



ihse. ... **kvm-tec** an ihse company 

WHEN KVM  
SPECIALISTS  
CONNECT  
STRONGER TOGETHER

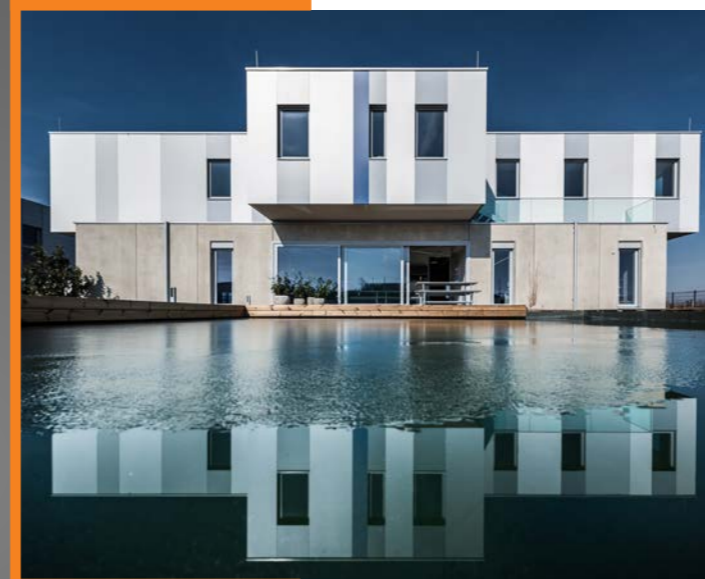




- IHSE is a leading global technology provider for KVM solutions (keyboard, video, mouse)
- IHSE offer modular and future-proof KVM solutions via proprietary network protocols
- Applications particularly in mission-critical areas such as air traffic control, control rooms and in the utilities and transport sector
- IHSE is based in Oberteuringen, Germany with subsidiaries in the USA, Singapore and China



- kvm-tec is a cutting edge provider of KVM-over-IP solutions offering great flexibility and lower-cost implementation
- kvm-tec enable the high-performance, latency-reduced transmission of the signals via the standard IP protocol in existing networks
- KVM solutions over the standard IP protocol are increasingly being deployed in industrial applications, broadcasting, post-production and the public sector
- kvm-tec is based in Tattendorf, Austria



## QUOTES FROM OUR MANAGEMENT TEAM

” With kvm-tec’s IP-based product portfolio we are strengthening our strategic competitive position in the market for further growth. Now we offer the right KVM solution for every customer requirement. Our joint technology platform also means we are reinforcing our innovation capabilities in a rapidly changing market.

**Dr. Enno Littmann**  
CEO, IHSE

” By expanding our product portfolio, we can offer our customers a one-stop-shop approach and expand our global reach. The two companies form a perfect synergy and will undoubtedly be stronger together.

**Michael Spatny**  
CSO, IHSE

” Since kvm-tec was founded some 15 years ago, we have continuously developed the technology behind our KVM-over-IP products which complement perfectly IHSE’s proprietary portfolio.

**Ing. Dietmar Pfurtscheller,**  
Founder and CEO, kvm-tec

” We are confident that we have found the right partner with IHSE to support our ongoing growth. With its global footprint and KVM expertise we are well positioned to become a ‘KVM Global Powerhouse’.

**Ingrid Pfurtscheller MSc**  
Head of Sales and Marketing, kvm-tec

” We are delighted that our technology group is continuing to grow with the acquisition of kvm-tec by IHSE. We make Mittelstand champions even better, even stronger, even more successful - this is exactly what Brockhaus Technologies stands for. We support our subsidiaries with our network and our expertise, and are a reliable partner for acquisitions.

