22 YEARS A.N.S.

ANS

Your needs. Our solutions.

Products Portfolio

March 2019

Your contact:

Discover our brand new websites :

FindmySwitch.com

www.findmyswitch.com
&
www.ans-europe.com

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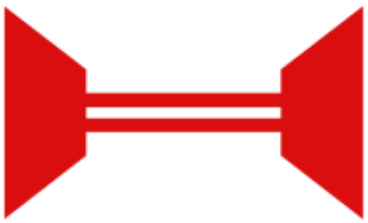
All brands are registered trademarks.

ANS COLOR CODE

Look at top right corner for colors

Power Management

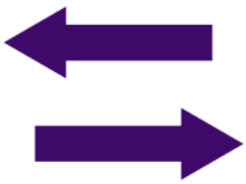
Remote Management



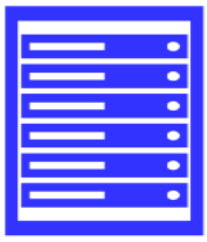
WDM

IT networking

Compatible SFPs



Converters



Racks

DCIM softwares

Wireless

We deliver all network components, including switches, routers, firewalls, VoIP phones, SAN products, as well as SUN material : HDD, memory, expansion modules, …

Why is it interesting to buy brands like Cisco, Avaya-Nortel, HP, Extreme networks, Juniper,...from ANS?

Some A.N.S. advantages:

- New and refurbished items;
- Very competitive pricing;
- Unique beneficial solutions;
- Short delivery time;
- Customized maintenance contracts;
- Standard and customized cables (Fiber and Copper);
- Quick response time;
- Consultancy;
- Tailored solutions.

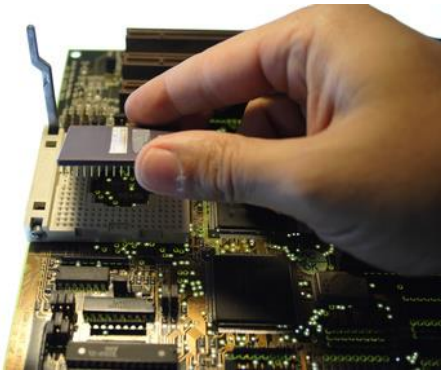
A.N.S. informs you as soon as your shipment is ready for delivery for, usually, the next business day. Besides, for refurbished material, A.N.S. team sends you pictures of the refurbished material with its box.

For Cisco:

- "Limited Lifetime Warranty" and "Enhanced Limited Lifetime Warranty" are available on most of the Cisco switches as the 2960, 2960S, 2960SF, 2960X, 2960Plus, 3650, 3850, 3560, 3560G, 3560X, 3750, 3750G, 3750X, 4500… . The Firmware updates are free of charge on all standard models;
- You **don't need to pay the annual Cisco fee** for these benefits.

REFURBISHED

What are the advantages of refurbished material ?



- **Price :**

Up to 70% less expensive.

- **Short delivery time:**

Very often less than a week.

- **Continuity :**

For end-of-life material.

- **For Test & Labo purpose :**

Why should you pay for new material ?

- **Warranty :**

1 year. Often more than what the manufacturer's warranty offered!

- **Interesting alternative to maintenance contracts :**

The main advantage of having a maintenance contract is a 'Next Business Day' swap.

How much does it cost ? The price of the maintenance contract is multiplied by the number of devices (very often identical). The purchase price of a refurbished material is very low and you can swap your device immediately.

A.N.S. delivers identical material for a lower price, with very short lead time !

RENTING

Why should you consider renting with ANS ?

- Renting contracts from 1 month,
  you can spread your investment over several years.
- Very attractive for short term needs such as
  hardware migration, exhibitions, testing of new technologies,
  office moves,…

REPAIRS

Why should you choose ANS for your repairs?

The ANS team is able to repair a large range of products like switches, routers, power supplies,…

Besides, we offer you a warranty of one year on the repair!

Compatible SFP's, GBIC's, X2's, Xenpaks, SFP+

Cisco, Nortel, HP, 3COM, Avaya/Nortel, Extreme, Juniper, Alcatel, H3C, Huawei,…

We have a full range of 100% compatible SFP's, GBIC's and Mini GBIC's fully tested by ANS engineers. This means huge savings on your budget because we are often 10 times less expensive than traditional manufacturers.

The standard warranty of the 'classic' brands is mainly 3 months, we offer a **3 years** warranty on our compatible line of products !

We also offer the possibility to test these modules with our try and buy program.

These modules are also available in :

- ✓ Colored SFP (CWDM/DWDM) – Different distances
- ✓ Ethernet 100Mbps, 1 Gbps, 10 Gbps
- ✓ Fiber Channel 1/2/4/8 and 16 Gbps [BROCADE, HP and IBM approved (OEM Brocade)]
- ✓ STM1, STM4, SYM16, STM64
- ✓ SFP, SFP+, XFP, X2, XENPAK
- ✓ **Direct Access Cable (D.A.C)**
- ✓ Single Fiber

We have a special gigabit SFP which can reach 2 km in multimode.
We also offer SFP's working on a **single fiber** (instead of a pair) which allows you to **double the capacity of your fiber connections**.

- ➢ None of the main switches and routers manufacturers (Cisco, HP,…) produce their own SFP's, they buy them from the same factories!

Fiber Optic patch cables

We offer you a wide range of Fiber Optic cables (simplex / duplex) of different lengths and connectors according to your needs:

Singlemode / Monomode

- 9/125 (OS1) YELLOW
- 9/125 (OS2) YELLOW

Multimode

- 62,5/125 (OM1) ORANGE
- 50/125 (OM2) ORANGE
- 50/125 (OM3) AQUA
- 50/125 (OM4) VIOLET

Connectors

MU connector

E-2000 connector

MT-RJ connector

ST connector

LC connector

SC connector

MTP connector

We can also provide all these connectors with APC (8 and 9 degrees).

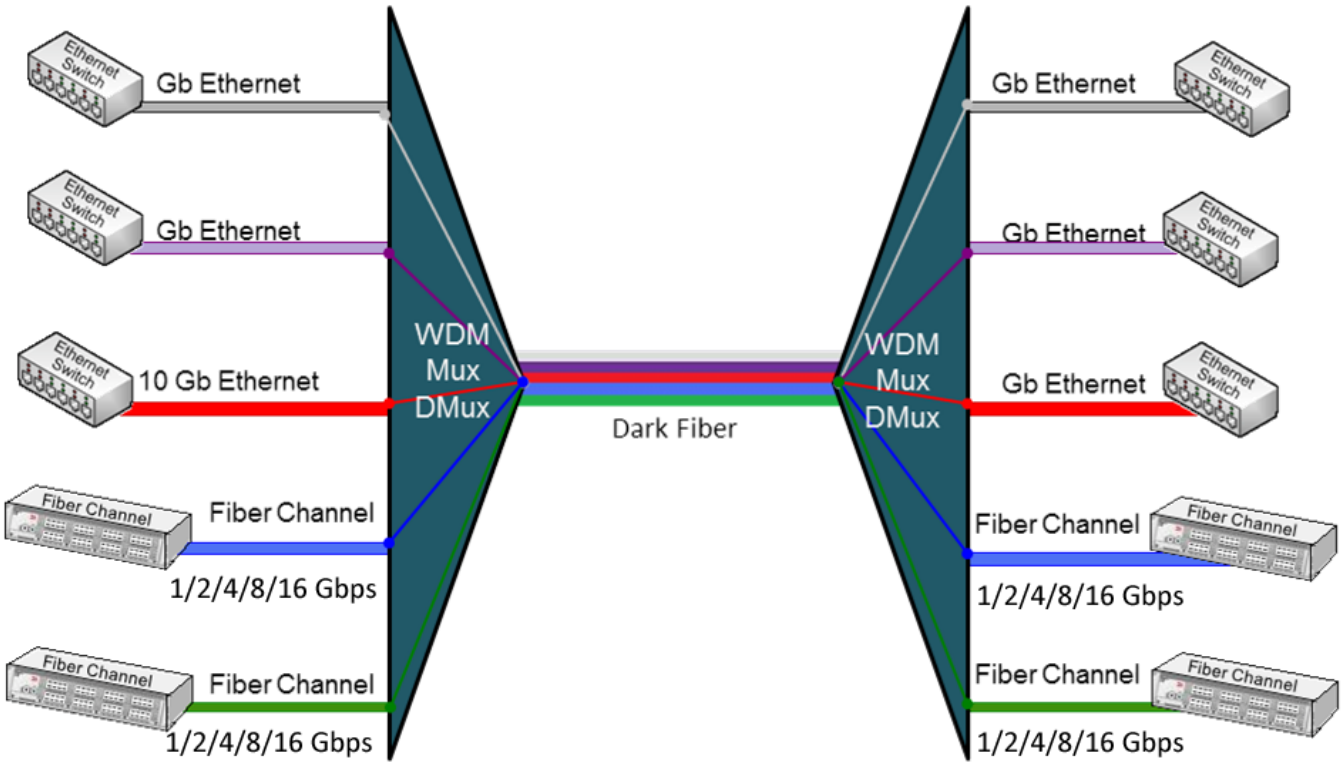
These are green connectors.

ANS SOLUTIONS

Transmission solutions

We offer you the possibility to try most of our solutions! It's our TRY and BUY program

WHAT'S WDM?

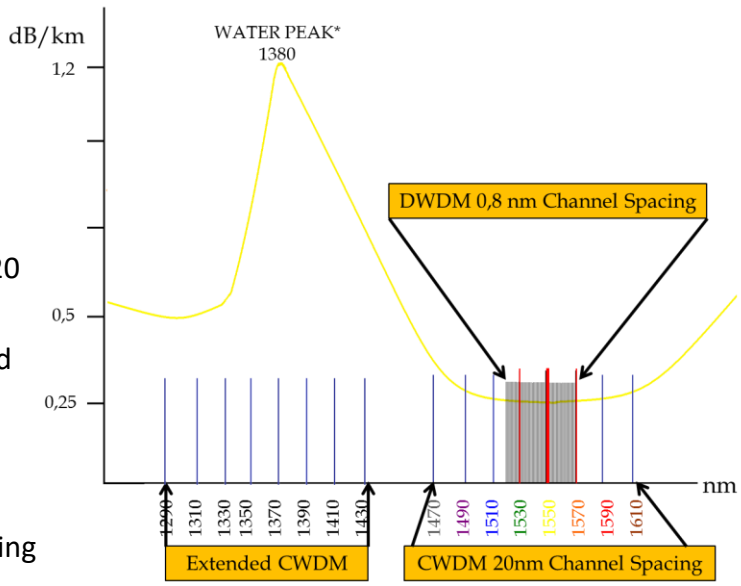


With WDM you can put multiple protocols on a fiber, single or paired.

The supported protocols are : Fast Ethernet, Gb, 10Gb, 40 Gb and 100 Gb Ethernet, FiberChannel 1Gb, 2Gb, 4Gb, 8 Gb or 16Gb, OC3/STM1, OC12/STM4, OC48/STM16, Escon and Ficon, E1 and E3, infiniband, …

CWDM/DWDM?

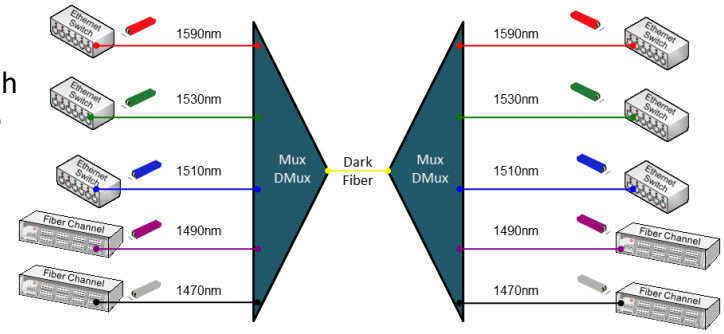
- **CWDM** (Coarse Wavelength Division Multiplexing);
- 8 or 16 wavelengths with a spacing of 20 nm;
- Possibility to do DWDM on 1530nm and 1550nm;
- **DWDM** (Dense Wavelength Division Multiplexing);
- More than 80 wavelengths with a spacing of 0,8 nm;
- More expensive than CWDM.



* Water peak: important if dist. > 20-25 km

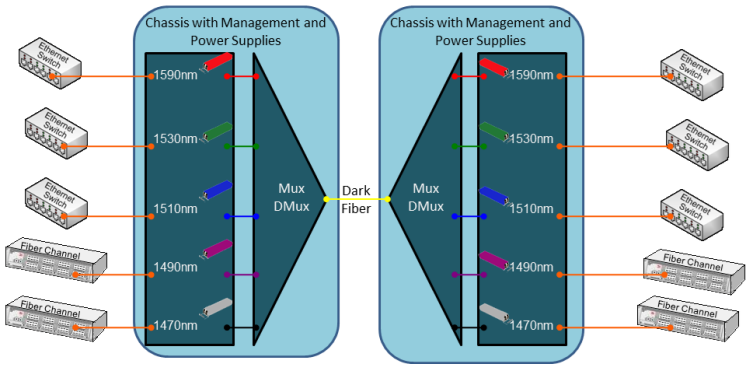
PASSIVE SOLUTION:

Replace SFP's (or GBIC's) in your switches with xWDM SFP's (or GBIC's) and connect it to the passive Mux/Dmux.



