

Annex B: Scope of Work

SCOPE OF WORK LOCAL AREA NETWORK (LAN) & POWER CABLING – UNHCR FO EI Obeid

The scope covers design/development of a suitable layout of the proposed networking system, preparation of bill of materials, pre-dispatch inspection / testing, packing and forwarding, transportation, insurance and carrying out further activities at the site like unloading, storage (space to be provided by the UNHCR), further handling, testing and commissioning including successful completion of acceptance tests and any other services specified.

The vendor shall be responsible for providing all materials, equipment's, and services, specified or otherwise, which are required to fulfil the intent of ensuring operability, maintainability, and reliability of the complete equipment covered under this specification within the quoted price. This work shall be in compliance with all applicable standards, statutory regulations and safety requirements in force of the date of award of this contract.

The details are as below;

1. The Vendor will perform a site survey.
2. Preparation of Actual Bill of Material based on Survey and UNHCR's requirements.
3. Prepare technical design drawings to specifications and provide hard and soft copies.
4. Provide comprehensive network infrastructure design and support services and create as-built drawings.
5. Laying and Termination of CAT6 Shielded UTP Cable. All cabling must be "structured"
6. Provide, install, and configure support structures and components needed for end-to-end network operations per project specifications in individual task orders—cable trays, equipment racks, cabinets, plywood backboards, blocks, patch panels, jacks, outlets, patch cords, labels, tie wraps e.tc.
7. Install, test, and certify cabling and conduit systems associated with electrical power distribution.
8. Labelling of Cables, I/Os, Jack Panel, Switches for new connections
9. Provide test equipment to test all cables installed to certify performance
10. Repair/Refurnishing work owing to damage caused due to cabling or any other work related to this Project. There should not be any hanging or uncovered wire. Provide material necessary to perform any minor construction for required installations.
11. Patch cord should be branded, and factory crimped
12. The vendor shall also be responsible for availing qualified personnel for installation, testing, commissioning and other services under his scope of work as per this specification.

13. All required tools and tackles for completing the scope of work as per the specification is the responsibility of the vendor. No separate charges for fixing/crimping/other connection charges would be paid by UNHCR.
14. The installation of equipment's shall be accepted only after installation tests are over.
15. The vendor should ensure while installation of LAN, day-to-day functioning of official work and existing network setup/connectivity/internet connectivity should not get disrupted.
16. Onsite warranty for all Installation and Hardware delivered for minimum one year and extended as per OEM (Official Equipment Manufacturer) guarantee/warranty offered.
17. In case, the quantity of laying cables or fixing wall mount sockets etc. exceeds or is less than the quantity in bid price schedule, the payment for the executed quantity shall be paid on pro-rata basis, for the actual quantities consumed / for which the installation is carried out through the vendor on Certification by UNHCR's ICT team
18. UNHCR reserves the right for quantity variation due to increase/decrease in requirements. The vendor shall also provide all required equipment which may not be specifically stated herein but are required to meet the intent of ensuring completeness, maintainability and reliability of the total system covered under this specification.
19. Equipment furnished shall be complete in every respect with all mountings, fittings, fixtures and standard accessories normally provided with such equipment's and/or needed for erection, completion and safe operation of the equipment's as required by applicable codes though they may not have been specifically detailed in the tender document, unless included in the list of exclusions. All similar standard components/parts of similar standard equipment's provided, shall be inter-changeable with one another.
20. Any other work required for making the network functional up to the satisfaction of UNHCR Representation in Sudan for the Field Office in El Obeid.

LAN & Power Requirements (Vendor should visit the site and specify the brand)

| S/N | Item | S/N | Description | QTY | location |
|----------|-------------------------|-----|---|-----|---------------|
| A | CABLE MANAGEMENT | | | | |
| | | 1 | 2 COMPARTMENT TRUNKINGS WITH ALL ACCESSORIES (Marshall-Tufflex or equivalent brand) | | |
| | | 2 | PVC Conduits with related accessories | | |
| B | LAN CABLING | | | | |
| | | 1 | Double Data Sockets with related accessories | 24 | |
| | | 2 | Single Data Sockets with related accessories | 3 | Access Points |
| | | 3 | Cat 6 3-meter Patch Cords (Krone brand or equivalent) | 55 | |

| | | | | | |
|----------|---|---|---|----|--------------------|
| | | 4 | Cat 6 1-meter Patch Cords (Krone brand or equivalent) | 55 | |
| | | 5 | Cat 6 Shielded UTP Cable (Krone brand or equivalent) | | TBD where required |
| | | 6 | Cat 6 STP Cable (Krone brand or equivalent) | | TBD where required |
| | | 7 | 24 Port Cat 6 Patch Panel (Krone brand or equivalent) | 4 | |
| | | 8 | Brush Panel/Cable Manager (Krone brand or equivalent) | 4 | |
| C | LAN ADMINISTRATION | | | | |
| | | 1 | 42U Rack with all accessories | 1 | |
| D | LAN POWER | | | | |
| | | 1 | 13A Standard Double Power Sockets for Clean Power (Universal Standard Type sockets) | 24 | |
| | | 2 | Single Power Sockets for Clean Power (Universal Standard Type sockets) | 3 | Access Points |
| | | 3 | 12-way 3 Phase Power Distribution Board with single phase Circuit Breakers | | TBD |
| | | 4 | 2.5mm Single Core Power Cable (Red, Green & Black) | | TBD |
| | | 5 | Power Cabling Accessories (Cable Lugs e.t.c) | | TBD |
| | | 6 | Power Cable | | TBD |
| E | EARTHING MATERIALS | | | | |
| | | 1 | Earth Bar | | |
| | | 2 | Earth Cable | | |
| | | 3 | Cable Lugs | | |
| | | 4 | Earthing Accessory materials | | |
| F | INSTALLATION CONSUMABLES AND ACCESSORIES | | | | |
| | | 1 | RJ45 Connectors | | |
| | | 2 | Wall Plugs | | |
| | | 3 | Screws | | |
| | | 4 | Cable Ties | | |
| | | 5 | Masking and Insulation tape | | |
| | | 6 | Labelling Cartridge | | |
| G | LABOUR | | | | |
| | | 1 | Civil works | | |
| | | 2 | Labour for Cable Pulling, Termination, Testing, labelling and Commissioning | | |

Important Notes:

1. An all-inclusive price for the Supply, Installation of standard Electrical/power and Data/Voice points in the premises at FO El Obeid should be submitted to UNHCR, the cost per Point pricing.

The cost per Point/workstation represents all materials including network and electrical cable, data and electrical boxes, colour coded inserts, patch panels, wall plates for both data and power, patch cords, all material needed for proper hanging and moulding as required. The price shall include a break down for electrical/power and data/voice separately.

- a. In addition, the cost per point/workstation represents all labour including fishing walls, running cable through offices, terminating, testing, labelling, and providing certification reports and warranty information.
 - b. The Pricing should include all costs, including conveyances, and accommodation necessary to complete the project.
2. Distribution unit for 3-Phase UPS power cabling should be setup in the Server Room
3. Each circuit breaker in the distribution unit should take load current for 3 standard desktop computers.
4. Trunking for both power and Data cables must be compartmentalized separately to minimize electromagnetic interference.
5. The vendor will promptly correct all defects for which the vendor is responsible.