A) – Installation Guidelines (For Circuits provided by PCCW)

1. Network Equipment

The following new network equipment will be provided and installed by PCCW at Exchange Participant's (EP)/Information Vendor's(IV)/ Clearing Participant's (CP) / Designated Bank's (DB) site:

- For dual circuits, there will be 1 fibre termination box# and 2 routers (depending on number of trading devices on the segment).
- For single circuit, there will be 1 fibre termination box# and 1 router.

*# **Notes: PCCW may make use of the existing fibre termination box if available.***

Below are the pictures of the router and Fibre termination box.

Fibre Termination Box

Note: PCCW may make use of the existing fibre termination box if available

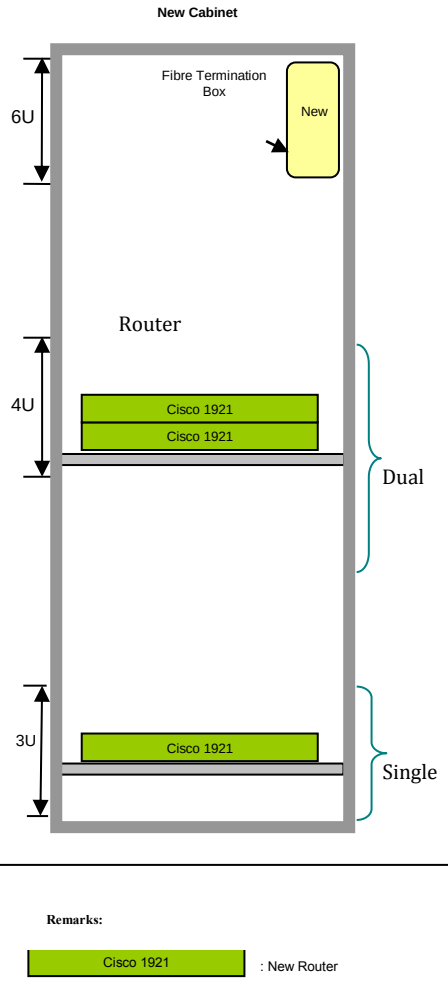
Access Router (Single)

Access Routers (Dual)

Note: The routers provided are desktop version (Rack-mounted type is not supported)

2. Accommodation Requirements

EPs/IVs/CPs/DBs should provide sufficient accommodation to house the equipment as follows.

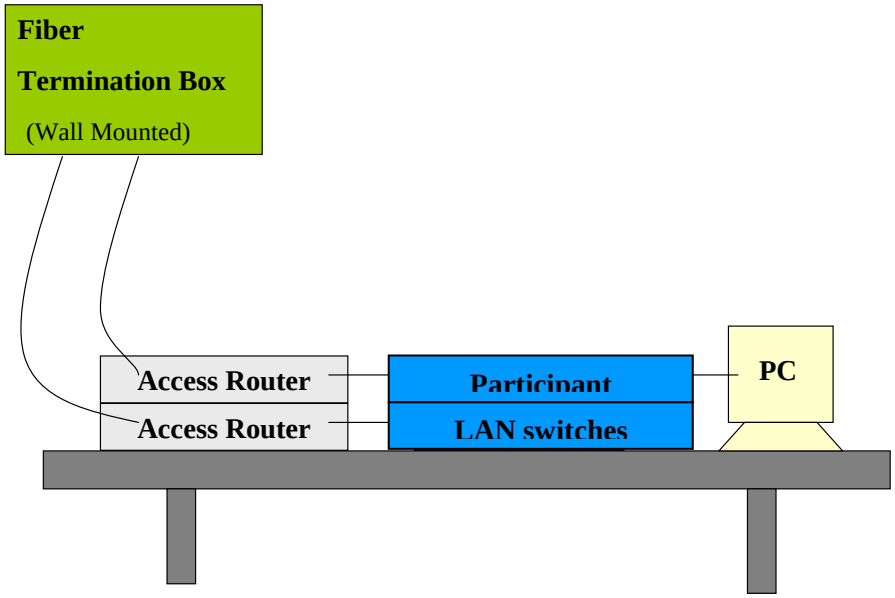


 # Note: PCCW will make use of the existing fibre termination box if spare fibre is available or otherwise install new fibre termination box.