**Marco Brockhaus**  
CEO, Brockhaus Technologies

## CONNECTING BOTH WORLDS - ONE STOP HOMOGENEOUS SOLUTION



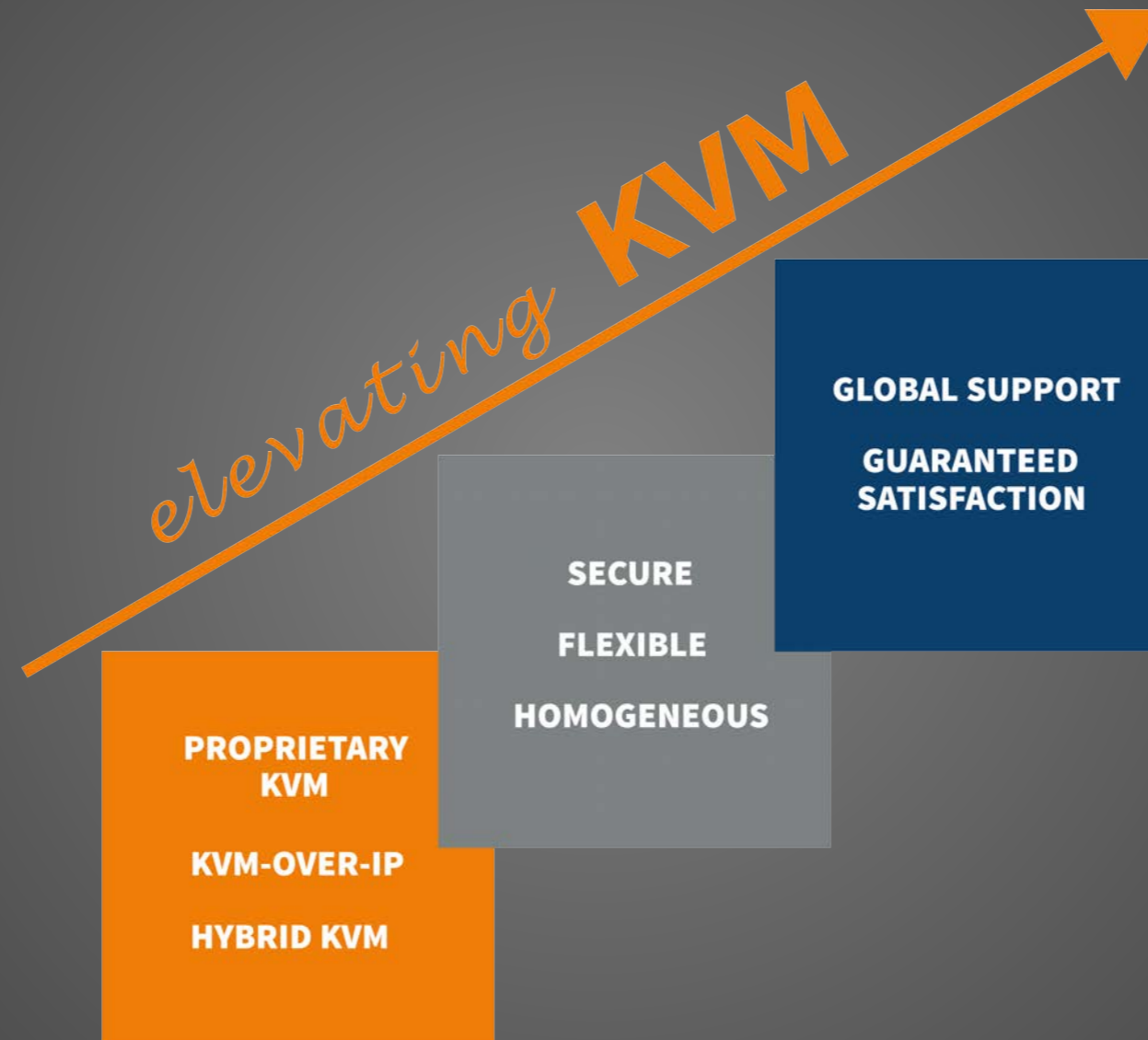
### REASONS FOR THE PURCHASE OF KVM-TEC

- IHSE identified kvm-tec as a rising company in the KVM-over-IP market
- With IHSE's extensive experience and know-how, kvm-tec's devices can be improved even further
- With the support of IHSE's sales channels, kvm-tec products can be distributed faster and more widely
- IHSE can use the KVM-over-IP possibilities to offer hybrid systems and a one-stop-shop approach
- Numerous synergies of both companies can be used and maximized (e.g. purchasing and production)



