



# **SMARTPatch™**

the link with intelligence

## Introducing SMARTPatch™ – the link with intelligence

**It's a jungle out there! Row upon row of racks, an impenetrable tangle of patch cords to fight your way through - no wonder it's easy to get lost without an accurate route map.**

### The Bigger Picture

The I.T. network is of such great importance to the modern day business that it is often referred to as the fourth utility. We have become highly dependent on network communication for conducting our day-to-day operations. In parallel to this increased importance, the volume of cables that an organisation has to contend with has grown dramatically. It becomes more and more difficult to know what equipment there is, where it is located, how it is connected to the network, and how often it is used. Particularly in a growing organisation, network management with an ever-tighter budget has become a major challenge. It is because of this significance and complexity that the need for network management has never been so essential.

### The scale of the problem

Previous methods of network management have focused mainly on active equipment such as PCs, switches, routers and hubs. Although this may paint a true picture of part of your network, it has neglected physical layer items such as patch panels, outlets and patch cords. SMARTPatch™ is a real-time connectivity management system that provides the organisation with a combined view of active equipment and physical layer components.

In many environments, basic I.T. functions such as performing MACs (Moves, Adds and Changes), troubleshooting and auditing are still performed manually.

This is clearly time-consuming, error-prone, and resource inefficient. Especially if you are relying on network documentation that is anything less than 100% accurate. Off-line cabling management simply falls short of the capabilities required.

On a fundamental level, how can you offer I.T. support to a user who has experienced network failure if you don't have access to accurate documentation? Or what if you are responsible for moving thirty network users but have no idea what spare capacity you have available?

### Tracking down an effective solution

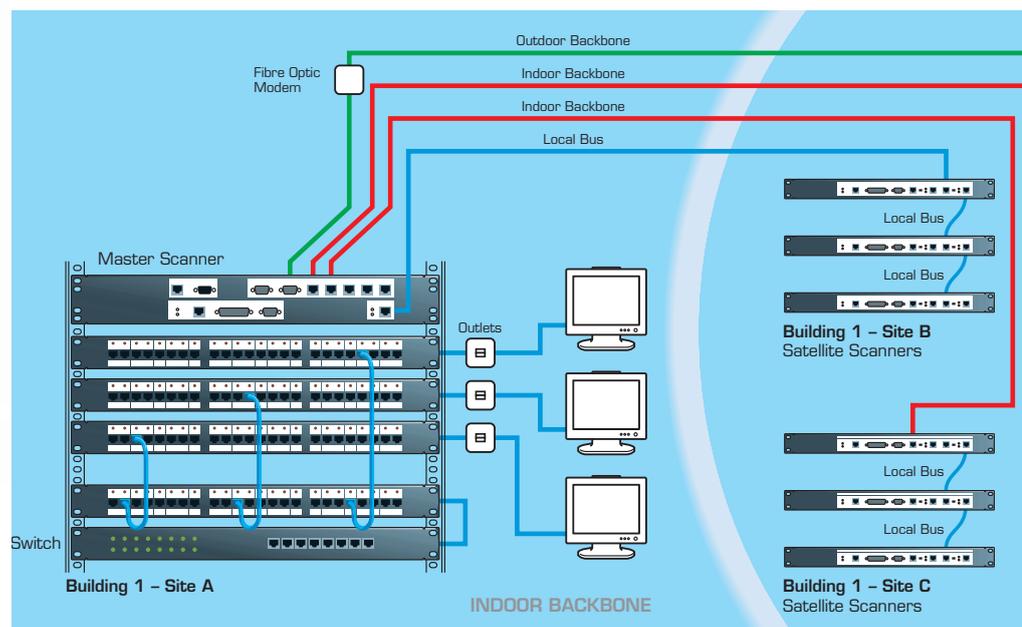
Organisations are actively investigating ways to reduce their network infrastructure expenditures and cost of network ownership.

As I.T. budgets are under continuous pressure, organisations need better management tools to control their network and cabling infrastructure. Indeed, corporate end-users are realising that the goal of driving down maintenance and downtime costs can only be achieved by building real-time management into their cabling systems for complete management and control.

Designed to overcome these issues faced by the Network Manager, the Brand-Rex SMARTPatch™ system automates network troubleshooting, maintenance and documentation procedures. SMARTPatch™ provides unprecedented real-time visibility of all link connections, starting from the end-user, including the PC and all connecting hardware elements, and ending with the active network equipment.

These are just some of the SMARTPatch™ benefits for the Network Manager and his team.

### SMARTPatch™ modular scanner system



# SMARTPatch™

Create order from chaos with **SMARTPatch™**, an intelligent solution that is simple and intuitive to use.

## Accurate Network Documentation

SMARTPatch™ features P-LET™ (Proactive LAN Equipment Topology), a network tracking device that discovers and recognises connectivity changes of all active stations in the network.

