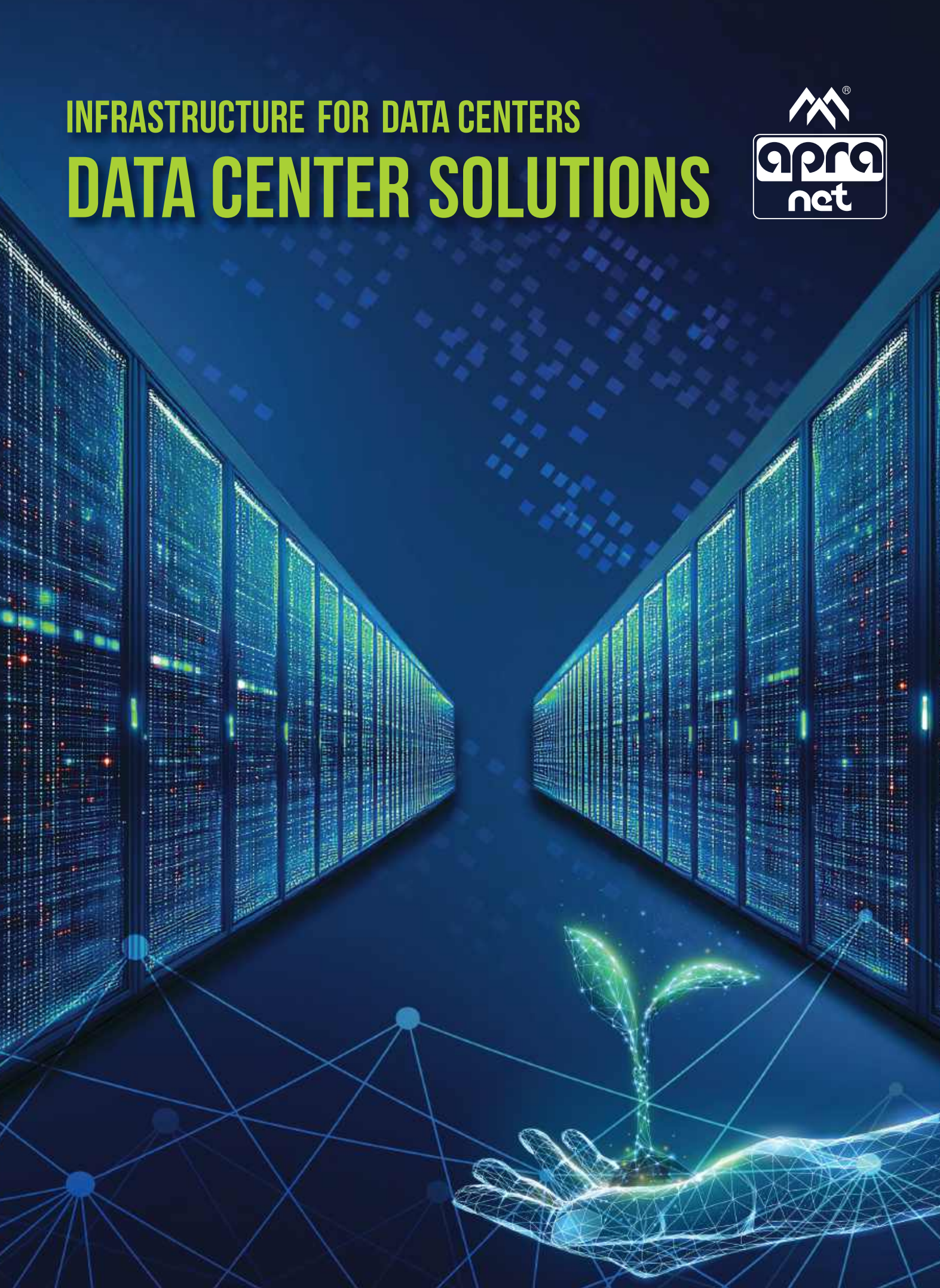
INFRASTRUCTURE FOR DATA CENTERS

# DATA CENTER SOLUTIONS



# FROM THE HEART OF THE VOLCANIC EIFEL

Our familiy-owned company has been developing and manufacturing sophisticated 19" enclosure solutions for more than 55 years. Our products fulfil the highest customer demands - and that fills us with pride.

