



AMPTRAC Intelligent Infrastructure Management System (IIMS)





25 Year System Performance Coverage*

The AMPTRAC System provides the same 25-year electrical and optical data-carrying performance warranty as standard AMP NETCONNECT cabling systems. The AMPTRAC components provide the following coverage:

- AMPTRAC Patch panels and I/O cables – 25 years
- AMPTRAC Patch Cords – 25 years
- AMPTRAC Sensor Strips – 5 years
- AMPTRAC Analyzers – 1 year (optional 3-year extended warranty available)
- AMPTRAC IM Software – 1 year Service Level Agreement



25 Year System Performance Coverage*

We are confident that your AMP NETCONNECT cabling system will keep performing to current TIA/EIA industry standards. If the registered system ever fails to meet those standards within 25 years of the date of installation, we'll provide the reasonable parts and labor to replace or repair the AMP NETCONNECT product.*

It's Standard Equipment

This coverage is automatically part of the package when*:

- AMP NETCONNECT products are specified end-to-end
- A Tyco Electronics authorized NETCONNECT Design & Installation (ND&I) contractor registers the network project with Tyco Electronics
- That ND&I performs the actual installation in accordance with Tyco Electronics requirements

Who's Covered

Unlike most systems suppliers, Tyco Electronics provides warranty coverage directly to the end user. Many suppliers provide coverage to the installers, who then provide coverage to the customer. But with Tyco Electronics warranties, there are no middlemen. The warranties are between you and Tyco Electronics.

For more information, please visit: <http://www.tycoelectronics.com/aboutus/pdf/tc.pdf>

Or call: 1-800-553-0938

Outside the U.S., please contact your local AMP NETCONNECT product sales office.

People & Products to Answer the Cabling Challenge.

Cabling a retail store, casino or office building can be complex. Yet the solution for productive connectivity and cable management can be as simple as talking to the right people - The AMP NETCONNECT business unit of Tyco Electronics.

The reason is what we bring to the building infrastructure challenges you face. In-depth technical knowledge and expertise from decades of experience. Innovative technologies from ongoing R&D. And quality products for every power, data, voice and video networking need. One of the broadest lines in the industry, in fact.

Additionally, it's what we do to answer the challenge: develop and deliver integrated, made-to-order solutions that optimize network performance, increase productivity and produce more immediate return-on-investment.

And it's not just providing technology. It's making sure solutions are efficiently and effectively installed: working with distributors and customers so products are delivered when and where you need them. And maintaining a global network of certified installation contractors.

It all means, simply, that AMP NETCONNECT cabling systems provide the answers you're looking for: the whole solution for any cabling challenge. From the ground up.

*Conditions apply. AMP NETCONNECT Home Net-Works Systems qualify for a 25 year component warranty only. For more information, please visit www.ampnetconnect.com or call 1-800-553-0938. Outside the U.S., please contact your local AMP NETCONNECT product sales office.

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Summary

The requirements of today's rapidly growing and changing infrastructures are no longer satisfied by traditional IT infrastructure management but need intelligent, real-time management. An Intelligent Infrastructure Management System (IIMS) is critical to providing accurate cable and network management information into the IT Infrastructure Library (ITIL).

The AMPTRAC Connectivity Management System turns cabling systems and their connected devices into intelligent networks by reducing costly and time-consuming manual cable management. With this system, you can track and document all moves, adds and changes to your network from a centralized location as they occur. This fully automated system optimizes asset utilization, maintains accurate documentation and helps prevent costly errors.

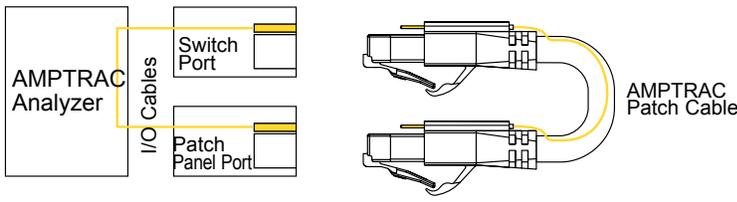
The AMPTRAC Connectivity Management System's easy-to-implement hardware coupled with iTRACS IM cutting-edge software can be integrated into new or existing networks. By allowing you to proactively respond to any changes in connectivity through customizable alerts or alarms, the iTRACS software optimizes your network monitoring and security. AMPTRAC hardware when used in conjunction with iTRACS software provides the missing link that integrates network management and physical layer management – revolutionizing the way networks are controlled and documented.

This one-of-a-kind infrastructure management system automatically generates a complete physical topology of your network at the Telecommunications Room/Data Center, while helping you manage and troubleshoot the network remotely.

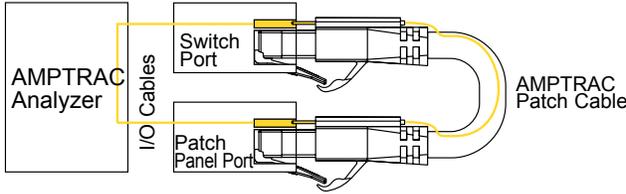
System Facts and Features

- Reduces downtime and response time
- Integrates network and physical layer management
- Helps to increase productivity
- Reduces operating costs
- Improves port and asset utilization
- Provides accurate and timely information
- Improves service levels
- Provides alerts and alarms for all changes relating to devices and their connectivity
- Provides work order control module with auto-provisioning
- Over 60 detailed reports available
- Audit trail based on historical log file
- Simplified installation and design with stackable, configurable Analyzer
- Complete product line support
 - XG Cat 6A shielded
 - Cat 6 unshielded
 - Fiber (SC and LC)
 - MPO (fiber) and MRJ 21 (copper)
- Analyzer LCD displays work order and circuit trace information
- Analyzer provides good and bad audible tone alerts and confirmations
- Analyzer generates remedial work actions to fix unauthorized moves, adds and changes
- Support for non-English languages

