Gem Cable Communications
Unit C, Oakleaf Court, Ryehill Close,
Lodge Farm, Northampton NN5 7UA

T. +44 (0) 844 921 0191
F. +44 (0) 844 921 0195

http://www.gemcable.com
enquiries@gemcable.com

TO	xxxxxx
FROM	Pete Adkins
COMPANY	xxxxx
FAX No.	
OUR REF.	**xxxx**
DATE	xxxxx
SUBJECT	Cat.5e Structured Cabling Installation, xxxxx.
TOTAL PAGES	6

This document comprises the Operations and Maintenance manual for the **Austin Taylor** Category 5e UTP Copper cabling system installed on the xxth floor of xxxxxxx for xxxx.

All horizontal copper cabling is terminated on Category 5e outlets (these being broken down by type below), with data cabling routing back to the Comms Room on the same floor and terminated on Austin Taylor Category 5e panels.

The final distribution of outlet types is as follows:-

- 166 x Category 5e UTP Outlets, comprising;
- 34 x 4-way Floor boxes (136 points)
- 4 x 4-way looms left in the floor void for future use (16 points)
- 4 x 2-way Partition Outlets (8 points)
- 1 x 4-way Partition Outlet (4 points)
- 1 x Double Ceiling Void Outlet (2 points)

A total of 9 x 1U UTP RJ45 panels were installed, along with 6 x 1U cable management panels

1. Scope of Works

1.1. Horizontal Copper Cabling

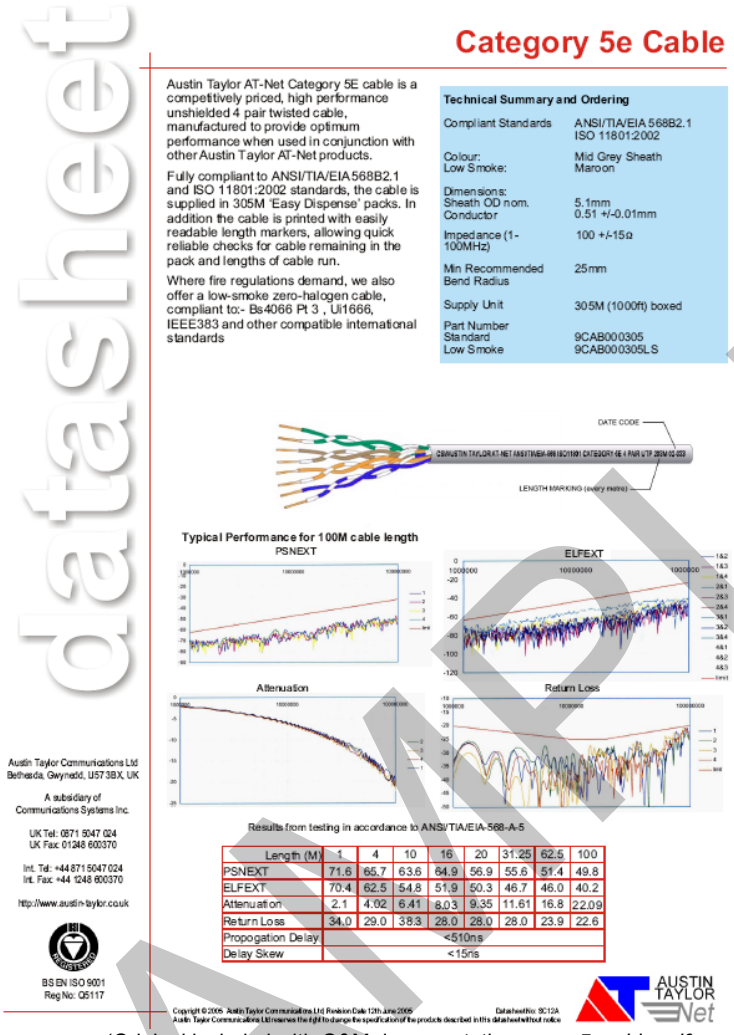
To supply, run and terminate on 1U Austin Taylor Cat.5e UTP RJ45 panels the following;

UTP Cat.6 Horizontal Cabling			
Item	**Qty**	**Description**	**Total**
1	34	4-Way floor boxes	**136**
2	4	4-way looms left in the floor void for future use	**16**
3	4	Double partition outlets	**8**
4	1	4-Way partition outlet	**4**
5	1	Double Ceiling void outlet	**2**
		Total Cables	**166**

All cables run on galvanised cable tray (installed by others) in the floor void, and are inclusive of LS0Z sheath and of internal grade.

All cables are secured to the cable tray by means of flush-cut cable ties. It should be noted that the cable tray as installed is narrower than would be recommended for the fill level, and in addition, has been installed upside down, requiring all cables to be strapped securely to the tray

All cables enter the communications cabinet in the comms room from the floor void.



datasheet

Category 5e Cable

Austin Taylor AT-Net Category 5E cable is a competitively priced, high performance unshielded 4 pair twisted cable, manufactured to provide optimum performance when used in conjunction with other Austin Taylor AT-Net products.

