



# MULTIMEDIA, BROADCAST & TELECOMMUNICATIONS

STUDIO, DISTRIBUTION, SATELLITE, INFRASTRUCTURE, TELECOMMUNICATION

A wide range of products for a diverse range of applications, as e.g. plug-in units, consoles, monitors and embedded computer solutions.

**POLYRACK supports the exchange of messages and information in the interaction of the world - in speech, sound, words and image.**

/03

## MULTIMEDIA & BROADCAST AND TELECOMMUNICATION

Plug-in units, consoles, monitors and embedded computer solutions

Daily life often runs like a movie. Only the scenes and actors change. Whether in private life or in the professional environment, displays, images, data transmission and manipulation are ever-present, in an ever-advancing, high-resolution complexity and speed for the benefit of the viewer and user.

Wide ranges of products, often from different suppliers, have to be connected to create a diverse range of applications. They have to be able to communicate and interact through an, often long, chain of technologies from recording to playback. A complex IP network has to be able to connect the various technologies, not only providing transmission, but also managing interface protocols to provide global information to multiple destinations for both commercial and private use.

Transmission of data is fundamental to achieving this. Often the decision of how to transmit information is determined by economics and geography. Local, wide area, mobile, trunk network and satellite transmission all play their part. For domestic use, fibre optic local loop technology is playing a significant part, along with 5G Mobile data, in providing end users with high quality data and images that the market demands.

Behind the systems produced by various manufacturers, POLYRACK brings its expertise to provide ranges of enclosures, system chassis, thermal management, displays, embedded computer solutions and consoles. Using POLYRACK's range of skills from concept design to logistics, manufacturers of leading edge technology systems can rely upon POLYRACK to provide advanced solutions to meet the specific needs of any application.

## MULTIMEDIA & BROADCAST



RECEIVER / DECODER



MIXING SYSTEM



ROUTER



# /04

## STUDIO

POLYRACK accompanies the scene with innovative solutions – it all depends on the right mixture

Studio Equipment is of great importance to the broadcast industry, in broadcast productions such as radio on-air, live performances, live broadcasts and theatre. The synergy of controls and functions are crucial for controlling live moments in image and sound. Ergonomics in the set-up, paired with functionality, for the user and the integration of the latest technology is fundamental. The entire equipment is subject to high quality standards in terms of look and feel and is equipped with highest-quality components.

**BROADCAST CONSOLES** Consoles are among the most important components of broadcast audio/video production. Equipped with customised tablet technologies and navigation via finger gestures, the functionalities of console operation are constantly advancing. This opens up a new dynamic for the operator in broadcast design, especially for live entertainment.

**LIVE / REPLAY / REMOTE SYSTEMS** For the broadcasting of sporting events or concerts, live production systems work in the background. These are used, for example, to capture highlights and im-

mediately play them back as a section or by means of a slow-motion effect. They also allow highlights to be broadcasted more quickly and transmitted to the viewer in a simplified way, as part of the system design.

Managing camera settings, capturing different moments and switching them up over the main image is highly specialised in real time and, requires synergy between the operator and the system. Network, audio, video, surveillance and control solutions – harmoniously aligned within an IP platform creating an innovative environment for the visionary development of the industry.