Open Circuit



Closed Circuit

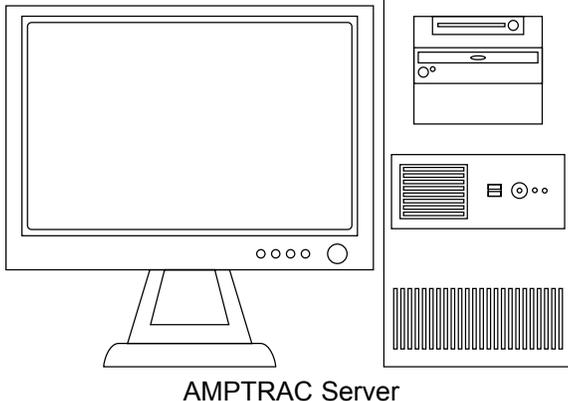
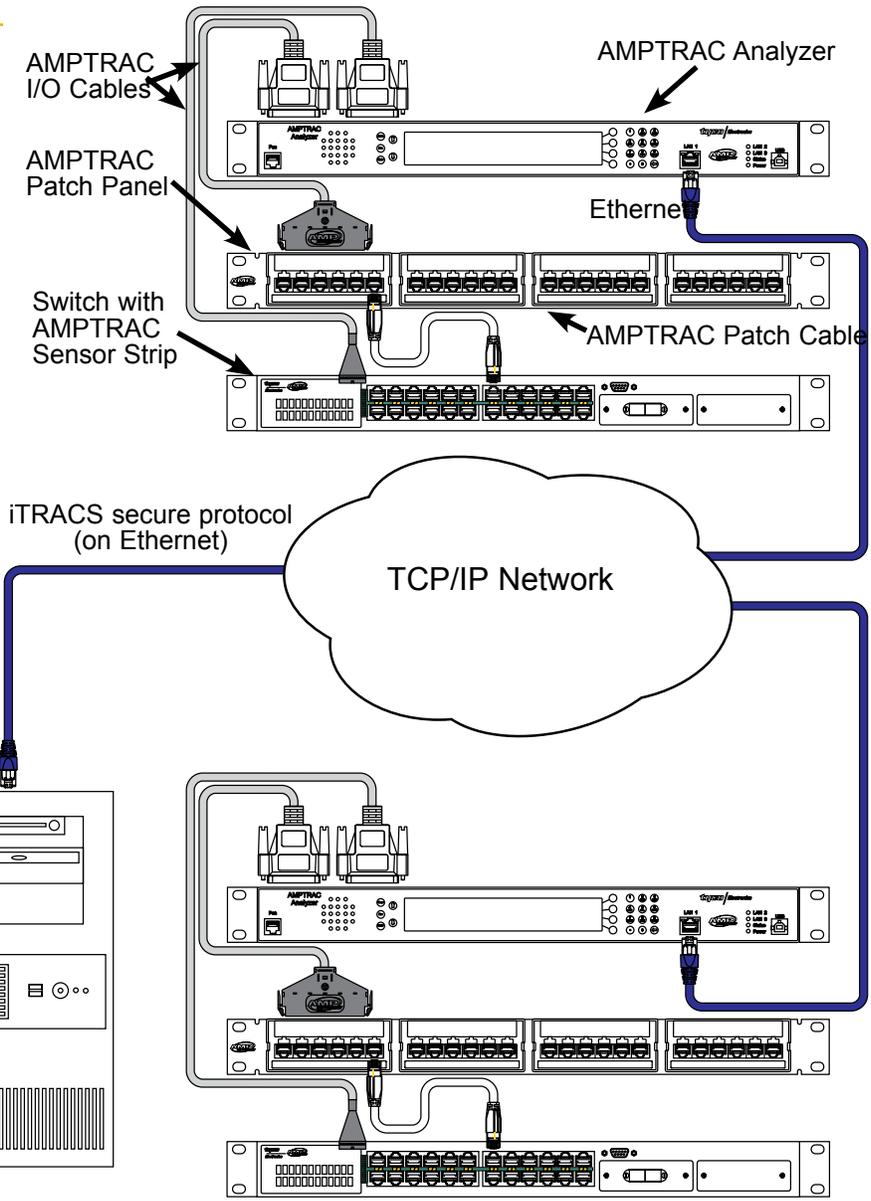


AMPTRAC Basic Operating Principle

- 9th wire technology in patch cord establishes open and closed circuit which can be monitored
- Analyzer monitors open/closed circuit and tracks connectivity
- Analyzer sends data to iTRACS IM software database
- iTRACS IM software sends work order and circuit info to AMPTRAC Analyzer

AMPTRAC System and Components

- AMPTRAC Analyzer:** The device that tracks the connections between sensor contacts and communicates with iTRACS IM software database
- AMPTRAC I/O cables:** Connects sensor contacts (patch panel and electronics) to analyzer
- AMPTRAC Patch Panels:** Patch panels with integrated sensor contacts
- AMPTRAC Sensor Strips:** Sensor contacts that are applied to network electronics port fields
- AMPTRAC Patch Cords:** Interconnects between patch panel and switch ports which have an integrated '9th' wire that is used to make connection between sensor contacts
- IM Software:** The software that manages the Analyzers, and correlates the connectivity information from the analyzers to a database model of the customer infrastructure
- AMPTRAC Server:** A higher level PC (often Rack mounted) that runs the iTRACS IM software



iTRACS® Infrastructure Manager™ Software – Software for the AMPTRAC Connectivity Management System

The Product Design

iTRACS Infrastructure Manager software has been designed for customers of Tyco Electronics, as it functions in tandem with AMPTRAC hardware. The software is designed to explore and discover and map the connectivity of the customer network. It is further designed to simplify the process of all future moves, adds and changes (MACs) of end-users. The software allows simultaneous access by a spectrum of department representatives; these include help desk, planning, network administration, supervision and technicians.

The Client Customers - The Problems of Complex Networks - Solved

iTRACS IM software is ideally suited to customers with complex data/telecom networks and critical applications. Examples include financial institutions, insurance providers, data centers, high security government facilities, military defense facilities, airports, medical centers, universities and corporate headquarters.

These customers and clients share the difficult management of complicated networks, requiring accurate record-keeping, high security, and frequent MACs. The simplification of the work order process also provides valuable benefits to client networks of any size, from small to enterprise network.

Product Leadership

iTRACS IM Software, as one of the earliest developers of Cable Management Software (CMS), has maintained an international leadership position in CMS design for more than 15 years. iTRACS IM software has been specifically designed to automate the MAC record maintenance process, to simplify the user interface and to share access across departments.

Ask for a demonstration today!

The screenshot shows the iTRACS Infrastructure Manager software interface. It features a navigation tree on the left, a central workspace with multiple views (Closet for '106-D2' Front View, Graphic for '106-D2', and Data for '106-D2'), and a bottom menu bar. Callouts point to various features:

- Enterprise display**: Points to the navigation tree on the left.
- Switch and Patch Panel Ports in Closet View**: Points to the front view of the closet rack.
- Work area indicated in graphic view**: Points to the graphic view of the closet.
- Data store information**: Points to the data view for the selected closet.
- Custom views based on job responsibilities**: Points to the bottom menu bar.
- Circuit trace from end-to-end and all points in between**: Points to the circuit trace view.