ACTIVE SOLUTION:

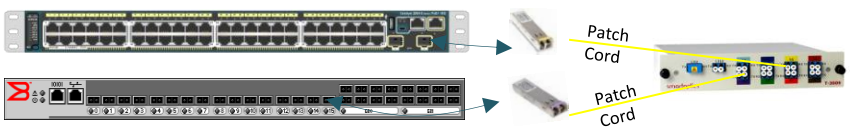
Transponders and Muxponders placed in a chassis with power supplies and a management card. Instead of placing colored SFP's directly in the switch, they are installed in a transponder making the conversion from multimode to WDM or from copper to WDM.



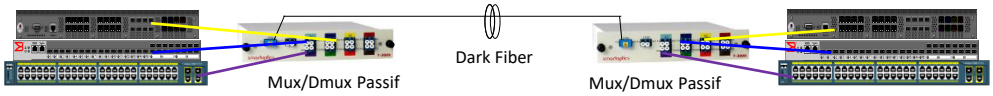
How to install a passive CWDM/DWDM solution ?

1. Insert the WDM SFP's in your equipment (Ethernet Switch or Fibre Channel Switch):

2. Connect the WDM SFP's to the Mux/Dmux, respecting the colours :



3. Connect the Dark Fiber on both sides:



4. You can manage from your equipment the transit power and the receive power thanks to the digital diagnostics of the DWDM SFP's.

1. WDM

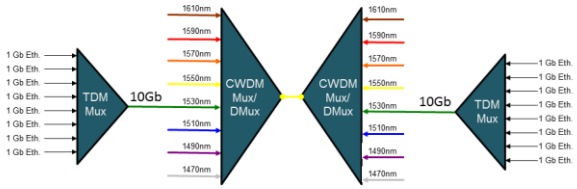
- We have a full range of compatible SFP's /Gbic's/XFP's/QSFP's for Cisco, Nortel, 3Com, HP, Enterasys, Juniper, Alcatel, D-Link, Extreme-Networks, Foundry, Riverstone, etc…;
- Our fiber channel SFP's are brocade approved (HP, IBM, etc…) and are multispeed (1/2/4 Gb, 2/4/8 Gb, 2/4/8/16 Gb);
- In some cases, we can rent dark fiber;
- Optical Add Drop Multiplexer (OADM). This allows you to add or drop one or several CWDM/DWDM signals.
- Possibility to mix active WDM and passive WDM;
- We have special MMX SFP's that can reach 2km in MultiMode;
- It's possible to use 32 DWDM links and 14 CWDM links at the same time;
- Encryption is also possible.

Time Division Multiplexing

A 1 rack unit chassis with a T.D.M. card (with or without encryption).

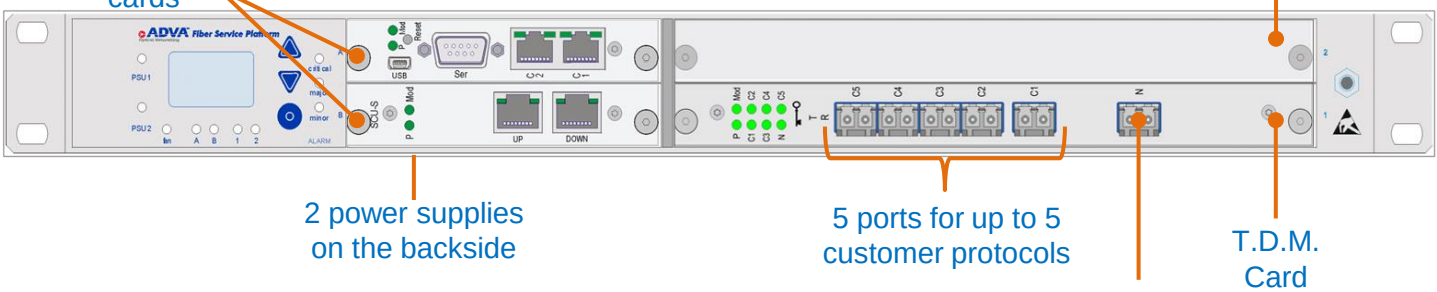
Extra slot available for an identical card or for other use.

There is also a 100 Gb version of this card
with and without encryption



Included:

- Management card with monitoring possibilities (Alarms, SNMP,…)
- Redundant power supplies



Encryption

- Multi-service protection against fiber hacking
- No impact on the latency or the throughput
- AES-256 standard recognized

You can measure the latency of the provider
with this card.

Total available time slots per card : 11

	Time Slots (TS)
1 Gb Ethernet	2
Fiber channel 1 Gb	2
Fiber Channel 2 Gb	2
Fiber Channel 4 Gb	4
Fiber Channel 8 Gb	8

Examples of possible combinations

	ETH 1 Gb (2TS)	FC 1 Gb (2TS)	FC 2 Gb (2TS)	FC 4 Gb (4TS)	FC 8 Gb (8TS)	Total Used Time Slots
Example 1	5					10
Example 2	1				1	10
Example 3			2	1		8
Example 4	3			1		10
Example 5	1	2				6

Outdoor Solutions

High Speed radio links

Unlicensed: non-private radio frequencies.

- Advantage : There is nothing to pay.
  - **5Ghz** up to 25km
    - With interferences : +/- 350Mbps **H**alf**D**uplex
    - Without interferences : Max 750 Mbps **HD**
    - This is our Point-to-Multipoint solution
  - **60Ghz** it's 400m of 750m
    - **Halfduplex**
      - 1000Mbps for max 750m
    - **Fullduplex**
      - 1000Mbps for max 400m
    - These are our point-to-point solutions
    - **A perfect line of sight is necessary!**

Licensed: private radio frequency

- **18→38Ghz** up to max 20km (when distance grows up, the frequency goes down)
  - 440Mbps **FD** / radio
  - Modules exist to put max 4 radio's together (1760Mbps)
  - Advantage: a stable connection over a longer distance and a guaranteed bandwidth.
  - **Every radio needs a license!**

- ✓ Latency of less than 200 microseconds;
- ✓ Encryption AES 128-bit and 256-bit;
- ✓ Management possibilities;
- ✓ Dedicated PoE.

RADWIN LANCOM Systems Siklu INTRACOM TELECOM SAF

ANS 22 YEARS

Indoor Solutions

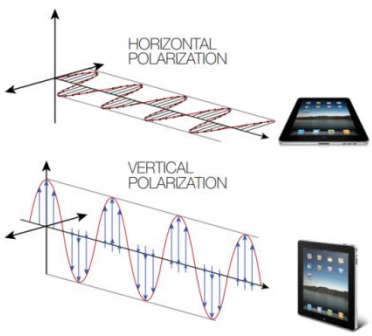
New and REFURBISHED Wi-fi solutions

- All the access points from Cisco, Aruba, Ruckus,… are available;
- Available in **new** and in **refurbished**;
- A site survey is possible in order to optimize the functioning of your wireless connections with a minimum of access points.
- Licence-free bands with the Wi-Fi 802.11 standards :

Wi-Fi technology	Frequency	Bandwidth
802.11a	5 GHz	54 Mbit/s
802.11b	2.4 GHz	11 Mbit/s
802.11g	2.4 GHz	54 Mbit/s
802.11n	2.4 or 5 GHz	600 Mbit/s
802.11ac	5 GHz	1 Gbit/s

Ruckus, the smartest Wi-Fi solution

- Perfect for high-density environments with loads of users at the same time ;
- Simple administration of client and guest access;
- Thanks to Beamflex+ technology, you need less access points to cover your area;
- Automatic calculation of the best bandwidth;
- Existsin controllerless: Ruckus Unleashed;
- vSmartZone: local or cloudbased Access Mgmt;
- Supports True Polarization diversity in 100% of the coverage area.

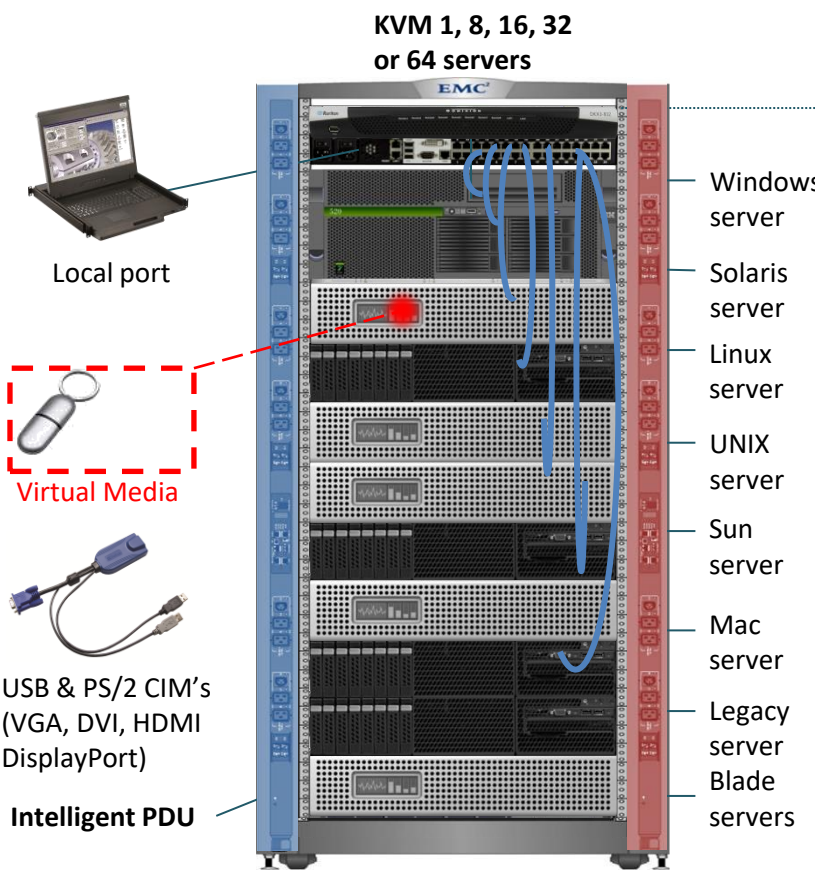


ANS SOLUTIONS

Management solutions

KVM over IP : KX III

- Supports up to 8 remote concurrent users and up to 64 servers;
- Extra local access and Bios access on the servers;
- Automatic mouse synchronisation (via VUSB Cims);
- High video quality (1920x1080) with a low usage of the bandwidth;
- No software installation, no adapter installation needed in the servers;
- Common browser-based access (local and remote);
- Multi-platforms compatible (Windows, Linux, Unix, …);
- Redundant power supply and redundant network 10/100/1000 connections;
- Virtual media capacity (remote software installation);
- Local and centralized authentication via LDAP, Radius, or Active Directory;
- Enhanced security via a 256-bit AES or a 128-bit RC4 encryption;
- Remote server switch OFF/switch ON with the Raritan PDU's;
- Modem access through serial port;
- Tiering port on all models.



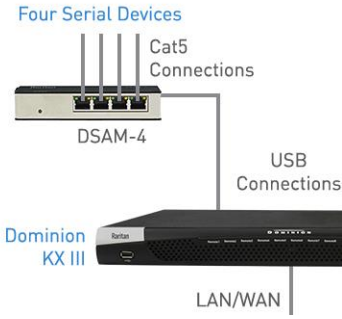
1. Servers – KVM

Different models:

DKX3-864, -832, -808, -464, -432, -416, -232, -216, -132, -116, -108

8 IP users 64 servers **+ 1 local user for each model**

NEW PRODUCT



KXIII Serial Access Module (DSAM)

Connected to KXIII's USB port (max 2 DSAM), this module provides serial access for up to 4 (DSAM-2) & 8 (DSAM-4) simultaneous connections.

They are USB powered and do not use any KXIII IP session.

2 versions available :

DSAM-2 & DSAM-4

KX II-101

Palm size KVM-over-IP to provide un-blocked access and BIOS-level control of a **single** server with VGA connection.

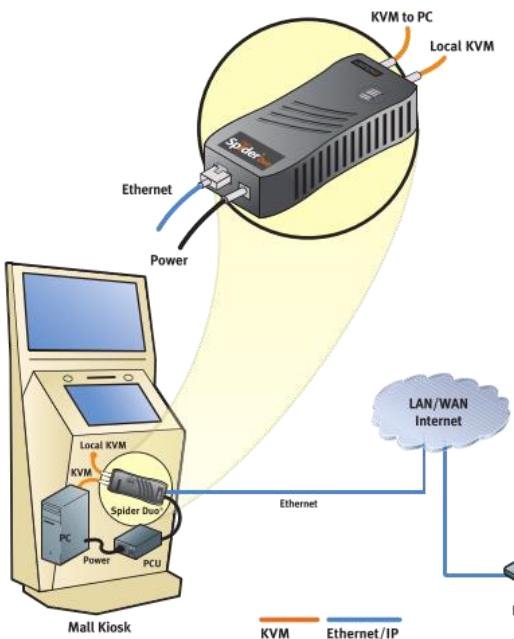
A small device with standard features such as: virtual media, mouse synchronisation, 1920x1080 video resolution,…

Lantronix SecureLinx Spider

LANTRONIX®

- Same features as the Raritan KX2-101;
- The SpiderDuo is ideal for those who need local access, as well as the flexibility of KVM-over-IP in a single integrated solution;
- Reduce costs and decrease downtime by remotely managing PC's and servers, down to the BIOS level, while still allowing transparent local access;
- Transfer files, install patches, perform upgrades remotely with Virtual Media;
- Easy configuration and installation with color coded connectors—local and remote management are up and running in minutes.

