30°).

[NEXT Audiocom/Pro12A](#)

Extron Upgrades FOX3 Matrix Switchers with Integrated Control



Extron's FOX3 Matrix Switchers now feature an integrated Extron IPCP Pro Q xi control processor, with all the same advanced features, processing power, security and breakthrough technologies found in the standalone Extron IPCP Pro xi Series control processors.

The popular FOX3 line has now been extended to include the FOX3 Matrix 560x and FOX3 Matrix 840x. With the addition of two larger matrix frames and integrated control processors, the series is now expandable from 8x8 up to 840x840 and provides powerful, customizable control of an entire AV system, including all source devices, displays, and room functions. FOX3 installations are intuitive to configure with Global Configurator software, which includes powerful, advanced features such as conditional logic, local variables, and macros.

To support the most complex systems, the integrated control processor can also be programmed using Global Scriptor, Extron's powerful and versatile control

system programming software. This feature-rich integrated development environment is used to program Extron Pro Series control systems and utilizes the easy-to-learn Python scripting language. Equipped with a wealth of features, from Dante audio support to redundant hot-swappable power supplies, FOX3 Matrix Switchers deliver highly reliable, robust, enterprise-wide fibre optic switching of 4K/60 video, USB, and control for mission-critical environments.

FOX3 Systems are the latest generation of fibre optic distribution solutions designed, engineered, and manufactured by Extron to meet the most demanding requirements of critical video and audio distribution applications. From point-to-point extension to fully non-blocking matrix applications up to 2000x2000 and beyond, FOX3 Systems securely deliver unrivalled performance and reliability to satisfy even the most discerning users.

[Extron/FOX3 Systems](#)

Elite Screens EDGE FREE ALR Projection Screen Available in Acoustic Transparent Format



Elite Screens, Inc. specializes in quality projection screens for retailers and integrators. The company has recently launched their new Ambient light rejecting fixed frame projection screen that is also acoustically transparent.

The Aeon CineGrey 4D AT is an EDGE FREE fixed frame screen that combines the acoustic transparent feature with ceiling ambient light rejecting technology. The screen material is perforated to allow speaker placement behind the screen which allows sound to breathe through while producing outstanding imagery in dark or bright room environments. The CineGrey 4D AT material eliminates up to 63% of ambient light from any direction and it is ISF Certified for accurate colour reproduction in a light-controlled room.

The Aeon CineGrey 4D AT has a sleek EDGE FREE design with its material wrapped around the frame which enables it to have a permanently flat, taut, and uniformly tensioned projection surface. An ultra-thin black bezel trim is included to enhance aesthetics by providing a giant flat panel TV appearance.

Elite Screens Aeon CineGrey 4D AT has a starting MSRP of \$1339 and it is available in 110", 125", 135" and 150" diagonal sizes in HDTV 16:9 aspect ratio. It comes with Elite Screens 2-Year / 3-Year ENR-G Manufacturer's Warranty for peace of mind on product longevity.

[Elite Screens/ Aeon CineGrey 4D AT](#)

New Powersoft DSP+ Amplifiers Incorporate AES67 Compliance for High-Performance AoIP Networking



Powersoft has bolstered its fixed-install product range by introducing AES67-compatible versions of its popular Duecanali and Quattrocanali amplifier platforms.

The new models, Duecanali DSP+ and Quattrocanali DSP+ can receive audio-over-IP (AoIP) streams compliant with the AES67 standard, which allows high-performance streaming AoIP interoperability across different networking systems.

The new Powersoft DSP+ models – comprising the Duecanali 804 DSP+, 1604 DSP+, 4804 DSP+ and 6404 DSP+ and Quattrocanali 1204 DSP+, 2404 DSP+, 4804 DSP+ and 8804 DSP+ – can receive AES67 streams natively by connecting the dedicated AoIP networking port to an AES67 network.

The new Duecanali DSP+ and Quattrocanali DSP+ amplifiers are supported by a new version of ArmoníaPlus, Powersoft's system design, control and monitoring software, which is available now.

The introduction of the new DSP+ models will enable systems integrators to take advantage of the growing number of AES67-native audio products, says Powersoft product management specialist Giorgio

Carminati, while the v2.4 update to ArmoníaPlus will streamline the configuration process by allowing users to configure both the AES67 inputs and DSP settings of the amplifiers in the same software.

All Powersoft amplifiers featuring a Dante card, including Duecanali DSP+D and Quattrocanali DSP+D models, can also be configured to work with AES67 audio streams by enabling AES67 mode in ArmoníaPlus or Dante Controller.

Suitable for larger installed sound reinforcement systems, the 2-channel Duecanali series offers low power consumption and heat dissipation, superior audio quality, and reliable performance in a compact, lightweight unit. With four channels, Lo-Z and 70V/100V distributed lines and low operating costs, Quattrocanali is perfect for small- to medium-size installations where flexibility is key. All Duecanali and Quattrocanali DSP+ and DSP+D models also benefit from state-of-the-art built-in signal processing.

Click [here](#) to download the ArmoníaPlus 2.4 software which also adds support for the T Series touring amplifier.

[Powersoft/Duecanali Series](#)

InfoComm India Rejuvenates with New Stakes

Make-in-India Brands Take Centrestage Presenting a New Dynamic and Promise



When the 2022 edition of InfoComm India – the country's first reference for AV – beckoned the industry recently, as it did, after a gap of two years, it was a revelation of sorts. The event's punch line of 'Reconnect. Refresh. Revitalize.' apparently had more reinforcements. It resonated with rejuvenation, redemption, and reassurance. Amidst all that....one factor stood out remarkably- an arrival of Make-in-India AV.

Yes. The coming back of InfoComm India in early September brought along with it that big aspirational element which appeared larger than the hitherto known order of the regulars. A much-awaited expression of Indian AV, at what also appeared to be a very decisive phase in time.

An SI Asia perspective:

-
- 160 Exhibitors from 15 Countries
 - 11,381 Unique Visitors
 - 35 Summit Sessions

If the coming back of InfoComm India physical event in early September was the biggest thing to happen to Indian AV in what is arguably the post-COVID journey of the industry, what stood out amidst the regular, familiar fare might as well be its tryst with future.

While those undefined apprehensions of the pandemic quickly disappeared with the exhibition show floor brimming with milling AV enthusiasts and exhibitors happily engaging the thronging visitors, it was as

quickly evident that there was a new dynamic in the making:

The arrival of Make-in-India or Made-in-India AV products and solutions- staking their claim with pride and purpose on what had hitherto been an MNC prerogative.