**SYSTEMS ASSISTANT**

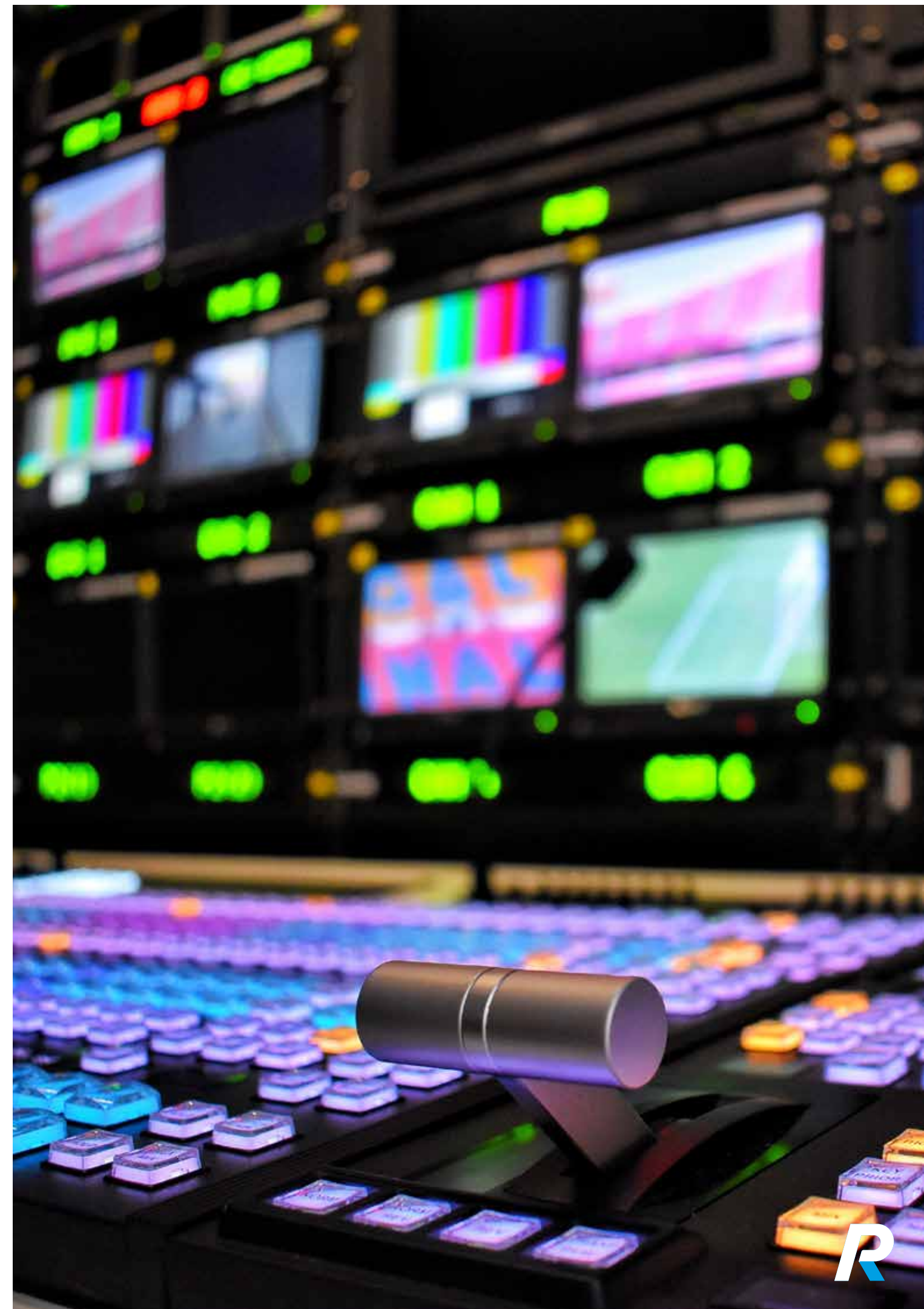
## STUDIO EQUIPMENT



**MIXING CONSOLE**



**EVENT CONTROLLER**







# /07

## DISTRIBUTION / SATELLITE

POLYRACK brings the signals together – uninterrupted transmission for image and sound

The network requirements need a combination of innovative technologies and intelligent routing of IP data. It requires the integration of hardware, software and services for a seamless interaction of the solution over terrestrial or satellite communication networks.