Information collected about the station includes the IP and MAC addresses, host name, location and station service type. Maintaining accurate records, a task that was once laborious and time consuming, is now simple and instantaneous.

## Work Order Module

The Work Order module will enable your organisation to perform accurate and efficient Moves, Adds and Changes (MACs) and manage work flow. Typically a task that takes time to plan and implement, work orders can be generated centrally and issued to technicians both on-site and in remote locations.

This gives a structured and standardised process, that can include a target completion date and priority, and allow the SMARTPatch™ Administrator to track the progress of tasks.

## Asset Management Module

Using the Asset Management module, profiles of each network component can be documented. For example, warranty information, vendor and price information, and maintenance details.

## Reduction of Wastage

Another benefit secured from SMARTPatch™ is the reduction of wastage within the network. P-LET™ scans the ports of all switches in the network, including availability and the last date/time that the port was active. This information can be displayed in the form of a report and is a valuable tool for the I.T. department to manage unused switch ports.

## Web Interface

The SMARTPatch™ system can be remotely accessed through a web browser, allowing you to view the physical connectivity of your network from any part of the globe. As a security measure, access is only granted through a user name and password. Inventory items, work orders, reports and links can be viewed in the same format as from the SMARTPatch™ application itself.

## Reporting Capabilities

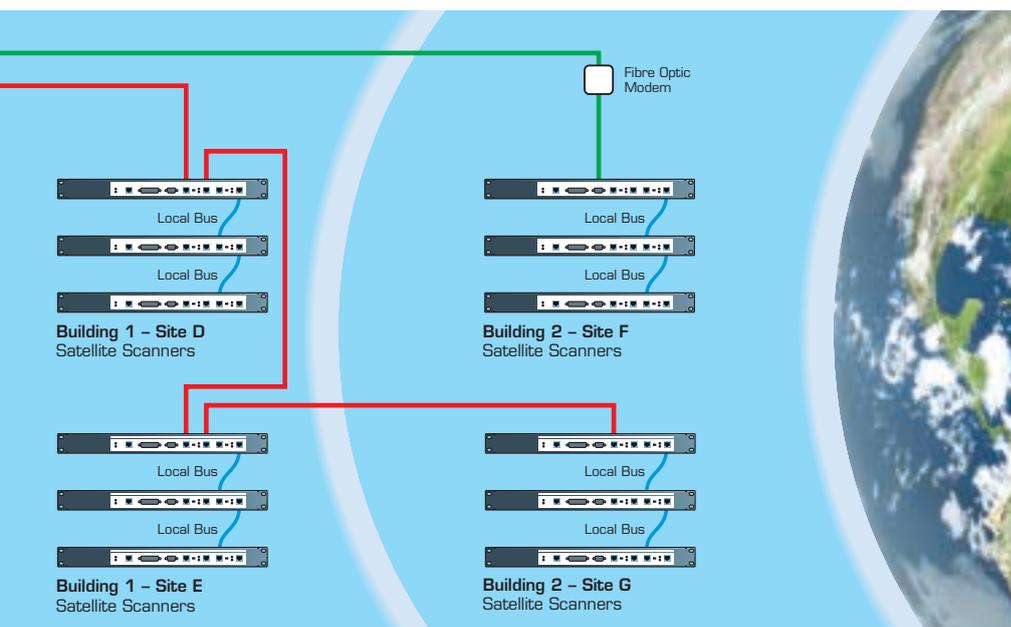
SMARTPatch™ allows you to run a host of connectivity reports, from the configuration of the entire network down to the individual user. Reports can then be e-mailed or exported to another application on your PC.

## Management of Auxiliary Devices

SMARTPatch™ can monitor and control the functioning of remote sensors; for example electronic door closures, smoke detectors, temperature control devices and CCTV cameras, making it particularly useful in security-conscious environments.

## Integration with Enterprise Management Systems

SMARTPatch™ integrates fully with third party Enterprise Management Systems such as HP Openview and CA Unicenter TNG.





## SMARTPatch™ for the Enterprise (SP4E)

SMARTPatch™ for the Enterprise (SP4E) is a physical layer network management application. Together with Brand-Rex's SMARTPatch™ Scanner and patch panel technology, it maps and monitors the network's physical layer.

SP4E provides real-time information on the status of connections in the network, from physical equipment in the communications room to the user at the workstation. All connectivity changes are reported to the network management station and guide the system administrator in planning and implementing cabling changes. SP4E presents the administrator with a complete picture of the physical layer including a combined view of the horizontal and vertical subsystems.

A combination of graphic images and real-time information assist the administrator in making critical decisions about Moves, Adds and Changes (MACs) to network components. These decisions are made both for the daily maintenance of the system and during network failures.

