

## Standard installation service scope of work

### Service: Structured cabling

#### 1 Service features and deliverables

- 1.1 New installation/migration (after order signed).
  - 1.1.1 Participate in customer meetings, if required.
  - 1.1.2 Conduct a site check with customer-designated personnel, if required.
  - 1.1.3 Collect customer data including cable containment information, outlet location, rack information, switch information and labeling requirement before delivering service onsite.
  - 1.1.4 Deliver equipment (if any) to customer site.
  - 1.1.5 Provide manufacturer manuals or user guides in electronic format or from downloadable link. Tailor-made manuals/user guides excluded.
  - 1.1.6 Equipment cabinet:
    - 1.1.6.1 Deliver the rack at confirmed location.
    - 1.1.6.2 Leveling of rack.
  - 1.1.7 Horizontal UTP cabling:
    - 1.1.7.1 UTP Patch Panel mounting by screw & caged nut with machine generated paper label.
    - 1.1.7.2 UTP cable installation within cable containment (provided by others), terminated with machine generated paper label at both ends.
    - 1.1.7.3 Faceplate and Modular Jack installation with machine generated paper label on Faceplate.
    - 1.1.7.4 TIA Channel Link Test with autosave report conducted on UTP Patch Panel and Modular Jack.
    - 1.1.7.5 Quick release tape used to fix/tighten the UTP cable.
  - 1.1.8 Backbone (UTP 4-pair/UTP multi-pair/fiber) cabling.
    - 1.1.8.1 UTP/fiber Patch Panel mounting by screw & caged nut with machine generated paper label.
    - 1.1.8.2 UTP/fiber cable installation within cable containment (provided by others), terminated with machine generated paper label at both ends.
    - 1.1.8.3 TIA Channel Test with autosave report conducted at UTP 4-pair/fiber Patch Panel.
    - 1.1.8.4 Continuity Test & Wire Map conducted on UTP multi-pair backbone cabling.
    - 1.1.8.5 Quick release tape & cable ties used to fix/tighten the UTP cable.

#### 2 Service exclusions

Activities such as, but not limited to, the following are not within the service scope:

- 2.1 Items listed under customer responsibilities.
- 2.2 Tailor-made manuals/user guides.
- 2.3 End client (notebook/desktop/printer) connectivity test at outlet location.
- 2.4 Equipment cabinet:
  - 2.4.1 Power socket is NOT provided.
  - 2.4.2 Application for work permit issued by building management office (BMO) is administered/provided by the customer.
  - 2.4.3 On-site assembly is NOT included.
  - 2.4.4 Baying is NOT included.
  - 2.4.5 Raised Floor Loading should be considered & made-good before installation by customer.
  - 2.4.6 Hot & Cold Air Flow management is NOT included.
  - 2.4.7 AC spur and change of power plug connection is NOT included.

- 2.4.8 800mm width cabinet with cable management facilities is recommended for cabling.
- 2.4.9 Floor tiles opening & grommet are NOT included.
- 2.4.10 Earth Cable connects between cabinet earthing terminal and the nearest Main Earthing Terminal (provided by others).
- 2.5 Cabling:
  - 2.5.1 Price does NOT cover the recovery of existing cables.
  - 2.5.2 Price does NOT include works carried out by nominated contractors – eg remove & reinstate false ceiling and fire stop.
  - 2.5.3 Protector, trunking, conduit, junction box and back/outlet box are NOT covered.
  - 2.5.4 Patch cord for Voice User Outlet is NOT covered.
  - 2.5.5 Equipment rack with accessories is NOT covered.
  - 2.5.6 Power Distribution Unit/power bar is NOT covered.
  - 2.5.7 Power socket is NOT provided.
  - 2.5.8 Cable Management Panel for equipment is NOT covered.
  - 2.5.9 Installation at 2m height or higher requires High Working Platform, which is not covered.
  - 2.5.10 All cables & cords should be installed inside cabling facilities provided by customer.
  - 2.5.11 Length of Cat.5e/Cat.6/Cat.6A cable should NOT be longer than 90 meters.
  - 2.5.12 Length of multi-pairs cable should NOT be longer than 800 meters.
  - 2.5.13 Length of OM3 cable should NOT be longer than 270 meters.
  - 2.5.14 Length of OM4 cable should NOT be longer than 470 meters.
  - 2.5.15 Length of single-mode cable should NOT be longer than 970 meters.
  - 2.5.16 Application for work permit issued by building management office (BMO) is administered/provided by the customer.
  - 2.5.17 Application for permission to use trunking/conduit facilities in public areas is administered/provided by the customer.
  - 2.5.18 Cabinet/ rack should have available space of multiple 2U height to house a set of Patch Panel (1U = 1.75 inch).
  - 2.5.19 Labeling record port types & sequence number only.