Spider Duo Application Example



Remotely manage power with the optional power control unit

LX – The light version of the KX III

It supports up to 2 remote concurrent users and up to 16 servers.

Different models:

DLX-108, -116, -216

1 IP user 8 servers **+ 1 local user for each model**

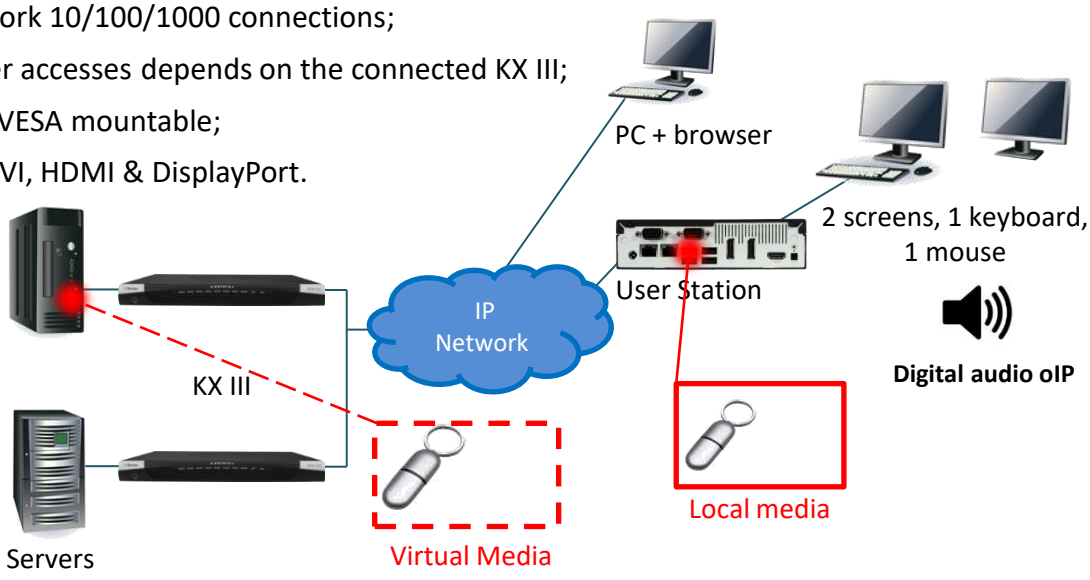
LX Features :

- Virtual media capacity (remote software installation);
- Automatic mouse synchronisation (via VUSB Cims);
- Common browser-based access (local and remote);
- 1920x1080 remote video resolution and supports 1 monitor;
- Local and centralized authentication via LDAP, Radius, or Active Directory;
- Modem access through serial port;
- Tiering port on all models.

KX III User station

This little User Station is a standalone appliance for high performance IP access to servers connected to a KX III. End user can access, view and control multiple servers without the need to work with a PC .

- Powerful Intel-based platform;
- Supports dual monitors;
- **Two 1080p streaming video sessions at 30 FPS;**
- Really easy to deploy with an easy-friendly user interface;
- Virtual media capacity (remote software installation);
- Redundant network 10/100/1000 connections;
- Number of server accesses depends on the connected KX III;
- Desktop, rack & VESA mountable;
- Supports VGA, DVI, HDMI & DisplayPort.



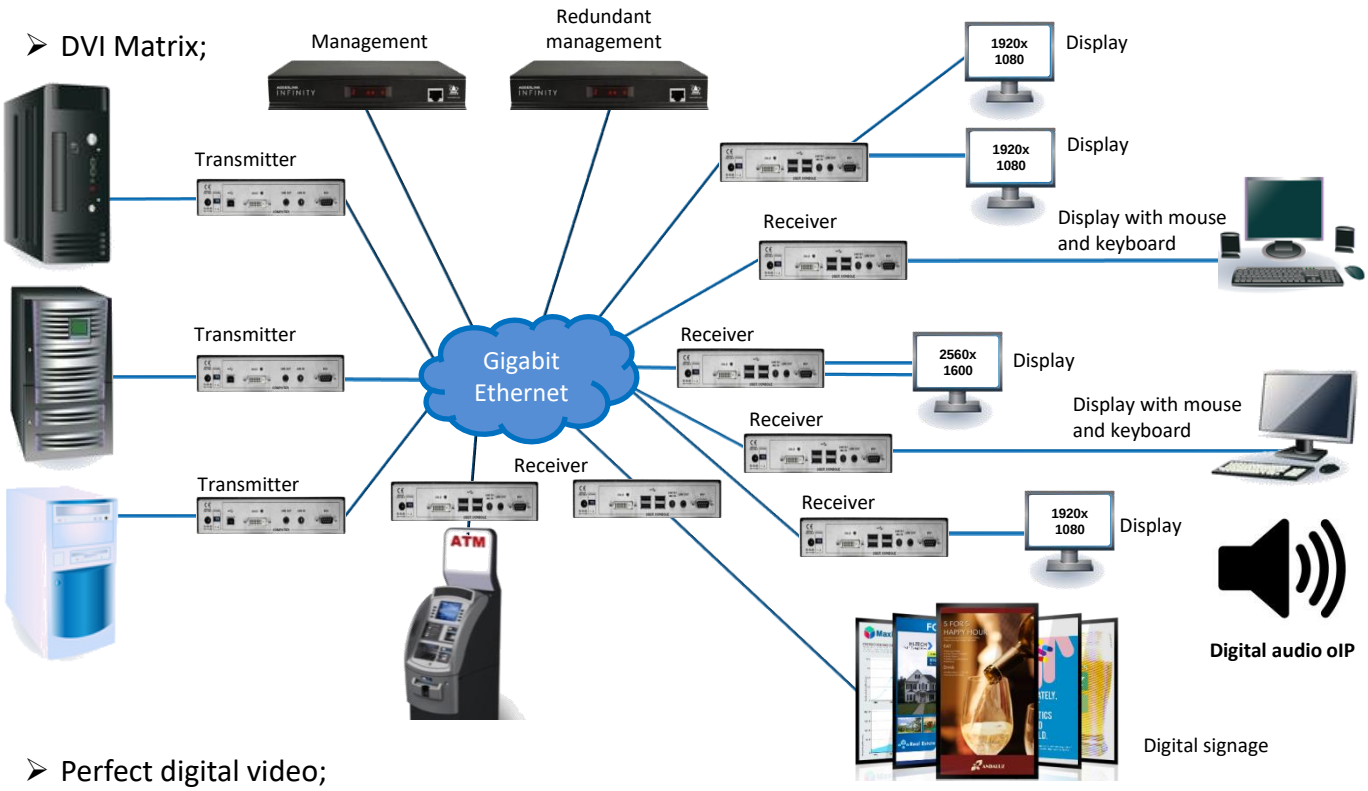
Adder Extender

- Specialized in VGA, DVI, HDMI and KVM extenders;
- Pure digital media extension over IP;

AdderLink Infinity

- Network & Direct DVI extender;

- DVI Matrix;



- Perfect digital video;
- Intelligent Video Encoding : uses optimal spatially-lossless compression techniques to minimize network bandwidth usage;
- Device switching;
- Digital Stereo Audio and Full DVI for optimal quality;
- Network multicast;
- Flexible configuration many-to-many: *Each RX (receiver unit) can be addressed by several TX (transmit units), and each TX can address several RX;*
- Receiver and transmitter support SFPs.

Case study Sicoplan

This engineering company works now with the AdderLink Infinity solution. 20 engineers work in the office. They all had big and powerful computers and they wanted to lighten up their workspace.

Thanks to AdderLink Infinity solution, all the computers are now in a air-conditioned and dust-free data center offering the users a more pleasant workspace.

For the complete Sicoplan case study, visit our website on:

www.ans-europe.com/sicoplan.html

PCoIP

With this new technology, it is possible to transport the image of a PC from a data center (Host) to a PCoIP-ready end-point device. From the user's perspective, nothing is different!

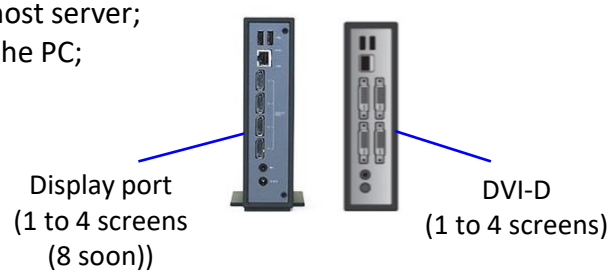
How does it work?

A host PCoIP card is inserted in a host server in the Data center which will efficiently and rapidly compress, encrypt and transport the image pixels, via Ethernet, to the PCoIP end-user devices. On the end-user side, the image will be decompressed, decrypted and displayed on a screen.

What are the benefits of this technology (only with the zero-client)?

- Security: data is safe in a secure data center. PCoIP end-user don't need any anti-virus or anti-malware protection and data is only stored in the host server;
- Silent and wider workplace due to the absence of the PC;
- High-definition video and audio.

There are 4 possibilities (see picture):

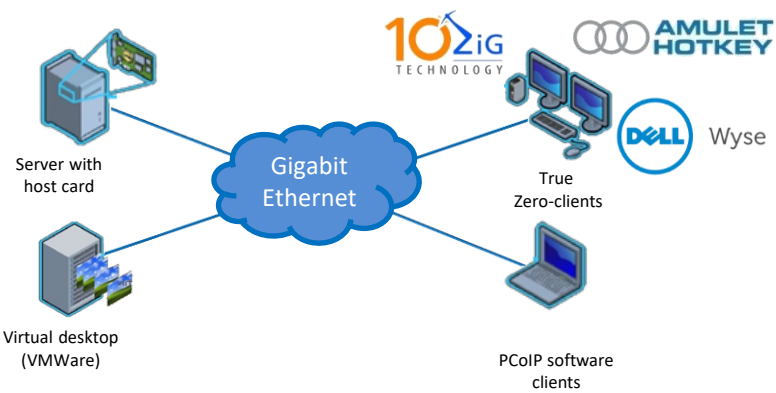


Hardware to Hardware
Hostcard in server to zero-client

Hardware to Software
Hostcard in server to PCoIP software client

Software to Hardware
Vmware to zero-client

Software to Software
Vmware to PCoIP software client



Configuration one-to-one: *Each RX (receiver unit) can be addressed by only one TX (transmit units), and each TX can address only one RX.*

Different KVM Over IP solutions comparaison

	ADDER	TERADICI	Raritan	LANTRONIX	Softwares	DRAC/RSA/ILO
Model	AdderLink Infinity	PCoIP Zero-clients	KX3	SecureLinx Spider	-	-
Client	Hardware	Hardware	Browser	Browser	Software	Browser
Resolution	1920x1080 – 2560x1600	1920x1200 – 2560x1600	1920x1080	1600x1200	Any	Low
Image quality	+++++	++++	++++	+++	++	+
Redundant power supplies	Y (w/ module*²)	N/A	Y	N	N/A	N/A
Redundant network	Y	N/A	Y	N	N/A	N
Connector DVI	Y	Y	Y	N	N/A	N/A
Connector HDMI	N	N	Y	N	N/A	N/A
Connector DisplayPort	N	Y	Y	N	N/A	N/A
Connector VGA	Y*3	N	Y	Y	N/A	N/A
*Virtual media / **at boot time***	Y/ Y	Y/Y	Y/Y	Y/Y	Y (see software)/N	Y/Y
Concurrent users	Y (no limit)	N	Y (9 max or no limit w/ KX2-101)	Y (no limit)	Y (see software)	N
Multiple screens	2	4	2	N	Y (see software)	N
Remote CPU power on/off	N	N	Y (w/ iPDU)	Y (w/ PDU)	N	Y
*Central video management**	Y	N	N	N	N	N
Blocking	N	N	Y (except KX3-808 & KX2-101)	N	N (see software)	Y
Non intrusive	Y	N	Y	Y	N	N/A
Local access port	N	N	DVI (VGA on KX2)	Y	N/A	N/A
RS232	Y	Y (USB-adapter)	N	N	Y (see software)	Y (see hardware)
BIOS level access	Y	Y	Y	Y	N	N
Level of encryption	AES-256/ RSA-2048	AES-128/AES-256	FIPS 140-2/128 256-bit AES	DES	Y (see software)	Y (see vendor)
User rights management	Y	Y (+ software)	Y	Y	Y	Y

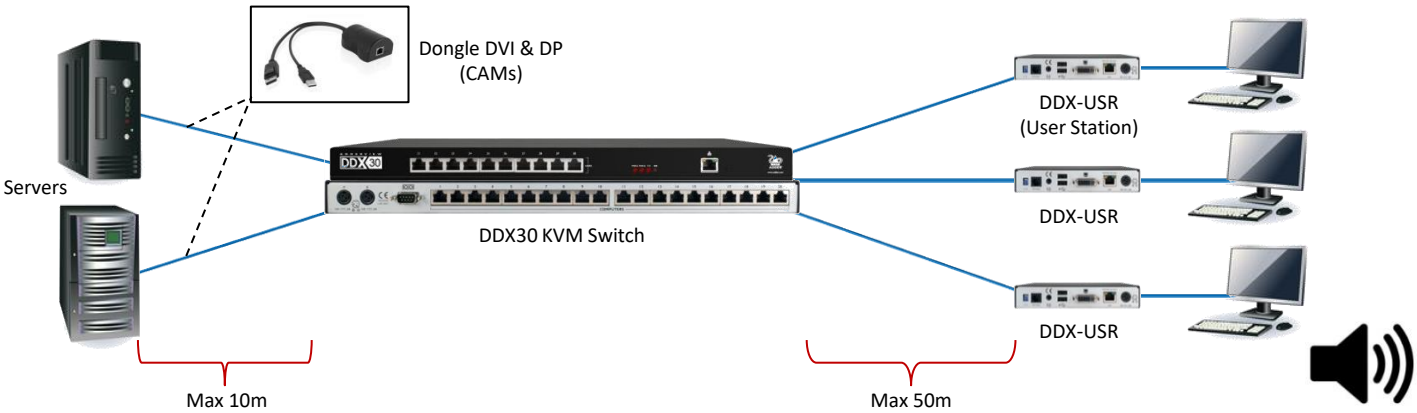
* Possibility to display the image of any server to any screen through the network.