Fully compliant to ANSI/TIA/EIA 568B2.1 and ISO 11801:2002 standards, the cable is supplied in 305M 'Easy Dispense' packs. In addition the cable is printed with easily readable length markers, allowing quick reliable checks for cable remaining in the pack and lengths of cable run.

Where fire regulations demand, we also offer a low-smoke zero-halogen cable, compliant to:- Bs4066 Pt 3 , Ul1666, IEEE383 and other compatible international standards

Technical Summary and Ordering

Compliant Standards	ANSI/TIA/EIA 568B2.1 ISO 11801:2002
Colour: Low Smoke:	Mid Grey Sheath Maroon
Dimensions: Sheath OD nom. Conductor	 5.1mm 0.51 +/-0.01mm
Impedance (1-100MHz)	100 +/-15Ω
Min Recommended Bend Radius	25mm
Supply Unit	305M (1000ft) boxed
Part Number Standard Low Smoke	 9CAB000305 9CAB000305LS

DATE CODE

LENGTH MARKING (every metre)

Typical Performance for 100M cable length

PSNEXT

ELFEXT

Attenuation

Return Loss

Results from testing in accordance to ANSI/TIA/EIA-568-A-5

Length (M)	1	4	10	16	20	31.25	62.5	100
PSNEXT	71.6	65.7	63.6	64.9	56.9	55.6	51.4	49.8
ELFEXT	70.4	62.5	54.8	51.9	50.3	46.7	46.0	40.2
Attenuation	2.1	4.02	6.41	8.03	9.35	11.61	16.8	22.09
Return Loss	34.0	29.0	38.3	28.0	28.0	28.0	23.9	22.6
Propogation Delay	<510ns							
Delay Skew	<15ns							

Austin Taylor Communications Ltd
Bethesda, Gwynedd, Ll57 3BX, UK

A subsidiary of
Communications Systems Inc.

UK Tel: 0871 5047 024
UK Fax: 01248 600370

Int. Tel: +44 871 5047 024
Int. Fax: +44 1248 600370

http://www.austin-taylor.co.uk

BS EN ISO 9001
Reg No: Q5117

AUSTIN TAYLOR Net

(Original included with O&M documentation as *cat5ecable.pdf*)

1.1.1. Floor Outlets

All floor outlets are presented in floor boxes on LJ6C Category 5e UTP modules, with the quantity of modules varying dependant on location (see supplied floor plan). The LJ6C floor box plates have been supplied by others.

Each floor box is numbered (01 to 38), with each point within a floor box being individually numbered. There are two numbering ranges, 1xx and 5xx, with each floor box containing two outlets in each range.

Modular faceplates LJ6C style

To complement the 25x50 module and faceplate range of products; Austin Taylor also manufacture a range of faceplates and accessories in the popular LJ6C (25x39mm) modular format.

Category 5e Clip Module

Shuttered clip complete with cat 5e socket. Features joint coding to suit 568A and B standards, quick termination caps for connectors and provision for port labelling.

Blanking Clip Module

Fills unused face plate positions. Provision for labelling

Faceplates

Single and Double faceplates to support one, two or four modules. Supplied complete with fixing screws and are compatible with standard backboxes. A choice of two standard finishes available, white matt, or white gloss.

Backboxes

A range of compatible backboxes are available, with depths ranging from 18mm to 45mm to suit requirements (refer Datasheet LJ07B for additional details)

Faceplates - one, two and four gang

Technical Summary

Faceplate dimensions Single gang Double gang	 85mm x 85mm x 10mm 146mm x 85mm x 10mm
Module dimensions Cat5e	 25mm x 39mm x 34mm
Faceplate / module material & colour	Fire Retardent ABS Bright white (BT 1P)
PCB materials	FR2 substrate 1.6mm with copper laminate 1oz to UL94 V0
Wire termination	Krone style IDC - colour coded for compatiblity with T568A/B
RJ45 sockets	8 position, 8 contact. Gold plated contacts

CAT 5e Clip Module

Blanking Clip

Ordering Information

Description	Part No	Supply Multiple
Faceplates Matt		
Faceplate, Single Gang, single outlet	9CP1916007	50
Faceplate, Single Gang, Twin outlet	9CP1915912	50
Faceplate, Double Gang, four outlet	9CP1915810	25
Faceplate Gloss		
Faceplate, Single Gang, single outlet	9CP2002601	50
Faceplate, Single Gang, Twin outlet	9CPI2002701	50
Faceplate, Double Gang, four outlet	9CP2002801	25
Modules		
Cat 5e	9CL1193766	50
Blanking Plate	9LFU189881	25

Austin Taylor Communications Ltd
Bethesda, Gwynedd, LL57 3BX, UK

A subsidiary of
Communications Systems Inc.