3. Space Requirements

Please refer to the following table for the space requirement of different network packages:

Network Packages	Access Router	Fibre Termination Box	Total Rack Space	Trays
1. Single Circuit	3U (5.5"/134mm)	6U (11.5"/ 267mm)	9U	1
2. Dual Circuits	4U (11.5"/ 267mm)	6U (11.5"/ 267mm)	10U	1



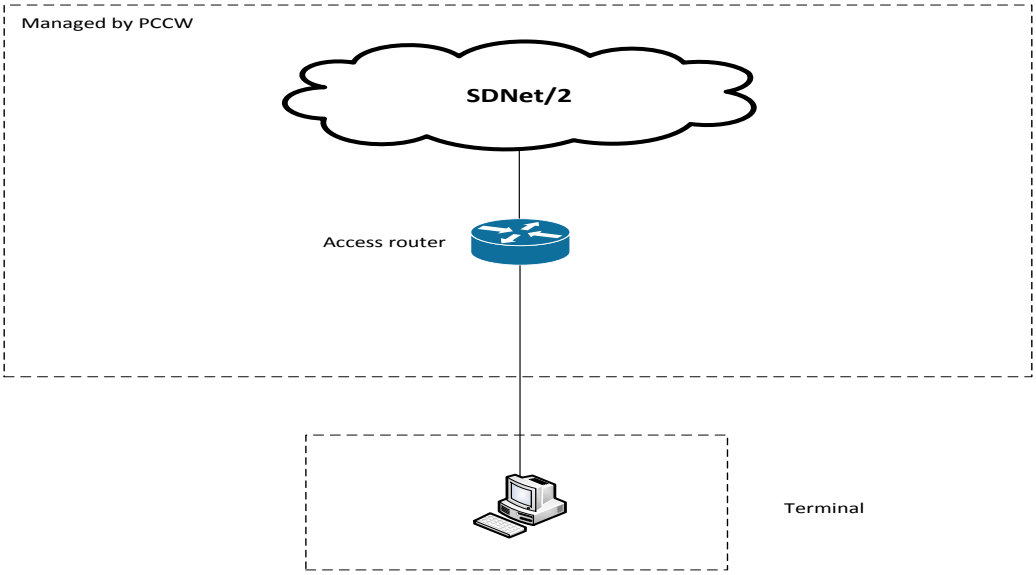
If Cabinet is not available, the space requirement for the network equipment is as follows:

Equipment Type	Width	Depth	Height
Fibre Termination Box	5.5" (140mm)	3" (77mm)	9.5" (242mm)
Access Router (Cisco 1921)	13.5" (343mm)	10.8" (275mm)	1.9" (49mm)

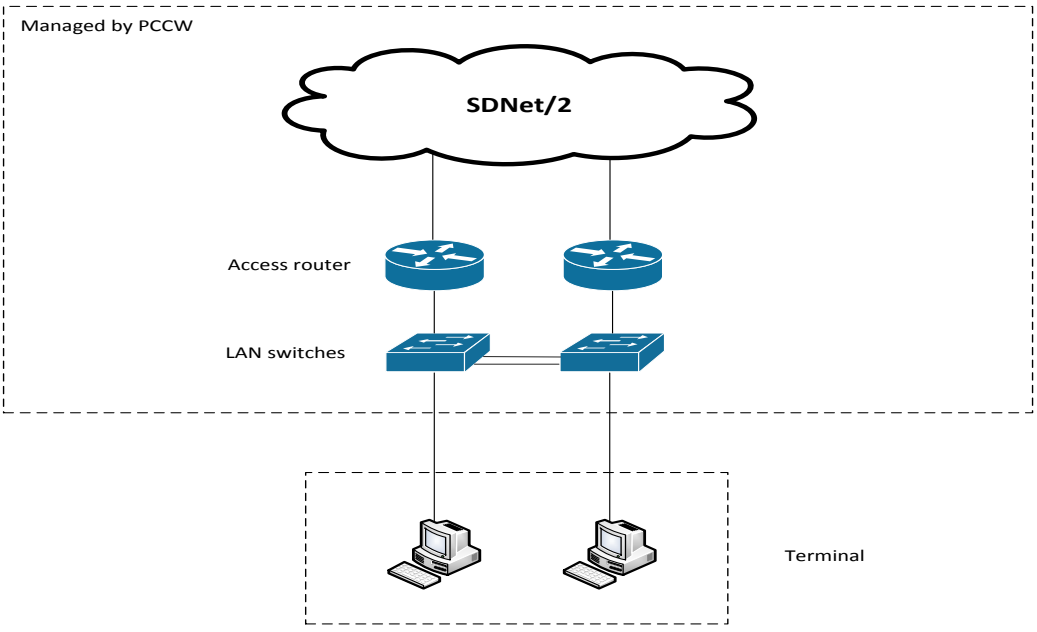
4. LAN Set-up Arrangement

The following diagrams show the typical LAN set-up for different network packages:

- **Typical LAN Set-up for Single Circuit**



- **Typical LAN Set-up for Dual Circuits**



5. AC Power Supplies

AC power supplies (220V) with standard 13A sockets should be provided by the EPs/IVs/CPs/DBs, before PCCW pays visit for circuit installations. They should be adjacent to the new equipment to be installed, and distance from power sockets to the equipment should be less than 2 meters. Stable AC power supplies is required (UPS is recommended).