*² Adder Red PSU is a 1U rack mount chassis with up to 16 12V DC power outputs for the transmitters.

1. Servers – KVM

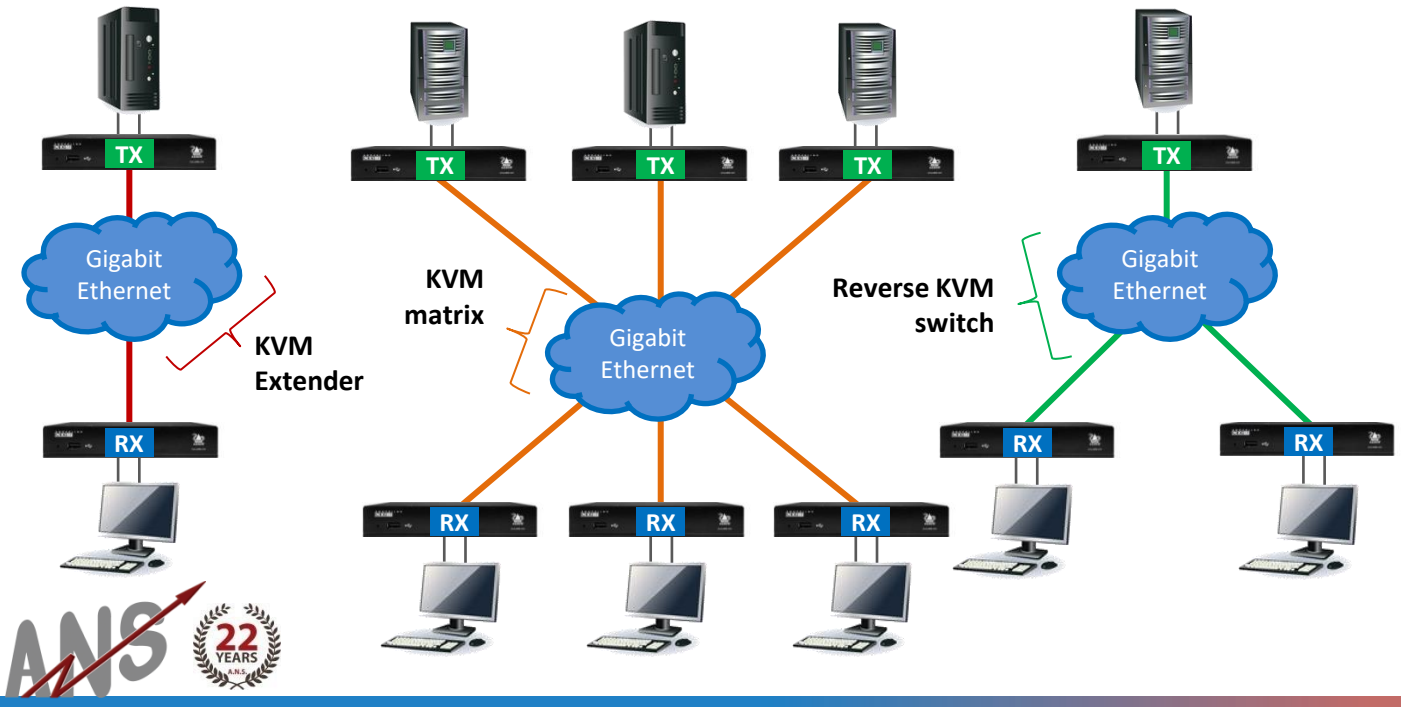
Adder DDX-30 & DDX-10

- Non IP KVM : UTP dedicated cable CAT 6 (max 50m) to the User Stations (users);
- Up to 23 servers and up to 29 users with 7 ports (front) dedicated for users (**FOR DDX-30**);
- Up to 9 servers and up to 9 users (**FOR DDX-10**);
- Lossless high resolution video (1920x1200);
- Dongles DVI and DisplayPort (CAMs) of 10m to connect the servers with the DDX-xx KVM;
- Access permissions per user (View only, Shared, Exclusive or Private connection modes);
- User station can be mounted on back of screens and on Din rail.



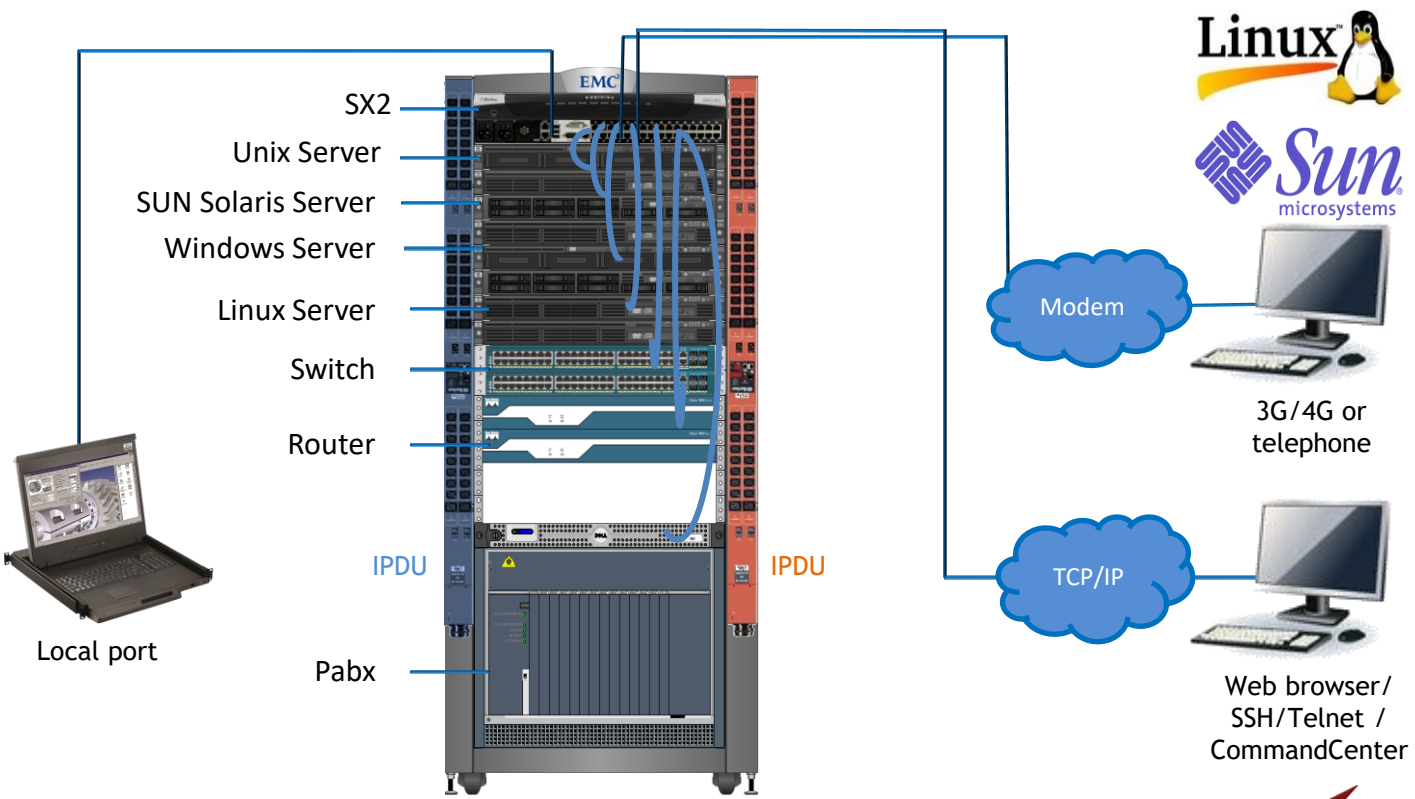
Adderlink XDIP

- Plays the role of a KVM extender, a KVM switch and a KVM matrix, all in one;
- Up to 8 transmitters and 8 receivers **per** transmitter;



SX II Secure Console Server

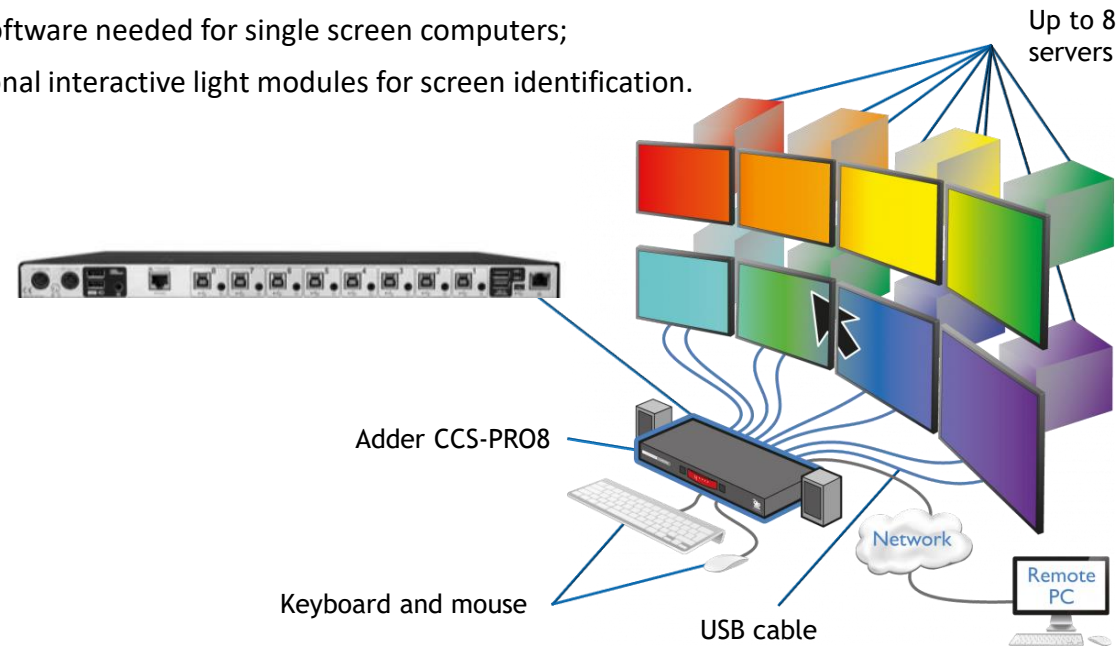
- With the SX2 access, monitor and control your serial devices securely, anytime, from anywhere;
- No need to send your technician with his laptop and console cable;
- Troubleshoot, maintain and manage remote locations 24/7 from a single location;
- Restore network connectivity and server operation via out-of-band direct serial or dial-up access (built-in modems are available on select models);
- SX2 provides local and remote access and control via SSH/Telnet and Web browser to manage serial servers and other IT devices;
- Optimize and troubleshoot networks via proactive event notification and data logs;
- Local or centralized authentication via LDAP, Radius, Tacacs+, Kerberos, Active Directory;
- Extensive SNMP traps allow for various alerts e.g., authentication failures, port connections and disconnections and many other events of interest to the system administrators;
- Direct access to a port via IP address or a «TCP port»;
- Possibility to remotely Power ON/OFF devices with Raritan PDU's;
- Several users can simultaneously address the same port;
- SX2-4, 8, 16, 32, 48 ports. 256Kb buffer per port (+- 80 pages);
- Automatic DTE/DCE serial port detection;
- Direct connect to Cisco devices without rollover cables.



3. Servers & Console

Adder CCS-PRO4 & CCS-PRO8

- Gives the user more desk space while controlling up to 8 servers (4 for PRO4) on up to 64 screens (32 for PRO4) (8 per server) with 1 keyboard and 1 mouse;
- Automatic switching between computers;
- No software needed for single screen computers;
- Optional interactive light modules for screen identification.



