

Data Centre & Communications Room Physical Layer Management



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TrueNet® Physical Layer Management



TrueNet® PLM combines our leading connectivity technology with Intelligent Physical Layer Management providing complete end-to-end, real time control and management of Enterprise Copper and Fibre Networks.

Bringing Layer 1, the physical layer of the network up to the same standard of real-time management as the active equipment in layers 2 and 3. TrueNet PLM monitors the location and connectivity of every copper circuit, fibre circuit and every connected Ethernet device – from server to security camera – throughout an entire enterprise.

Single site or multi site, TrueNet PLM is specifically designed to bring physical networks out of the shadows and under professional management control. It integrates with network management (NMC) and network operations (NOC) centre software for full control.

A complete PLM solution comprises bespoke TrueNet PLM Patch Panels and Patch Cords, linked together with Active Scanning Hardware. Users access the system via a web-based software application located on a single server. The software integrates all the gathered network information from the panels, cords and scanning hardware enabling real time monitoring and control of the complete Enterprise Network.

Supplied through ADC KRONE'S fully trained and approved system integrators the TrueNet PLM system comes with the TrueNet System Warranty, featuring an additional zero-bit-error warranty offering you complete peace of mind.

Features

- Location based automated service provisioning and deployment
- Real time asset tracking and reporting
- Event monitoring, vulnerability assessments and reporting in-line with legislative requirements
- Complete physical layer monitoring
- Error free, centrally managed moves, adds and changes
- 100% asset utilisation, scans and reclaims available capacity on or off site
- Detection and alerts to any authorised or unauthorised event across the network
- Connection based security across the entire physical layer

TrueNet® PLM 24 Port LC-LC Duplex Metal Split Patch Panel

The TrueNet PLM 24 Port LC-LC Duplex Metal Split Patch Panel from ADC KRONE combines our leading connectivity technology with Intelligent Physical Layer Management providing a 'best in class' solution.

The panel, incorporates a unique LED indication and port labelling system not to be found on any other product on the market. In addition the split-level design minimises disturbance to neighbouring optical LANs, reducing the risk of faults on adjacent fibres when upgrading installations, whilst still delivering a high port density per 'U' spacing.



Features

- Fully warranted integrated solution
- Unique LED indicators with clear port labelling
- 24 LC Duplex connectors – singlemode or multimode
- 2 discrete trays (2 x 12) with locking screws
- Anti-tamper lid screwed to each tray
- Internal cable management
- Requires special purpose TrueNet PLM fibre patch cord
- Rapid / fault free moves, adds and changes
- Internal cable management protects splices and pigtails from lateral damage whilst maintaining the bend radius for optimal data performance
- Anti-tamper lid prevents accidental intrusion into the splice bay area by operators or technicians
- Covered by the TrueNet System Warranty

Ordering Information

Description	Catalogue Number
PLM Fibre Split Patch Panel – LC Multimode	7033 1 016-00
PLM Fibre Split Patch Panel – LC Singlemode	7033 1 016-01
PLM Patch cord LC-LC Duplex OM3 50/125 1m	7078 6 110-10
PLM Patch cord LC-LC Duplex OM3 50/125 2m	7078 6 110-20
PLM Patch cord LC-LC Duplex OM3 50/125 3m	7078 6 110-30
PLM Patch cord LC-LC Duplex OM3 50/125 5m	7078 6 110-50
PLM Patch cord LC-LC Duplex OS1 9/125 1m	7078 1 150-10
PLM Patch cord LC-LC Duplex OS1 9/125 2m	7078 1 150-20
PLM Patch cord LC-LC Duplex OS1 9/125 3m	7078 1 150-30
PLM Patch cord LC-LC Duplex OS1 9/125 5m	7078 1 150-50

TrueNet® PLM 24 Port LC-LC Duplex Metal Split Patch Panel

Specifications

Panel Specification

Panel rack mounting	1U 19" (IEC 60297)
Panel dimensions (mm)	44 x 483 x 282 deep
Product weight	3.7Kg
Materials	Zintec – powder coated black RAL 9011
Number of trays	2 discrete (1U total height)
Capacity	48 fibres max (LC)
Connector system	LC
Cable management	Internal
Signal voltage	5V dc
Signal current	2 mA max (EN60950:2000)

Connector Specification

Sleeve material	Singlemode – ceramic
	Multimode – phosphor bronze
Typical insertion loss, dB	Singlemode – 0.2
	Multimode – 0.3

Environmental

Operating temperature range	-10°C - +60°C
Operating humidity range	≤ 95% relative humidity non condensing
Standards	EN 6008-2-2
	IEC 68-2-27
	IEC 68-2-6
	IEC 68-2-14
	IEC 68-2-3
	ISO/IEC 11801:2002

TrueNet® PLM UTP and S/FTP Category 6 Patch Panel

The TrueNet® PLM 24 Port Category 6 Patch Panel from ADC KRONE combines our leading connectivity technology with Intelligent Physical Layer Management providing a 'best in class' solution.