### WHAT DOES THIS MEAN FOR THE IHSE PORTFOLIO?

- kvm-tec's KVM-over-IP is an add-on to IHSE's product portfolio: classic proprietary KVM technology is complemented by KVM-over-IP
- Homogeneous interoperability of proprietary, IP-based and hybrid platforms allow for a streamlined applicational offering



### ADDED VALUE FOR ALL CUSTOMERS

- Existing systems can be seamlessly extended with IP
- Offering the best solution for the customer, fully adapted to their requirements
- Increased flexibility of signal management and infrastructure: homogeneous, hybrid systems
- Advanced and innovative products designed to meet the specific needs and applications of customers
- Generate clear advantages by combining both approaches in one system
- One-stop-shop approach allows the customer to stay with their preferred and proven provider now offering both systems
- Combining the sales and technical organizations lead to improved customer satisfaction
- Possibility to seamlessly connect KVM systems through compatible products

HISTORIC MILESTONES AND ACHIEVEMENTS

**ihse.**

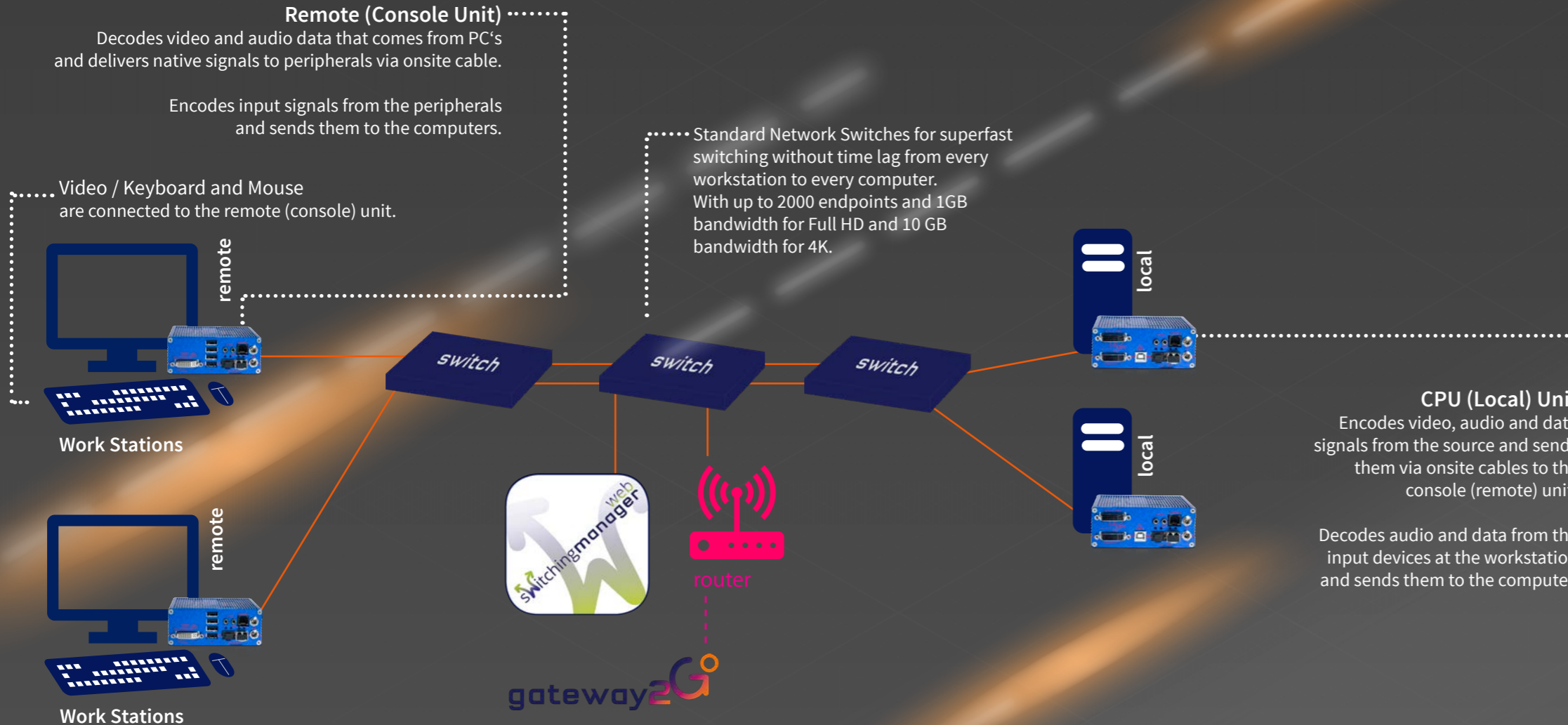
- 1984** Foundation of IHSE GmbH
- 1988** Introduction of first KVM extender
- 2001** First OEM partnership
- 2009** **Foundation of IHSE USA**
- 2010** Introduction KVM matrix switch Draco tera
- 2011** Start cooperation with Fraunhofer Institute
- 2013** **Foundation of IHSE APAC**  
World's first matrix grid architecture for dynamic coupling of KVM matrix switch
- 2015** 100% ownership of APAC/ Singapore based representation & World's first KVM matrix switch with 576 I/O-ports
- 2016** Brockhaus Private Equity acquires majority shareholding
- 2019** Relocation to new HQ & production facility & Introduction of IP-enabled solution & Buy-out by Brockhaus Technologies AG
- 2020** IPO Brockhaus Technologies AG & Launch Draco MultiView 4K60
- 2021** **Foundation of IHSE China**