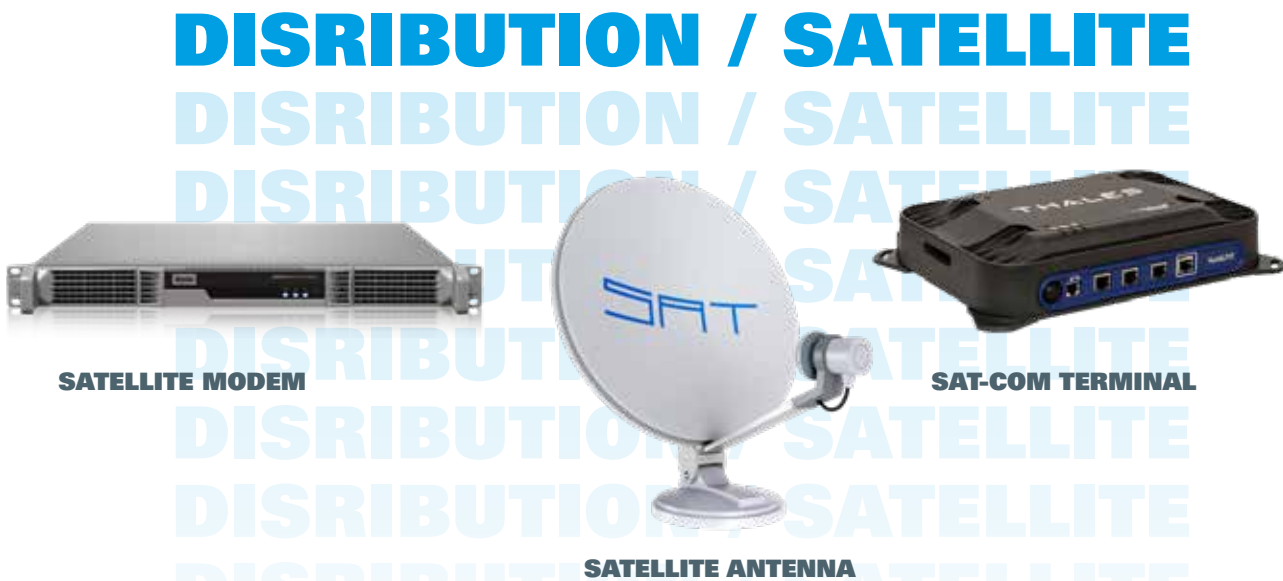
The advantages lie in the unlimited access and availability that the user has, nearly everywhere. The continuous development and reception of satellite internet shows the alternatives for the future. This also includes VoIP (Voice-over-IP), streaming video, web access or connection to email and social media, in every corner of the globe.

**MODULATOR / DEMODULATOR** New updated standards DVB-S2 and DVB-S2X are becoming prominent whilst older standards, DVB-S and DVBDSNG, continue to be supported and regulated.

**DOWNCONVERTER / UPCONVERTER** Converters are used to create high frequency bandwidths with greater stability in satellite applications for broadcast, telecommunications and IP.

**MODEM** Satellite modems provide for barrier-free transmission of the latest standards.

**HUBS AND GATEWAYS** Gateways provide an efficient satellite interface and enable a higher density of hubs and terminals. For distribution networks, from the user, to the head-end, via the tower to satellite, the application of the latest technology is providing global, uninterrupted access to data.





## INFRASTRUCTURE

POLYRACK connects the broadcast world – secure and easy communication of all sources and locations

IP networks are key elements of the broadcast world. The infrastructures are intelligent, low-latency, trusted, deterministic and discoverable. Only the communication and connection among each other must function and work without restrictions. Widely used among the various formats is AoIP – Audio over IP for two-way network exchanges, increasing utilisation and connecting multiple networks into a fully virtualised real-time routing and processing infrastructure. Designed and aligned for a full IP infrastructure with multifunctionality and flexibility, combining all cornerstones for intercom, audio and video. With future transmission rates, there are no limits to innovation – the broadcast world is being set up today for tomorrow, making it adaptable and expandable for the future at any time.

### AUDIO DISTRIBUTION SYSTEMS / ROUTING

The audio network is the linchpin of any installation – an all-rounder for the network. Configurations with different interfaces, hot-plug options and on-line configuration are becoming fundamental. The networks are expandable on the system side, changeable, fail-safe and equipped with high performance and reliability. HD technology requires constantly increasing bandwidths for an unrestricted user experience.