Based on a Client/Server SQL relational database, all the components of the physical layer, as well as active equipment, are included.

These components can be represented in a wide range of connectivity reports. Depending on your pre-defined settings, reports can range from the configuration of the entire network down to single user connectivity.

The Work Order module allows planners to create works orders, which are then separated into individual tasks. Each task is assigned to a technician and given a completion date. Technicians take ownership and perform their assigned tasks. Once tasks are completed the database is automatically updated, eliminating the need for manual data entry. From Work Order initiation to Work Order completion, the status of a Work Order or an assigned task can be monitored.

The Asset Management module utilises comprehensive, well-structured library and inventory modules to document and manage all aspects of the network inventory. Profiles of each network component such as PCs, SMARTPatch™ components and active LAN Equipment are available. Detailed information such as warranty expiry dates, vendor information, pricing, maintenance and service details and the exact location of each network item can be included.

Catalogue/Part No.	Description
<b>SPASCP</b>	Software Core Package
<b>SPASWO</b>	Work Order Module
<b>SPASAM</b>	Asset Management Module
<b>SPASCP01</b>	Additional users – Software Core Package
<b>SPASWO01</b>	Additional users – Work Order Module

### Minimum System Requirements

Server	
<b>Hardware</b>	Pentium III 500 MHz, 128 Mb RAM, 1GB free HD space
<b>Software</b>	NT Workstation / Server, Version 4 or higher Windows NT Service Pack 5 Windows 2000 with Service Pack 1 or later version Microsoft Internet Explorer 5.0 or later version
Client	
<b>Hardware</b>	Pentium II 300MHz, 64 Mb RAM, 500 Mb free HD space
<b>Software</b>	Win 95 / 98 / NT Workstation / NT Server DCOM or; Windows 2000 with Service Pack 1 Microsoft Internet Explorer 5.0 or later version

## Modular Scanners



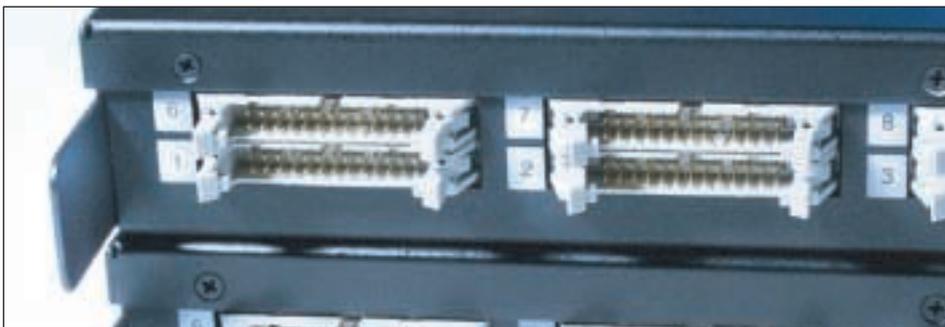
SMARTPatch Satellite Scanners

The SMARTPatch™ modular scanner system comprises the Satellite Scanner and the Master Scanner. Satellite Scanners are mounted in the communications room rack and report on-site patch panel port connectivity information to the Master Scanner containing the SNMP agent. The Master Scanner operates as a concentrator unit between the Satellite Scanners and the SMARTPatch™ for the Enterprise (SP4E) management station. In addition to its concentrating function, the Master Scanner performs the same local port connectivity functions as the Satellite Scanner and can be used on its own in smaller installations.

The Master Scanner collects, saves and transmits connectivity data from up to 120 Satellite Scanners, each one of which functions as a relay station for connectivity data in up to 10 patch panels (240 ports). The Master Scanner consolidates this data and updates the SP4E management station on connectivity changes reported by the Satellite Scanners under its control. Each Master Scanner is able to scan directly up to 10 patch panels, in addition to its concentrator functions.

In a site with a high number of ports, typically more than 3200, the first scanner in the chain (Master or Satellite Scanner, the one which is linked to the indoor or outdoor backbone) needs to have expanded memory.

Catalogue/Part No.	Description
<b>SPSM320SC012</b>	SMARTPatch Master Scanner
<b>SPSM320EC012</b>	SMARTPatch Master Scanner with expanded memory
<b>SPSS320SC022</b>	SMARTPatch Satellite Scanner
<b>SPSS320EC022</b>	SMARTPatch Satellite Scanner with expanded memory



Satellite Scanner reverse - panel ports



## 24 Port CAT6Plus Patch Panel UTP

The SMARTPatch™ 24 port GigaPlus patch panel in a 1U rack space, can be incorporated into the SMARTPatch™ system. The system continuously scans the connectivity configuration of all the patch cords and reports to the Network Administrator's management station using standard SNMP protocol.