4. Screen drawers

T1700 & T1900 LCD Console Drawers

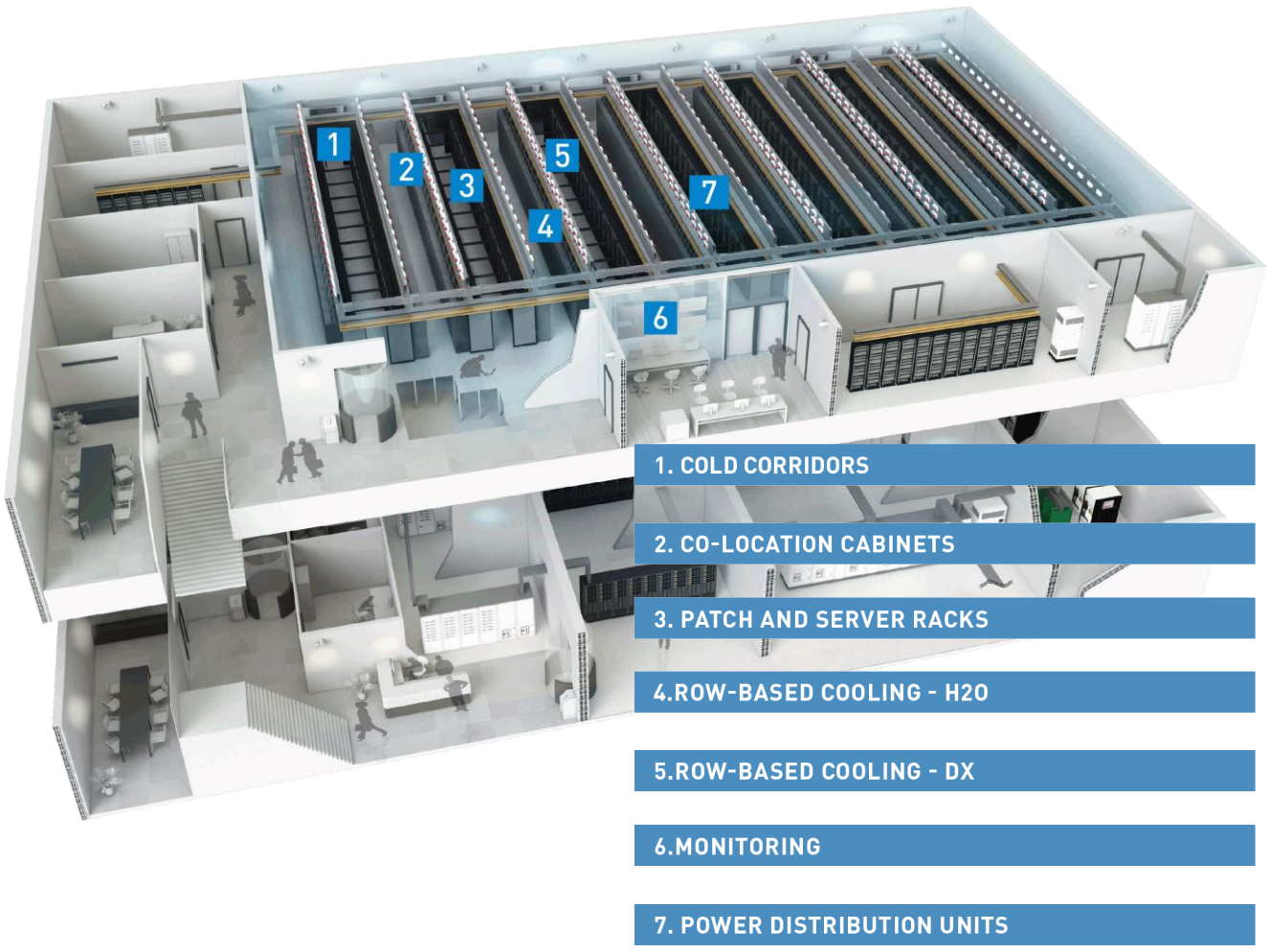
These drawers are meant to be used in the racks. Raritan and Austin Hughes console drawers exist in different resolution and dimensions, here are the main features :

- 1U 17“ and 19”;
- Support DVI-D, VGA, HDMI (for Austin Hughes), USB and/or PS/2;
- Support Full HD with resolutions of 1920x1080, 1280x1024, 1600x1200;
- The drawers exist with an integrated KVM
- All series are available in French and Swiss keyboard

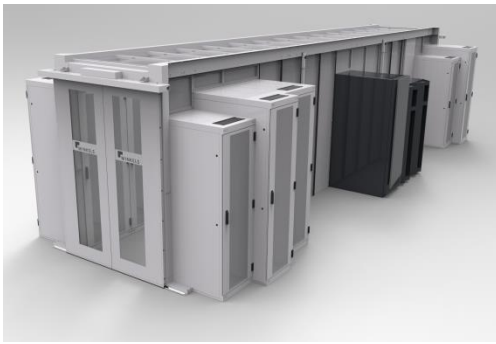
Modular, integrated data centre solutions

Minkels is a leading European manufacturer and global supplier of sustainable data centre solutions. The products stand out in terms of innovation and flexibility. Customers can always be sure that they have the latest data centre technologies at their disposal. Minkels has modular solution in:

- Racks and related data centre housing (Varicon®)
- Data centre cooling (VariCondition®)
- Data centre monitoring (VariControl®)
- Data centre power distribution (VariconPower®)
- And a wide range of data centre accessories



5. Rack



NEXT GENERATION COLD CORRIDOR

The Minkels' Next Generation Cold Corridor is the ultimate modular solution to meet your flexible and dynamic data centre construction requirements. The Next Generation Cold Corridor is rack supported and efficiently separates hot and cold airflows in data centres.

FREE STANDING COLD CORRIDOR

The Minkels' Free Standing Cold Corridor is an ultra-modular and cost efficient, free standing aisle containment system. It offers pay-as-you-grow options for separating warm and cold air flows in an energy efficient manner, enabling investments in racks to be spread out over time.

COLOCATION CABINETS

The Minkels compartmentalised colocation cabinets are ideal for keeping multiple endcustomer systems together in a cabinet, each one securely separated from the others.

PATCH AND SERVER RACKS

The Minkels patch and server racks are very well-suited for housing (blade) servers, switches, patch panels, routers and storage equipment. The racks are available in different heights, widths and depths.

ROW-BASED COOLING H2O

VariCondition-H2O helps you solve high density challenges in the most energy and cost efficient manner possible. These row-based cooling units are placed between the 19" racks and provide reliable cooling capacity in a very efficient and flexible manner.

ROW-BASED COOLING DX

VariCondition-DX is an easy to install, energy efficient cooling solution. This cooling solution is well-suited for placement between the 19" racks. The cool air is routed directly to your expensive IT equipment. A raised floor is not necessary.

MONITORING

Minkels has a wide range of Monitoring & Management solutions under the VariControl® brand name. They vary from simple power or environmental monitoring solutions to fully integrated data centre monitoring systems and software.

POWER DISTRIBUTION UNITS

Electricity is a critical component in any data centre. VariconPower represents a full series of rack PDUs (Power Distribution Units), UPS solutions and modular busbar systems. Minkels stays true to its strategy with VariconPower: to supply energy-efficient data centre solutions

Why work with Intelligent PDU's?

- Possibility to know the real load by feed and the consumption by departments;
- Possibility to charge the client according to his consumption;
- Helps to know if it's possible to add an equipment without overloading the rack;
- Check the consumption by phase in order to balance the phase;
- Follow the temperature, the humidity, the pressure, water and intrusion detection, …;
- In case of electrical and environmental dysfunction, you receive an alarm;
- Remote and local access management;
- Differentiate your power supplies with coloured PDU's and cables;
- Secure your power cables;
- Smartphone and tablet app to keep an eye on the consumption from everywhere;
- Switch OFF, switch ON and reboot your equipments;

Measure, control and save !

With our solution you can remotely (depending on the model):

- Measure, with an accuracy of more than 99%, the consumption of your equipment:
  - PDU;
  - Phase;
  - Breaker;
  - Outlet.
- Measure the environment through a sensor.

+/-99%

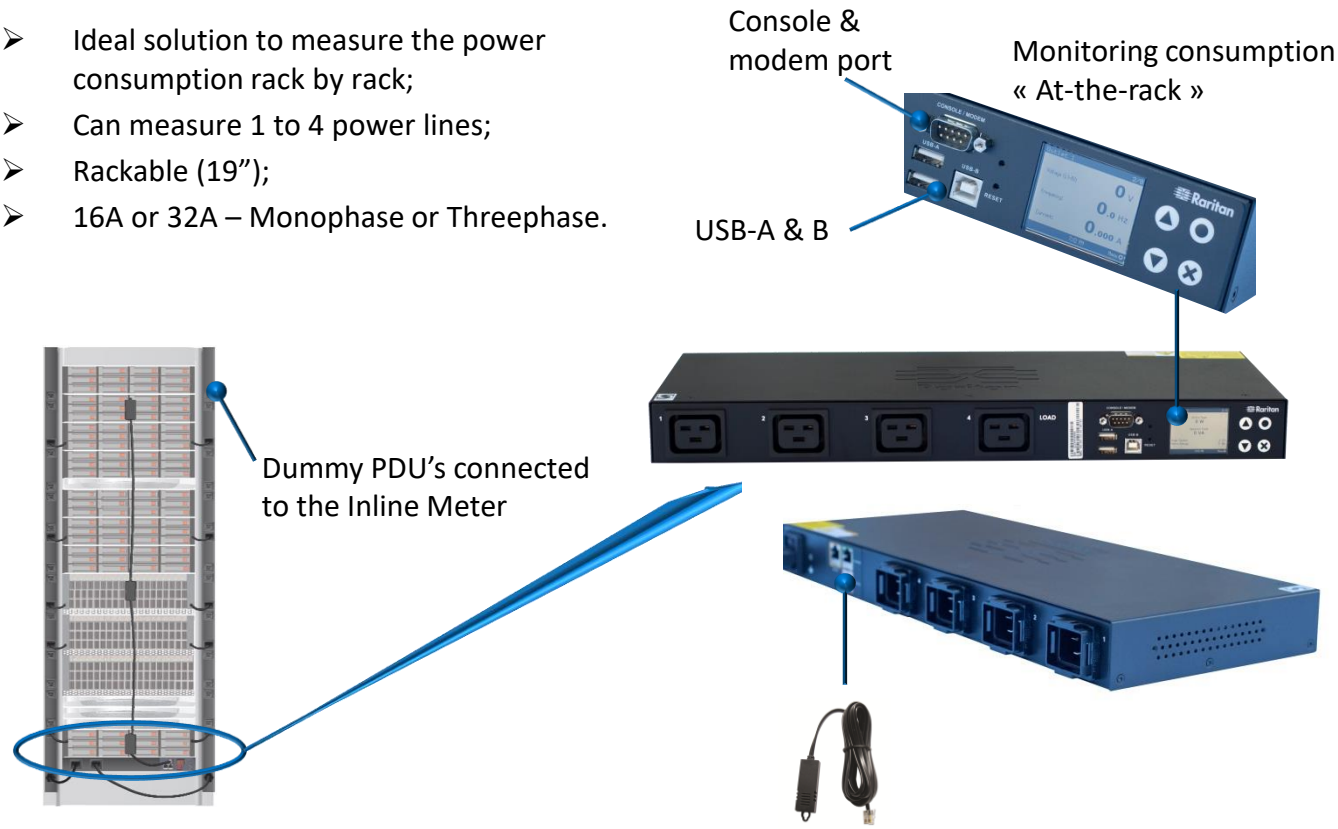
INTEROP BEST OF SHOW AWARD 2015 Grand Prize

Raritan PX : 5 PDU families

	PDU Metered	PDU Metered, Outlet Switched	Outlet Metered	Outlet Metered, Outlet Switched	Inline Metered
PX family	PX-1000	PX-2000	PX-4000	PX-5000 and DPX	PX-3000
Power Metering	PDU	PDU	Outlet, PDU	Outlet, PDU	Circuit
Power on-off (compatible with optional Raritan KVM)		•		•	
Power Data Collected	A, V, W, VA, pf, kWh	A, V, W, VA, pf, kWh	A, V, W, VA, pf, kWh	A, V, W, VA, pf, kWh	A, V, W, VA, pf, kWh

By rack: Raritan Inline metered

- Ideal solution to measure the power consumption rack by rack;
- Can measure 1 to 4 power lines;
- Rackable (19”);
- 16A or 32A – Monophase or Threephase.



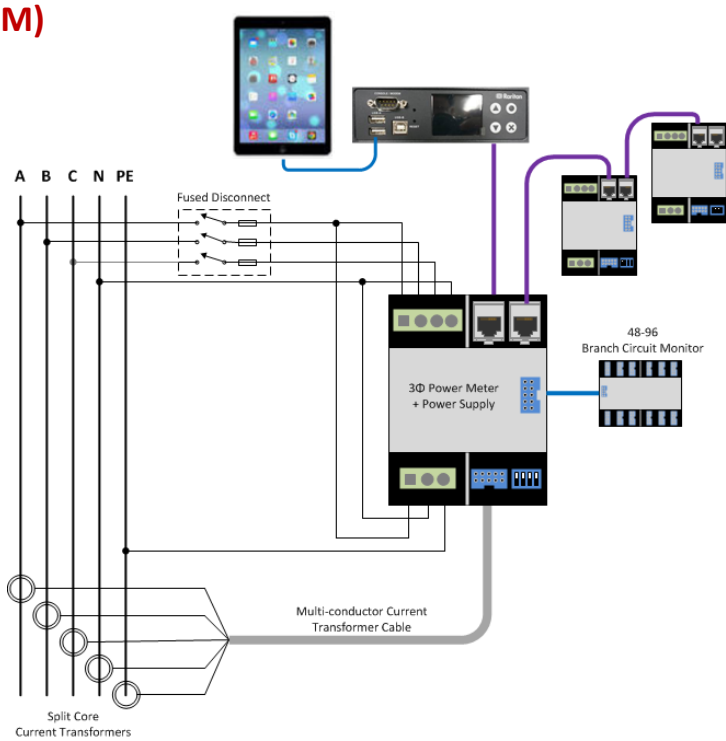
Intelligent Branch Circuit Monitoring (BCM)

This device is able to monitor data center power consumption in order to improve energy efficiency, reduce costs and provide reporting of users power consumption.