While the regular biggies took their regular positions with little change, the limelight was certainly taken by the long-awaited and much-desired coming of 'Make-in-India' AV brands to the centrestage.

The 2022 edition of InfoComm India, was thus marked by at least half-a-dozen exhibitors with that prestigious logo of 'mechanized lion.'

The brand Indian AV has also expressed itself in another half-a-dozen exhibitors from the distribution segment, presenting some very exiting solutions from the global domain.

Grand Brand Made-in-India

Tacodi Electronics: Big and Strong on Make in India

AV: For all those longing for a Make in India brand for video-conferencing AV gear that had hitherto been like a prerogative and monopoly of multinational brands, Tacodi Electronics presented an inspirational story. The New Delhi-based Start-Up founded in 2019 – from the entrepreneurs of Burlington, New Jersey-headquartered 'smart communicator' Tacodi – appeared set to break new ground in the domain that is generically dominated either by the Western or by the Chinese manufacturers.

"We looked at the domain. We saw the opportunity and we stepped in," says Devashish Majumdar. "The idea to come to India and manufacture this VC hardware was, of course, due to the opportunity available in



the space," he explains, "and give to Indian users the flexibility to design hardware for any application."

The company manufactures the complete ecosystem of videoconferencing that includes PTZ cameras, servers, MCUs, video soundbars, and other hardware endpoints, apart from the unique desktop speakerphone which is a fancy these days. Tacodi is obviously benefited by the presence of its own R&D facility based in India.

"The second advantage for us is the assurance of data security" affirms Majumdar. "That our servers are entirely manufactured locally with our components, the security element is always guaranteed."

Trueview: Beckoning with True-to-its-Name

Promise: The Aurangabad-based Warner Electronics (I) Pvt Ltd shared the IFI 2022 centrestage with other Make-in-India AV brands via its flagship brand Trueview that's been manufacturing security and surveillance and display solution systems in India. The company, however brought to the fore its latest system solution for education market.

The system solution comprised TRUECLICK, an integrated student response system; TRUE CAP, a smart lecture capture system; and TRUEBOARD, an educational application for interactive flat panels.



In addition, the company also exhibited its latest offering of Interactive flat panel for Entertainment market as well.

“We have till recently been approaching the market with interactive flat panels; but we see the rapid changes on the education market and modern requirement for integrated and smart solutions,” says Naveneet Rathod of Warner Electronics. “We built the system keeping in view the Indian schooling system in particular,” he explains. “The complete ecosystem of TRUE Click, Capture and Board integrates the students and the teacher via a smart learning mechanism with a multitude of tools enabling a plethora of smarter ways of education. They are easy to understand, use and implement.”

ATDSC: Team InfoVision ‘India’ (un)limited: Team InfoVision India Pvt Ltd – the New Delhi-based manufacturer of AV, live streaming and online teaching gear – was reportedly the first company in India to launch Interactive Whiteboards for Smart Classrooms almost two decades ago. Having been in the market for so long, it decided to take to the InfoComm show floor, with the spirited Make-in-India AV punch line under its AV brand ATDSC- Advanced Technology Development Solutions Centre.

The company launched at the show a broad range of solutions that are highlighted by a PTZ camera, wireless HDMI transmitter, wireless Chairman-Delegate Unit, and more.



“Our entire range is fully Made-In-India,” says Dinesh Giri of Team InfoVision. “Only a small minuscule portion of the making is sourced from outside,” he explains. Demonstrating the technology competence, and quality of the products’ performance, Dinesh asserts the product range they launched from the show floor are unique and no other OEM has the same capability at the moment.

“The Wireless Chairman-Delegate conferencing unit is a truly unique solution,” Dinesh explains. “It allows for as many as 1055 units performing from a single room.” ATDSC also launched its new digital podium at the show.

HIKVISION: Adapting to Make-In-India Vision:

Mumbai-based video surveillance solutions provider Prama Hikvision India Pvt Ltd took to IFI show floor with its Make-In-India tagged Interactive flat display panel solutions, LCD video walls and digital signage solutions, apart from their regular, trusted video surveillance systems.



“Our range of display solutions are entirely designed and developed in India,” says Bhavin Chauhan, Assistant Vice-President (IT Products) at Prama Hikvision. As it is, we have begun entirely indiginizing our video surveillance solutions such as PTZ cameras and security systems,” he said. According to him, only a minor percentage of components are being sourced from the Chinese major Hikvison, but they have been building strengths to develop that competency too, very soon.

“The Make-in-India spirit is very big on us,” asserts Bhavin, “we are so much energized and motivated with it,” he clarifies, “we’re here to take the light forward and

promote our products with indigenous expertise on par with the global competence.”

BIRD AI: Taking Artificial Intelligence to 4K Highs like Bird: Branching out from Indian Smart Learning tools developer Cybernetix, BIRD AI brought some new, truly Intelligent solutions with 4K capabilities. The company launched from the IFI showfloor, its latest all-in-one 4k Collaboration Hub called BIRD Canvas AX, and USB 4K Whiteboard camera Doodle, besides its popular BIRD Hub- the wireless collaboration meeting on any screen solution.



“The BIRD Canvas comes with built in Interactivity comprising a 4K AI-based camera with auto framing, meaning it adjusts the view based on the number of people in a given set-up,” explains Ananth Vijay Kulkarni of BIRD AI. “It is augmented by 4 mems of beam-forming microphone layers equipped with their own dedicated DSP processor,” he details. “The third layer is our own BIRD OS, designed in our lab with a hexacore processor.”

According to him, the totally customizable solution is fully agnostic and enables running of any native application.

The Doodle solution brings to users one refreshingly new offering. The USB-based 4K Whiteboard camera that it is, the system captures all the content on the whiteboard digitally, and transfers the designated surface. "The beauty of the solution is that even if one is blocking the content by hand, or person, they are rendered transparent on the recipient screen so that the content is seen clearly, without any obstruction," explains Ananth.

Rahi Systems: Bringing Nativity to Google Meet: Rahi Systems – the global IT solutions provider with deep roots into AV integration brought to IFI stage what it called the Native Google Meet Device System.

"People normally talk about Zoom and Team, but not a Native solution," remarks Rohit Singal, Vice-President-India for the California-headquartered MNC. "No other OEM has this solution, at least on this showfloor," he observes.