UK Tel: 01248 602555
UK Fax: 01248 600370

Int. Tel: +44 1248 602555
Int. Fax: +44 1248 600370

http://www.austin-taylor.co.uk

BS EN ISO 9001
Reg No: Q5117

Datasheet No: SC11B

AUSTIN TAYLOR

(Original included with O&M documentation as *lj6cmodsandfaceplates.pdf*)

1.1.2. Wall Outlets

All wall outlets are presented on double or quad faceplates, the location being determined by the provision of the back-box (supplied and fitted by others).

Each wall outlet is individually labelled, e.g. Wall Outlet 03 is labelled as 141, 541

1.1.3. Ceiling Void Outlets

There is a double outlet located in the ceiling void to facilitate the installation of a wireless network. The locations of this outlets is indicated on the drawing "*xxxxxxxxxxxxx.pdf*"

1.2. Patch Panel Termination

All UTP cables route back to the Comms Room, where these are terminated to 9 no. 24 port 1U high Austin Taylor Cat.5e UTP panels. These are installed to the cabinets together with 1U high cable management bars at a nominal provision rate of one management bar to every two patch panels.

datasheet

Category 5e Patch Panels

Part of a wide range of structured cabling products, these Category 5e patch panels may be used with matching Category 5e linejacks or as discrete components.

Available in 16 and 24 port, and twin deck 32 and 48 port variants. All are fully compliant to ANSI/TIA/EIA 568B2.1 and ISO 11801:2000 standards and feature a robust, high quality metal construction with integral cable management providing a quick fit cable tie fixing point for each port.

The panels use Krone style IDC connections which are colour coded to T568B.

Each panel is supplied with a fixing and earth kit plus a self adhesive label field for individual port identification.

The upper mounting plate of the 'Twin Deck' variants is easily removable for access to the lower wiring points.

Rear of 48 port patch panel showing IDC connections, pcb colour coding, integral cable management and quick release supports.

Technical Summary

Compliant Standards	ANSI/TIA/EIA 568B2.1 ISO 11801:2000
Dimensions 16 and 24 port: 32 and 48 port:	Standard 19" rackmount, 1U high 1.5 U high
Colour	Black semi-gloss
Wire termination	Krone style IDC - colour coded to 568B
Cable management	Quick fit cable tie fixing point per port
RJ45 sockets	8 position, 8 contact socket Gold plated contacts
Accessories	Supplied with cable ties, 4 cagenuts and fixing bolts plus earthing kit
Labeling	Adhesive labeling strips provided

Austin Taylor Communications Ltd
Bethesda, Gwynedd, LL57 3BX, UK

A subsidiary of Communications Systems Inc.

UK Tel: 01248 602555
UK Fax: 01248 600370

Int. Tel: +44 1248 602555
Int. Fax: +44 1248 600370

http://www.austin-taylor.co.uk

BS EN ISO 9001
Reg No: 05117

Ordering Information

Description	Part No.	Carton Multiple
16 Port Patch Panel	9PAN204331	10
24 Port Patch Panel	9PAN204361	10
32 Port (twin deck) Patch Panel	9PAN 204361	10
48 Port (twin deck) Patch Panel	9PAN204371	10

AUSTIN TAYLOR Net

Austin Taylor 1U UTP panel

All panels are labelled with the outlet number, with a separate patching field for each range;

Panels 1-4	Outlets 101 – 182
Panels 5-8	Outlets 501 – 582
Panel 9	Outlets 901 – 902

2. Testing and Labelling, Category 5e, 4 Pair Cabling

All the Category 5e installation testing was carried out utilising a Fluke DTX 1800 tester.

This tester meets the following Standards: -

- TIA Category 3 and 5e per TIA/EIA-568B
- TIA Category 5 (1000BASE-T) per TIA TSB-95
- TIA Category 6 per TIA/EIA-568B.2-1 (Addendum #1 to TIA/EIA-568B.2)
- ISO/IEC 11801 Class C, D, and E
- ISO/IEC 11801 Class F (DTX-1800 only)
- EN 50173 Class C, D, E
- EN 50173 Class F (DTX-1800 only)
- ANSI TP-PMD
- IEEE 802.3 10BASE-T, 100BASE-TX, 1000BASE-T
- IEEE 802.5 (STP cabling, IBM Type 1, 150Ω) Token Ring, 4 Mbps and 16 Mbps

The selected test standard determines the test parameters and the frequency range of the tests.

All results recorded are supplied in 'soft' form, on a CD, submitted in PDF format.

3. Documentation

Test results of the installed system are available on CD ROM. In addition, once the test results have been audited by Austin Taylor, a system warranty certificate will be provided in hard copy.

4. Quality Assurance

Gem Cable's on-going commitment towards quality has been formally recognised by the British Standards Institute, through our BS EN ISO 9002:1994 registration.

Our current registration status is to **BS EN ISO 9001: 2000**.

Yours sincerely
For and on behalf of Gem Cable

Pete Adkins
Business Development Manager