### Features

- High density 24 ports per 1U
- Conforms to ISO/IEC IS 11801 (2000), ANSI/TIA/EIA-568 and CELENEC EN50173(2000) Drafts for Cat6
- Termination using standard 110 block termination tools
- Colour coded wiring blocks, compatible with both T568A and T568B wiring options
- Compatible with 23-26 AWG solid or stranded wire cables
- Optional enhanced cable retention fixture
- LED indicators on panel front identify ports for MAC's (Move, Adds and Changes)
- 10 position RJ-45 outlet style with pin 9 used for SMARTPatch™ connection
- 14 pin headers on rear of panel for connection to SMARTPatch™ scanners

Catalogue/Part No.	Description
<b>SP6PNLU24012</b>	SMARTPatch 24 port CAT6Plus UTP patch panel
<b>SP6PNLU24012F</b>	SMARTPatch 24 port CAT6Plus UTP patch panel with cable retention fixture



CAT6Plus Patch Panels

## 24 Port CAT6Plus Patch Panel STP

The SMARTPatch™ 24 port GigaPlus patch panel in a 1U rack space, can be incorporated into the SMARTPatch™ system. The system continuously scans the connectivity configuration of all the patch cords and reports to the Network Administrator's management station using standard SNMP protocol.

### Features

- High density 24 ports per 1U
- Conforms to ISO/IEC IS 11801 (2000), ANSI/TIA/EIA-568 and CELENEC EN50173(2000) Drafts for Cat6
- Termination using standard 110 block termination tools
- Colour coded wiring blocks, compatible with both T568A and T568B wiring options
- Compatible with 23-26 AWG solid or stranded wire cables
- Provision for cable routing and clamping with I shaped anchors
- Special grounding channels for clamping shielded braids
- Rear cover for superior EMI/RFI protection
- LED indicators on panel front identify ports for MAC's (Move, Adds and Changes)
- 10 position RJ-45 outlet style with pin 9 used for SMARTPatch™ connection
- 14 pin header on rear of panel for connection to SMARTPatch™ scanners

Catalogue/Part No.	Description
<b>SP6PNLF24012</b>	SMARTPatch 24 port CAT6Plus STP patch panel

## 24 Port GigaPlus Patch Panel UTP and STP

The SMARTPatch™ 24 port GigaPlus patch panel in a 1U rack space, can be incorporated into the SMARTPatch™ system.

The system continuously scans the connectivity configuration of all the patch cords and reports to the Network Administrator's management station using standard SNMP protocol.



GigaPlus 24 Port Patch Panel

### Features

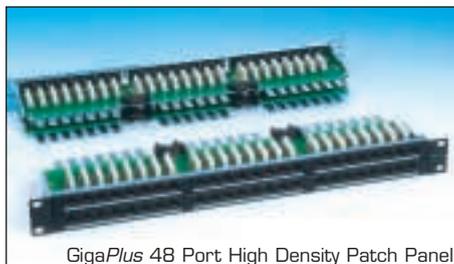
- High density 24 ports per 1U, 19" standard rack mounted
- Conforms to ISO/IEC IS 11801 – 2000 (draft) for Cat5 and ANSI/TIA/EIA-568-A-5 Cat5e requirements
- Standard 110 termination blocks, compatible with both T568A and T568B wiring options
- Compatible with 22-26 AWG solid or stranded wire cables
- Provision for cable routing and clamping with I shaped anchors
- Special grounding channels for clamping shielded braids on STP panel
- Rear cover for superior EMI/RFI protection on STP panel
- LED indicators on panel front identify ports for MAC's (Move, Adds and Changes)
- 10 position RJ-45 outlet style with pin 9 used for SMARTPatch™ connection
- 26 pin header on rear of panel for connection to SMARTPatch™ scanners

Catalogue/Part No.	Description
SP5PNLU24012	SMARTPatch 24 port GigaPlus UTP patch panel
SP5PNLF24012	SMARTPatch 24 port GigaPlus STP patch panel

## 48 Port GigaPlus Patch Panel UTP

The SMARTPatch™ 48 port GigaPlus patch panel in a 1U rack space, can be incorporated into the SMARTPatch™ system.

The system continuously scans the connectivity configuration of all the patch cords and reports to the Network Administrator's management station using standard SNMP protocol.



GigaPlus 48 Port High Density Patch Panel

### Features

- Very high density 48 ports per 1U
- Conforms to ISO/IEC IS 11801 – 2000 (draft) for Cat5 and ANSI/TIA/EIA-568-A-5 Cat5e requirements
- Standard 110 termination blocks, compatible with both T568A and T568B wiring options
- Compatible with 22-26 AWG solid or stranded wire cables
- Provision for cable routing and clamping with I shaped anchors
- LED indicators on panel front identify ports for MAC's (Move, Adds and Changes)
- 10 position RJ-45 outlet style with pin 9 used for SMARTPatch™ connection
- 14 pin headers on rear of panel for connection to SMARTPatch™ scanners

Catalogue/Part No.	Description
SP5PNLU48012	SMARTPatch 48 port GigaPlus UTP patch panel





96 Fibre SC Duplex Patch Panel

## 96 Fibre SC Duplex Patch Panel

The SMARTPatch™ 96 Fibre SC patch panel is an intelligent, high-density fibre optic patch panel offering the option of real-time physical network management.