Rahi Systems have also brought another unique solution that integrates multiple devices like DSPs, control switches, processors, and user interfaces and more. "With just one interface, you can control everything." According to him, it saves space, multiple failure risks and investment too, besides the unique user experience of technology.

SuperUS, the Mumbai-based tech OEM focused on building connected information systems with smart devices, brought its new healthcare solutions that promise to revolutionize the medical industry services to people. Having tied up with E-Ink Holdings Incorporated to manufacture smart technology tools in India, the company demonstrated its range of solutions under its Make-In-India initiative.

The Big Lot Out There...

The *Make-In-India* band wagon didn't appear stopping there. There were exhibitors like Aero Digital, Online Instruments, Samsung, Delta, and others, who have either full, or partial manufacturing happening in India.

The biggies like Kramer, Crestron, Harman, Bosch, QSC, Sennheiser, Christie, Optoma, MSS World, B-Tech AV, Peerless AV, ClearOne and more have all been there with their latest offerings.

The show did have new comers like ZeeVee, Cyviz, and Aten.



Optoma India, aggressively seeking its stakes in the Indian AV, presented a broad range of visual solutions that included its launch of new **Direct View LED** display line (130 and 160 inches); two WUXGA laser projectors **ZU920T and ZU920TST**, and Creative Touch 5-Series interactive flat panels, apart from the **ZU2200 Ultra Bright Professional Installation Projector**.

Expanding on Optoma's award-winning line of Direct View LED displays, the new 1080P FHDS130 Direct View LED display is an all-in-one solution for quick and

simple installations, ensuring easier adoption for the growing LED display market.

Optoma ZU920T and ZU920TST DuraCore laser projectors deliver in spades on brightness and accurate colour reproduction, along with installation flexibility and lifetime reliability, bringing to life stunning imagery and captivating content.

The ZU2200 Ultra Bright Professional Installation Projector, on the other hand, establishes an incredibly high brightness benchmark to the category, as well

as extreme flexibility with eight interchangeable lenses to meet the needs of even the most complex installations.

AV major **QSC India** highlighted its presence at the IFI 2022 with its **recently launched Q-SYS SPA-Q Series network amplifiers** that deliver right-sized amplification while adding audio/control I/O options to support a wide range of spaces. The SPA-Q Series joins a host of other Q-SYS products (including the QIO Series network I/O expanders and Q-SYS Feature and Scaling licenses) that pair perfectly with smaller Q-SYS Cores (such as the Q-SYS Core Nano), allowing you to decouple the I/O from the processor for an unmatched degree of customization and scalability.

The convection-cooled Q-SYS SPAQ 100-2f (two channel x 60 W) and Q-SYS SPAQ 200-4f (four channel x 60 W) amplifiers provide bidirectional GPIO for control and two onboard software-definable flex channels (either mic/line inputs or line outputs), giving integrators the greatest amount of flexibility for I/O and control at the periphery of the system.

Ideal for smaller spaces, both models are half-rack, 1RU and deliver clean sound and performance without overpowering the space. In addition, they include hardware for multiple mounting options allowing for flexible placement.



Software Based Solutions like Q-Sys is the Present and Future of Pro AV

“We changed the AV industry over a decade ago with the launch of Q-Sys which was built on a flexible software-based foundation and a unified systems-based IP architecture. Q-Sys is the only platform with a robust audio engine, video engine and control engine where processing of all three happens at the software layer. And because it’s a software-based system, introducing simple firmware updates has allowed us to consistently improvise and add various features and functionalities like AEC, VoIP, AVoIP, third-party device control, AVB, remote management and much more over time” asserts Rajesh Mittal, managing director, South West Asia, QSC; as he discusses the growing impact of software within the professional AV domain.

Rajesh explains that Q-Sys’ open architecture allows users to seamlessly integrate hardware, software and services to create a large ecosystem of solutions that

can be enhanced as and when the need arises. And with Q-Sys enabled QSC products use intel processing, standard network protocols, simplified drag-n-drop programming, and novel and agile scripting tools; system integrators can easily design and deploy a truly comprehensive system that can be controlled through a single unified platform seamlessly, without the need for investment into any additional hardware; thereby saving on time, effort and money.

Collaboration and conferencing major ClearOne

highlighted its presence at the IFI 2022, with two of its most popular and trusted solutions- the beamforming microphone array ceiling tile BMA 360, and all-in-one collaboration appliance Versa Mediarbar.



Industry's only ultra-wideband, frequency invariant beamforming mic array with uniform gain, the BMA 360 – coming with ground-breaking technology including FiBeam and DsBeam, and more recent Voice Lift technology, the BMA 360 makes conference participants experience natural and full-fidelity audio across all beams and within a single beam.

In addition to the advancements in beamforming technology, the BMA 360's 6G Acoustic Echo Cancellation (AEC) delivers unmatched per-beam full-duplex audio performance. On-board audio algorithms,

like noise reduction, filtering, and Automatic Level Control, eliminate the need for per-beam processing in a DSP mixer requiring fewer DSP mixer resources.

The Versa Mediarbar provides high-quality visual collaboration, audio conferencing, and UC applications from a single integrated device, offering the most straightforward solution available with virtually no setup required.

Next-level Collaboration Experience by Neat:

Norwegian collaboration and video conferencing solutions provider NEAT, taking to IFI show platform for the first time, presented what it called 'next-level' collaboration experience by means of innovative, purpose-built hardware that includes:

- Neat Bar, a compact and elegant meeting room device
- Neat Bar Pro, for larger meeting spaces
- Neat Pad, a touch screen device that can be used as a controller or a scheduler for meeting spaces

Neat Board, a multi-touch LED screen all-in-one collaboration device

- Neat Frame, a personal meeting device for small spaces, home offices and one-on-one collaboration

This next-level VC experience also comprises a band of features called Neat Symmetry, Neat Sense; Neat Audio; and Neat Bubble to make an integrated experience that is truly next-level. All are designed for different collaboration settings from intimate meetings through to group collaboration, appealing to a diverse customer base from start-ups to the enterprise.

Certified for Zoom and with full MS Teams certification imminent, Neat automatically updates software, unless a customer has opted out, and 'Neat as a Service' provides budget-friendly subscriptions saving money for other IT projects.

Ntech Systems, the Bangalore-based distribution major coming onto its first big show platform since its inception, presented a whole big range of solutions in an apparent message of its *arrival* in Indian AV.