The monitoring is done and can be done at the level of:

- Data center;
- Cooling system;
- Lights;
- Breakers.

This allows you to calculate the PUE of your data center.



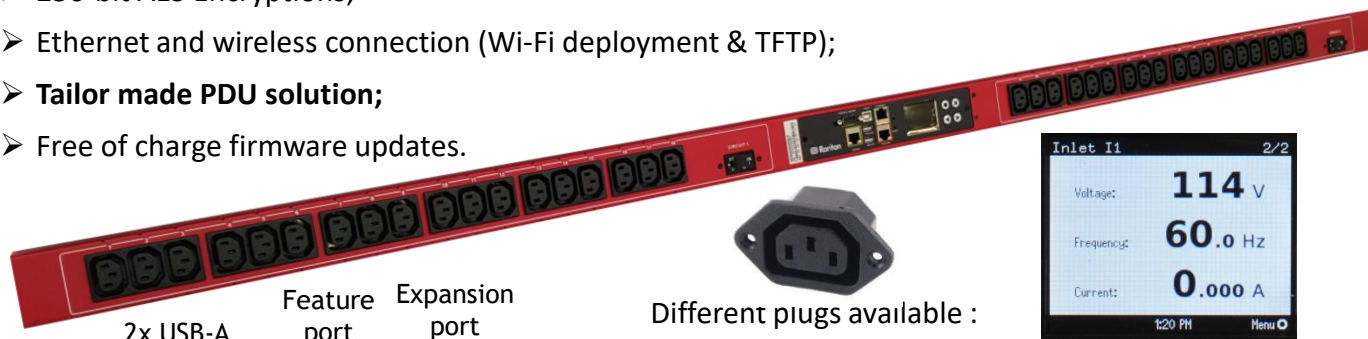
6. Power

What are the new features?

- Hot swappable intelligent controller ;
- LCD color display (220x176) wich can change orientation automatically;
- New iX7 controller with more compute power & new features like controller power sharing (expansion slot);
- Only for models with iX7 controller: Dual Network access & extended cascading (mix between USB & Ethernet daisy chaining or only Ethernet);
- Outlets (C13 & C19) are now with the same size;
- Bi-state latching relays allow you to consume 67% less energy (standard on PX-IX7 & PX3-5000);
- Low profile flush-mount circuit breakers for improved rack accessibility;
- Residual current monitoring which reduces the risk of electric shock;
- Quick setup of hundreds of PDU's with a single USB stick;
- Support a temperature of max 60°C.

What are the main features?

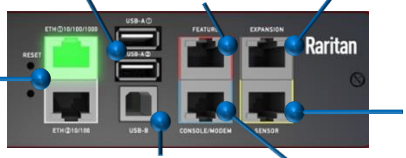
- Secure access via a serial or IP (browser (SSH or Telnet)). No software installation required;
- Power consumption of each outlet or the entire PDU (Power Distribution Unit) displayed on the screen or via the web interface. This allows you to easily manage your electricity needs;
- 4 to 54 outlets models, 16 or 32 Amps. 1U, 2U or 0U. Single-phase and three-phase power;
- C13, C19 and now also Schuko (but possibility to add also Schuko & Cebec through adapters);
- Integration with the KX/SX, command center, power IQ and DCTrack;
- Configurable alerts (consumption, temperature, humidity,…) via SNMP, Email and Syslog;
- Local or centralized authentication via LDAP, RADIUS, Active Directory;
- 256-bit AES Encryptions;
- Ethernet and wireless connection (Wi-Fi deployment & TFTP);
- **Tailor made PDU solution;**
- Free of charge firmware updates.



Different plugs available : C13, C19, …

« at-the-rack » consumption in amps, volts and watts

« Built to order » possible !



Ethernet 10/100/1000 & 10/100 ports

2x USB-A

Feature port

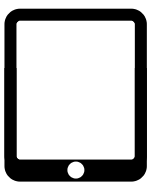
Expansion port

Sensor port

USB-B

Console & modem port

Ehternet and serial ports for a Web GUI or CLI



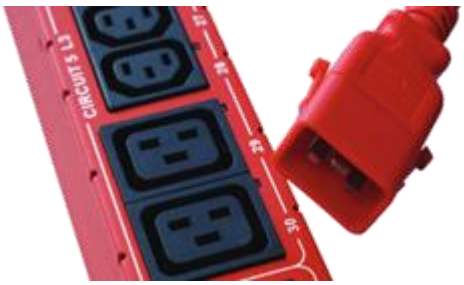
Tablet/smartphone access

SecureLocks

Raritan SecureLock cables help you to maintain safely and accurately your plugs in your PDUs.

Why?

- Eliminate the risk of IT equipment power cords vibrating loose or accidentally pulling out while working on a rack;
- Avoid unnecessary work stoppages, downtime and trips to the data center;
- Protect your data center from pulled-out plugs that can bring down servers – even devices with dual power supplies are susceptible.



Available models:

- IEC C-14 (m) to IEC C-13 (f)
- IEC C-20 (m) to IEC C-19 (f)
- Black, red and blue colors
- Lengths 0,5 to 3 m

Colored PDUs

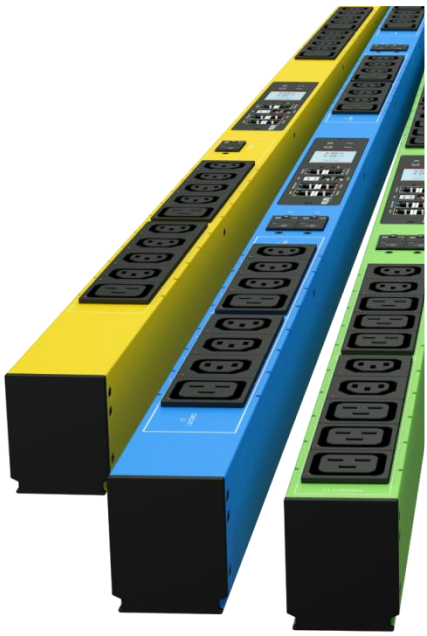
Why?

1. Easily identify Redundant Power Feeds to IT equipment. Two colors to directly identify the A and B power feeds.

2. Makes it easy for technicians working in the racks. Communication is simplified.

3. Clearly identify your data center facility power chain. One color for each power chain supplying power to the rack.

4. Identify different voltages in your data center. Different colors match with a power distribution voltage.



Which color would you choose? Hint: Red and Blue are most popular.

Smart environmental controller

Raritan EMX: Intelligent environmental rack Controller

Rack controller for asset management sensors (AMS) such as temperature, humidity, air flow, air pressure, close/open sensor, smoke, water) as well as asset management tags (AMT).

The Raritan EMX is the centralizing unit between data coming from the different sensors and the management software (dcTrack/PowerIQ).

Two versions available :

EMX-888

8 ports for up to 32 sensor ports (with hubs)

EMX-111

1 port for up to 4 sensor ports (with hub)

Sensors

The Raritan AMS : Smart environmental controller

With Raritan's unique Asset Management Tags (AMTs) and Asset Management Sensors (AMSs), data center operators can now have an accurate, automated, real-time inventory of all IT assets and their locations, down to the 1U level. AMT and AMS can be combined with Raritan's dcTrack® data center infrastructure management (DCIM) software which is designed to track assets, determine capacity in a number of areas and manage changes.

Raritan AMS: Asset management sensor

- Magnetic connector for AMT, one per 1U space;
- Multicolored LEDs, one per 1U space;
- Magnetically mounts to existing racks.

Raritan AMT: Asset management tag

- Magnetic connector to attach tag to the AMS;
- Unique electronic 64-bit value, one-wire ID chip;
- Unique scannable ID bar code matching the electronic ID chip;
- Industrial adhesive patch to attach tag to IT device.

Sensors list

Temperature
DPX2-T1 at the front or rear of the rack to monitor cool air entering and hot air being expelled.

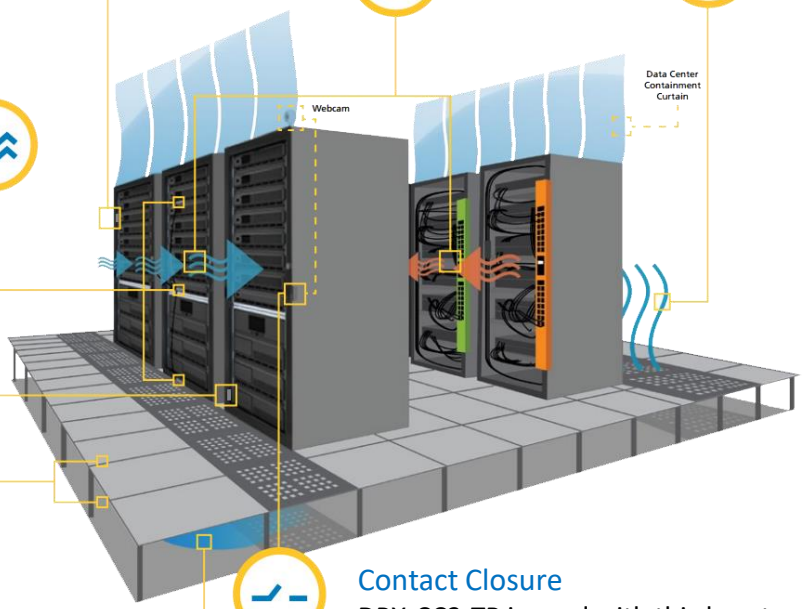
Airflow
DPX-AF1 can meter airflow in plenum space.

Rack Inlet Temperature & Humidity
DPX2-T3H1 strings together 3 sensor heads, making it easy to mount them.

Vibration
DX-VBR detects vibrations along 3 axes.

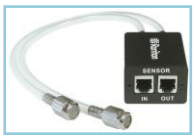
Proximity
DX-PIR detects motion around a cabinet.

Differential Air Pressure
DPX-T1DP1 meters Differential air pressure above and below a raised floor, or between hot aisles and cold aisles to prevent thermal leaks.



Contact Closure
DPX-CC2-TR is used with third-party sensors such as magnetic door locks.

Water/Leak
DPX-WSF-KIT, DPX-WSC-35-KIT & DPX-WSC-70-KIT sensors monitor leaks on the floor, around an area, on liquid cooled racks and can detect condensation.



DPX2-T1	Single Temperature Sensor with Replaceable Sensor Head for PX2/PX3
DPX2-T1H1	Temperature (1) & Humidity (1) Sensor with Replaceable Sensor Head for PX2/PX3
DPX2-T3H1	Temperature (3) and Humidity (1) Sensor with Replacable Sensor Head for PX2/PX3
DPX-T1	Single Temperature Sensor
DPX-T1H1	Single combo temperature and humidity sensors
DPX-T2H2	Dual Combo Temperature (2) and Humidity (2) Sensors
DPX-T3H1	Combo of Temperature (3) and Humidity (1) Sensors (T, T+H and T)
DPX-T1DP1	Differential Air Pressure (1) and Temperature (1) Sensor
DPX-AF1	Single Airflow Sensor
DPX-CC2-TR	Dual Contact Closure Sensor - requires customer-provided Normally Closed (NC) or Normally Open (NO) switch like door open/close, door locked/unlocked, smoke (present or absent).
DPX-WSF-KIT	Floor Water Sensor plus Contact Closure Sensor
DPX-WSC-35-KIT	Water Sensor plus Contact Closure Sensor
DPX-WSC-70-KIT	Water Sensor plus Contact Closure Sensor
DX-PD2C5	5 Digital NC/NO Contact Closures, 2 Powered (12V) Dry Contacts. Only for PX3.
DX-D2C6	6 Digital NC/NO Contact Closures, 2 Dry Contacts.
DX-VBR	Vibration sensor which detects acceleration along three axes (x, y, z).
DX-PIR	Digital Proximity Sensor - Includes Tamper Sensor and Contact Closure. Only for PX3.
DPX-ENVHUB4	4-Port Hub for DPX Environmental Sensors

Intelligent and secured access control

The SmartLock door handle is the ultimate solution for data center requiring the most secure environment. Designed to handle current and future demands for enhanced security requirements. Built to integrate with new or existing infrastructure.