Sustainability is not just a buzzword for us, but a central component of our corporate philosophy.

for over 55 years
Made in Germany



We place great value on maintaining fair relationships with our partners and customers.

Thanks to our innovative, responsible technologies and state-of-the-art production methods, we help to protect the environment and preserve valuable resources.

Place your trust in our expertise and let us shape the future of data centers together!

- Cabinets and rack systems
- Access control
- Monitoring
- Air conditioning
- Power Supply
- Service

## ... AND WHAT CAN WE DO FOR YOU?

Consulting ◗ Planning ◗ Installation ◗ After sales ◗ Maintenance

# THE DATA CENTER OF THE FUTURE

To take full advantage of the opportunities offered by digitalisation, **future-proof, intelligent IT infrastructures** are needed that constantly adapt to new application possibilities.

Are you looking for the highest possible security for your sensitive hardware?
You will find it in apraNET's data center solutions.



As a **manufacturer and system provider for data centers and micro data centers**, we produce solutions for your various requirements at 3 locations in Germany.

19" standard systems or customized solutions - but anything but run-of-the-mill. Our know-how in the industry sector enables us to equip critical infrastructures reliably and efficiently.

The individually configurable **apra rack systems** in combination with the apra system technology (**cooling, power and monitoring**) ensure optimum functionality, fail-safety and maximum performance.




## EXPERT ADVICE, OUTCOME-ORIENTED AND FLEXIBLE

Being a system provider for data centre solutions, we are there for you reliably and with all our knowledge - from planning to production and installation through to after-sales service.

## Cabinet system

# TiRAX

### The classic IT cabinet

- flexible cabinet dimensions and modular interior design
- can be individually configured using an extensive range of parts
- fully symmetrical basic construction
- can be completely dismantled
- **protection class up to IP 55**
- load capacity up to 1500 kg
- can be combined with all **apra system technology components**
- on-site assembly incl. maintenance of system technology possible



**THE PERFECT CHOICE FOR BUILDING MICRO DATA CENTER (MDC) SYSTEMS**

## Cabinet system

# NETCELL

### The optimised cabinet for data centers



- **perfect for large volumes of cables or PDUs** because of integrated cable ducts
- separation of power and network cables possible
- cable overlengths can be accommodated by using an optional tray system
- can be completely dismantled
- individually configurable
- protection class IP 20
- load capacity up to 1500 kg
- can be combined with all IP protection-independent **components of apra's system technology**
- can be assembled on site, including housing components

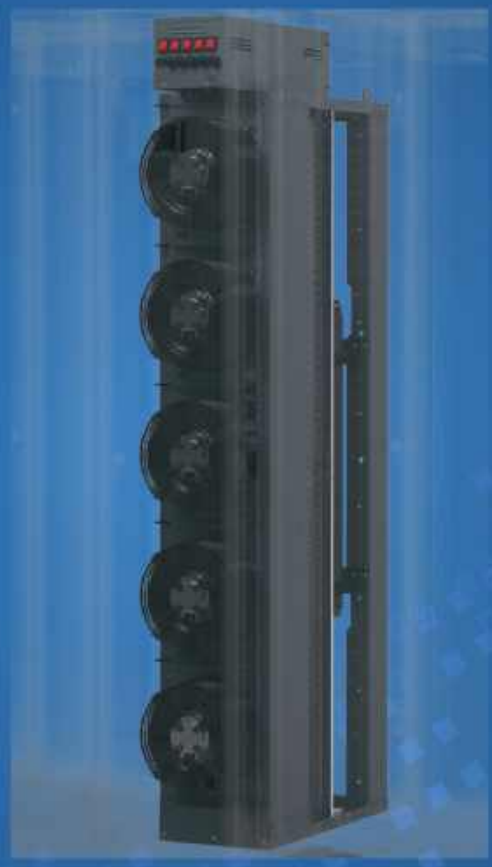
**YOUR FAVORITE FOR THE INCLUSION OF PASSIVE OR ACTIVE COMPONENTS WITH HIGH PACKING DENSITY**

# AIR CONDITIONING TECHNOLOGY

## keeps your hardware in comfortable temperatures

Growing capacities and increasing packing densities require energy and cost-efficient and highly available air conditioning systems.