IP-based infrastructures allow format independence – whether HD, HDR, UHD, 4K or 8K. Constantly increasing bandwidths are the backbone for further development of the broadcast industry and offer a scope, with expansion potential, for an unrestricted user experience in new quality.

## INFRASTRUCTURE



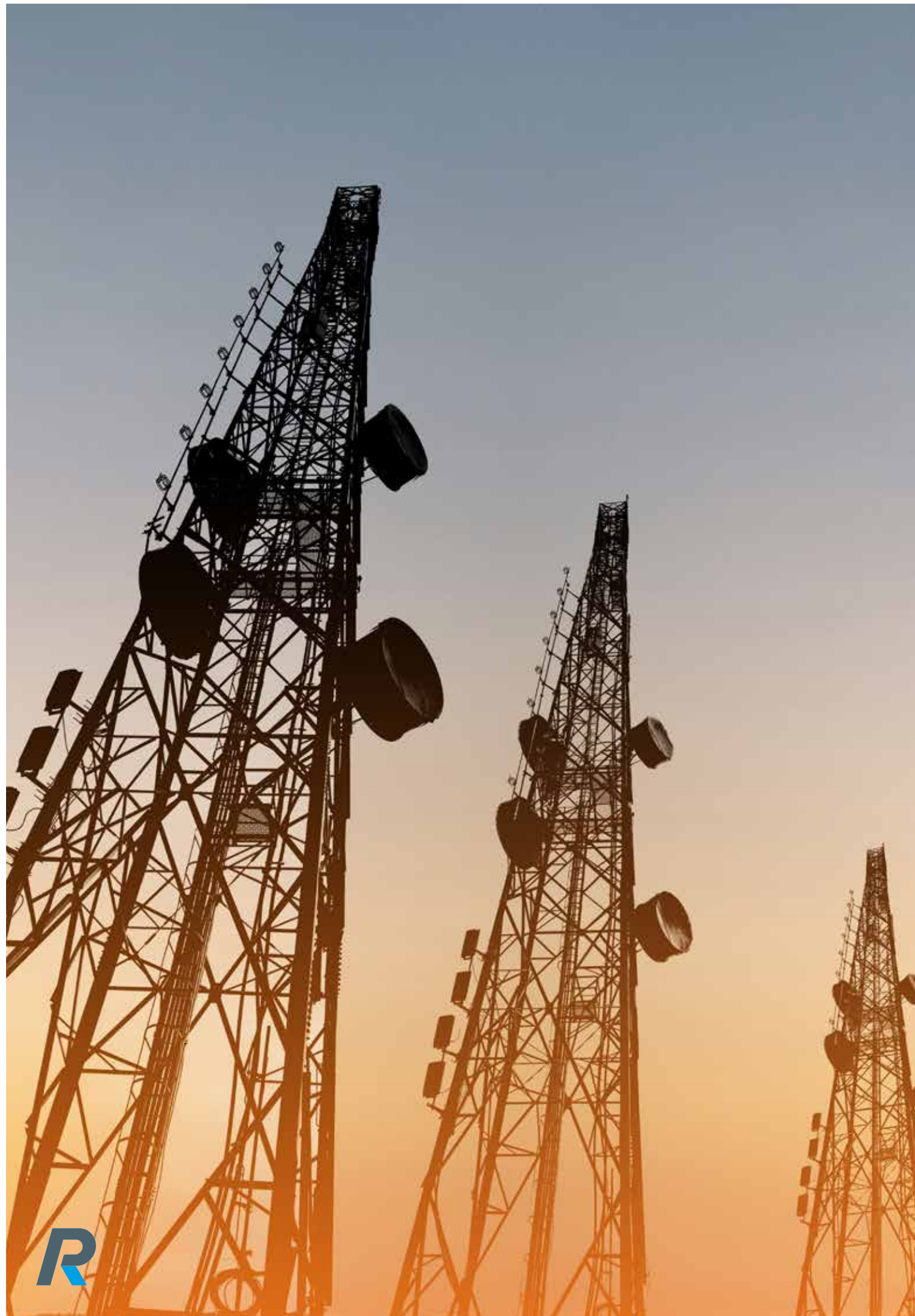
SERVER / STORAGE & RECORDER

AUDIO DISTRIBUTION SYSTEM

CONTROL AND MANAGEMENT UNIT







# /11

## TELECOMMUNICATIONS

POLYRACK supports the exchange of messages and information in the interaction of the world – in speech, sound, words and image