The company's exhibits at the show included

- **HIVE solution from Hall Technologies:** A driverless cloud-based AV control platform that combines the three pillars of AV control software, interface, and hardware to interact with Microsoft Teams, Zoom, Google Meet and more to create an infinitely scalable and easy-to-manage AV solution.
- **Discovery Series from Hall Technologies:** A low-cost 4K extension with adaptable USB and HDMI features for software video conferencing and audio extraction. The series includes a HDBaseT Wall Plate Transmitter and Receiver kit that pairs natively with soft-codec video conferencing applications such as Zoom, Teams, Skype, WebEx and more.
- **Enabling BYOM on Cisco Webex with INOGENI:** The 4KX-PLUS converts Ultra HD to USB 3.0 with an HDMI loop and external power for BYOM applications. It connects HDMI cameras, video sources or CODECs to a third party laptop.
- **Enhancing Video Conferencing with INOGENI SHARE 2U:** captures two channels of HD video over USB or HDMI and shares to the designated port with uncompressed 1080p30 video, needing minimal set-up.

OSRAM India marked its presence at the show by demonstrating the benefits of world-class projection lamps via its best-selling projector lamp, the P-VIP projector lamps- against the often misled adoption of counterfeit lamps. By their sheer brilliance of performance, and build strength, the lamps have shown a demonstrated differences of luminance, long-life, and the unmistakable optical experience across the spread of any given screen.

With German manufacturing expertise built on robust technology where the burner tube is made of high purity quartz glass, capable handling high-pressure mercury up to 300 kPa for a long time, the P-VIP lamps ensure reliable performance of optimum luminance for a long-time, unmatched by any counterfeit product.

Kramer Electronics who stepped onto the InfoComm India 2022 show floor in the last minute, stood to its pole position at the event, demonstrating a broad range of solution that create a game changing dynamic.



The range of solutions included VW Series video wall processors, the regular matrix switchers, VP Series presentation scaler systems, control systems, and audio solutions, besides its popular collaboration devices and quicklaunch meeting solution.



Christie Digital demonstrated spectacular projection mapping competencies using high-brightness RGB pure laser projectors comprising the award-winning *D4K40-RGB* and *Griffyn 4K32-RGB*, both of which are sought-after for large-scale experiential installations across India. The full-featured Inspire Series 1DLP laser projector will also make its InfoComm India debut, alongside the high-performance *MicroTiles LED*, *Core Series II LED* video walls and *Access II Series LCD* panels featuring 4K UHD resolution and 16/7 run-times.

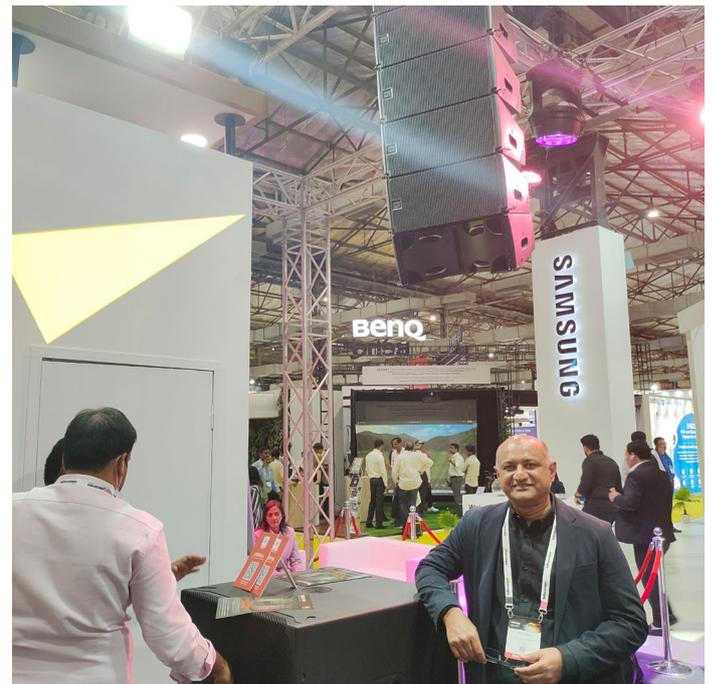


Audio specialist **Sennheiser** has unveiled its plans for expanding the Evolution Wireless Digital family of radio microphones. Named EW-DX, the new microphone systems will simplify professional workflows by utilizing refined technologies to deliver a digital UHF system that can be scaled with ease.

The complete set of new EW-DX products includes handheld, bodypack, table stand transmitters, and two two-channel receiver versions in a half 19" rack space (one with, and one without Dante) as well as a four-channel Dante-enabled receiver in a full 19" format.

First flight of products and software will become available towards the year end with more items following in the first half of 2023.

HARMAN Professional introduced the new JBL Professional SRX900 Series of powered loudspeakers, including dual 6.5-inch and dual 10-inch powered line array elements designed for portable and installed applications.



"It is an absolute pleasure to showcase the new SRX900 Series loudspeakers for the first time in India. It's the first powered line array launch for Harman, and it meets a very competitive price-point while offering an extremely strong and versatile performance value," says G Amar Subash, vice-president and

general manager, Asia Pacific and India at HARMAN Professional Solutions. “These systems are scalable, and comes with a sophisticated software and control platform, which makes it very easy to setup and extremely pertinent to install spaces.”

Additionally, Harman Professional also introduced their expanded range of the JBL Control Contractor series of products that include new slim wall-mount loudspeakers and outdoor IP-rated loudspeakers that are available in an attractive form-factor.

Minister for Information Technology for the Government of Tamil Nadu Thiru Mano Thangaraj – who visited the event on Day One, besides being Chief Guest Speaker at the NIXT Summit Industry Forum for Education on Day 2 – commended the event after he went around the booths. “InfoComm India is a professional platform that gathers industry experts with latest knowledge and valuable insights while providing a conducive channel for business community to network and connect,” he observed.

