

University of Sydney Parts List for Communications Cabling

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Samples of all the parts listed below can be viewed at:

University of Sydney ICT
316 Abercrombie St
Darlington NSW 2008

Please contact **Jennifer Sayers** on **(02) 8627 7840** to inspect them.

Fibre-optic Enclosures

Most of the fibre optic enclosures on the market will not accommodate the detailed labelling used by the University. The Data Network Group has approved the following FOBOTs for installation:

The fibre optic enclosures you must use			
Brand	Part no.	Product	Notes
Fibre Equipment Management	FEM-124-ST	24 port ST 1 Rack Unit Enclosure	Suits a 12/12 cable
Fibre Equipment Management	FEM-348-ST	48 port ST 3 Rack Unit Enclosure	Suits two 12/12 cables

Warranty Issues

If you wish to provide your warranty via a cable manufacturer's certification programme, please confirm with the manufacturer that the use of these enclosures will be acceptable. AMP and Krone have granted a warranty for us under these conditions. Molex have indicated that they will too.

We expect that other manufacturers will hold similar views on this subject, as the enclosures are not working parts of the system. If you encounter any problems, we are happy to talk directly with the manufacturer to try to sort things out.

Cable Managers

The Data Network Group has approved two types of cable manager for installation with twisted pair cabling.

Wherever it will fit, you must use the following model:

Large cable manager			
Brand	Part no.	Product	Notes
Molex Premise Networks	25.B035G	Deep Ring Run panel	The standard colour scheme has a grey panel with black rings. Molex product literature indicates that an all-black version is also available, 25.B035B.

If the Molex model will not fit in an existing cabinet, a smaller all-metal cable manager is to be used. Examples of this type are:

Examples of small metal cable managers			
Brand	Part no.	Product	Notes
Tyco	0-0558329-1	Netconnect Open Cabling Systems Panel Kit, 1.75, Cable Mgt	
Leviton	49253-LPM	Horizontal Patch Cord Organizer, 1RU	

What not to buy:

- Small cable managers with plastic components are not acceptable.
- Specifically, the popular Krone Highway cable manager is not acceptable.
- The Clipsal Titanium cable manager and its Krone equivalent are not acceptable.
- The smaller version of the Molex style is not acceptable.

Patch panels (RJ-45)

The University specification

- Patch panels must be made of metal.
- Patch panels must have a flat area extending the full width of the panel from the inner edge of the left bracket to the inner edge of the right bracket. This area must be at

least 9mm in height. This is where the strips of traffolyte labelling are to be fixed. Panels with two such flat areas, upper and lower, are preferred.

- A patch panel must have no more than 24 ports per RU.
- Patch panels with little windows, paper labels and perspex or plastic label covers are not acceptable.

You are not allowed to install patch panels which do not meet our specification.

Most of the high-volume-selling patch panels on the market do *not* comply. However, almost all manufacturers do also make the style required by the University.

Which brand does the University prefer?

The University does not have a preferred brand of patch panel. You should choose a brand you have confidence in, as you are required to give a fifteen year warranty on the work.

To help you to find the right type of patch panel, this table gives examples of 1RU patch panels which have been checked and approved by the Data Network Group:

Examples of approved 1RU patch panels				
Brand	Part no.	Product	Label areas	Notes
3M	XE004204279	24 Port PCB Panel Cat6 UTP 19" 1RU Black	upper and lower	
ADC Krone	6653 1 677-24	PP C6T 24 port 1U KRO/110 W/ WIRE MGT	upper and lower	This panel is stocked by Krone but does not appear in the current Australian catalogue. If your distributor has trouble obtaining these panels, please contact Jacqui Heath at ADC Krone on 0437 232 248. A Cat5e version of this panel is also manufactured.
AMP	0-0336526-1	24 port patch panel (unloaded)	upper and lower	Cat5e jacks are 0-1375191-2 and Cat 6 jacks are 0-1375055-2. Each panel must be installed fully loaded with 24 jacks.
Clipsal	RJ/24UPP	24 port unloaded keystone	upper and lower	This is a Clipsal product newly available in Australia. You must supply it fully loaded with 24 jacks: part no.

		patch panel		RJ45SMA6,BK (Cat6 Keystone Jack, Black). Lower category jacks may be used to terminate voice grade cable. If your distributor has trouble obtaining the new panels, please contact Brendan Giles at Clipsal on 0403 063 474.
Leviton				Please contact the Data Network Group for details
Molex Premise Networks				Please contact the Data Network Group for details
Panduit	DP24688TG	DP6 PLUS series 24 port patch panel	upper and lower	
Siemon	HD5-24	24 port Cat5e patch panel	upper and lower	

This is *not* a complete list of suitable panels. For brevity, we have only listed one model from each brand. Most are available in both Cat 6 and Cat5e versions. Some are also available in "double height" 48 port 2RU versions. Those closely related models are approved too.