### 3 Customer responsibilities

Customer shall be responsible for each of the following:

- 3.1 Ensure that all site preparation, power supply compatibility requirements and other specified service prerequisites are met.
- 3.2 Provide detailed information regarding location within the end user site for the performance of the service.
- 3.3 Provide unobstructed, continuous access to sites and systems required for the performance of the service.
- 3.4 Provide all E&M facilities and physical mounting facilities for recording system installation, including trunk, cable trays, conduits, power sockets, rack space, screws, LAN nodes and cabling facilities, for the performance of the service.
- 3.5 Provide all necessary information for recording system configuration, including channel mapping list, user list, user grouping and user profile, for the performance of the service.
- 3.6 Ensure that working conditions for HKT personnel onsite at any end user facility are safe, secure and adequate in all respects to allow them to perform the services efficiently and that comply with all applicable health and safety regulations.
- 3.7 Make appropriate personnel available to assist HKT in the performance of its responsibilities.
- 3.8 Co-ordinate service deployment on third-party maintained hardware and software (if applicable) with HKT.

- 3.9 Have valid licenses for all software products or software updates to be installed by HKT.
- 3.10 Be involved in UAT, sign-off and acceptance of service provided by HKT.
- 3.11 Obtain any necessary consent and take any other action required by applicable laws, including but not limited to data privacy laws, prior to disclosing any of its employee information to HKT.
- 3.12 Be responsible for the identification and interpretation of any applicable laws, regulations and statutes that affect customer's existing application systems, programs, or data to which HKT will have access during the services. It is customer's responsibility to ensure the systems, programs and data meet the requirements of those laws, regulations and statutes.
- 3.13 Environment and Power Guidance in Equipment Room
  - As guidance for the best practice in maintaining a healthy working environment and stable power source for equipment.
  - 3.13.1 Operating Environment Requirements:
    - 3.13.1.1 Ambient temperature: 10°C - 27°C.
    - 3.13.1.2 Relative humidity: 30% - 75% non-condensing.
    - 3.13.1.3 Carpeting is not recommended.
    - 3.13.1.4 Water sprinkler should not be equipped directly above the equipment.
    - 3.13.1.5 Dust free and sufficient lighting.
  - 3.13.2 Site information and provisional by the end-user:
    - 3.13.2.1 Electrical schematic diagram kept in equipment room.
    - 3.13.2.2 Emergency lighting or lighting powered by essential power.
    - 3.13.2.3 Dual feed power supply per cabinet.
    - 3.13.2.4 UPS/Essential power for cabinet Fan.
    - 3.13.2.5 ATS or dual feed for critical equipment if applicable.
    - 3.13.2.6 Spare power socket for emergency use.
    - 3.13.2.7 Non RCD MCB power source for all servers house inside cabinet.
    - 3.13.2.8 Locked door cabinet as the recommendation.
    - 3.13.2.9 Clear power socket label.
    - 3.13.2.10 Reserve the minimum rack space at least 30% buffer for the easy maintenance and cabling management purpose on the equipment rack.
  - 3.13.3 Electrical Work:
    - 3.13.3.1 AC power requirements: Nominal 220V  $\pm$  6%.
    - 3.13.3.2 Grounding: < 1 ohm.

#### 4 General provisions/other exclusions

- 4.1 All tasks will be performed during HKT business working hours, Monday through Friday, 8:30am to 5:30pm, and Saturday 8:30am to 1pm, excluding public holidays.
- 4.2 Unless HKT agrees in writing, any services provided outside of HKT standard business hours may be subject to additional charges.
- 4.3 The ability of HKT to deliver this service is dependent upon the customer's full and timely co-operation with HKT, as well as the accuracy and completeness of any information and data the customer may provide to HKT. HKT shall not be responsible for verification of information furnished by the customer, end user or any contractor.
- 4.4 HKT reserves the right to charge, on a time and materials basis, for any additional work over and above quoted service pricing that may result from work required to address service prerequisites or other requirements not met by the customer.