The panels, which support 48 SC duplex cables (96 fibres) in a 5U rack space, can be attached to the SMARTPatch™ system. The system continuously scans the connectivity configuration of all the patch cords and reports to the Network Administrator's management station using standard SNMP protocol.

### Features

- High density, supports 48 SC duplex cables (96 fibres) in a 5U rack space
- Configurable rack mounting brackets allow for recessed panel mounting, enhancing cable protection
- Patch cord bay and front door protect patch cords and connectors
- Hinged transparent smoked plexiglass door is retracted into chassis when servicing patch cord area
- Wide range of complementary fibre optic cable management accessories available
- Pre-assembled SC adapters or blank panel option available
- singlemode and multimode adapters available
- Optional top cover protects cables from accidental damage and dust
- Large work area for comfortable installation
- Rear and side entry cut-outs with provision for cable ties
- LED indicators on panel front identify ports for performing error-free MAC's (Move, Adds and Changes)

Catalogue/Part No.	Description
SPFPPCM10096DC2C	SMARTPatch 96 fibre SC patch panel (no adapters)
SPFPPCM1MM96DC2C	SMARTPatch 96 fibre SC patch panel (multimode)



48 Fibre SC Duplex Patch Panel

## 48 Fibre SC Duplex Patch Panel

The SMARTPatch™ 48 Fibre SC patch panel is an intelligent, high-density fibre optic patch panel offering the option of real-time physical network management.

The panels, which support 24 SC duplex cables (48 fibres) in a 2U rack space, can be incorporated into a managed SMARTPatch™ system. The system continuously scans the connectivity configuration of all the patch cords and reports it in standard SNMP to the Network Administrator's management station.

### Features

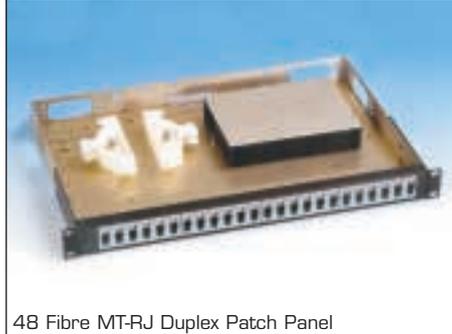
- High density, supports 24 SC duplex cables (48 fibres) in a 2U rack space
- Configurable rack mounting brackets allow for recessed panel mounting, enhancing cable protection
- Wide range of complementary fibre optic cable management accessories available
- Pre-assembled SC adapter or blank panel option available
- singlemode and multimode adapters available
- Optional top cover protects cables from accidental damage and dust
- Large work area for comfortable installation
- Rear and side entry cut-outs with provision for cable ties
- LED indicators on panel front identify ports for performing error-free MAC's (Move, Adds and Changes)

Catalogue/Part No.	Description
SPFPPCM10048DC2	SMARTPatch 48 fibre SC patch panel (no adapters)
SPFPPCM1MM48DC2	SMARTPatch 48 fibre SC patch panel (multimode)
SPFPPCM10048DC2C	SMARTPatch 48 fibre SC patch panel (no adapters) with cover
SPFPPCM1MM48DC2C	SMARTPatch 48 fibre SC patch panel (multimode) with cover

## 48 Fibre MT-RJ Duplex Patch Panel

The SMARTPatch™ 48 Fibre MT-RJ patch panel is an intelligent, high-density fibre optic patch panel offering the option of real-time physical network management.

The panels support 24 MT-RJ duplex cables (48 fibres) in a 1U rack space and can be attached to the SMARTPatch™ system. The system continuously scans the connectivity configuration of all the patch cords and reports to the Network Administrator's management station using standard SNMP protocol.