AMPTRAC Analyzers



Front with Included Accessories



Back

The AMPTRAC Connectivity Management System Analyzer discovers connects/disconnects and communicates the port ID information in real-time to the AMPTRAC database software over a TCP-IP connection. When a patch cord is inserted or removed from a port, the AMPTRAC sensory circuit immediately notifies the database software to update and document the change in connectivity. This provides network administrators responsible for small to enterprise wide multi-site networks, with vital time saving up to-the minute information about the status of their network from the hardware layer up. Any change in connectivity can be checked and authorization verified, and if appropriate, action taken if the action is unauthorized.

- Universal analyzer design
 - Analyzer can be configured as a master or slave
 - Any unit can directly communicate to database server or through another analyzer
 - Virtually unlimited in number of ports/drops which can be monitored
- Highly flexible design and implementation allowing for use in office buildings, data centers and remote/branch offices
- Analyzer sold with license to iTRACS IM software (see pages 12 and 13 of this chapter for description of software)
- Available in 336-port and 168-port versions:
 - Both use 1U of rack space
 - Positive, keyed and reliable DB25 connection for I/O cables
 - Shallow depth at 6.25" (160 mm)
 - Suitable for shelf or 19" rack or cabinet mounting
 - Large 4 line LCD display providing interactive communications with the database
 - Supports connection of PDA, electronic tablet or computer to analyzer via Ethernet port
- Three 10/100BASE-Tx Ethernet ports provided (1 in front, 2 in rear) to provide connection to LAN and server as well as allow analyzer to communicate via another analyzer
- Use of latest and current circuitry design
- Little heat generation — no concerns over heat management in rack or cabinet

Enhancements

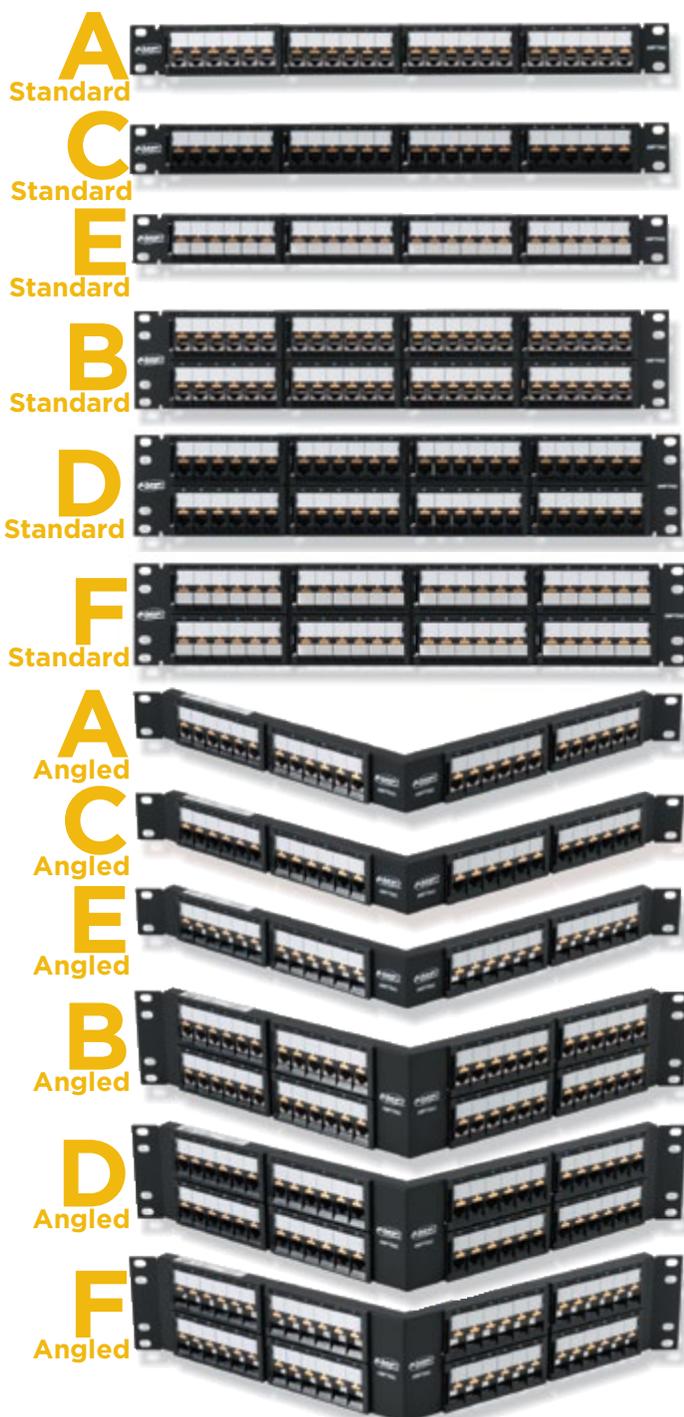
- AMPTRAC Analyzer provides work order information on the LCD screen
- Provides a "good or bad" tone from analyzer based on work order information
- Generates remedial work actions for repair of unauthorized changes
- Supports character based language

Description

Description	Ports Monitored	Part Number
Analyzer, US Power Cord with iTRACS IM Software and 1 Year Service Level Agreement	336	3-1591309-1
	168	4-1591309-1
Extended 3-Year Analyzer Warranty	-	9-1591306-0

Note: A complete channel connection to a work area outlet passes through two monitored ports, the network switch and the patch panel. Therefore, each active channel monitored requires two Analyzer ports.

AMPTRAC Twisted Pair Patch Panels



- Incorporates integrated solid contacts for enhanced protection, appearance, and reliability
- I/O cable connection made via 110 IDC punch down in the rear of patch panel, minimizing pre-planning and allowing for cables to be cut to length (1435844) or with 110 plug and play cable assembly (1933152) (see page 10)
- Cost-effective solution for AMPTRAC Connectivity Management System ready solution - install AMPTRAC patch panels now and analyzer, I/O cables, and software later
- Available in straight versions as well as angled versions for improved cable and space management
- Uses AMP NETCONNECT high-performance AMP-TWIST shielded 6A and SL Series Cat 6 UTP modular jacks
- AMP-TWIST shielded 6A modular jacks meet or exceeds the channel specifications of ANSI/TIA-568-C.2 Category 6A and Amendment 1 to ISO/IEC 11801:2002 Class EA up to 500 MHz when used as a component in a properly installed AMP NETCONNECT XG F/ UTP channel
- AMP-TWIST shielded 6A modular jacks meet or exceed all requirements for IEEE 802.3an 10 Gigabit Ethernet
- XG Cat 6A and Cat 6 patch panels come unloaded with modular jacks bagged separately for field termination with SL Series modular jack termination tool P/N: 172150 (see Chapter 22)
- SL Series multimedia patch panels come unloaded and accept SL Series jacks for custom configurations
- For compatible cable management products, see Chapter 15