Customised air conditioning concepts meet your individual requirements.



## FEATURES:

- output range: from 0.3 to 30 kW cooling capacity per device
- installation on the roof or in the door / side wall of the enclosure (single enclosure) or as a cooling insert between the enclosures (data center)
- refrigerant: R513 / R401 / R32
- decentralized cold water generation possible
- free cooling / surplus heat utilization
- individual cooling solutions
- also suitable for heavily polluted ambient conditions, e.g. chemicals, high humidity, dust / sand or in coastal areas
- maintenance contract can be included





# LIQUID COOLING

## when air just isn't good enough



Rely on the future of cooling and increase the efficiency of your data center with liquid cooling directly on the chip. Thanks to precise and targeted heat dissipation you can save energy as well as operating costs - with higher performance and lower maintenance costs.

Regardless of whether you want to retrofit individual hotspots or entire racks: our technology allows you to achieve maximum cooling performance with minimum effort.

Extend the service life of your hardware and avoid costly failures due to overheating.



## FEATURES:

- waterless liquid cooling directly on the chip
- waste heat from the chips is used to vaporise dielectric fluid
- can be retrofitted into existing racks
- for all common server CPU (Intel® Xeon® and AMD EPYC™) and GPU series NVIDA® Enterprise GPUs)
- increase in computing density to more than 100 kW per server rack
- the constant temperature of the fluid enables simple integration into heat recovery systems

# PDU - POWER DISTRIBUTION UNIT

## *Intelligent energy distribution*

Increase the efficiency and security of your power supply with a **Smart PDU** - the **intelligent solution** for your **data center and for optimizing your IT infrastructure.**

Reduce costs and set new standards in energy management.



## FEATURES:

- future-proof design
- compliance with the requirements of the Energy Efficiency Act
- linked to EMI-Connect

## CUSTOMISABLE:

- measurement of voltage, frequency, active, reactive and apparent power per phase or per socket
- switchable outputs
- circuit breaker, overvoltage protection
- residual current measurement
- sensors for monitoring temperature and humidity
- outlets: C13 / C19 / CEE7/3 / multi-socket
- input: 16 A / 32 A / 63 A, 1-phase / 3-phase



# UPS - UNINTERRUPTED POWER SUPPLY

## Nonstop power - reliability around the clock

The optimum protection for sensitive servers and network technology that rely on excellent quality power supply - even during power outages.

**Protect your systems from voltage peaks and frequency fluctuations.**

### FEATURES:

- UPS classification VFI-SS-111 according to IEC 62040-3
- continuous online converter
- very high efficiency up to 98% (Eco-Mode)
- modular design
- individual overlap time due to additional battery modules
- up to 200 kVA rated power



# FIRE DETECTION / FIRE EXTINGUISHING SYSTEM

## Detect early, act fast

**Early and reliable fire detection** by certified suction smoke detectors enables **countermeasures to be initiated quickly** in the event of an alarm.

Therefore, possible damage and business interruptions are reduced to a minimum.





### FEATURES:

- active, highly sensitive suction smoke detector for the earliest possible smoke detection
- extinguishing by flooding the rack with quenching gas Novec 1230
- future-proof and expandable thanks to high modularity
- fulfils DIN EN 54 Part 20, Class A, B and C
- VdS-approved (G206004) as suction smoke detector according to EN 54-20

# MONITORING SYSTEM „EMI“

## Cabinet monitoring and access control

Protect your valuable network technology and **optimise access to sensitive areas** with our modern **cabinet monitoring and access control solution.** Precisely tailored to your requirements.