48 Fibre MT-RJ Duplex Patch Panel

### Features

- Very high density, supports 24 MT-RJ duplex cables (48 fibres) in a 1U rack space
- Configurable rack mounting brackets allow for recessed panel mounting, enhancing cable protection
- Wide range of complementary fibre optic cable management accessories available
- Pre-assembled MT-RJ adapters
- Optional top cover protects cables from accidental damage and dust
- Large work area for comfortable installation
- Rear and side entry cut-outs with provision for cable ties
- LED indicators on panel front identify ports for performing error-free MAC's (Move, Adds and Changes)

Catalogue/Part No.	Description
SPFPPCM1MM48MJ2	SMARTPatch 48 fibre MT-RJ patch panel
SPFPPCM1MM48MJ2C	SMARTPatch 48 fibre MT-RJ patch panel with cover



CAT6Plus and GigaPlus Patch Cords



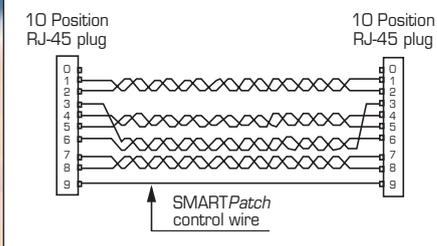
## CAT6Plus and GigaPlus Patch Cords

SMARTPatch™ GigaPlus and CAT6Plus patch cords are designed for use on SMARTPatch™ applications. They comprise a nine-wire flexible cable, terminated with a ten position RJ-45 plugs at either end. The patch cords feature moulded RJ-45 connectors for enhanced life and reliability. Both shielded and unshielded options are available with standard lengths of 1.0, 1.5, 2.0, 2.5, 3.0 and 5.0m.

The data signals are transferred over four twisted pairs of the cable.

An additional ninth wire transfers the SMARTPatch™ scanning signal. The ten-position plugs are standard RJ-45 plugs with two additional contacts (numbers 0 and 9), mounted externally to the standard eight contacts.

All the patch cords meet full Category 6 (Draft) or Category 5e performance and are 100% tested at the factory. They are easily identified by their blue colour which comes as standard.



## SP6 - PC - U - 010 - 400

Group  
(SMARTPatch Cat6  
SMARTPatch Cat5e)

Part Tag  
(Patch Cord)

Cord type  
U = UTP  
S = STP

Length  
010 = 1.0m

Cord Colours  
1st No. = Cable  
2nd No. = Boot1  
3rd No. = Boot2



MT-RJ Fibre Optic Patch Cord

## MT-RJ Fibre Optic Patch Cord

The SMARTPatch™ MT-RJ patch cord is designed for use on SMARTPatch™ applications. It comprises two tight buffer fibres and an additional 26 AWG copper wire housed within a standard MT-RJ patch cable. The patch cord is currently available in multimode 62.5/125.

Each end is terminated with a high performance hybrid connector comprising an MT-RJ fibre optic connector and a spring-loaded electrical contact housed within a common plastic shell.

When inserted into a port of an MT-RJ fibre optic patch panel with SMARTPatch™ capability, both optical and electrical connections are made simultaneously. The copper connection allows the Brand-Rex SMARTPatch™ system to scan all the fibre optic connections and report the connectivity results to the network administrator on-line and in real-time.

Each patch cord is identified with a batch reference ID label and is supplied with individual test certification.

Catalogue/Part No.	Description
SPFPJ062010MJ2	1.0m SMARTPatch fibre multimode MT-RJ patch cord
SPFPJ062030MJ2	3.0m SMARTPatch fibre multimode MT-RJ patch cord
SPFPJ062050MJ2	5.0m SMARTPatch fibre multimode MT-RJ patch cord

## SC Fibre Optic Patch Cord

The SMARTPatch™ SC patch cord is designed for use on SMARTPatch™ applications. It comprises two tight buffer fibres and an additional 26 AWG copper wire housed within a common flat PVC outer jacket. The patch cord is currently available in multimode 62.5/125.

Both ends are terminated with a high performance hybrid connector comprising an SC duplex fibre optic connector and a spring-loaded electrical contact housed within a common plastic shell.

When inserted into the port of an SC fibre optic patch panel with SMARTPatch™ capability, both optical and electrical connections are made simultaneously. The copper connection allows the Brand-Rex SMARTPatch™ system to scan all the fibre optic connections and report the connectivity results to the network administrator on-line and in real-time.

Each patch cord is identified with a batch reference ID label and is supplied with individual test certification.

Catalogue/Part No.	Description
SPFFCSC062010SC2	1.0m SMARTPatch fibre multimode SC patch cord
SPFFCSC062030SC2	3.0m SMARTPatch fibre multimode SC patch cord
SPFFCSC062050SC2	5.0m SMARTPatch fibre multimode SC patch cord



Attachment cord

## Attachment Cords

Attachment Cords are used to connect the Master or Satellite Scanner to the patch panels. These cords are supplied in either 1.5 metre or 2.5 metre lengths. The type of cord required is dependent on the type of patch panel to be connected to. CAT6Plus 24 port UTP/STP and GigaPlus 48 port (1U) UTP patch panels use Group B cords and all other patch panels use Group A cords.

Group A is a flat ribbon cable with two 26-pin connectors on each end. Group B is a flat ribbon cable with one end using a 26-pin connector and at the other end, the cable is split and two 14-pin connectors are used. The 14-pin connectors are labelled A and B and must be connected to the corresponding connector on the patch panel.