Our immediate environment and the world are subject to a continuously closer networking. Technical progress through new technologies such as the Internet of Things (IoT) and the optical fiber network allowed increasing transmission rates. As a result the demands on hardware and software are being redefined. Unknown and new applications facilitate communication and bring users together in a variety of ways. Our daily life and aspirations require a high-speed data highway.

**MODEMS** Network-bound or wireless modems are the link into the World-Wide-Web and the entrance into the world of communication.

**ROUTER / SWITCH** A networked interconnection must be created for data communication. This is supported by routers within networks and switches between different devices in a network.

**NETWORKS** Networks have a diverse purpose with different definitions of use. This includes both telephone and radio networks, but also computer and sensor networks.

## TELECOMMUNICATIONS



**PLUG-IN TECHNOLOGY FOR TRANSMISSION AND STORAGE**



**NETWORK TECHNOLOGY FOR DISTRIBUTION AND CONNECTION**



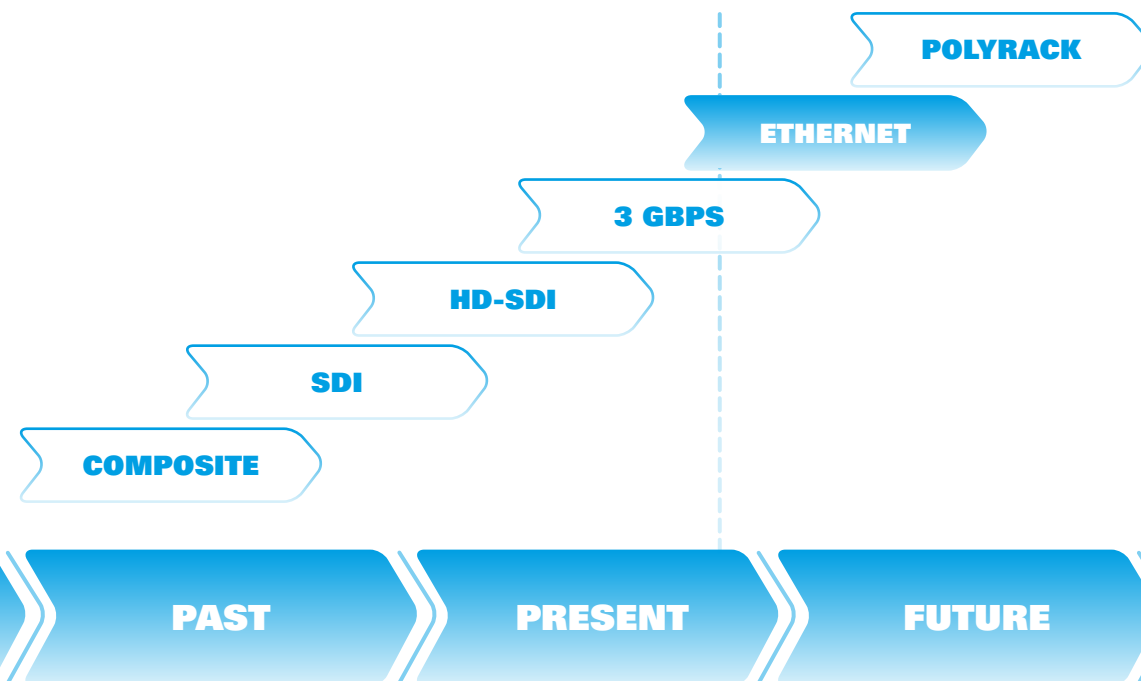
# /12

## PRODUCT HIGHLIGHTS

POLYRACK accompanies the broadcast industry – creating the future together

Technologies are the foundation, new services the platform and users the market driver. The mobile phone is becoming the new TV platform. HDR – High Definition Range is becoming more and more popular and screen quality is continuously improving. On-demand offers are in greater demand and the need for entertainment in every situation is increasing.