- For dual circuits: 2 power points are required

- For single circuit: 1 power point is required.

One additional temporary power point is also required for circuit commissioning test use.

6. Important Notes and Precaution for Circuit Installation

- Secure accommodation should be provided to house the new equipment.
- Do not bend the fibre cables and patching cords (yellow in colour).
- Stable AC power supply is required (UPS is recommended).
- For Dual Circuits, separate (dual) AC power feeds and fuses are recommended.
- Environmental conditions: air-conditioned with ventilation is required
- For fibre pre-wiring works at EPs/IVs/CP/DB sites, PCCW will make use of the cabling facilities provided by the EP/IV/CP/DB as far as possible. If it is not feasible, PCCW will provide basic facilities for cable fixing such as flexible conduit or protection along the route. In case relocation of the provided facilities is required in future, PCCW will consider charging the EP/IV/CP/DB the costs required for such alternation.
- LAN switches and their power points will be provided by EP/IV/CP/DB.

B) Installation Guidelines (For Circuits provided by HGC)

1. Network Equipment

The following new network equipment will be provided and installed by HGC for the SDNet/2 at Exchange Participant's (EP)/Information Vendor's (IV)/ Clearing Participant's (CP) / Designated Bank's (DB) site:

- For dual circuits, there will be 1 fibre patch panel and 2 routers.
- For single circuit, there will be 1 fibre patch panel and 1 router.

Standard circuit

Access Router (Single)

Access Router (Dual)

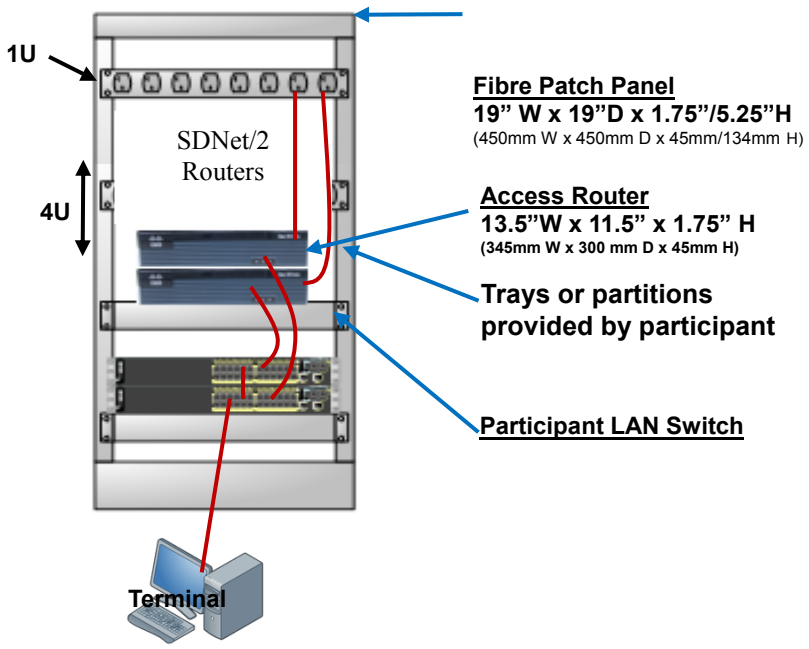
Note: The routers provided are desktop version (rack-mounted type is not supported).