## FEATURES:

- combination of rack monitoring and access control in one device
- simple monitoring of environmental parameters (temperature, humidity, air flow, etc.)
- access control via electronic turning lever
- opening via RFID, PIN or remotely via web browser
- event log for tracking events such as openings or alarms
- freely configurable alarms and threshold values
- automatic notification by e-mail or SMS

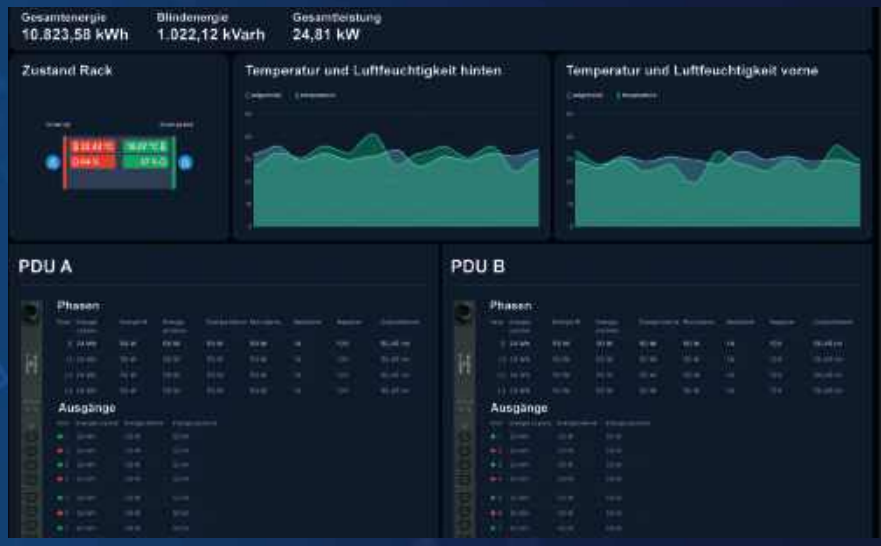


# EMI CONNECT MANAGEMENT SOFTWARE

## *View all data at a glance*

To ensure the smooth operation of a data center or IT infrastructure, it is crucial to continuously monitor a large number of system components from both classic IT and building technology.

Thus, disturbances can be identified at an early stage and failures, damage or unauthorised access can be prevented.




Our higher-level management software EMI-Connect allows monitoring data from all EMI units to be displayed in real time and visualised using maps and dashboards.




## FEATURES:

- superordinate system for monitoring a large number of EMI's
- centralised management of all data, parameters and users
- graphical representation of the data
- visualisation of the IT infrastructure
- mass configuration of the EMI devices used
- collection and storage of all relevant system events e.g. alarms, changes to settings or access attempts

# MICRO DATA CENTER

Do you prefer to **process your data in-house** or have **quick access to backups**? Then a Micro Data Center offers a compact and cost-effective solution to operate your IT securely and reliably.

The system offers all the options for the requirements of a modern data center as well as the requirements of operators in **critical infrastructures.**

Thanks to its self-contained design and airflow, the MDC can be operated in defined spaces under almost any environmental conditions.

Therefore, operation is not only possible in the office, but also in industrial environments.



## WE WOULD BE HAPPY TO HELP YOU CONFIGURE

- dimensions
- redundant power supply
- redundant air conditioning
- access control
- fire extinguishing system
- UPS system
- cable management
- pre-assembly and assembly on site
- commissioning and maintenance

# DATA CENTER

Modern data centres present us with increasingly complex requirements. Thanks to the comprehensive expertise of apraNET and our partners in the apra group, we can react quickly and flexibly to such challenges.

We can implement project-related adaptations quickly - whether for smaller installations or data centres with several hundred racks.

Our **NETcell cabinet system** was developed in collaboration with data centre operators specifically for this purpose. Our **TiRAX cabinet system** is also used here.

Combined with our **apra cooling system** and the flexible **apra power system**, you are well equipped for all kinds of challenges.



## WE WOULD BE HAPPY TO HELP YOU CONFIGURE

- 19“/ 21“ rack systems
- cold / hot aisle containment
- cable management
- PDUs
- access control
- monitoring
- air conditioning
- construction
- pre-assembly and assembly on site
- commissioning and maintenance

# EMC CABINETS FOR HIGHLY SENSITIVE DATA

## *Our specialist for special requirements and critical infrastructure*

The EMC cabinet '312' is designed for the operation of 19" devices that require special protection against electromagnetic radiation.