Description	Port Count	Height - Rack Units (Inches)	Figure	Footprint	
				Standard	Angled
XG Cat 6A (Shielded)	24	1U (1.75)	A	1933331-1	1933333-1
	48	2U (3.50)	B	1933332-1	1933334-1
Category 6 (Unshielded)	24	1U (1.75)	C	1933327-1	1933329-1
	48	2U (3.50)	D	1933328-1	1933330-1
SL Series Multimedia (without jacks)*	24	1U (1.75)	E	1933323-1	1933325-1
	48	2U (3.50)	F	1933324-1	1933326-1

NOTE: Previous versions of AMPTRAC SL Patch Panels require I/O cable 1499656-X instead of new version 1933152-X.
 *NOTE: SL Series multimedia panels do not accept dust-covered jacks

AMPTRAC MRJ21 Patch Panels

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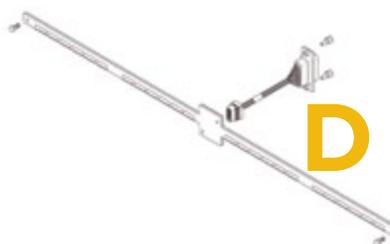
- High-performance copper cabling solution
- High-density, small form factor connectivity
- Factory terminated and tested
- Modular, pluggable design
- 4-Pair MRJ21 patch panels support applications which use four or fewer pairs including 10BASE-T, 100BASE-T and 1000BASE-T
- 2-Pair MRJ21 patch panels support applications which use two or fewer pairs including 10BASE-T, and 100BASE-T
- Utilizes HD22 interface for AMPTRAC I/O cable (1499507) (see page 10)
- For compatible cable management products, see Chapter 15

Footprint	RJ-45 Ports	MRJ21 Connectors	Per Port Wiring (Applications)	Figure	Part Number
Standard	24	4	4-Pair (10/100/1000BASE-T)	A	1777029-2
	48	4	2-Pair (10/100BASE-T)	B	1777042-1
Angled	48	8	4-Pair (10/100/1000BASE-T)	C	1777041-1
		8	4-Pair (10/100/1000BASE-T)	D	1777053-1

AMPTRAC Patch Panel Retrofit Kits

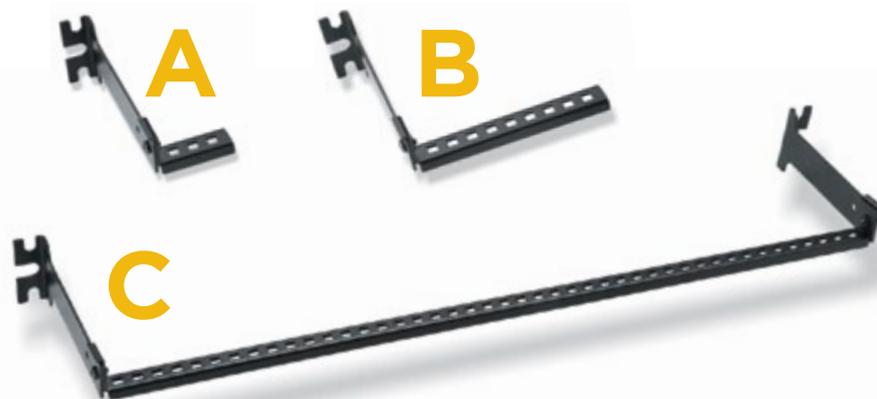


- Kits are designed to retrofit the AMPTRAC Connectivity Management System to existing installations of AMP NETCONNECT SL Series standard unshielded, 110Connect patch panels, or angled and standard MRJ21 patch panels
- SL Series and 110Connect kits contain material to retrofit 24 ports; two kits are required for a 48-port patch panel
- MRJ21 kits contain materials to retrofit 24- or 48-port patch panels as listed



For Use With	Fitted Ports	I/O Interface	Figure	Part Number
110Connect (Cat 5 or 5e) Straight Patch Panels	24	2.0 mm AMPMODU	A	1499639-1
SL Series (Cat 5e or 6) Straight Patch Panels	24	2.0 mm AMPMODU	A	1499640-1
MRJ21 Angled Patch Panels	48	HD22	B	1479853-1
MRJ21 Straight Patch Panels	48	HD22	C	1479951-1
	24	HD22	D	1479894-1

AMPTRAC I/O Cable Management Brackets

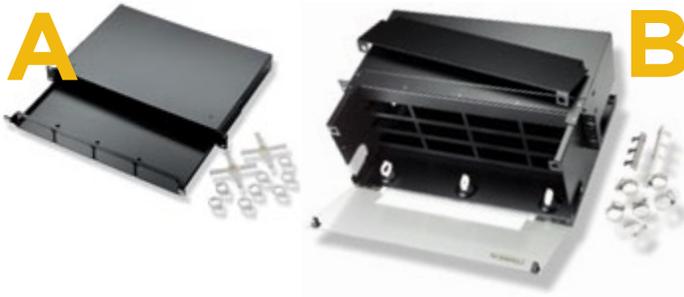


- Universal brackets provide support for I/O cable assemblies
- Adjustable
- Utilize existing patch panel mounting hardware

Description	Width	Figure	Part Number
Universal Bracket	40 mm	A	1499659-1
	100 mm	B	1499659-2
	448 mm	C	1499659-3

AMPTRAC Optical Fiber Patch Panels and Accessories

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- Available in XG (850 nm LO 50 μm) multimode (OM3) and single-mode
- Support for field termination with interface module or preterminated use with MPO cassettes
- AMPTRAC LC duplex systems use modified fiber enclosures listed below
- Duplex LC AMPTRAC interface modules are not included with 1933443 or 1435593 enclosures
- AMPTRAC XG 50 μm (OM4) MPO cassettes also available
- AMPTRAC optical fiber patch panels only accept AMPTRAC duplex LC modules and cassettes listed below

Description	Type	Maximum AMPTRAC Module/AMPTRAC Cassette Capacity	Maximum Fiber/Duplex Port Capacity	Figure	Part Number
AMPTRAC Optical Fiber Patch Panels	1U Drawer	4 of: 1933420, 1499647 or 1499649 (each sold separately)	48-fibers/24 duplex ports	A	1933443-1
	4U Enclosure	12 of: 1933420, 1499647 or 1499649 (each sold separately)	144-fibers/72 duplex ports	B	1435593-2