Catalogue/Part No.	Description
SPAACA015	Attachment cord 1.5m flat, Group A
SPAACA025	Attachment cord 2.5m flat, Group A
SPAACB015	Attachment cord 1.5m flat, Group B
SPAACB025	Attachment cord 2.5m flat, Group B





Control Pad

## Control Pad

The Control Pad is connected to a scanner and allows the technician performing the actual cabling changes on site to activate the physical link change process.

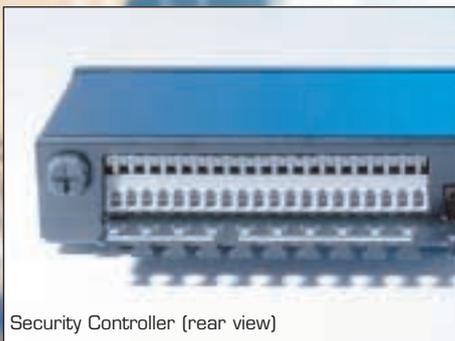
When a link task is sent to a scanner, the "Pending" LED on the Control Pad is activated, indicating that there is a link task waiting to be implemented. The technician can now initiate the link change process from the Control Pad. The appropriate LEDs on the patch panels now turn on in sequence to guide the technician through the process.

The on-site manual LED scan allows the technician at the rack to view the patch panel connections using the manual control pad. When a port LED is turned on, the corresponding patch connection LED lights up, giving the technician a visual indication of the patch cord connections.

The use of LEDs eliminates the risk of patching errors, as they will not turn off until their respective ports have been correctly patched.

Catalogue/Part No.	Description
<b>SPAMCP</b>	Control Pad

## Security Controller



Security Controller (rear view)



Security Controller

The Security Controller enables control of various sensors and remote-controlled devices from the SMARTPatch™ Management Station. Remote devices such as door locks, door switches, fans, temperature sensors, etc. can be physically connected to the SMARTPatch™ system. The Network Manager is immediately notified of any changes or alarms, greatly increasing overall network security.

One Security Controller can support up to six sensors and four remote-controlled devices.

Two Security Controllers may be cascaded, doubling the capacity of sensors and devices controlled. When cascaded, two units mounted in a 19" rack occupy less than 1U of rack space.

Spring-loaded interconnection blocks enable fast and easy field installation and no external power is required when units are attached to SMARTPatch™ Scanners. Connection to the SMARTPatch™ Scanner Auxiliary Port is via an attachment cord supplied with the unit.

Catalogue/Part No.	Description
<b>SPAMSCO1</b>	Security Controller

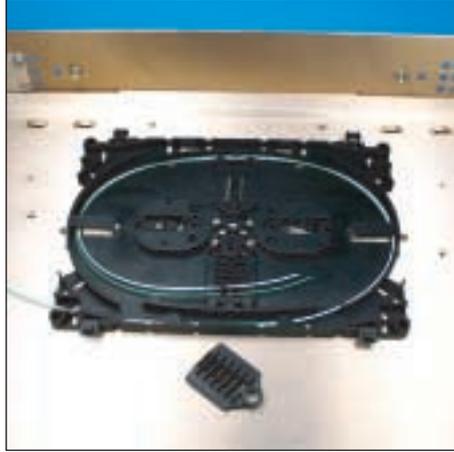
## Fibre Optic Accessories



Cabling Routing Ring Kit

Brand-Rex offers a complete range of accessories to secure, organise and protect fusion spliced fibres; including splice cassettes, splice cassette covers, fusion protection sleeves and protection sleeve holders. The stackable splice cassettes hold up to two protection sleeve holders each, for a total of 12 fibres per cassette.

Additional accessories are available to optimise cable protection and storage. Cable routing



Splice Cassette Expander and Protection Sleeve Holder

rings may be added to provide orderly storage, while maintaining minimum bend radius.

Fully customisable cable entry panels for cable entry glands may be assembled over the rear and side cable entry cut-outs to further enhance cable strain relief. When using armoured cables, the Fibre Optic Cable Ground Kit can be attached to grounding points on the rear of the panel.