The panel incorporates a unique LED indication and port labelling system not to be found on any other product on the market.



Features

- Unique LED indicators
- Clear port labelling
- Incorporates the fully component compliant Category 6 KM8 jack
- Fully warranted integrated solution
- Requires special purpose TrueNet® PLM patch cord
- Ease of installation through patented cable management features
- Rapid / fault free adds moves and changes
- Showcase standard communications room appearance
- Covered by the TrueNet System Warranty

Ordering Information

Description	Catalogue Number
Patch Panel, PLM Category 6 KM8, 24 Ports UTP	6527 1 728-00
Patch Panel, PLM Category 6 KM8, 24 Ports S/FTP	6527 1 728-01
Booted Patch Cord, PLM Category 6 KM8, LSZH Blue UTP	5719 2 821-XX
Booted Patch Cord, PLM Category 6 KM8, LSZH Red UTP	5719 2 822-XX
Booted Patch Cord, PLM Category 6 KM8, LSZH Green UTP	5719 2 824-XX
Booted Patch Cord, PLM Category 6 KM8, LSZH Orange UTP	5719 2 825-XX
Booted Patch Cord, PLM Category 6 KM8, PVC White UTP	5719 2 830-XX
Booted Patch Cord, PLM Category 6 KM8, PVC Blue UTP	5719 2 831-XX
Booted Patch Cord, PLM Category 6 KM8, LSZH Grey S/FTP	5719 2 887-XX

*Replace XX with:

04 = 1.5m

07 = 2m

10 = 3m

15 = 5m

TrueNet® PLM UTP and S/FTP Category 6 Patch Panel

Specifications (Patch Panels)

Mechanical

Panel rack mounting	1U 19" (IEC 60297)
Panel dimensions (mm)	44 x 483 x 120 deep
Plug / jack mating cycles	≥ 750 (IEC / EN 60603-7 Series)
Plug / jack insertion / withdrawal force	≤ 20N (UTP), 30N (STP) (IEC / EN 60603-7 Series)
Product weight	0.9Kg including jacks (UTP), 2.2kg (S/FTP)

Electrical

Jack	Category 6
Insulation resistance	≥ 500MΩ
Dielectric strength	Contact / contact 1.0kV
Current carrying capacity	≥ 1A / contact
Typical plug / jack resistance	≥ 20mΩ
Conductor terminations of LSA-PLUS® contacts	≥ 30
Conductor diameter	0.5-0.65mm (AWG 24-22)
Insulation diameter	0.7-1.4mm

Panel

Signal voltage	5V dc
Signal current	2 mA max (EN60950:2000)
Testing requirements of connection technology according to ISO/IEC 11801 2nd edition	ANSI/TIA-568-B.2.1 and EN 50173-1:2002

Environmental and Safety

Operating temperature range	-10° to +60°C
Operating humidity range	≤ 95% relative humidity non condensing

TrueNet® PLM Solution – Active Hardware

The TrueNet PLM active hardware is configured in a hierarchical layout and is the interface between the PLM Patch Panels, providing the management software with all relevant data to scan connectivity changes within the physical layer.



The TrueNet® PLM Master is always at the apex of the hierarchy, connecting with Expanders and Scanners. In addition the Master also includes the SNMP agent to gather data on all IP devices connected to the network.

Rack Indicators and Indicator Controllers are used to identify racks in larger communication rooms, to assist with the work order process or any other maintenance operations.

Features

- Location based service provisioning and deployment
- Real time asset tracking and reporting
- Event monitoring, vulnerability assessments and reporting in-line with legislative requirements
- Complete physical layer monitoring
- Error free, centrally managed moves, adds and changes
- 100% asset utilisation, scan and reclaim available capacity on or off site
- Detection and alerts to any authorised or unauthorised event across the network
- Connection based security across the entire physical layer

Ordering Information

Description	Catalogue number
PLM Scanner	6527 1 730-00
PLM Master 4 Ports	6527 1 733-00
PLM Master Expander	6527 1 732-00
PLM Expander	6527 1 734-00
PLM Indicator Controller	6527 1 735-00
PLM Control Pad	6527 1 736-00
PLM Mini Scanner	6527 1 739-00
PLM Network Scanner	6527 1 741-00
PLM Rack Indicator	6527 1 737-00
PLM Scanner Attachment Cord Cu	6527 1 750-XX*
PLM Scanner Attachment Cord FO	6527 1 751-XX*