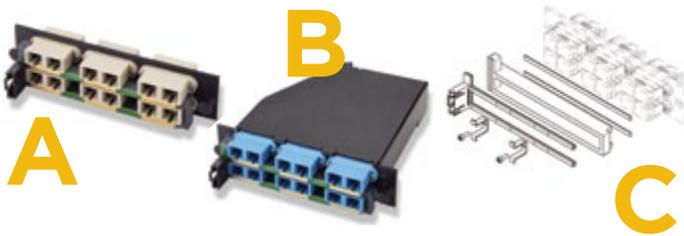


Connector Type	Description	Fiber Count	Duplex Port Count	AMPTRAC I/O Interface	Fiber Type	Figure	Part Number
Duplex LC	AMPTRAC Interface Modules†	12-Fiber	6-Port†	IDC or 110 Plug & Play (1435844/1933152)	XG OM3 50 μm Single-mode	C	1933420-2 1933420-3
	AMPTRAC MPO Cassettes†	12-Fiber	6-Port†	6-Position Mod Plug (RJ-11) (1499684)	XG OM3 50 μm Single-mode	D	1499647-2 1499649-2

†NOTE: AMPTRAC duplex LC require use of above drawer (1933443) or enclosure (1435593).

†NOTE: Adapters inserts included

AMPTRAC Optical Fiber Adapter Plates, Cassettes and Accessories for Optical Fiber Enclosures



- Available in XG OM3 (850 nm LO 50 μm) multimode and single-mode
- Support for field termination with adapter plate or preterminated use with MPO cassettes
- AMPTRAC duplex SC adapter plates and MPO cassettes (Figures A and B) use standard AMP NETCONNECT enclosures in chapter 15

Description	Connector Type	Fiber Count	Duplex Port Count	AMPTRAC I/O Interface	Fiber Type	Figure	Part Number
AMPTRAC Snap-in Adapter Plates	Duplex SC	12-Fiber	6-Ports	6-Position 2.54 MTE (1499685)	Multimode	A	1435657-1
					Single-mode		1435657-2
AMPTRAC MPO Cassettes	Duplex SC	12-Fiber	6-Ports	6-Position 2.54 MTE (1499685)	XG OM3 50 μm		1435688-2
					Single-mode	B	1435689-2
AMPTRAC Snap-in Adapter Plate Retrofit Kit	For Adapter Plate 559596			6-Position 2.54 MTE (1499685)	-	C	1435685-1

Note: AMPTRAC Duplex SC Snap-in Adapter Plate and MPO Cassettes use standard fiber enclosures in Chapter 15

AMPTRAC LAN Electronics Sensor Strips



- Sensor strips are readily available for a number of LAN electronic equipment types
- All sensor strips are Printed Circuit Board (PCB) with 2.0 mm AMPMODU connector.
- Custom sensor strips can be designed to work with most LAN electronic equipment. For assistance, call AMP NETCONNECT customer service at 1-800-553-0938
- Equipment manufacturer, model number, and model revision are required in determining the selection of the proper sensor strip
- Sensor strips contain an adhesive backing for easy installation

	Description of Equipment	# of Ports	# Ports per Group	# of Port Groups	Part Number
Twisted Pair Equipment	AMPNETCONNECT 50-port Telephone Patch Panel	50	50	1	1435954-1
	Nortel Baystack 470-48T Ethernet Switch	48	16	3	1435939-1
	CISCO 4000 and 6000 Blades (48-Port)	48	12	4	1499651-1
	Nortel Baystack 5520 Ethernet Routing Switch	48	12	4	1499660-1
	CISCO WS-3750-48 and WS-C2960G-48 Switches	48	16	3	1499798-1
	AMP NETCONNECT 48-port 1U Patch Panel (1933458-1)	48	12	4	1499970-1
	Alcatel Omni OS6800-48L Switch	48	12	4	2111101-1
	CISCO WS-C2950SX-24/26 Switch	26	8	3	1435827-1
	CISCO 4000 and 6000 Blades (48-Port); Nortel 5520-24T Ethernet Switch	24	12	2	1435346-1
	CISCO WS-C2950-48 and C3560-48 Switch; Nortel 5520-24T Switch	24	16-8	2	1435346-4
	CISCO 3500-24 Switch	24	12	2	1435346-5
	Nortel Baystack 450-24T Ethernet Switch	24	12	2	1435933-1
	Alcatel 6600-24 Switch	24	12	2	1777005-1
	Nortel Passport 8648 Ethernet Switch	24	16-8	2	1777014-1
	Extreme Summitt 400 Switch	24	8	3	1933067-1
	Tyco Electronics 24-port Switch (1591099-x)	24	8	3	1933184-1
	CISCO 48-port Blades (3 groups of 16)	24	16-8	2	1933228-1
	CISCO WS-3560-24PS Switch	24	12	2	1933430-1
	Generic 24-port; Rigid Flex (6 over 6)	24	12	2	1933737-1
	CISCO 4948 Switch	24	16-8	2	1933850-1
	CISCO WS_C2960-24PC Switch; HP Procurve J8720A Switch	24	12	2	1933899-1
	Extreme Summitt 481 (1433) Switch	16	8	2	1435927-1
	Exterasys Switches	16	16	1	1499759-1
	Exterasys 1H-16TX Module	16	16	1	1933053-1
	Generic 16-port; Rigid Flex (8 over 8)	16	16	1	2111168-1
	Extreme Summitt 1i, 5i and Alpine 3808 Switches	12	X	X	1435952-1
	Generic 12-port; Rigid Flex (6 over 6)	12	12	1	1777019-1
	CISCO WS-3750G-24S Switch	12	12	1	1499800-1
CISCO 2960-24TC and 2960-48-TC Switches	12	12	1	1933241-1	
HP Procurve J4111A Switch	8	8	1	1933098-1	
CISCO 48 and 24-port LC Blade X6748-SFP)	48	4	12	1933361-1	
CISCO 3750-24FS (MTRJ) Switch	24	24	1	2111149-1	
CISCO 24-port MT-RJ Blade (X6324-100-FX)	24	24	1	1435937-1	
CISCO 16-port Duplex SC Blade	16	8	2	1435820-1	
CISCO 12-port LC Switch (S-3750-12S)	12	4	3	1499795-1	
CISCO 8-port LC Blade (SUP32-GE-3B)	8	8	1	1933358-1	
CISCO 4-port LC Uplink	4	4	1	1499794-1	
Generic 2-port, Duplex SC Uplink	2	2	1	1933875-1	
CISCO 2-port LC Uplink (2950)	2	2	1	1933180-1	
CISCO 2-port LC Uplink (3750)	2	2	1	1499799-1	
Alcatel 2-port LC Uplink (6648)	2	2	1	1479889-1 1479889-2	
CISCO 2-port Uplink (2950)	2	2	1	1435950-1	
CISCO Dual Duplex SC Uplink (3550)	2	2	1	1435818-1	