Yamuna Nagar Municipal Corporation Additional Commissioner Dheeraj Kumar, one of the 150 Hosted Buyers invited by the show organizers InfoCommAsia Pvt Ltd felt impressed. “I am thoroughly impressed

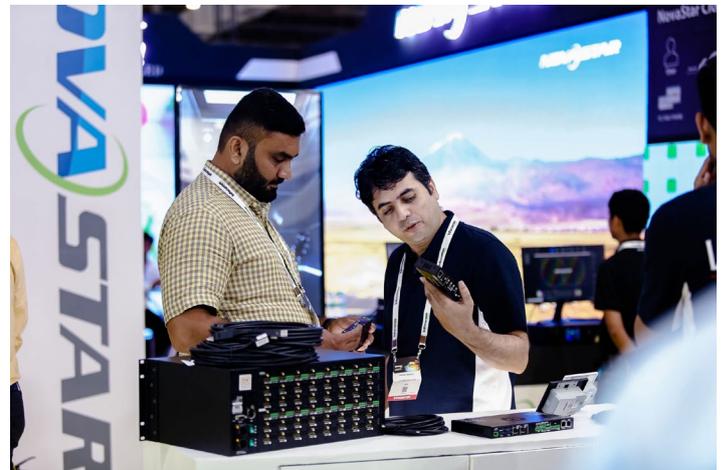


Minister for Information Technology for the Government of Tamil Nadu Thiru Mano Thangaraj.

with the technologies put up by the exhibitors,” he said. While the regular majors have had their own expectations rejuvenated, it was arguably the Make-in-India bandwagon that hogged the limelight at the show.

We all know the 2023 edition of the show would be organized at the Jio World Convention Centre in Mumbai. The dates of the event are 25-27 October. Mark your calendar, now.

[infocomm-india](https://www.infocomm-india.net)



Part One

XR Studio: The Game Changer



The human spirit is indomitable. For every challenge, humanity has found solutions and opportunities. There is no denying that COVID-19 accelerated the adoption of digital technologies. The AV industry has been in the forefront providing connectivity for employees, colleagues, friends and customers from the safety of their homes; offered solutions to manage access and control crowds and thought out-of-the-box to present events for the masses from the comfort of their homes.

The XR studio is one such example. VR and AR were already common technologies before COVID-19 hit. XR or Extended Reality is another tool in the box in the digital realm that has evolved rapidly. According to [MarketWatch](#), global XR production will grow by 46.5% per year between 2020 and 2026.

What exactly is XR studio? A XR studio comprises different components. Playing a major role are LED screens which act as large backgrounds and at times are even installed on the floor. Of course complementing the LED screens are cameras and lights. Instead of green screens which have been predominantly used to virtually transport a presenter to an environment, XR studios showcase the environment on the LED screens. The biggest benefit – anyone on the stage can actually see and interact with the environment seamlessly, without wondering whether they are in the right position.

Key Components. As mentioned above, LED panels play a key role. As cameras can be unforgiving in production, the panels have to be of high quality. In addition the processors driving the LED panel as

well as the media servers used for real time content need to be of very high standards. When the end product is broadcast, viewers should not realise that the production was shot in a XR Studio – that is the ultimate goal.

The Plethora of Uses. XR studios over the last year have transformed productions. They have been used to produce film segments when travelling was a constraint, for commercials, concerts and events. It has also become highly fashionable to use XR studios for corporate presentations to key stakeholders as they offer a more dynamic and engaging impact.

GIANTSTEP's XR Studio

GIANTSTEP is a content solutions company that produces some of the best visual contents in Korea and specializes in using the latest innovative content technologies like AI-based virtual human production, real-time XR content, immersive real-time content and VFX, for use in entertainment, television and advertising. The company has recently set-up its XR studio.

GIANTSTEP's XR studio features multiple high resolution LG displays with a centre LED screen at 11,520 x 2,700 pixels, a top ceiling display at 1928 x 1538 pixels, a bottom display at 2816 x 1408 pixels and accompanied with a right display of 1920 x 1080 pixels. All of these displays power up with just one Analog Way Aquilon C+ series and one Analog Way Picturall Pro Mark II media player.

Choi Seong Ho, the chief technology officer of GIANTSTEP notes that "as the trend setter, we can only choose the best quality technologies as the production

needs to be of very high standards. After many tries, we finally found the best choice of LG LED panels with the Analog Way equipment." He adds, "we always demand the most ultimate and reliable technologies for our XR studio."



Analog Way's Picturall Pro Mark II media server and Aquilon C+ video processor.

Chris Choi, country manager of Analog Way Korea explains that Analog Way's Picturall Pro Mark II media server is the only one that can cover over 8K resolution live contents properly from a single server unit. "Picturall Pro Mark II has enough power to play media up to 16 x 4K resolution, allowing massive media playback on the whole video canvas used for GIANTSTEP's studio. In addition, the extreme video processing performance offered by the Aquilon C+ has the ability to drive a large number of perfectly synchronized 4K60 LED displays. The performance and mission critical reliability of our products were key to help GIANTSTEP to set up its high standards XR studio."

Having visited their studio this year, I was truly impressed by GIANTSTEP's level of innovation and creativity," says Eric Delmas, CEO of Analog Way. "This culture resonates very well with Analog Way's passion for solving the most complex video processing challenges such as those encountered in virtual production."



LG LSAA LED and LSAA controller.

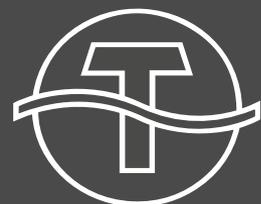
LG's Kim Dong Pil, VP of LG Asia B2B Business explains, "LG offers differentiated value by providing dedicated ecosystem solutions such as camera, media server, camera tracking and rendering software. Our products are designed to be suitable for ICVFX based production, and we are continuously improving both the hardware and software through on-site support to optimize the LED Wall to meet constantly evolving production technology."

Mr Choi is also quick to note the importance of partners. "The success of an XR studio depends on partnering with the right technology providers. There is a lot of behind-the-scenes technology that helps create the right look and feel of a production in a XR studio. Of course, the expertise of the production crew is also crucial. There are, as expected, challenges when setting up a XR studio, but proper technical understanding does a lot to help overcome them."

Analog Way

LG

In PART TWO that will appear in our November issue, you can read about the different challenges faced by GIANTSTEP in setting up the studio and how they had resolved them. In addition learn about how GIANTSTEP came up with its own solution for better control of all the different elements for a more seamless XR studio recording.



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Audio-Visual Transcendence at Ahmedabad's Vastral Auditorium

Cantata Communication Solutions designs and equips Ahmedabad's new Vastral Auditorium with state-of-the-art AV infrastructure

by Elton Noronha



FACTFILE

Project Name: Vastral Auditorium

Project Location: Ahmedabad, India

Project Segment: Multi-purpose Auditorium

Project Contractor: Malani Construction

Project Systems Integrator: Cantata Communication Solutions

Key Solutions: d&b Audiotechnik, Audio-Technica, Kramer, Epson, Belden Cables and Leksa Lighting

The state of Gujarat currently stands as one of India's most vibrant and burgeoning regions; with cities like Surat and Ahmedabad quickly rising through the ranks to stake their claim to be among the top metropolises in the country. And a growing confluence of cultural and entertainment activities has, over the years, presented the administration with several opportune instances to improvise local infrastructure by consistently introducing new venues to capably meet such exigencies.