Catalogue/Part No.	Description
<b>SPAFOCRR48</b>	Cable Routing Ring Kit (up to 48 fibres)
<b>SPAFOCRR96</b>	Cable Routing Ring Kit (up to 96 fibres)
<b>SPAFOCGK01</b>	Cable Ground Kit
<b>SPAFOCEP01</b>	Cable Entry Panel Kit (includes two cable entry panels)
<b>SPAFOCCK12</b>	Splice Cassette Kit (up to 12 fibres) includes one splice tray and cover
<b>SPAFOCCE12</b>	Splice Cassette Expander Kit (up to 12 fibres)
<b>SPAFOPSH06</b>	Protection Sleeve Holder (up to 6 fibres each), 10 per pack
<b>30-0008-01</b>	Fusion Splice Protection Sleeve 45mm



## The Millennium Warranty 25-year System Performance

**When bought as a system and installed by an approved Millennium Channel Partner, Millennium Cabling Systems carry a 25-year Warranty.**

Brand-Rex has an established global network of re-sellers, distributors and installers to ensure Millennium products are easy to obtain. Installers are trained to the highest standard by Brand-Rex to maintain a consistently high level of system performance worldwide. The 25-year warranty is awarded when systems are installed and tested to the Millennium terms and conditions.

Components within the SMARTPatch™ system are also covered under the Millennium Warranty. Brand-Rex will work closely with the end user or their representatives, to provide a flexible and comprehensive package of pre- and post-sales support.



Product warranty details are as follows:

### **Passive Cable Products**

Starting from the date on the Millennium Warranty certificate and ending 25 years later. This includes the Cat5e/Cat6/Optical performance of SMARTPatch™ patch panels.

### **Electronic Products**

Starting from the date on the Millennium Warranty certificate and ending 18 months later. This includes SMARTPatch™ Scanners, Control Pad, Security Controller and the active section of SMARTPatch™ patch panels.

### **Software**

The substantive performance of the software against the published specification is guaranteed and free technical support and minor upgrades will be supplied for sixty days from the date of the software licence.

**Please consult the current Millennium testing document for full warranty details.**

## MillenniumM Training

Brand-Rex offers a comprehensive programme of authoritative and educational training courses for end-clients, re-sellers and installers of MillenniumM products. In fact, Brand-Rex is now one of Europe's key suppliers of specialised training courses in the area of design and practical implementation of structured cabling systems.

All formal Brand-Rex training courses have been recognised by BICSI and qualify for Continuing Education Credits (CECs) for BICSI Registered Communications Distribution Designers (RCDDs), installers and technicians. These credits are essential to maintain any BICSI qualification, the only internationally recognised set of qualifications for structured cabling installers and engineers.

SMARTPatch is no exception, with the launch of three new dedicated courses, BTM008, BTM009 and BTM010.

### BTM008 Selling SMARTPatch

1 day

**Contents:** This course covers the components involved in the SMARTPatch intelligent patching system, its main attributes, value to the customer and how to do a simple demonstration.

**Who should attend:** Re-sellers of the Brand-Rex SMARTPatch™ system.

### BTM009 Installing SMARTPatch

1 day

**Contents:** How to install GigaPlus, CAT6Plus and MillenniumM Fibre Optic Systems (MFOS) versions of the SMARTPatch intelligent patching system.

**Who should attend:** Installers of the Brand-Rex SMARTPatch™ system.

### BTM010 Configuring and Using SMARTPatch

3 days

**Contents:** This course covers the elements involved in setting up, running and maintaining the SMARTPatch system including the SMARTPatch for the Enterprise (SP4E) intelligent database.

**Who should attend:** Users and re-sellers of the Brand-Rex SMARTPatch™ system.

In the UK, courses are held at the Brand-Rex Training Centre in Cheshire, England, Glenrothes (near Edinburgh) and London, or at customer's premises on request. Outside the UK, training is organised with the help of Brand-Rex Authorised Distributors and Franchise Partners. Please contact your local Brand-Rex representative, who will be happy to help with any course queries.

A summary of the full MillenniumM training course offering is shown in the table below:-

Code	Title	Duration (Days)	BICSI CECs			
			RCDD	LAN	OSP	Tech/Inst.
BTM001	Intro to Structured Cabling	1	7	-	-	7
BTM002	Advanced Structured Cabling design	1	7	-	-	7
BTM003	MillenniumM Structured Cabling system	1	7	-	-	7
MTM205	Blown fibre design course	1	7	-	-	7
MTM206	Blown fibre installation course	2	14	-	-	14
BTM004	Multimode Fibre Technician	2	14	-	-	14
BTM005	Singlemode Fibre Technician	2	14	-	14	14
BTM006	Telecommunications cable joiner	3	21	-	21	21
BTM007	Air blown cable installer	3	21	-	21	21
BTM009	SMARTPatch Installation	1	7	-	-	7
BTM010	SMARTPatch Configuration	3	21	-	-	21
BTM011	Cabling Standards for consultants	0.5	4	4	-	4
BTM012	Cabling Standards for consultants with practical	0.75	5	5	-	5
BTM013	Troubleshooting Cat 6	1	7	-	-	7
IN100	BICSI Installer Level 1	6	30	-	-	-
IN200	BICSI Installer Level 2	6	30	-	-	-
TE300	BICSI Technician	6	30	-	-	-