- Electromagnetic lock for remote electronic access control or datacenter access system
- Momentary or continuous lock actuation with DIN lock manual override
- Handle with integrated sensors for lock and latch status, monitoring and alarm functions
- Efficient gear motor design for low power consumption
- Easy integration with standard rack monitoring and access control systems
- Efficient design satisfies both single and multi-point enclosure latching needs
- Fits industry standard panel preps

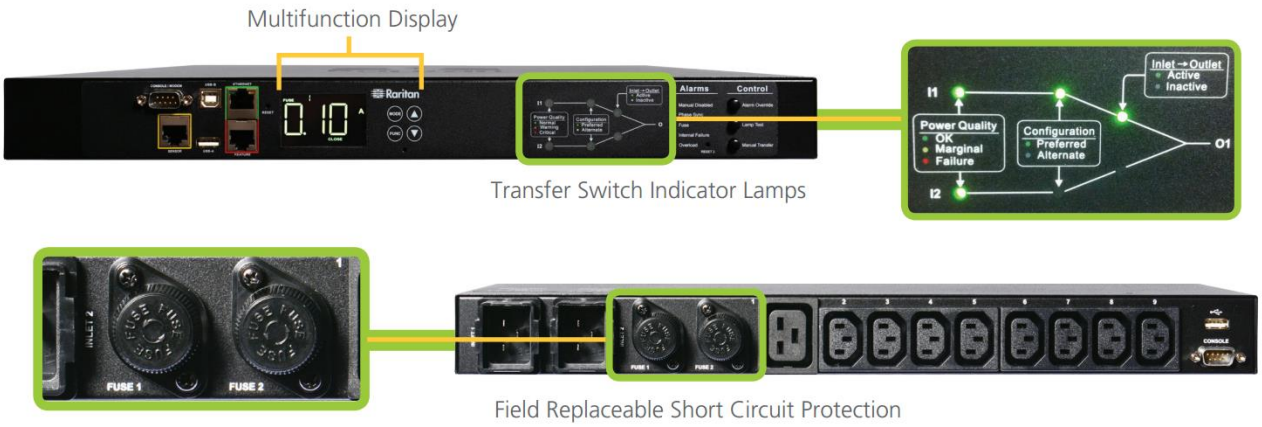
	Sensor Family/Technology	Part Number		Package Description
SmartLock Accessories	Intelligent Door Sensor	DX2-DH2C2		Two active dry contacts powered by 12V to support 3rd party door locks. Two digital Normally Closed (NC) or Normally Open (NO) contact closures. Dual RJ-45 connectors
	Digital Proximity Sensor	DX-PIR		Digital proximity sensor that detects motion around a cabinet, RJ-45 connector. Range: 16ft (5m), +/- 47 degrees horizontal, +/- 41 degrees vertical
	Intelligent WEBCAM	Ask your Sales Contact		Ask your Raritan Contact about compatible WEBCAMs to the SmartLock Solution
	Door Position Sensor	Ask your Sales Contact		2-wire door position sensor detecting the state of the rack door position (Open, Closed).
SmartLock® BASIC	Basic Handle	(Single Handle) SML-SCO-H3EM-60 (Kit) SML-KIT-SCO-60-2D	(Single Handle) EMKA Handle E (Kit) SML-KIT-01	Electronic Swinghandles -High security DIN lock
SmartLock® STANDARD	Single-Low Frequency Reader	(Single Handle) SML-SCO-H3EM-68 (Kit) SML-KIT-SCO-68-2D (Kit) SML-KIT-SCO-68-1D		Southco Electronic Swinghandle and RFID Card Reader - 125 kHz Prox card reader - supports HID 125 kHz Prox card types - Wiegand Output protocol
	Single- High Frequency Reader	(Single Handle) SML-SCO-H3EM-66 or 67 (Kit) SML-KIT-SCO-66-2D (Kit) SML-KIT-SCO-66-1D	EMKA AGENT E (Kit) SML-KIT-EKA-AGE-2D (Kit) SML-KIT-EKA-AGE-1D	Southco Electronic Swinghandle and RFID Card Reader - 13.56 MHz MIFARE® Classic 4k MIFARE Plus® 2k MIFARE® DESFire® 4k & iClass UID/integrated card reader: supports ISO14443 A (13.56 MHz) card types - Wiegand Output protocol
	Dual - High/Low Frequency Reader	Ask your Sales Contact		Southco Electronic Swinghandle and RFID Card Reader - Dual Frequency reader, 125KHz Prox card reader - 13.56 MHz MIFARE® Classic 4k MIFARE Plus® 2k MIFARE® DESFire® 4k & iClass UID/integrated card reader - Wiegand Output protocol
SmartLock® ADVANCED	ASK YOUR SALES CONTACT FOR SMARTLOCK ADVANCED OPTIONS AND AVAILABILITY			

Integrates with data centre infrastructure management system

- Remote control; Single and Dual frequency smart card reader
- Reader recognizes existing employee 125kHz or 13.56MHz RFID cards
- Full integration with acclaimed DCIM software Power IQ leveraging PDU infrastructure to transmit the access credential.
- Can be used as a standalone system or integrated with an existing building access control system or supplied as a fully networked system enabling remote monitoring and audit trail reporting to meet compliance requirements, such as HIPAA and Sarbanes Oxley.

Intelligent Hybrid Transfer Switch

- Most reliable power for single corded devices thanks to the oversized relays and air gaps (3.3mm);
- 2 single throw relays to support reliable out-of-phase transfers;
- 1 or 2 rack units chassis with a long design ;
- Low consumption (17-20W) and less heat (No fan needed);
- Available in 16A and 32A ;
- Field replaceable fuses ;
- Possibility to use Raritan's SecureLock™ cables.



	ATS	HTS	STS
Transfer Times	10 to 16ms	**4 to 8ms**	4 to 6ms
Reliability	✖	✓ ✓	✓
Price Point	$	$$	$$$$

ATS = Automatic Transfer Switch STS = Static Transfer Switch

The intelligent additional features

- USB ports for Wi-Fi, camera, tablet and cascading
- Supports Raritan plug-and-play environment sensors
- The PX3TS-5000 series features outlet-level metering and switching

Power IQ®

Integration with the DCIM software Power IQ

for effective data center infrastructure management

9. Power software

Sunbird's Power IQ

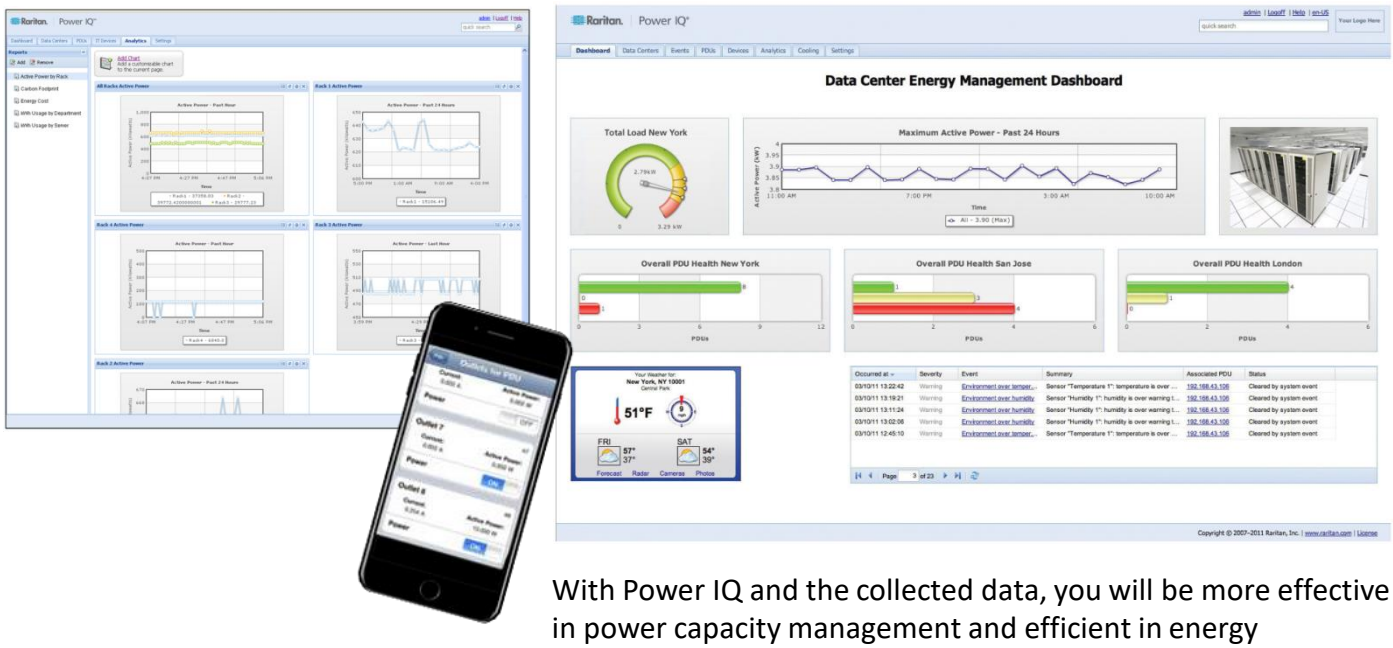
Power IQ is a new secured and centralized solution for the power management.

It manages any number of Raritan's Dominion® PX™ and third-party rack PDU's. The system is open database compliant (ODBC) and can be integrated with your current reporting system.

Its data collection and managing capabilities, used in combination with rack PDU's help IT and facility managers :

- Generate energy cost reports for customers;
- Baseline and certify changes in energy and carbon footprint;
- Simplify centralized Dominion® PX™ management with bulk configuration and firmware management;
- Create trending reports so you can easily see usage trends;
- Collect data from servers and other peripherals on outlet level (volt, amps, kVA, kW, kWh);
- Generate graphics with collected data.

NEW ! POWER IQ FOR RENT!



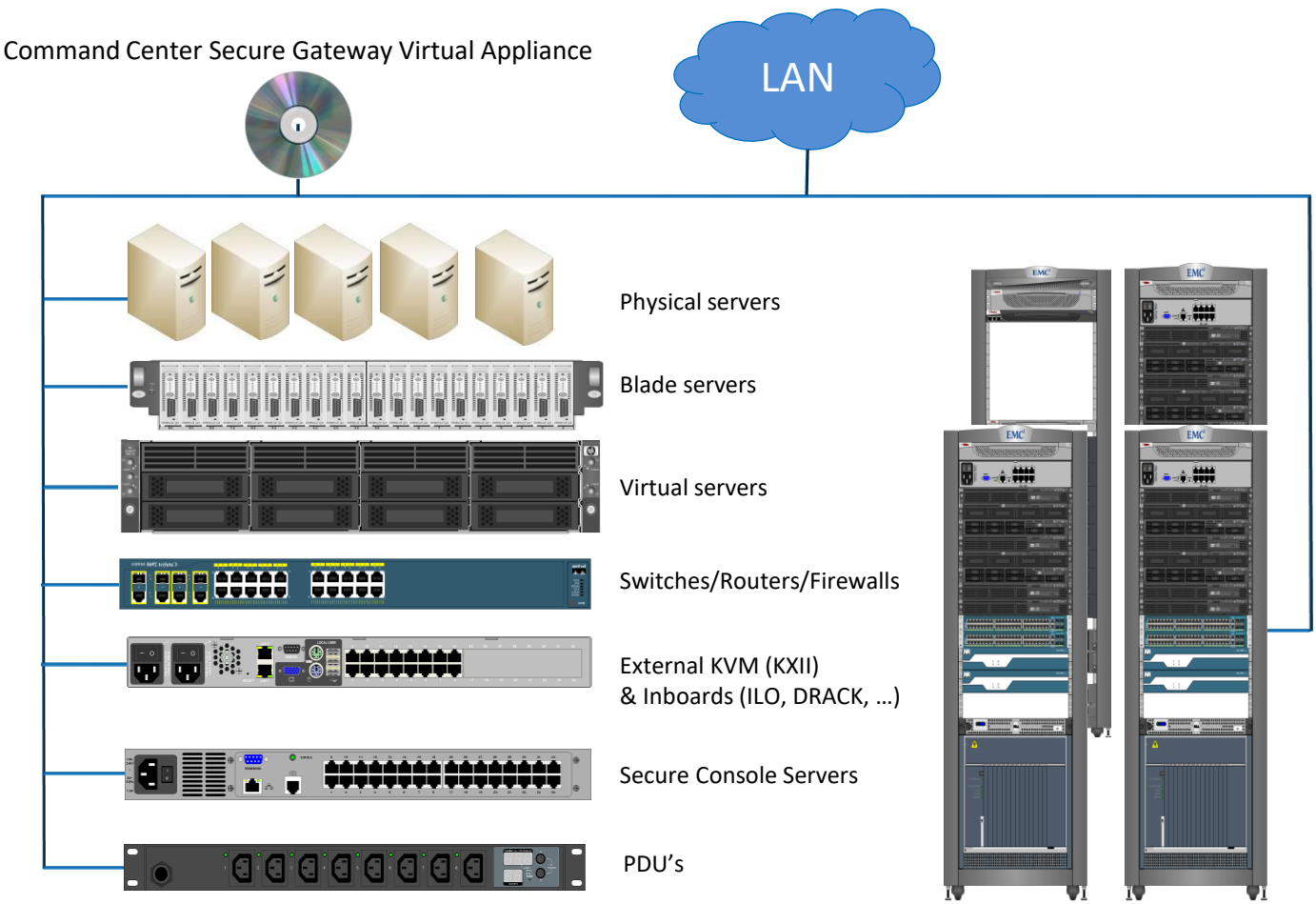
With Power IQ and the collected data, you will be more effective in power capacity management and efficient in energy consumption.