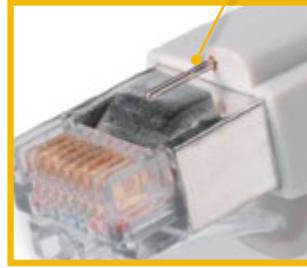
AMPTRAC Twisted Pair Patch Cable Assemblies

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White AMPTRAC Patch Cable Assembly

External Probe



- Meets or exceeds Category 6 performance specifications
- Cat 6A shielded assembly meets or exceeds the channel specifications of ANSI/TIA-568-C.2 Category 6A and Amendment 1 to ISO/IEC 11801:2002 Class EA up to 500 MHz when used as a component in a properly installed AMP NETCONNECT XG F/UTP channel
- Cat 6A shielded assembly meets or exceeds all requirements for IEEE 802.3an 10 Gigabit Ethernet
- Patch cable assemblies contain 9th conductor that is connected to external probe molded into the modular plug boot
- Backward compatibility permits assemblies to support new or existing Category 5e systems
- External probe makes contact with sensor pad on the sensor strip and/or patch panel sensor contact
- Off-center probe designed to accommodate stacked-jack LAN switch configurations
- Non-plenum jacketing, CMR rated
- Color matched over-molded snagless boots
- Crossover patch cable assemblies are unshielded with red cable jacketing and black over-molded boots

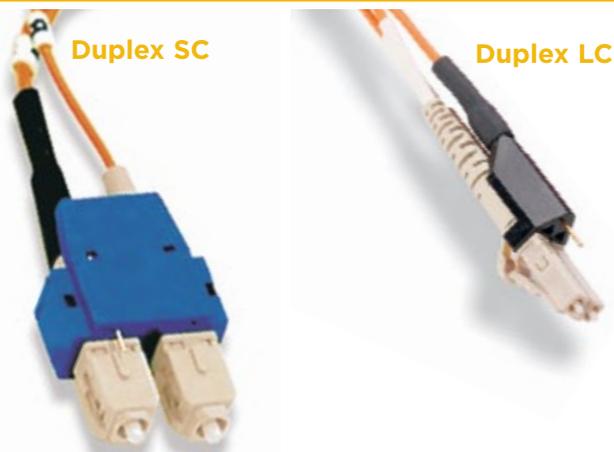
AMPTRAC Category 6, Unshielded Patch Cable Assemblies

Wiring	Jacket Boot		Length						
	Color	Color	3 ft [0.91 m]	5 ft [1.52 m]	7 ft [2.13 m]	10 ft [3.04 m]	14 ft [4.26 m]	16 ft [4.87 m]	25 ft [7.62 m]
Universal	Black	Black	1435864-3	1435864-5	1435864-7	1-1435864-0	1-1435864-4	1-1435864-6	2-1435864-5
	Gray	Gray	1435835-3	1435835-5	1435835-7	1-1435835-0	1-1435835-4	1-1435835-6	2-1435835-5
	Blue	Blue	1435861-3	1435861-5	1435861-7	1-1435861-0	1-1435861-4	1-1435861-6	2-1435861-5
	Green	Green	1435860-3	1435860-5	1435860-7	1-1435860-0	1-1435860-4	1-1435860-6	2-1435860-5
	Red	Red	1435862-3	1435862-5	1435862-7	1-1435862-0	1-1435862-4	1-1435862-6	2-1435862-5
	White	White	1435834-3	1435834-5	1435834-7	1-1435834-0	1-1435834-4	1-1435834-6	2-1435834-5
	Yellow	Yellow	1435863-3	1435863-5	1435863-7	1-1435863-0	1-1435863-4	1-1435863-6	2-1435863-5
	Orange	Orange	1435918-3	1435918-5	1435918-7	1-1435918-0	1-1435918-4	1-1435918-6	2-1435918-5
	Violet	Violet	1435919-3	1435919-5	1435919-7	1-1435919-0	1-1435919-4	1-1435919-6	2-1435919-5
Crossover	Red	Black	1435953-3	1435953-5	1435953-7	1-1435953-0	1-1435953-4	1-1435953-6	2-1435953-5

AMPTRAC XG Category 6A, Shielded Patch Cable Assemblies

Wiring	Jacket Boot		Length						
	Color	Color	3 ft [0.91 m]	5 ft [1.52 m]	7 ft [2.13 m]	10 ft [3.04 m]	14 ft [4.26 m]	16 ft [4.87 m]	25 ft [7.62 m]
Universal	White	White	1499740-3	1499740-5	1499740-7	1-1499740-0	1-1499740-4	1-1499740-6	2-1499740-5

AMPTRAC Optical Fiber Patch Cable Assemblies

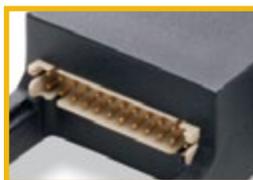


- Meets or exceeds optical performance specifications for XG OM3 (850 nm LO 50 μm) multimode and single-mode
- Duplex SC and duplex LC assemblies available
- Patch cable assemblies contain copper conductor that is connected to external probe
- External probe makes contact with sensor pad on the sensor strip and/or patch panel sensor contact
- One wire/one probe design to monitor duplex fiber port as a single connection
- OFCR riser rated and listed cable
- Cable is a mini-tri-zip design for flexibility and small size

Connector End 1	Connector End 2	Fiber Type	Length					
			1 m [3.28 ft]	2 m [6.56 ft]	3 m [9.84 ft]	5 m [16.40 ft]	7 m [22.96 ft]	10 m [32.80 ft]
Duplex SC	Duplex SC	XG OM3 50 μm	1435725-1	1435725-2	1435725-3	1435725-5	1435725-7	1-1435725-0
		Single-mode	1435726-1	1435726-2	1435726-3	1435726-5	1435726-7	1-1435726-0
Duplex SC	Duplex LC	XG OM3 50 μm	1435796-1	1435796-2	1435796-3	1435796-5	1435796-7	1-1435796-0
		Single-mode	1435797-1	1435797-2	1435797-3	1435797-5	1435797-7	1-1435797-0
Duplex LC	Duplex LC	XG OM3 50 μm	1435790-1	1435790-2	1435790-3	1435790-5	1435790-7	1-1435790-0
		Single-mode	1435791-1	1435791-2	1435791-3	1435791-5	1435791-7	1-1435791-0

NOTE: AMPTRAC XG OM4 50 μm cable assemblies also available.