Fibre Patch Panel

2. Accommodation Requirements

The EPs/IVs/CPs/DBs should provide sufficient accommodation to house the new equipment as follow (an example of dual circuit installation):

Standard 19" width cabinets at participant site



3. Space Requirements

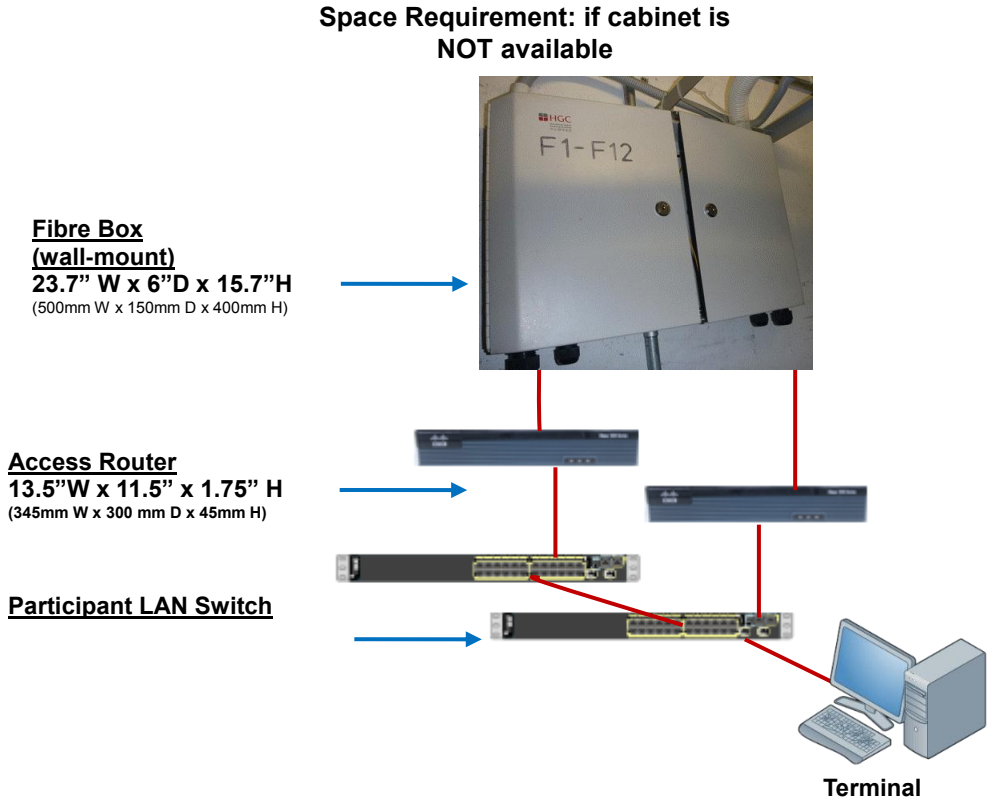
Please refer to the following table for the space requirement of different network packages:

Network Packages	Access Router	Fibre Patch Panel	Total Rack Space	Trays
1. Single Circuit	3U (5.25"/ 135mm)	1U (1.75"/ 45mm) *3U (5.25"/135mm)	4U 6U	1
2. Dual Circuits	4U (7"/ 180mm)	1U (1.75"/ 45mm) *3U (5.25"/135mm)	5U 7U	1

*In general practice, 1U fibre patch panel will be used for fibre termination. 3U fibre patch panel will be used for exceptional case, subject to site condition

If Cabinet is not available, the space requirement for the network equipment is as follows:

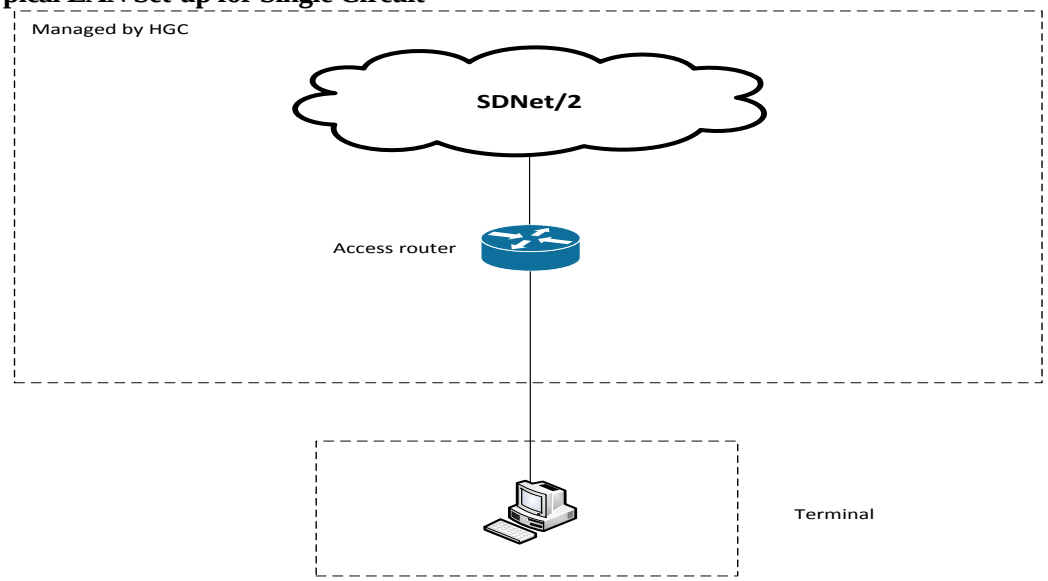
Standard circuit model



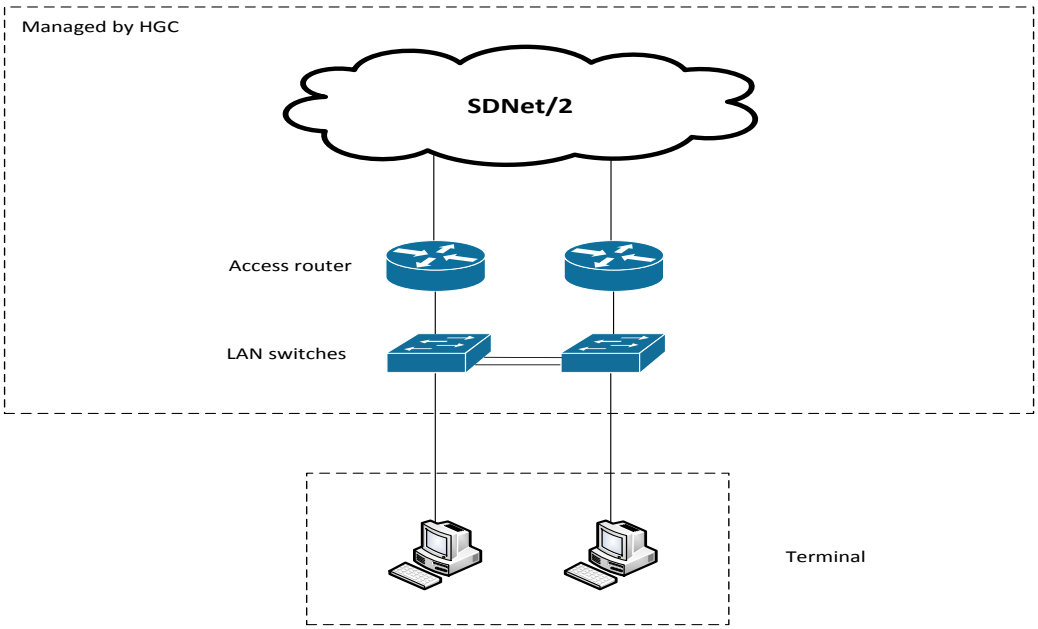
4. LAN Set-up Arrangement

The following diagrams show the typical LAN set-up for different network packages:

- **Typical LAN Set-up for Single Circuit**



- **Typical LAN Set-up for Dual Circuits**



5. AC Power Supplies

AC power supplies (220V) with standard 13A sockets should be provided by the EPs/IVs/CPs/DBs, before HGC pays visit for participant circuit installations. They should be adjacent to the new equipment to be installed, and distance from power sockets to the equipment should be less than 2

metres. Stable AC power supplies is required (UPS is recommended).

- For dual circuits: 2 power points are required.
- For single circuit: 1 power points are required.

The EPs/IVs/CPs/DBs should note that the distance from power sockets to equipment should be less than 2 metres.

6. Important Notes and Precaution for Circuit Installation

- Secure accommodation should be provided to house the new equipment.
- Do not bend the fibre cables and patching cords (yellow in colour).
- Stable AC power supply is required (UPS is recommended).
- For Dual Circuits, separate (dual) AC power feeds and fuses are recommended.
- Environmental conditions: air-conditioned with ventilation
- For fibre pre-wiring works at EP/IV/CP/DB sites, HGC will make use of the cabling facilities provided by the EP/IV/CP/DB as far as possible. If it is not feasible, HGC will provide basic facilities for cable fixing or protection along the route. In case relocation of the provided facilities is required in future, HGC will charge the EP/IV/CP/DB the costs required for such alternation.
- LAN switches and their power points will be provided by EP/IV/CP/DB.

C) – Installation Guidelines (For Circuits provided by Wharf T&T)

1. Network Equipment

The following new network equipment will be provided and installed by Wharf T&T for the SDNet/2 at Exchange Participant's (EP)/Information Vendor's(IV)/ Clearing Participant's (CP) / Designated Bank's (DB) site:

- For dual circuits, there will be 1 fibre termination box, 2 routers.
- For single circuit, there will be 1 fibre termination box, 1 router.