*Replace XX with: 51 = 1.5m, 52 = 2.5m, 06 = 6m, 12 = 12m

TrueNet® PLM Solution – Active Hardware

Specifications (Excludes 6527 1 736-00)

Panel rack mounting	1U 19" (IEC 60297)
Panel dimensions (mm)	44 x 483 x 160 deep
Product weight	2.0Kg / 4.4lb

Interfaces

Up/down links	Standard RS-485, Full – duplex connector shielded RJ-45 socket Data rate up to 115.2 Kbps
Serial	RS-232 Connector 9-pin D-type male Data rate up to 115.2 Kbps Protocol UART, start bit 1, Stop bit 1, nonparity
100BASE-Tx	RJ-45 socket, Ethernet IEEE 802.3, 100BASE-Tx/10BASE-T, 100/10 Mbps industry standard for connection to local area network
Control pad	Connector RJ-45 socket, 8 pins
Patch panel connections	Connectors 6 or 12 headers, 26-pin

LED Indicators (where used)

PWR	On when scanner is powered
CPU	Blinking to indicate master heartbeat
DOWN LINKYELLOW	On during transmission of each of the DOWN LINK ports
DOWN LINKGREEN	On during reception of each of the DOWN LINK ports
100BASE-Tx – Rx	On during reception from local area network
100BASE-Tx – Tx	On during transmission to local area network
100BASE-Tx LINK	On when link is active

Environmental & Safety

Operating temperature range	0°C - +50°C
Operating humidity range	≤ 90% relative humidity non condensing
Safety	UL 60950, EN 60950
EMC	EN 55022, FCC part 15 Class A, EN 55024
Power	100 – 240 VAC, 47 – 63Hz, 30W maximum

TrueNet® PLM Solution – Software

The PLM Software forms the user interface and is accessed by System Administrators and Network Technicians via the web. The system automatically provides complete link information in a graphical format, providing full end-to-end visibility, automatically updating in real time as changes occur.



TrueNet PLM drastically speeds up and simplifies daily network provisioning, maintenance and security providing Network Managers with full visibility and control of the network and its assets.

Features

- Automatic discovery of any IP device on the network
- Accurate monitoring and logging of any connectivity based event across multiple sites
- Highly customisable events and alarms with the ability to specify who receives alerts for different events
- Includes a work order tool for scheduling moves, adds and changes using a streamlined process
- Immediate identification of physical layer related failures results in reduced downtime and repair times
- Identifies unused network assets ensuring 100% utilisation
- Continual monitoring for illegal connections, disconnections or tampering for increased network security
- Remote maintenance and troubleshooting saves time and costs
- Powerful reporting tools give asset tracking and event log monitoring information for legislation such as Sarbanes Oxley, ISO/EN 20000 etc.
- Optional modules available to integrate PLM into other applications (OpenView, Tivoli etc.)
- Optional CAD module generates full 2D architectural views of the geographical location of each asset in the entire network

Ordering Information

Description	Catalogue Number
Basic Software	
PLM Management Software – 1,000 ports	6527 1 752-01
PLM Management Software – 2,000 ports	6527 1 752-02
PLM Management Software – 5,000 ports	6527 1 752-05
PLM Management Software – 10,000 ports	6527 1 752-10
PLM Management Software – 20,000 ports	6527 1 752-20
PLM Management Software – 30,000 ports	6527 1 752-30
Additional Modules	
PBX Module	6527 1 753-00
CAD Module (Without MapGuide)*	6527 1 754-00
CA Unicenter Module	6527 1 755-00
HP OpenView NNM Module	6527 1 756-00
Additional Licenses (xx – no of licenses in '000s)	6527 1 757-xx

*CAD module requires Autodesk MapGuide®

TrueNet® PLM Solution – Software

Specifications

TrueNet PLM software must be installed on a machine that serves as a dedicated server. The following are the minimum hardware and software requirements for the PLM Server and Client PC's:

Server Requirements

Minimum Hardware:

Pentium processor running at least 800 MHz

1000MB+ RAM

20 GB hard disk space

Recommended Hardware:

Dual Pentium 4 processor running at 2600 MHz

1024MB RAM (or more)

40GB+ hard disk space

Software:

Windows 2000 family (Windows 2003 server family recommended)

(Microsoft Internet Explorer 6 recommended)

Microsoft SQL 2000 (standard/Enterprise edition recommended)

IIS 5 (or higher)

MSMQ – Microsoft message queuing system

Client Minimum Requirements – Software:

Any Microsoft based system (Win 95, 98, ME, NT, 2000, XP etc.)

Microsoft Internet Explorer 5.5 with service pack 1 (with signed ActiveX & cookie support)

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