AMPTRAC I/O Interface Adapter, DB25 to 2.0 mm AMPMODU Connector

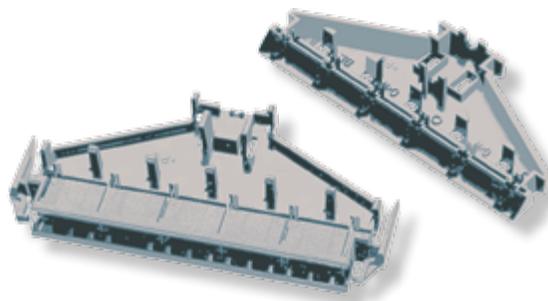


Back Detail
24 Position, 2.0 mm
AMPMODU Connector

- For use with 2.0 mm connectors less than 24 position
- Allows for side-by-side connections of multiple 2.0 mm AMPMODU connectors
- Allows for use of all analyzer ports
- Built-in strain relief and cable management

Description	Part Number
AMPTRAC I/O Interface Adapter, DB25 to 2.0 mm AMPMODU Connector	1499641-1

AMPTRAC I/O Interface, 110 Plug and Play Kit



Assembled Kit

- Used with I/O cable assembly part number 1435844 (use 4 per assembly) for custom length
- Easy to lace and field terminate (no special tools required)
- Built-in latches and orientation features

Description	Part Number
AMPTRAC I/O Interface, 110 Plug and Play Kit	1933151-1

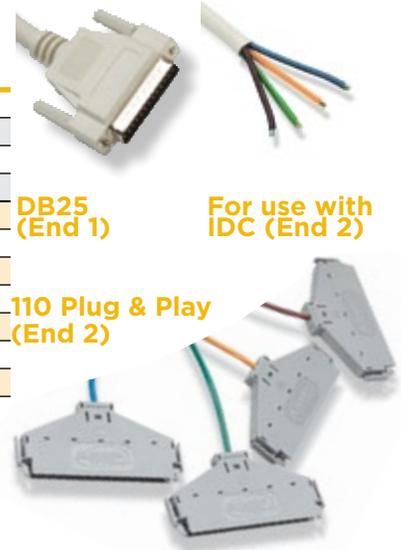
AMPTRAC Analyzer I/O Cable Assemblies

13

- AMPTRAC connectivity management system I/O cable assemblies are available with the following connectors:
 - DB25 connector (on analyzer)
 - 110 Plug and Play connector (on AMPTRAC SL Series patch panels) and duplex LC interface modules
 - HD22 connector (on MRJ21 patch panels)
 - 2.0 mm AMPMODU connector (used with the analyzer DB25 adapter 1499641-1)
 - 2.0 mm AMPMODU connector (on sensor strips)
 - 6-position modular plug (RJ11) (LC duplex MPO cassettes)
 - 6-position 2.54 MTE connector (on duplex SC adapter plates and MPO cassettes)
- All I/O cables come with molded boots on the analyzer connector end
- I/O cable assemblies are non-plenum (CM rated) and UL Listed

AMPTRAC SL Series and AMPTRAC Optical Fiber Patch Panels

Application	Connector		Conductor Count	Length	Part Number
	End 1	End 2			
Cat 6A Shielded Cat 6 Unshielded Duplex LC	DB25 - Analyzer	None - used with IDC	24	7 ft [2.13 m]	1435844-7
				14 ft [4.27 m]	1-1435844-4
				50 ft [15.24 m]	5-1435844-0
				100 ft [30.48 m]	9-1435844-9
				4 ft [1.22 m]	1933152-4
				7 ft [2.13 m]	1933152-7
	110 Plug & Play	24	10 ft [3.05 m]	1-1933152-0	
			14 ft [4.27 m]	1-1933152-4	
			25 ft [7.62 m]	2-1933152-5	
			50 ft [15.24 m]	5-1933152-0	
			75 ft [22.86 m]	7-1933152-5	
			100 ft [30.48 m]	9-1933152-9	



MRJ21 Patch Panels

Application	Connector		Conductor Count	Length	Part Number
	End 1	End 2			
MRJ21 Patch Panels	DB25 - Analyzer	HD22	24	4 ft [1.22 m]	1499507-4
				7 ft [2.13 m]	1499507-7
				10 ft [3.05 m]	1-1499507-0
				14 ft [4.27 m]	1-1499507-4
				25 ft [7.62 m]	2-1499507-5
				50 ft [15.24 m]	5-1499507-0
				75 ft [22.86 m]	7-1499507-5
				100 ft [30.48 m]	9-1499507-9



PCB Sensor

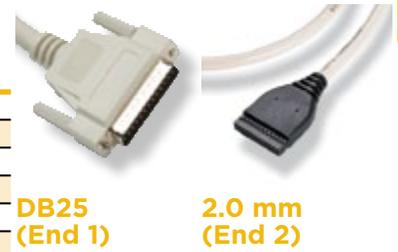
Application	Connector		Conductor Count	Length	Part Number
	End 1	End 2			
LAN Switches	2.0 mm	2.0 mm	2	4 ft [1.22 m]	1499690-4
				7 ft [2.13 m]	1499690-7
				10 ft [3.05 m]	1-1499690-0
				14 ft [4.27 m]	1-1499690-4
				25 ft [7.62 m]	2-1499690-5
				50 ft [15.24 m]	5-1499690-0
				75 ft [22.86 m]	7-1499690-5
				100 ft [30.48 m]	9-1499690-9



AMPTRAC Analyzer I/O Cable Assemblies

PCB Sensor

Application	Connector		Conductor Count	Length	Part Number
	End 1	End 2			
LAN Switches	DB25 - Analyzer	2.0 mm	24	4 ft [1.22 m]	1435845-4
				7 ft [2.13 m]	1435845-7
				10 ft [3.05 m]	1-1435845-0
				14 ft [4.27 m]	1-1435845-4
				25 ft [7.62 m]	2-1435845-5
				50 ft [15.24 m]	5-1435845-0
				75 ft [22.86 m]	7-1435845-5
				100 ft [30.48 m]	9-1435845-9



PCB Sensor

Application	Connector		Length	Conductor Count			
	End 1	End 2		6	8	12	16
LAN Switches	2.0 mm*	2.0 mm	4 ft [1.22 m]	1499689-4	1499688-4	1499687-4	1499686-4
			7 ft [2.13 m]	1499689-7	1499688-7	1499687-7	1499686-7
			10 ft [3.05 m]	1-1499689-0	1-1499688-0	1-1499687-0	1-1499686-0
			14 ft [4.27 m]	1-1499689-4	1-1499688-4	1-1499687-4	1-1499686-4
			25 ft [7.62 m]	2-1499689-5	2-1499688-5	2-1499687-5	2-1499686-5
			50 ft [15.24 m]	5-1499689-0	5-1499688-0	5-1499687-0	5-1499686-0
			75 ft [22.86 m]	7-1499689-5	7-1499688-5	7-1499687-5	7-1499686-5
			100 ft [30.48 m]	9-1499689-9	9-1499688-9	9-1499687-9	9-1499686-9



*NOTE: Use with DB25 Adapter P/N: 1499641-1 to connect monitored device to AMPTRAC Analyzer.