Depending on the frequency, a shielding attenuation of up to 80 dB is achieved in the range from 30 MHz to 18 GHz, making the MDC particularly suitable for use in high-security areas, e.g:

- **Police**
- **Military**
- **Government**











## FOR YOUR SAFETY:

- redundant power supply for your devices (PDU systems)
- active ventilation via fan modules
- active air conditioning (DX / CW)
- mechanical or electronic
- fire extinguishing system and early fire detection
- UPS system
- automatic monitoring and fault signalling
- cable management and extensive accessories
- pre-assembly and installation on site
- commissioning and maintenance / after-sales service

# CONTAINER DATA CENTRE

***The perfect choice for spatial capacity limits or if you are looking for a decentralised edge solution***



## CUSTOMISED EQUIPMENT FOR YOUR IT CONTAINER

- compact rack systems with high packing density
- can be completely dismantled
- load capacity: 1500 kg
- cold / hot aisle containment incl. lighting
- cable tray systems
- **Monitoring:** container monitoring - access control and various sensors
- can be combined with all **apra system technology** components such as **air conditioning, power supply, etc.**
- on-site installation incl. maintenance of system technology possible



**FEEL FREE TO CONTACT US -**
**WE WILL BE HAPPY TO ADVISE YOU!**

# OUR „ALL-IN“ SERVICE PACKAGE

## STATE-OF-THE-ART PRODUCTION
## MEETS INNOVATIVE SERVICE

PRODUCTION

PUNCHING/LASERING



PRINTING



INJECTION MOULDING



WELDING



COATING



WE'LL MAKE IT FIT

CHAMFERING



PRE-ASSEMBLY AT THE FACTORY



SERVICE

ON-SITE COUNSELLING



CONSTRUCTION AND DESIGN



ELECTRICAL ASSEMBLY



ON-SITE ASSEMBLY





## PRE-ASSEMBLY AT THE FACTORY

Our experts ensure that every detail is perfectly tailored to your requirements during the assembly at the factory.

Thanks to the proximity and close connection to our production site, we guarantee the highest quality and efficiency.

## CONSTRUCTION AND FINAL ASSEMBLY ON SITE

On request, our technicians can take care of the installation at your site.

The **integration of components** from the apra cooling system or the apra power system is also carried out directly by apraNET.



## AFTER-SALES AND MAINTENANCE

**We are your reliable partner for**

- system modifications
- extensions
- maintenance of supplied components

# PROFIT FROM OUR HANDS-ON EXPERIENCE

**IT and telecommunications infrastructure - crisis-proof and cleverly solved... at Stuttgart Hospital**



> **„We would not have been able to fulfil our complex requirements with a simple standard solution"**

The project manager of the IT service centre approached us with this premise in mind.

With more than 50 clinics and institutes in 52 buildings at various locations, Klinikum Stuttgart is the largest hospital in Baden-Württemberg with almost 2,200 beds.

When restructuring the security-sensitive IT area, the hospital relied on innovative and flexible technologies to manage the wide range of rack types at the time **(350 cabinets in 190 rooms)** in a structured manner, using our 'EMI-One' surveillance monitoring system.

We paid particular attention to compliance with the German "KRITIS" guidelines for critical infrastructure when merging the four independent hospitals, which all worked with their own service providers, concepts and systems - with comprehensive measures:

- Documentation of all cabinets and rooms
- Installation and set-up of an access control system
- Setting up control and access authorisations (centrally via VM.7 documentation)
- Installation of temperature sensors
- Monitoring system for door monitoring contacts and sensors



**Today, the project manager at Stuttgart Hospital says:**

„We have been relying on the **expert performance of apraNET** for 6 years now and are expanding our cabinet systems with the EMI-One access and monitoring system.

With apraNET as our partner, we know that we get everything we need for our complex requirements **from a single source**!"


SOME OF OUR
PARTNERSHIPS
Informations
Technik
Zentrum Bund
GLASFASER
RUHR
KANN
vodafone
TMT
Business Solutions
Stadtwerke
Wertheim
Die Energie vor Ort
GEROLSTEINER
Das Wasser mit Stern
SWT
NetCologne
Plusnet
westnetz

# YOUR PARTNER FOR DATA AND INFORMATION TECHNOLOGY








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