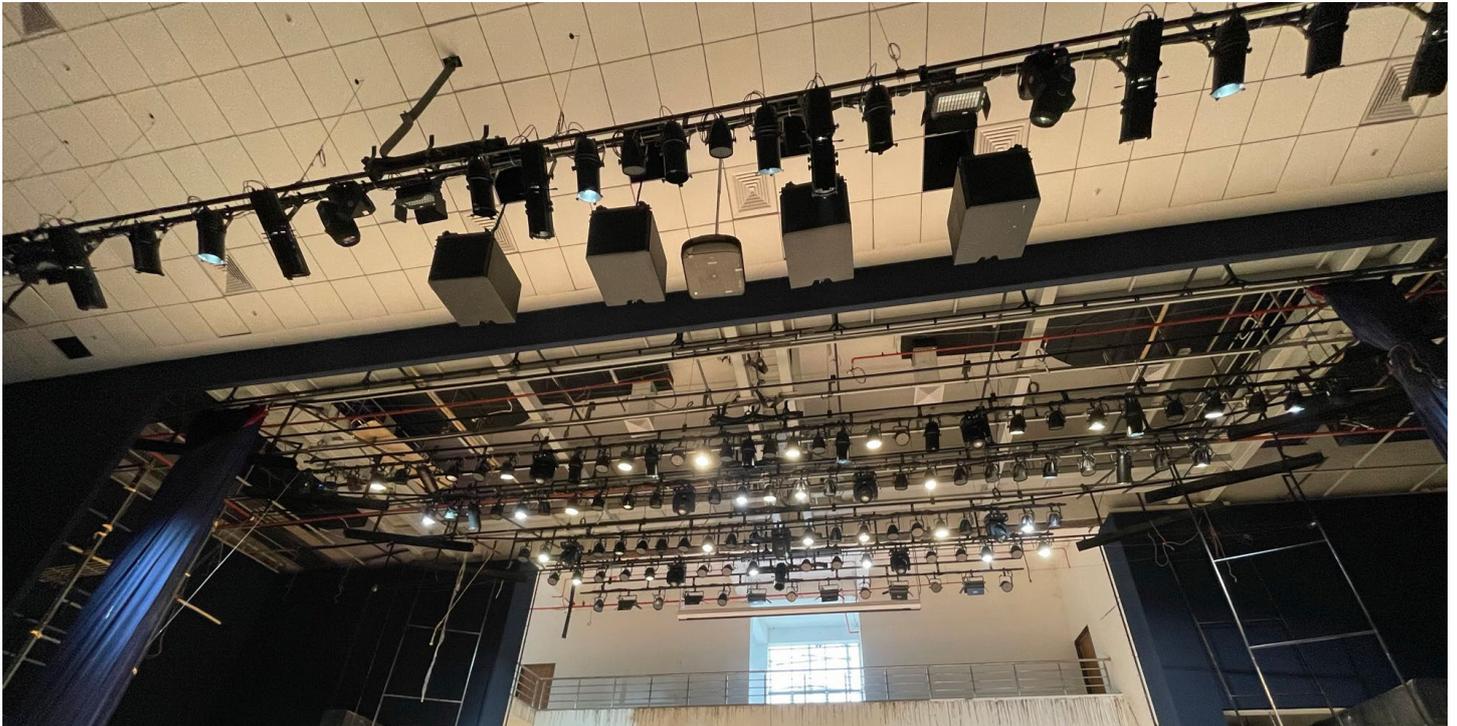
2017 witnessed the inception of one such venue in Ahmedabad – the Vastral Auditorium, which is a 1000-seater capacity state-of-the-art space that was originally planned by the then home minister



of the state of Gujarat, to play host to a variety of cultural and entertainment performances. An official tender for the project was released out by the local municipal corporation in 2018; and this was won by Rajkot based contractor M/s Malani Construction who in turn commissioned Ahmedabad based AV solutions company Cantata Communication Solutions to design and deliver a world-class integrated AV system for the auditorium. And deliver they did – as the company cherry-picked industry leader brands like d&b Audiotechnik as their preferred partner for the audio solution, Audio-Technica for microphone and peripherals, Leksa Lighting for the venue and stage lighting solution, Epson for stage projection, Kramer for end-to-end AVoIP, and Belden for comprehensive venue cabling to power and support all of the hardware and software technology products.



“Since this is a government project, the managing authorities were very clear about the kind of AV capabilities that they needed for the space. The client insisted on key metrics such as audio clarity and intelligibility delivered to each seat within the venue, as well as appropriate stage lighting that would offer camera friendly stage illumination while also delivering RGB multi effects. And I believe this clarity came from experience and knowledge of the dos and don'ts in terms of AV that the authorities gained by working on similar scaled projects that were instituted in the city not too long ago. From the brief that we received, it was clear that we needed the best technologies for this project. And this was even more crucial for our company, since it was our first large



install in own hometown. We were confident of making a statement by integrating only world-class solutions at this venue – the likes of which were never before seen here in Gujarat” explains **Willis Desai, proprietor of Cantata Communication Solutions.**

According to Willis, the Vastral Auditorium can and should be heralded as a venue that features a lot of firsts – especially in the realm of professional AV-IT systems. From the first sound system of its kind, to avant garde automation, lighting and video systems – Cantata left no stone unturned to ensure that the Vastral Auditorium could offer a comprehensive sensory experience like no other space in the region.

Says Willis, “We took this as the perfect opportunity to bring in d&b as the main sound reinforcement solution – coincidentally also making it first time in India for the brand to feature so prominently in any government install. Undoubtedly the USP of the audio system is the fact that we’ve managed to deliver over 10db

headroom which really enhances the sound experience drastically. This is something that the client hadn’t experienced at any of the other projects that they had established earlier, mainly because almost all of those sites have been equipped with economical solutions. At the same time, this is also the first government project in Gujarat to feature Dante technology in such an extensive manner, as we installed the Dante enabled MCX C15 distributed audio controller and Rio3224 high-performance I/O rack from Yamaha to assure flawless audio mixing and processing. On the other hand, with AVoIP being a key prerequisite for video, we chose to partner with Kramer owing to their impressive portfolio of products and technologies that specialize in meeting this requirement. This matches together perfectly with the high-end projectors from Epson comprising the EB 1505UH WUXGA 3LCD 12000 lumen laser projector and EB L1495U WUXGA 3LCD 9000 lumens laser projectors that have been installed to provide a high-quality viewing experience thanks to their 4K enhancement capabilities. And for what is perhaps the most crucial tangible element

of the venue – the lighting – we chose to partner with Leksa Lighting which is an Indian brand that has revolutionized the industry with their world-class products and technologies.”