AMPTRAC LC MPO Cassettes, AMPTRAC LC Duplex Adapter Plates

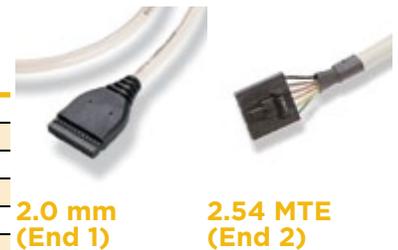
Application	Connector		Conductor Count	Length	Part Number
	End 1	End 2			
Duplex LC	2.0 mm*	6-Position, RJ11	6	4 ft [1.22 m]	1499684-4
				7 ft [2.13 m]	1499684-7
				10 ft [3.05 m]	1-1499684-0
				14 ft [4.27 m]	1-1499684-4
				25 ft [7.62 m]	2-1499684-5
				50 ft [15.24 m]	5-1499684-0
				75 ft [22.86 m]	7-1499684-5
				100 ft [30.48 m]	9-1499684-9



*NOTE: Use with DB25 Adapter P/N: 1499641-1 to connect monitored device to AMPTRAC Analyzer.

Duplex SC

Application	Connector		Conductor Count	Length	Part Number
	End 1	End 2			
Duplex SC Adapter Plates and MPO Cassettes	2.0 mm*	6-Position 2.54 MTE	6	4 ft [1.22 m]	1499685-4
				7 ft [2.13 m]	1499685-7
				10 ft [3.05 m]	1-1499685-0
				14 ft [4.27 m]	1-1499685-4
				25 ft [7.62 m]	2-1499685-5
				50 ft [15.24 m]	5-1499685-0
				75 ft [22.86 m]	7-1499685-5
				100 ft [30.48 m]	9-1499685-9



*NOTE: Use with DB25 Adapter P/N: 1499641-1 to connect monitored device to AMPTRAC Analyzer.

The screenshot shows the iTRACS software interface with several key components and callouts:

- Enterprise display:** Points to the left-hand navigation tree showing a hierarchical structure of locations from North America down to specific office racks.
- Switch and Patch Panel Ports in Closet View:** Points to a 3D perspective view of server racks in a closet, with blue lines indicating connections between ports.
- Work area indicated in graphic view:** Points to a schematic diagram of a circuit, showing a specific area labeled 'B' within a larger network diagram.
- Data store Information:** Points to a table-like view showing details for a specific location, such as 'J. Jones' and 'None'.
- Custom views based on job responsibilities:** Points to a detailed circuit diagram for '106-D2' showing various components like '1A-A1 (Patch Panel)', '106 (Faceplate/Floorbox)', and '106-D2 (Jack/Outlet)'.
- Circuit trace from end-to-end and all points in between:** Points to the same circuit diagram, highlighting the path of the circuit through various network elements.

iTRACS IM software has been designed to work with AMP NETCONNECT AMPTRAC Connectivity Management System hardware. Together they create an automated, accurate, real-time physical layer management system. This combined system proactively responds to changes in connectivity and intelligently records your cabling system and its devices with accurate documentation. You reduce costs by eliminating time-consuming manual work order processes. You also maximize your existing network investment by identifying under-utilized assets.

iTRACS® Intelligent Infrastructure Management Software

- ⦿ Real-time monitoring - automates the process of discovering, documenting, monitoring, and managing the physical network's connections and its devices.
- ⦿ Automatically updates the database - reports authorized or unauthorized changes in real time.
- ⦿ Self-discover patching - discovers all iTRACS-enabled port connectivity.
- ⦿ Event logs - whenever the system detects a connectivity change, it automatically creates an entry in an internal comprehensive log.
- ⦿ Automated work order process - iTRACS Infrastructure Manager software provides a greatly automated work order system, to be shared by the help desk, network/telecom managers and technicians. It is the simplest and most intelligent system available. Each user works from a simple user interface, unique to their task.
- ⦿ Access rights and privileges are determined by the administrator. Authorized users select proposed moves of workstations, phones, printers or other equipment. Moves can be performed singly or in bulk, as in departmental relocation. The system automatically generates auto-routing, and a step-by-step work order and schedule, which can be accepted or revised by the user. Tasks can be divided and distributed between various supervisors and technicians via email. Work orders can include system diagrams and floor plans.
- ⦿ When a work order is completed for an iTRACS IM software monitored port, the system record instantly updates, ensuring accurate information. Should an unauthorized change occur, iTRACS IM software can generate a work order to reverse the unwanted action.
- ⦿ For un-monitored ports, a simple verification by technical staff/management ensures that the work flow automatically updates the iTRACS IM software database.
- ⦿ The system can also generate comprehensive reports containing all work order details such as the author, status, creation and scheduled dates, and notes.
- ⦿ Terminal service - iTRACS IM software can be accessed via terminal service therefore allowing full functionality and viewing by remote users.
- ⦿ Automatic re-synchronization - if a network outage should occur, the iTRACS IM Software database automatically re-synchronizes upon the restoration of power, showing network asset connectivity changes.
- ⦿ Security Features - iTRACS IM software distinguishes unauthorized changes from authorized ones.
- ⦿ Alerts - receive a text message via email containing a pre-defined message.
- ⦿ More detailed reports - iTRACS IM software provides a library of detailed reports of cable, port and asset utilization. These reports are invaluable to network administrators and asset managers.
- ⦿ Auto-routing - The system automatically generates suggested auto-routing, and a step-by-step work order and schedule, which can be accepted or revised by the user.

IM Enhancements (9.1)

- ⦿ Supports character based languages as well as Latin based
- ⦿ Work order communicates with AMPTRAC analyzer LCD
- ⦿ ODBC read-authorization
- ⦿ Virtual machine support

Description	Part Number
iTRACS IM Software with One-year Gold Plus Service Agreement	Sold With Analyzer
iTRACS IM Software Concurrent User Pack (5 Additional Users)	1479979-1
iTRACS IM Gold Plus Service Agreement (1 Year Per Port)	1-1479977-1

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