**kvm-tec over IP**  
an "ihse. company"

- 1987** Foundation of Ing. Dietmar Pfurtscheller's company
- 1980s** Development of desktop publishing monitors for Nixdorf
- 1990s** Development of graphics cards with high performance and industry leading Pead Hurrigan graphics card
- Mid 1990s** Development of industrial video converters
- 2004** Start of development of video signal transmission
- 2005** Renaming into kvm-tec electronic GmbH
- 2017** Relocation to new kvm-tec HQ facility
- 2018** Establishment of sales departments in the US and China
- 2021** **IHSE acquires a majority stake in kvm-tec Holding GmbH**

## KVM-OVER-IP TECHNOLOGY BY KVM-TEC

KVM-over-IP enables the connection to existing KVM systems and remote workplaces.



## WHY KVM OVER IP?



### FLEXIBILITY

- Compatible with standard network switches
- Up to 2000 endpoints
- Flexible with Full HD and 4K in one system
- Redundant, uncompressed
- Latency time 0,47 ms
- In-house development  
Patent pending USB 2.0 implementation



### SECURITY

- Dedicated network

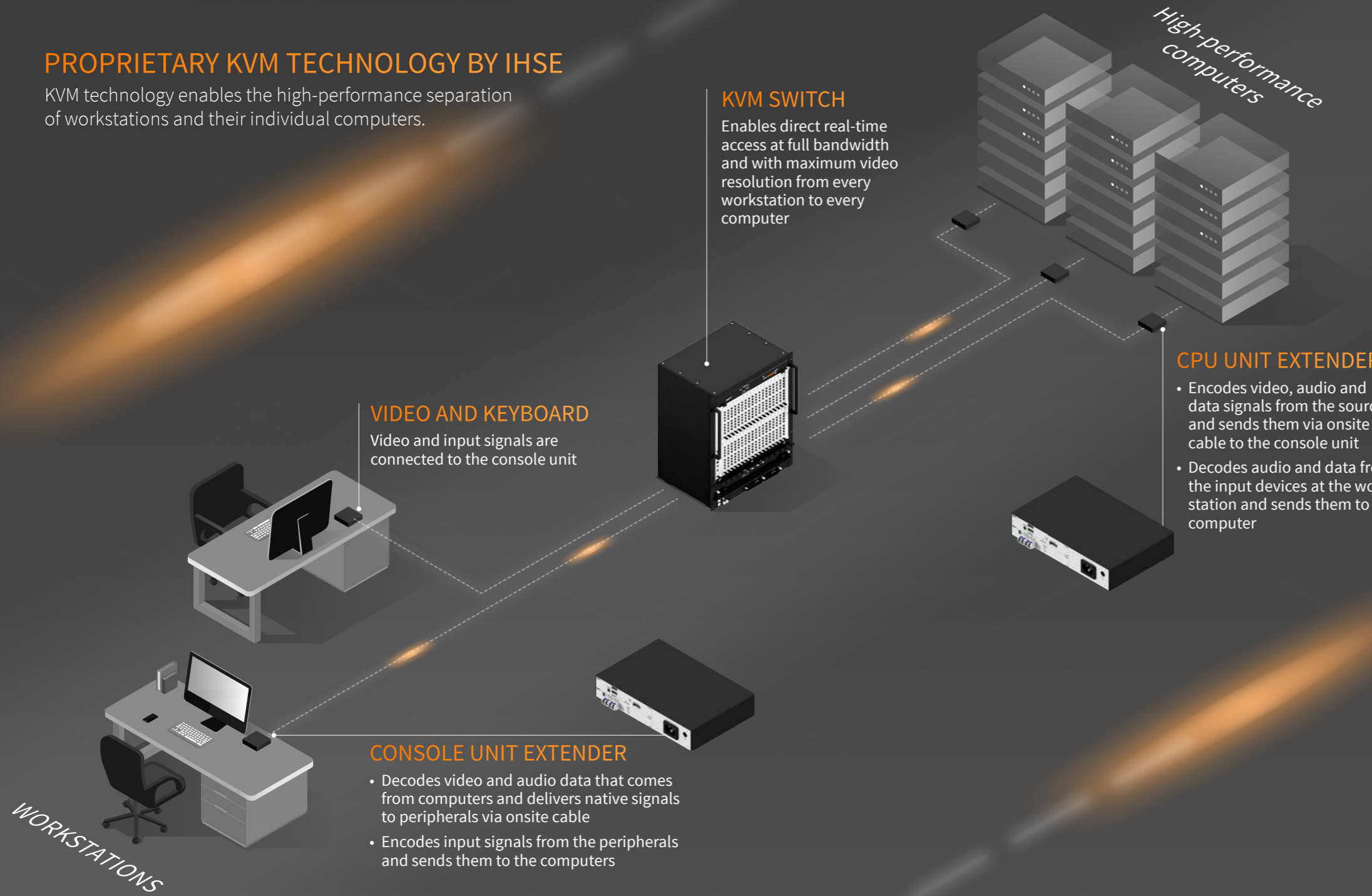


### COST & ENERGY SAVINGS

- Excellent price-performance ratio
- Ergonomic workspace solutions
- Additional software features
- Low power consumption

## PROPRIETARY KVM TECHNOLOGY BY IHSE

KVM technology enables the high-performance separation of workstations and their individual computers.