Access Router

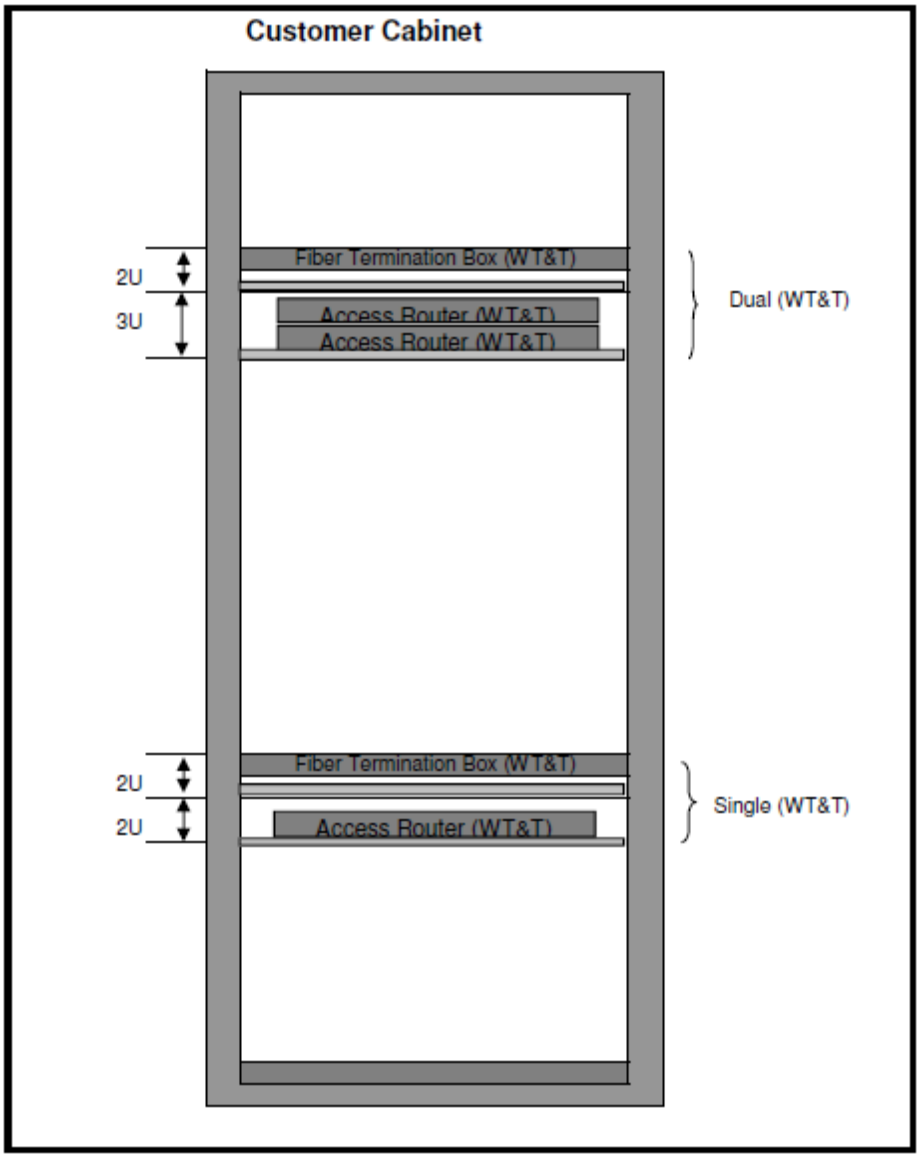
Note: The routers provided are desktop version (rack-mounted type is not supported).

Cabinet-mount fiber box

Wall-mount fiber box

2. Accommodation Requirements

The EPs/IVs/CPs/DBs should provide sufficient accommodation to house the new equipment as follows.