The broadcast world is opening up new opportunities for a surge in innovation. The increasing network speeds with simultaneous expansion offers a new definition of broadcast. The industry will set new trends. IP in combination with the development of bandwidths will decisively change the broadcast of the future.



**ANALOG**



**DIGITAL**



**SOFTWARE / NETWORK / IOT**







# /15

## TECHNOLOGY HIGHLIGHTS

POLYRACK connects ideas with technologies – give the innovative progress a platform

**BONDING TECHNOLOGY & SEALS** Bonding is a special process, which requires very high accuracy and quality. The production steps must be constantly controlled and documented. The pre-treatment is a decisive factor, solid experience and a bonding-suitable design are the basis for the desired result.

Applicable dosing materials are all commercially available materials on 1K basis from low viscosity to filled, with abrasive materials, such as UV adhesives and sealants, silicones, MS polymers, PUR, silicones with particles (EMC).

In the field of sealing technology, so-called compact materials with a hardness of 16 - 60 Shore A are available. These materials are not compressible in themselves and require space for lateral expansion after the dispensing process. They are ideal for use with enclosures that have access doors or need to be disassembled for maintenance.

Bonding and Sealing are the joining processes of the future. With the volumetric dosing machines, a wide variety of adhesives and sealants such as epoxy resins, acrylates, PUR, silicones etc. bonds and seals can be applied consistently and process-securely in the most diverse of forms.



## TECHNOLOGY HIGHLIGHTS



PRODUCTS MADE WITH THE BONDING AND SEALING TECHNOLOGY



# /16

## CROSS TECHNOLOGICAL SYSTEMS PARTNER

Due to the technology crossing company concept POLYRACK distinguishes itself from the market and combines all different fields that are shown below.



### PROCESS DEVELOPMENT

#### Plastic solutions

Tool construction, injection molding



### PRODUCT- & SYSTEMS DEVELOPMENT

#### Mechanical production

Welding, laser robot, CNC punching, milling, etc.



### TECHNOLOGY & MATERIAL CONSULTING

#### Extrusion solutions, cast

Aluminum-, zinc-, magnesium casting

#### Electronics

- Development and layout of circuit boards
- Interface connection test for backplanes

- Partially and fully assembled systems
- Cable assembly

#### Surface Treatment

- Wet painting
- Powder coating

- Silk screen, pad printing, HD printing
- Electroplating

#### Mounting and Assembly

- ESD-compliant assembly
- Function and final testing

- Quality control
- Software installation and testing

#### Logistics

- Packaging concepts
- Global inventory support
- Individual logistic concepts



**With our wide range of products we can always offer our customers the optimal solution across technologies.**

**Andreas Rapp**

# /17

## MARKETS & INDUSTRIES

### AUTOMOTIVE

### MACHINERY & PLANT ENGINEERING

### TELECOMMUNICATION

### ENERGY TECHNOLOGY

### AEROSPACE & DEFENSE

### AUTOMATION TECHNOLOGY

### MEDICAL TECHNOLOGY

### MULTIMEDIA & BROADCAST

### TRANSPORTATION

### MEASUREMENT & CONTROL

Industries at a glance: The more diverse the challenges become, the more individual our solutions are.

Take advantage from our know-how of more than 45 years.



# /18

## POLYRACK TECH-GROUP

Our group of companies – POLYRACK Electronic Aufbausysteme GmbH, RAPP Kunststofftechnik GmbH, POLYRACK Aerospace GmbH, Metalle in Form Geräteteile GmbH, as well as their subsidiaries abroad - offers an innovative and comprehensive range of products that are manufactured in high quality and with the economical benefits of series production.

Our focus is particularly dedicated to the development and manufacturing of customer-specific products and solutions. Extensive consultancy in the conception stage, right at the start targeted and reliable development, production and assembly combined with on-time delivery are characteristic of our service offering.