The Sunbird power management solution is interoperable with the Cisco EnergyWise technology.

➔ Monitoring of the exact power consumption of all equipments of each rack in a data center.

Command Center Secure Gateway

- After logging in, you can visualize and manage all allowed assets;
- Manages physical (including blade servers), as well as virtual machines and Vmware infrastructure (ESX servers and the VirtualCenter);
- You can integrate your servers with ILO cards (HP), RSA II (IBM), DRAC4 (Dell);
- Near the Dominions KX, SX, KSX and PX, you can also integrate any asset that can be accessed via a browser, Telnet, SSH, RDP and VNC. eg : IP camera, Print Server, etc;
- Access and manage all technological platforms on application, operational and BIOS level;
- If different ways to access an asset exist, command center will display them : for example a HP server should be accessed via the ILO card, the KX, RDP, Telnet and SSH. On power level, it will be accessed via the ILO card or the PX;
- Assets can be sorted following different criteria : location, type, application, rack number, etc…;



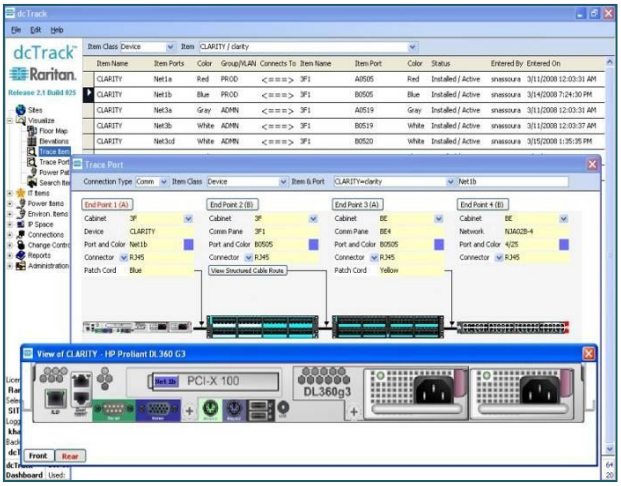
- Many valuable and well-laid out reports that include text and graphics to provide system details are available. The search and trace utility provides a tool to track and trace which user accessed to a specific server, switch, pdu, …;

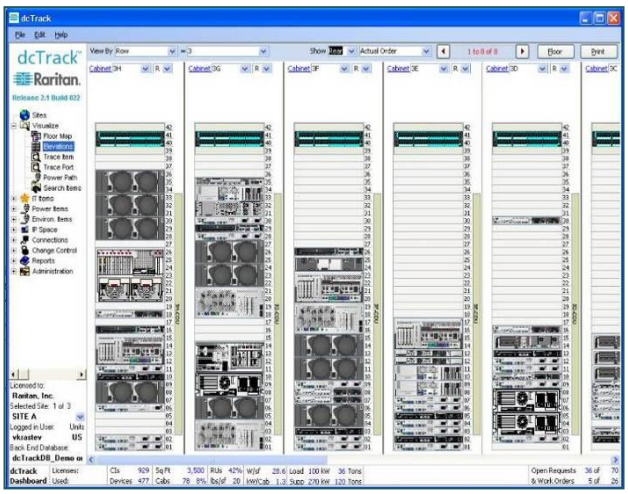
10. Infrastructure

Sunbird's dcTrack

Solution	Automated / Intelligent / Powerful Data Center Infrastructure Management Database (DCIM)									
Domain	Facilities			Networking			Servers / Hosts			
	Space	Heat	Power	Cabling	VLANs	IP Subnets	Stand alone	Blade	Virtual	Apps
Activity	Visualization / Provisioning / Capacity Planning / Change Management									

- Sunbird's dcTrack DCIM solution provides real-time resource utilization data for better electrical, cooling, floor, cabinet, cable and network capacity planning;
- Provides an accurate, automated, real-time inventory of all IT assets and their locations;
- Quickly find space, power and network connectivity for IT devices, simplifying capacity planning and change management;
- Better control of power consumption (Green IT), increase cost effectiveness;
- Optimization of infrastructure;
- Physical, financial and logic information of all equipments;
- Management of all server configurations (rackable, blades and virtual servers);

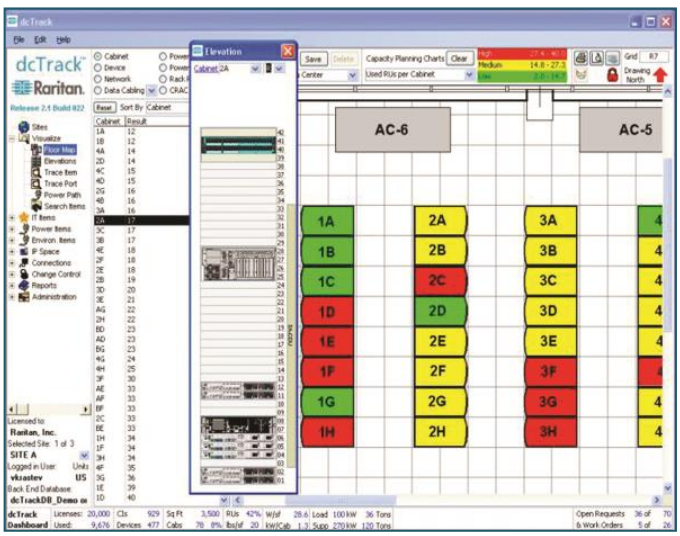


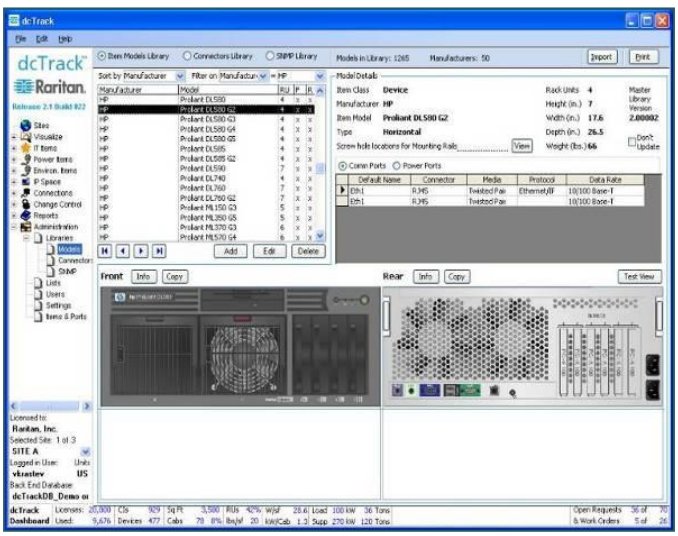


NEW ! dcTRACK FOR RENT!

10. Infrastructure

- The data center floor map is linked in real-time to the AutoCAD® or Visio® floor plan. Any changes made to the CAD background are immediately visible and recognized as new objects in dcTrack;
- Overview Temperature / Current / Weight / Location;
- « Change management » – easy management of work orders;
- Library of more than 20,000 devices;
- View racks: front, rear and description;
- Management and visualization of the supply chain: from the power source to the UPS;
- Cabling: Infrastructure Management Cable;
- Management: automation of IP addresses.



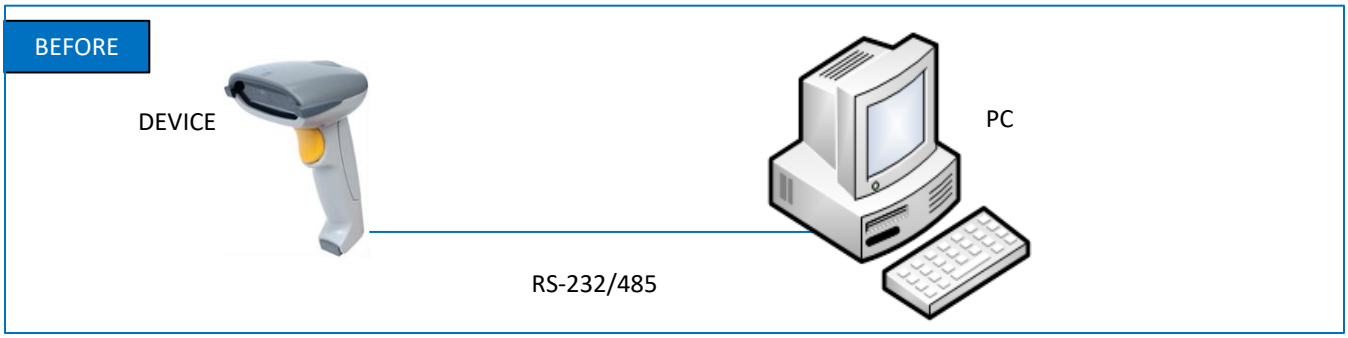


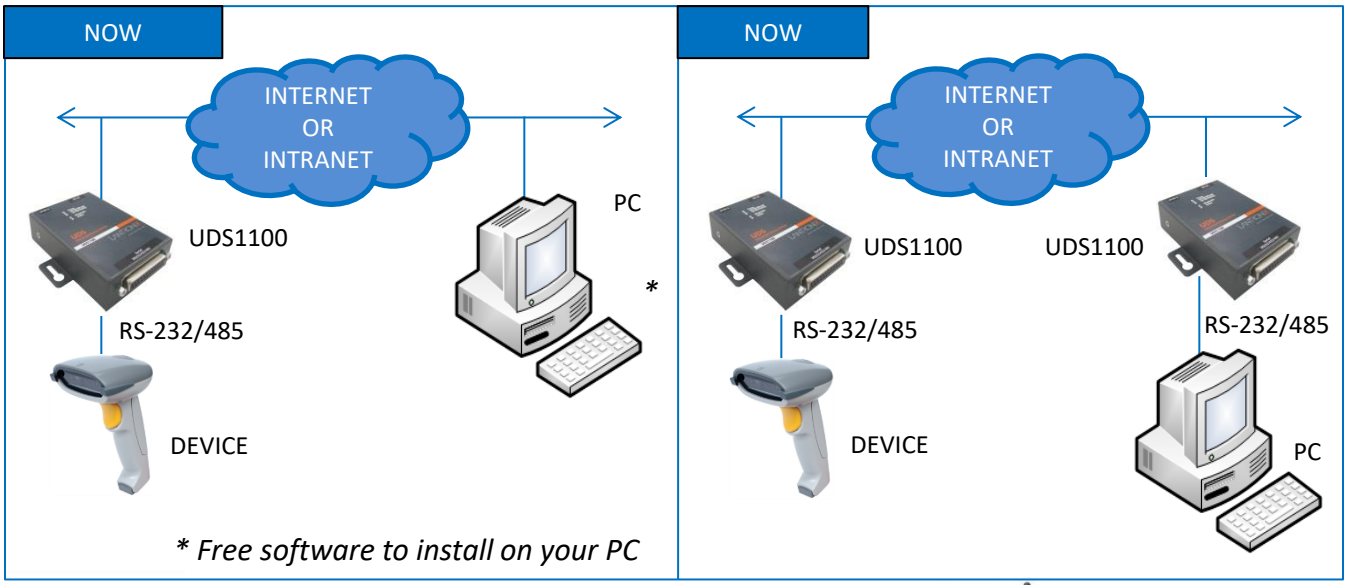
ANS SOLUTIONS

Conversion solutions

Serial to Ethernet

- Lantronix has a wide range of solutions to help you accessing your serial devices (badge reader, barcode reader, security system, weighing machine, …) through your Ethernet network;
- You don't need to install a PC near your devices anymore;





- Solution with one or several serial ports;
- Solution Ethernet cable or wireless;
- Solution in an external enclosure, or via a module to insert in your device;
- Industrial version available. Several industrial protocols available.

USB to Ethernet

AnywhereUSB is a 2 to 5 USB ports.
Ideal solution to connect different serial and USB devices on the network, in virtual environments such as VMWare.

Media converters

Different protocols that we are able to convert to fiber :

- Ethernet, Fast Ethernet, GbEthernet;
- STM1/OC3, STM3/OC12 and STM16/OC48;
- RS232, RS422 and RS485;
- E1/T1 and E3/T3;
- Video signal (NTSC, PAL and Secam);
- Etc …

Our solutions are available in “Stand Alone” or via a module to insert in a chassis. The external enclosures may have a redundant power supply as well as a management card.

Universal converter Gb/Ethernet

Very interesting small Gb/Ethernet converter.
IN : one copper 10/100/1000 and one SFP port (you can use one or the other) - OUT : one SFP port. One can realize with this converter and with the FairOptics SFP’s all possible Gb conversions.

Industrial

Westermo : A whole range of **industrial** switches, Ethernet extenders, converters, 3G/HDSPA modems, PSTN modems, industrial bridges, repeaters and isolators.

ANS Notes

ANF Partners

We are directly in contact with each of these manufacturers as far as purchase/sale, support and maintenance are concerned.

We are also reseller of: Cisco – Nortel/Avaya – 3Com – HP – Extreme Network– Juniper – Allied Telesis – IMC – Barracuda – Digi - Avocent – Perle – Westermo – 10Zig – Amulet

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