Fibre Termination Panel
16.93" W x 13.78"D x 1.77"H
(430mm W x 350mm D x 45mm H)

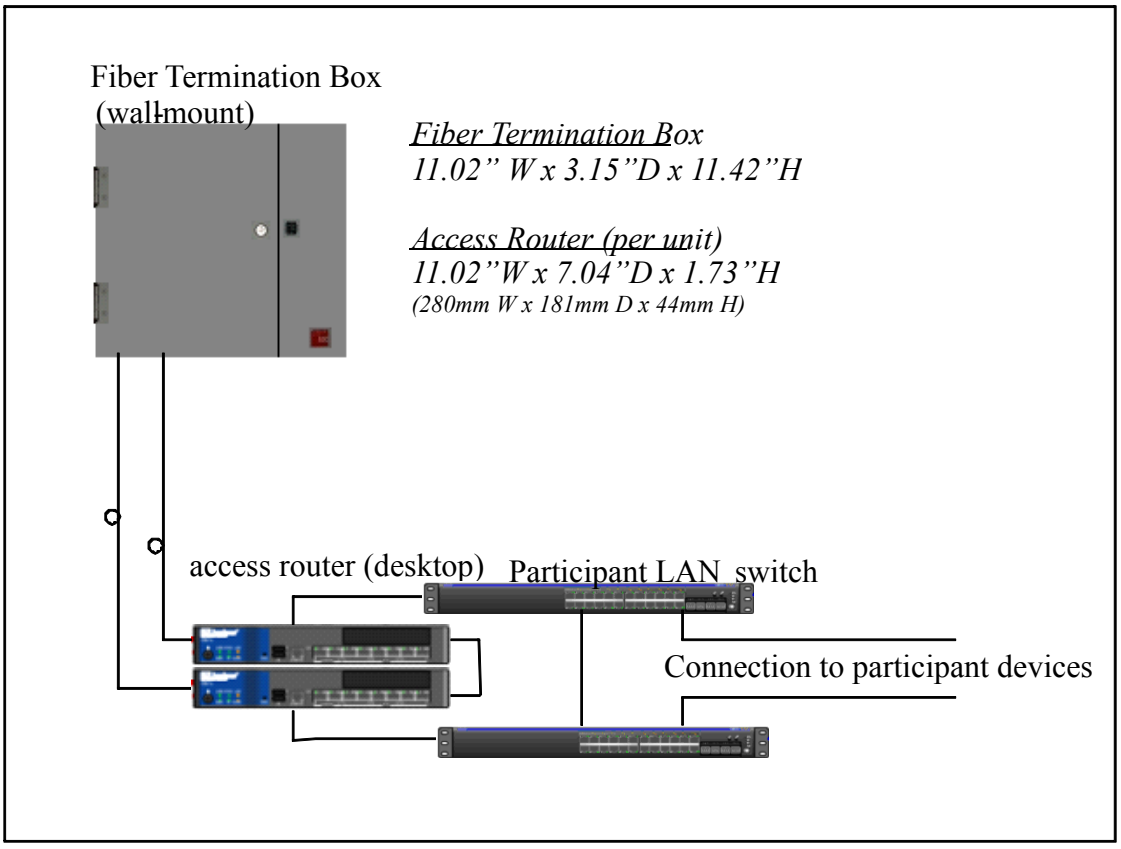
Access Router (per unit)
11.02"W x 7.04"D x 1.73"H
(280mm W x 181mm D x 44mm H)

3. Space Requirements

Please refer to the following table for the space requirement of different network packages:

Network Packages	Access Router and LAN Switch	Fibre Termination Box	Total Rack Space	Trays
1. Single Circuit	2U (7"/178mm)	2U (3.5"/ 89mm)	4U	2
2. Dual Circuits	3U (10.5"/ 267mm)	2U (3.5"/ 89mm)	5U	2

If cabinet is not available, the space requirement for the network equipment is as follows:



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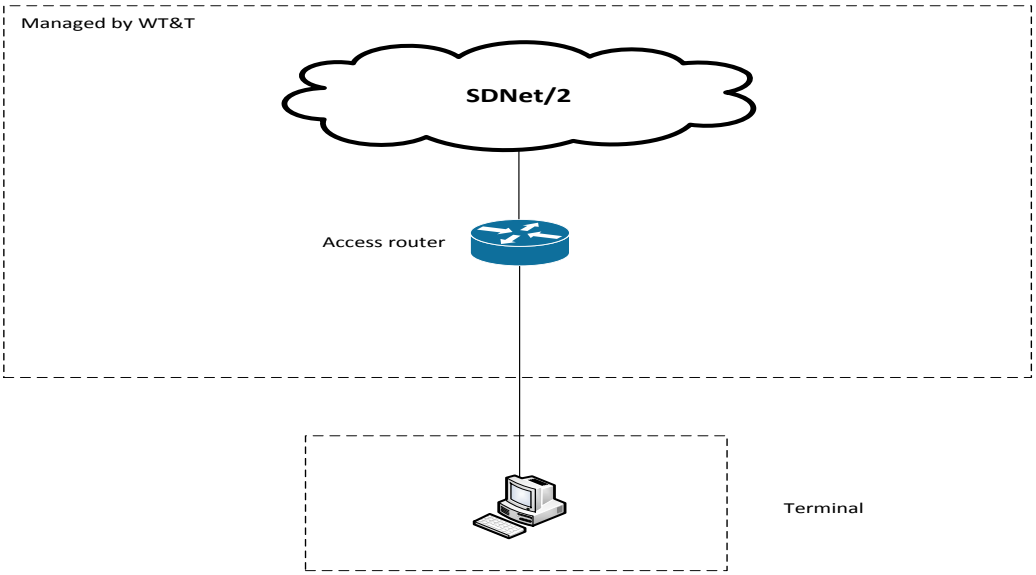
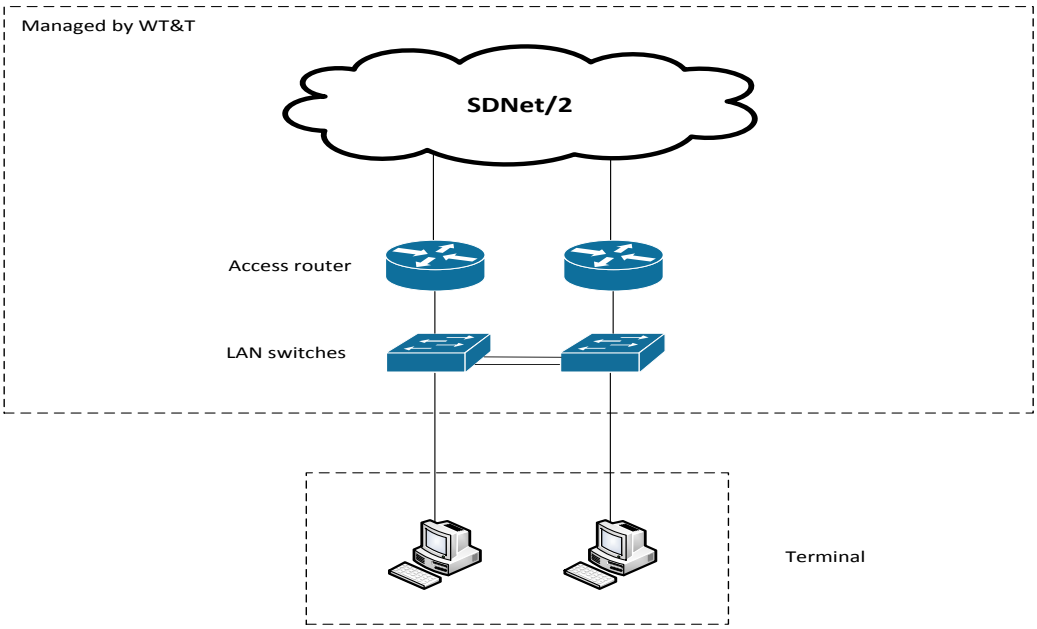
4. LAN Set-up Arrangement

The following diagrams show the typical LAN set-up for different network packages:

- **Typical LAN Set-up for Single Circuit**



- **Typical LAN Set-up for Dual Circuits**



5. AC Power Supplies

AC power supplies (220V) with standard 13A sockets should be provided by the EPs/IVs/CPs/DBs, before Wharf T&T pays visit for circuit installations. They should be adjacent to the new equipment to be installed, and distance from power sockets to the equipment should be less than 2 metres. Stable AC power supplies is required (UPS is recommended).

- For dual circuits: 2 power points are required.
- For single circuit: 1 power point are required.

6. Important Notes and Precaution for Circuit Installation

- Secure accommodation should be provided to house the new equipment.
- Do not bend the fibre cables and patching cords (yellow in colour).
- Stable AC power supply is required (UPS is recommended).
- For Dual Circuits, separate (dual) AC power feeds and fuses are recommended.
- Environmental conditions: air-conditioned with ventilation is required
- For fibre pre-wiring works at EP/IV/CP/DB sites, Wharf T&T will make use of the cabling facilities provided by the EP/IV/CP/DB as far as possible. If it is not feasible, Wharf T&T will provide basic facilities for cable protection along the route. In case relocation of the provided facilities is required in future, Wharf T&T will consider charging the EP/IV/CP/DB the costs required for such alternation.
- LAN switches and their power points will be provided by EP/IV/CP/DB.