Willis explains that after a detailed analysis of the space was commissioned by the Cantata team, certain key challenges were identified and the technical design slowly started to take shape. Ansata – the official distributors of d&b Audiotechnik in India – provided the Cantata team with a complete audio solution design for the auditorium featuring the d&b audiotechnik Yi8 and Yi12 2-way loudspeakers in a line array arrangement using the array-processing technology + the flyable Vi cardioid subwoofers as the main PA; and multiple numbers of the 8S two-way full range loudspeakers deployed as the near and far field Image fills, front-fills and delay systems.

The sound system design presented by Ansata was created by referencing d&b’s ArrayCalc prediction software, which promised to offer the same level of sound to all the seats of the auditorium while keeping a 0.8 dB loudness difference from front to back seats of the auditorium with the full-glory setting on array-processing. And the entire proposed system was to be rigged / mounted according to the specifications taken from the ArrayCalc prediction software using standard installation accessories, which includes d&b’s ArrayCalc and R1 for workflow.

The precise use of software prediction did help plot out the most optimum points for loudspeaker placement within the venue. However, physically installing the loudspeakers on-site did come with its own set of on-ground challenges. As Willis explains, “To be honest, the ceiling structure posed the greatest challenge. The

ceiling structure offers an interconnected walkway for services which is 4 meters above the false ceiling. Therefore, to consider the mounting and adjustment of any device on the ceiling needed special structural support from an additional metal structure. Drawings submitted by Ansata, though accurate, suggested that we mount speakers at points where physical suspension wasn’t possible. We therefore had to arrange for specially fabricated support structures by providing structural drawings with load bearing details to client and contractor. Special suspension points were installed to support loudspeaker rigs as well as lighting rigs. This is also the first venue that we’ve worked on, which features a total of seven units of 7metre lighting motorized bars from Leksa Lighting, where each lighting bar needs 4 suspension points and hoists, which have been installed on the metal structure with special provisions made for 3 phase motors.”

The project execution phase kicked off in May 2021, starting with laying out the cabling and anchoring the rigging arrangements. A total of over 10000 meters of Belden cables have been laid out in order to ably support AV signal transmission. In terms of the audio, each of the loudspeakers are individually connected with a power amp channel, which enhanced the team’s ability to efficiently deploy d&b’s array processing algorithm to tune the PA.

A total of 8 units of the Yi8 Loudspeaker and 4 units of the Yi12 Loudspeaker have been deployed at the main stage as L-R line array hangs, with a total of 4 units of the flyable Vi-SUB subwoofers deployed in cardioid arrangement. The stage also features a total of 4 units of the MAX2 loudspeakers deployed as the stage monitoring solution – with the entire loudspeaker system powered through multiple units



of the 10D and 30D which are from d&b's series of Class D amplifiers that feature active power factor correction. Additionally, a single unit of the DS10 Audio network bridge has also been installed in order to offer efficient interface between Dante networks and AES3 digital audio signals, while also providing distribution of Ethernet control data. Separate loadable presets have been made available for users to load on to the amplifier, thereby assuring that the system will adjust the audio levels and frequency distribution accordingly with different customized array-processing presets. The team have also ensured that the system can be made to work with any chosen preset based on the application and/or headcount for a particular show; through the mere touch of a button on the R1 remote control software on a laptop.

Complementing the audio system is a rather extensive microphone inventory as well – with team Cantana offering a comprehensive portfolio of microphones from industry leading brand Audio-Technica. The

microphone inventory comprises 3 counts of the system 10 PRO rack-mount digital wireless system (tiepin system), along with 3 units each of the AE5400 cardioid condenser microphone and AE6100 hypercardioid dynamic vocal microphone from Audio-Technica's acclaimed Artist Elite series. Additionally, 4 units of the ES925/DS5 modular cardioid condenser gooseneck microphone system also adorns the lecterns, while 8 units of the ES933PMC wide-range miniature condenser microphone have been deployed as overhead capture sources for entertainment and music performances. This is further consolidated by a total of 8 units of the U841A boundary microphone, that offer exceptionally intelligible audio reproduction in a super-compact, low-profile design.

The lighting scheme at the Vastral Auditorium is no less impressive, as it sports a total of 162 lighting fixtures illuminating the performance stage. The setup primarily comprises a single unit of the LK FLW 300 high performance LED Follow Spot Light, 60 units

of the LEKSUN G+ RGBW LED Pars, 10 units of the Moving Head Beam 7R - II, 14 units of the LK Zpro 300 T 300watt zoom LED profiles, 10 units of the LK CYC 400 CCT CYC washes, 3 units of the LK MH 16R moving heads, 22 units of the LEKSUN 200 LED Multi 10 light, 8 units of the LEKSUN 543T high-performance LED Stage Illuminators; in addition to several other spot and PAR light combinations. Willis affirms that every lighting fixture used here is driven by LED engines to bring down heat generation and usage of electricity; with the entire lighting design programmed and controlled via a single unit of the compact and impressive Tiger touch II console from Avolites.

To facilitate a heightened AVoIP experience, team Cantata have equipped the auditorium's control room with Kramer Network - the software-based AV over IP enterprise management solution that gives IT system administrators complete centralized or distributed control of IP streams, room environments and any AV device from any single point on the network; in addition to Kramer's VIA Connect Pro - the wireless collaboration and presentation solution that makes sharing and presenting in meetings easier. Additionally, the team have also installed a total of 5 units of the TP-580R long-reach HDBaseT receivers (for 4K60Hz) along with 3 units of the WP-20 wall-plate switcher and transmitter over extended-reach HDBaseT, and a pair each of the KDS-EN5 H.264 encoder and KDS-DEC5 H.264 decoder (for HDMI signals of up to 4K@30Hz), Control of the system is achieved through a single unit of the SL-240C Compact 16-Port Master / Room Controller with PoE and a single unit of the KT-107 7-Inch Wall & Table Mount PoE Touch Panel.