### VIDEO AND KEYBOARD

Video and input signals are connected to the console unit

### KVM SWITCH

Enables direct real-time access at full bandwidth and with maximum video resolution from every workstation to every computer

High-performance computers

### CPU UNIT EXTENDER

- Encodes video, audio and data signals from the source and sends them via onsite cable to the console unit
- Decodes audio and data from the input devices at the workstation and sends them to the computer

### CONSOLE UNIT EXTENDER

- Decodes video and audio data that comes from computers and delivers native signals to peripherals via onsite cable
- Encodes input signals from the peripherals and sends them to the computers

WORKSTATIONS

## BENEFITS OF KVM



### OPTIMIZATION

- Outsourcing of computers
- Direct access
- Latency-free extension of computer signals



### COST & ENERGY SAVINGS

- Longer service life
- Jointly used resources
- Total cost of ownership
- Green KVM: low power consumption, ergonomic workspace solutions



### CONNECTIVITY

- Signal distribution
- Signal interconnection
- Signal extension
- Signal conversion



### REDUNDANCY

- Constant availability



### (CYBER) SECURITY

- Access control
- Complete isolation



### RELIABILITY

- Fail-safe
- Highly critical areas



**ATV Privat TV  
GmbH & Co KG**

The Austrian television channel of ProSiebeSat.1 Media SE.



**Cirque du Soleil  
Los Angeles, USA**

Cirque du Soleil provides an unparalleled experience with fascinating shows and events around the world.



**Northeast China Power  
Grid Company**

A branch of China State Power Grid which provides energy to the northeast of China.



**BBC One**

The flagship television channel of the BBC airing across the UK. It is the oldest and most popular TV channel in the country.



**China Academy of Space  
Technology (CAST)**

Dedicated to the exploration of space, it is CAST's mission to use the most advanced space technology for the benefit of mankind.



**Shanghai Gaogiao**

Shanghai petrochemical company is one of the top 10 petro chemical companies in China refining more than 10 million tons of oil per year.



**China Central Television  
Station (CCTV)**

One of the largest TV channels in the world producing top news around the world.



**ORF**

With 4 TV channels and 3 radio channels, it is the largest and only national public service broadcaster in Austria.

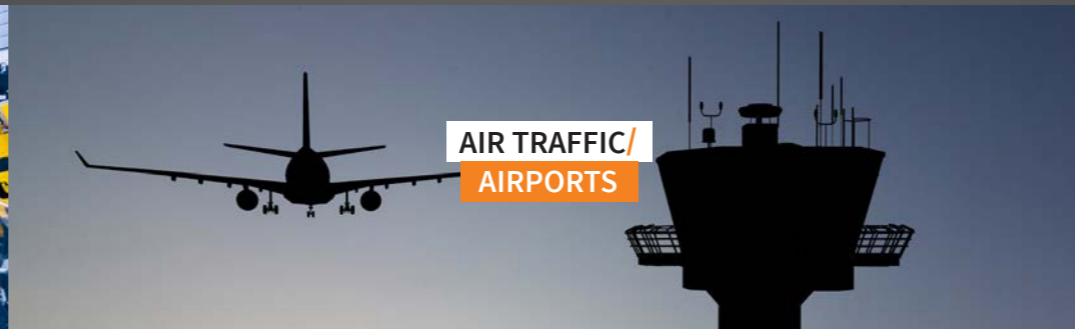


**DOHA Film Institute**

The national museum of Qatar was inspired by the "desert rose", a crystal cluster found in the Qatari desert.



**INDUSTRIAL/  
CORPORATE**



**AIR TRAFFIC/  
AIRPORTS**



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DEFENCE**



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TRANSPORTATION**



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HEALTH CARE**



**BROADCAST/  
POST PRODUCTION**



**VENUES/  
ENTERTAINMENT**



**BANKING/  
FINANCE**



**AUGMENTED/  
VIRTUAL REALITY**



**ESPORTS/  
GAMING**



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SECURE KVM SOLUTIONS ■ IP ACCESS ■ MISSION CRITICAL 24/7