Brands not in the table

If you would like to install a brand not listed above, please contact the Data Network Group to determine the correct patch panel part number for that brand.

Do not complete your quote or order any parts or cable until it has been established whether or not that brand manufactures a patch panel acceptable to the University and whether stock of that model will be available in Australia.

What not to buy

- The very popular Krone Highway series patch panels and the black plastic Krone category 6 panels are not acceptable. See the table above for the metal Krone model.
- The silver plastic Clipsal Titanium patch panels are not acceptable. See the table above for the approved Clipsal parts.

Disconnection Modules ("Krone blocks")

All disconnection modules for traditional telephone distribution frames shall be **genuine ADC Krone**.

All parts of the telephone frame shall also be genuine ADC Krone parts.

Face Plates for Telecommunications Outlets

The Data Network Group recommends **Clipsal 2000 Series** face plates. This is because there is a non-removable area where the required traffolyte labels can be fixed.

If you use face plates in the HPM Excel style, the labels are removed from the outlet when a painter takes the cover off. This can lead to the labels being mistakenly transferred to a different outlet.

Racks

Almost all new installations at the University use lab racks (open frame racks) instead of cabinets.

Here are the part numbers of the racks we use, together with the vertical cable managers that fit them.

Racks		
Part no.	Description	How many to buy
Rack Technologies OF3801	Open frame rack, 38RU	n
Rack Technologies OF3803	Cable management channel, 38RU	$n + 1$
Rack Technologies 9138	Cable management ring	$12 \times (n + 1)$

For example, if you are installing 2 racks, you also need 3 cable management channels and 36 cable management rings.

NOTE: these are the part numbers for 38RU racks. You are not allowed to use 45RU racks unless the Data Network Group gives you permission. This is for OH&S reasons.

Rack Power Rail

For up to three racks in a comms room, one rack power rail is to be supplied.

For more than three racks in a comms room, one rack power rail per every two racks is to be supplied.

Rack Power Rail	
Part no.	Description
Rack Technologies 9003-CAPT	10 way horizontal power rail, 10A, 2RU

Plaster Dust Protection

You must prevent plaster dust and other foreign matter from entering RJ45 sockets during the building work.

These products have been approved because they do not leave a sticky residue. Do not use ordinary sticky tape, packaging tape or masking tape. Do not even think about using electrical tape!

Tape for plaster dust protection		
Brand	Product	Width
3M Scotch	#810 Magic Tape	24mm
Pritt	Invisible Tape	24mm

If you need to get this tape in a hurry, there is an Officeworks store opposite the Ross Street gate of our Main Campus. They are open from 7am.

How to use the tape on patch panels

1. Remove the patch panel from its packaging.
2. Immediately cut a long strip of tape and stick it firmly over the RJ45 sockets.
3. Install the panels in the rack and wire them up on the back.
4. Remove the tape to test the cabling.
5. Apply fresh tape immediately after testing.
6. Leave the tape in place. We will remove the tape when we come to connect up the network.

How to use the tape on wall sockets

Follow a similar procedure.

Communications Pits and Manholes (Access Chambers)

All communications pits and manholes are to be reinforced concrete, cast on site, built to current and historical PMG/Telecom Australia/Telstra designs. **No pre-cast or plastic pits are allowed.**

Pits and manholes are only to be built by a specialist contractor recognised as a qualified manhole builder by Telstra. Where the excavation is at a location with live communications cables running through it, "built" includes excavation as well as construction. Where no live cables are present, excavation by others shall be at the discretion of the specialist contractor.

Please contact the University's Data Network Group for any inquiries about this type of infrastructure, including names of suitably qualified contractors.

Acknowledgements

The University thanks:

- ADC Krone, AMP, Clipsal, Molex, Panduit and Siemon for supplying samples of their products for evaluation.
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- Optical Solutions Australia for showing us Leviton