Reviewing the Vastral Auditorium's AV and automation system in total, Willis expresses his satisfaction with the way things turned out, as he says, "This venue

definitely stands out as a class-apart, especially in terms of the plethora of possibilities that this world-class AV infrastructure affords. We'd like to thank all the brands and partners that worked closely with us through every step of the way and helped make this project the rousing success that it is today. I'm convinced that audiences will enjoy nothing less than an absolutely exception experience at the Vastral Auditorium".

Mr. A.A Mal, deputy electrical engineer at the Ahmedabad Municipal Corporation, and one of the key government personnel involved throughout the life-cycle of the project, echoes the sentiments shared by Willis, as he confirms, "We're extremely impressed with the quality of products, technologies and service that we have received from team Cantata. The overall experience at the Vastral Auditorium is significantly richer when wcompared to other previously established sites. And for us, this project stands as a beacon of excellence for future designs of similar facilities. The space is already getting booking inquiries for events and we're eagerly looking forward to hosting and serving new clients."

Cantata Communication Solutions

Ansata

d&b audiotechnik

Epson

Audio-Technica

Leksa Lighting

Inspiring 5,000-year History of Henan Brought to Life with Dante Network Design

Integrator ACE ensures that the vast number of audio systems work seamlessly with flexibility



FACTFILE

Project Name: Unique Henan: Land of Drama

Project Location: Henan, China

Project Segment: Attraction

Project Contractor: Malani Construction

Project Systems Integrator: Advanced Communication Equipment (International) (ACE)

Key Solutions: Dante Network platform with Dante Domain Manager

Unique Henan: Land of Drama, which covers more than 100 acres and receives approximately 10,000 tourists daily (with up to 20,000 visitors on holidays), is known as the largest fantasy city in the world. The amazing 5,000-year history of Chinese culture in and around the Henan region is presented in this self-guided, multi-media, and immersive live performance experience.

More than 800 actors are employed in a variety of dramatic, completely immersive, panoramic storytelling that takes place in 21 theatres, hundreds of outdoor locations, 56 maze-like courtyards, numerous themed restaurants, and food and beverage facilities.



The attraction's construction took four years to complete and cost nearly \$930 million.

The facility's many lighting, video, and sound systems are controlled by a mix of preprogrammed, synchronized, time-code-based presentations, audio-triggered routines, as well as live production and mixing. At Unique Henan: Land of Drama, many elements of the global sound system and the many stand-alone systems are all built upon Dante audio networks managed and monitored with Dante Domain Manager.

"This is an amazing attraction. It's like a theme park, but it's all theatre and AV experience-based. There are expansive indoor and outdoor spaces, restaurants, panoramic vistas, and more," said Steven Cai, marketing manager of Audinate, APAC. "For sound design, each theatre has very different venue characteristics, different performance forms, and

different construction conditions. Each theatre is unique. The only way to manage such a set of venues and bring consistency and reliability to the project was to design all audio systems around a Dante network with many Dante-enabled products."

Steven explained that the vast number of loudspeaker points throughout the Land of Drama dictate that a very flexible sound system architecture be created to accommodate evolving, ongoing production and space changes. The main theatres, micro theatres, and outdoor scene spaces are all built on a Dante system architecture, which significantly simplifies the cable installation and connections between large systems. The three main theatres work as independent networks, and the micro theatres and the scene spaces interconnect through an optical fibre network.

"The AV integrator for this project, Advanced Communication Equipment (International) (ACE), did



an amazing job," said Steven. "As you can imagine, this is essentially more than 100 AV installations all wrapped up in one huge project. Many spaces work independently, and many are tied together. Some sound systems are hidden for background music, and some are large full-on line-array, concert-level productions. They even have mobile sound systems that can be relocated and positioned as needed to better cover larger crowds. The flexibility required here is like nothing else."

The Dante platform is a complete AV-over-IP solution that allows audio, video and control data to be transported over standard 1GB ethernet networks. Supported in more than 3,000 Dante-enabled products from more than 500 manufacturers, Dante replaces point-to-point analogue and digital connections with software-based routing, effortlessly sending AV channels anywhere on the network with perfect digital fidelity.

Andy Wei, solution manager at Audinate, APAC, explained that: "Much of the sound system architecture is based on centralized control. The sound source equipment and the primary and backup digital mixers are located in a master control room. System digital processors and amplifiers are installed across four separate equipment rooms. Optical fibre interfaces are located at the performance venues, which can be connected to on-site mobile broadcast computers, wireless microphones, and other equipment as needed. All devices in different locations are connected through fibre to form a complete network enabling quick access, configuration, and management of the system at any network point."

With such a large and complex system, hundreds of Dante-enabled devices are connected to the network. Some of the core Dante-enabled components include multiple Soundcraft Vi1000 and Vi2000 digital mixers, Shure ULX-D Series digital wireless microphones, a range of BSS digital processors, and much more. For signal routing and device control, powerful management software was required.



Andy added that the Platinum version of Dante Domain Manager (DDM) software was used for the network routing and configuration of the entire system. He explained that the system primarily adopts a multi-channel form of arranging the loudspeakers. No matter the location, some speakers can be positioned to enhance the sense of an immersive sound experience. At the same time, each speaker channel can be processed separately to facilitate even more processing flexibility.

Pang, the audio system administrator for the project was particularly impressed with how stable the system was thanks to DDM. "DDM gave us power and control over the Dante network, ensuring the network was not only more secure but also more scalable," said Pang. "Our team, as well as the entire management team, were really pleased with the results of this project, meaning DDM is now a non-negotiable tool for us in future Dante projects."

Dante Domain Manager is a server-based audio network solution that brings a centralized, complete view of an entire networked Dante deployment. Dante

Domain Manager can show every device in every space while allowing seamless expansion of the AV network. Dante Domain Manager allows managers to define separate, non-interfering groups of devices that can only be accessed by authorized users. Support staff can stay on top of issues with a system-wide dashboard and complete set of alerts and audit logs to quickly track and troubleshoot issues.

"With the evolving nature of the programs and performances, the content, speaker positions, and the connected equipment in use are constantly changing; only a Dante network managed with Dante Domain Manager could take on a project of this scale," added Steven. "Along with flexibility, sound quality and system reliability are also critical. The system – in all spaces – sounds great, is extremely stable, and the client is thrilled with the results."

Audinate/Dante Domain Manager Software



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