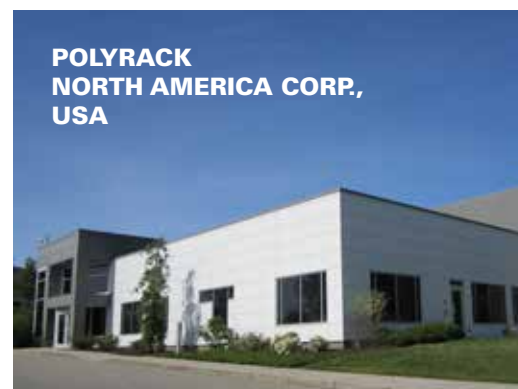
Effective: 01.01.2025



**PLANT 2, STRAUBENHARDT,  
GERMANY**



**PLANT 1,  
STRAUBENHARDT,  
GERMANY**



**POLYRACK  
NORTH AMERICA CORP.,  
USA**

## CONTACT GERMANY

### POLYRACK TECH-GROUP

#### POLYRACK TECH-GROUP Holding GmbH & Co. KG

Steinbeisstraße 4  
75334 Straubenhardt  
Germany  
Phone +49(0)7082.7919.0  
Fax +49(0)7082.7919.330  
info@polyrack.com  
www.polyrack.com

### COMPANIES OF THE TECH-GROUP

#### POLYRACK Electronic-Aufbausysteme GmbH

Steinbeisstraße 4  
75334 Straubenhardt  
Germany  
Phone +49(0)7082.7919.0  
Fax +49(0)7082.7919.330

#### RAPP Kunststofftechnik GmbH

Heinrich-Hertz-Straße 25  
75334 Straubenhardt  
Germany  
Phone +49(0)7082.7919.0  
Fax +49(0)7082.7919.630

#### POLYRACK Aerospace GmbH

Steinbeisstraße 4  
75334 Straubenhardt  
Germany  
Phone +49(0)7082.7919.0  
Fax +49(0)7082.7919.330

#### Metalle in Form Geräteteile GmbH

Ottostraße 10  
76227 Karlsruhe  
Germany  
Phone +49(0)721.94496.0  
www.metalle-in-form.com

### SUBSIDIARIES

#### Switzerland

##### POLYRACK AG

Seefeldstraße 283  
8008 Zürich  
Switzerland  
Phone +41(0)71.6951455  
polyrack\_ch@polyrack.com

#### USA/Canada

##### POLYRACK North America Corp.

1600 Highland Corporate Drive  
Cumberland, RI 02864  
USA  
Phone +1.401.770.1500  
polyrack\_us@polyrack.com

#### Asia/China

##### POLYRACK Science & Technology Co., Ltd.

7th floor, Building No. 11  
Langkou Industrial Park  
DaLang Street,  
Longhua New District  
Shenzhen 518054  
China  
Phone +86.755.8202.8946  
polyrack\_asia@polyrack.com

#### Benelux, Belgium

##### POLYRACK Benelux SRL

Rue Léopold Génicot 19A  
5380 Fernelmont  
Belgium  
Phone +32.81.411.500  
polyrack\_benelux@polyrack.com

#### Great Britain

##### VEROTEC Ltd.

Unit 4 Bottines Industrial Estate,  
Hillsons Road  
Curdridge  
Southampton Hampshire  
SO30 2DY  
Great Britain  
Phone +44 2380 246900  
info@verotec.co.uk



You will find your closest sales representative or distribution partner responsible for your area at:

**www.polyrack.com**



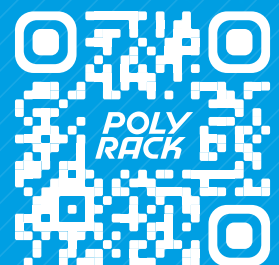


**POLYRACK TECH-GROUP**

Steinbeisstraße 4  
75334 Straubenhardt  
Germany  
[www.polyrack.com](http://www.polyrack.com)

**HOTLINE**

+49.(0)800 - POLYRACK  
+49.(0)800.76597225  
[sales@polyrack.com](mailto:sales@polyrack.com)



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