

MICAS Administration Block

STRUCTURED CABLING WORKS

COMPONENT PASSIVE EQUIPMENT TECHNICAL SPECIFICATIONS

Ref.1A: Full Size Network Data Cabinet

- Floor standing 19" Rack
- Compliant with IEC 297-1
- Front and back mesh doors, powder coated
- Door opening type refer to BOQ item 1.1 & 1.2
- Fully assembled by the contractor in the distribution facility, except for power bars, earth bars, and shelves
- Removable and lockable side panels
- Front and back door removable with security spring lock, handle, and mounted key cylinder lock
- Includes front high-density vertical cable organizer panels on both sides
- Includes vertical cable basket on both sides to guide and support vertical cables
- Top cover with vented lid
- Set of 4 levelling feet
- Heavy-duty castor wheels included
- Allows for proper cooling airflow
- Complete rust protection
- Robust design
- 2 sets of keys provided
- 6 fan roof mountable tray including fans
- Top and bottom cable ingress slots
- Bidder responsible for checking location accessibility during site visit to determine if racks should be delivered flatpack or ready assembled

Ref.1B: Small Network Data Cabinet

- Wall mount 19" Rack
- Front glass door compliant with UNI 7142-(88)
- Powder coated
- Installed by the contractor in the distribution facility, except for power bars, earth bars, and shelves
- Removable and lockable side panels
- Front door removable with security spring lock, handle, and mounted key cylinder lock
- Removable cable entry panel in top and base
- Top cover with vented lid
- Allows for proper cooling airflow
- Complete rust protection
- Robust design
- 2 sets of keys provided
- Top and bottom cable ingress slots

Ref.1C: Cage Nuts

- Cutout Dimension: 12.3 x 12.3mm
- Overall width: 16.5mm
- M6 type, max panel thickness: 1.63mm, min panel thickness: 0.71mm, thread: M6

Ref.1D: Cable Ties

- Black, UV resistant due to carbon structure, minimizing the effect of UV rays
- Length: 30 cm

Ref.1E: Cable Management

- 1U management of patch leads
- 19-inch cable management panels
- Includes 5 metal brackets

- Metal management loops
- Black colour

Ref.2A: 24 Port Cat6 UTP RJ45 Patch Panel

- Krone IDC punch down type, accepts 22 to 26 AWG wires
- Category 6 compliant
- Wiring Specification: T568A & T568B
- Port Density: 24 ports per 1U (44mm)
- Identification tags or numbering for ease of socket identification, preferably on top of the sockets
- Contact compatibility: 22 to 26 AWG Solid & 24 AWG stranded wires
- Panel material: black powder painting coat finish
- 1U rack space design (19 inch racks)
- All materials used shall be of uniform design and the same brand for items Ref 4A, 5A, 5B, 5C within the technical specifications document

Ref.3A: Surface Trunking

- PVC trunking
- EN 50085-2-1 Standard
- Flexible for installation and maintenance
- Finishing accessories including angles, ends, and joints
- Colour: white

Ref.3B: Cable Baskets

- Can be fixed with suspended studs from the roof or by brackets installed on the wall
- Includes all necessary clips, clamps, and joints
- Zinc plated
- Width: 300 to 500mm, height: minimum 60mm

Ref.3C: Conduit

- PVC conduit and fittings of heavy gauge; external PVC conduit exposed to the external environment should be sealed and watertight
- External conduit installations shall be rendered watertight
- Adequate support with allowance for expansion and contraction under normal working temperature variations

Ref.4A: Internal Grade Cat 6 UTP Cables

- Cat 6 compliant
- Built to TIA/EIA 568 B.2-1
- Built to EN50173-1
- Built to ISO/IEC 11801
- LSOH - Low Smoke Halogen Free type - IEC 61034
- Colour: white/grey
- Per meter marking
- Conductor quality: 23AWG or better
- Conductor type: Solid bare copper
- Unshielded: 4 pair UTP cables, each pair twisted separately, designed around an X filler
- All materials used shall be of uniform design and the same brand for items Ref 2A, 5A, 5B, 5C within the technical specifications document

Ref.4B: Category 6A Screened Copper Cable

- Category 6A F\FTP cable
- Supports category 6A 10 Gigabit Ethernet applications
- Meets or exceeds TIA/EIA 568 B.2-1 standard
- Meets or exceeds ISO/IEC 11801 standard
- Outer jacket: LSOH - Low Smoke Halogen Free type - IEC 61034
- Per meter marking
- Copper conductor quality: 23AWG or better
- Copper conductor type: Solid bare copper

- Consists of 8 insulated wires formed into 4 pairs, each pair individually screened with an aluminium/polyester tape, with overall screening
- All materials used shall be of uniform brand throughout as for items Ref. 1A, 4A, 4B, 4C within this document

Ref.4C: Category 6A Screened Copper Cable External Grade

- Category 6A F\FTP cable
- Supports category 6A 10 Gigabit Ethernet applications
- "S" foil screen
- External duct grade Polyethylene outer sheath
- UV Stable to UL1581
- Specified to 500MHz
- Meets or exceeds TIA/EIA 568 B.2-1 standard
- Meets or exceeds ISO/IEC 11801 standard
- Outer jacket: LSOH - Low Smoke Halogen Free type - IEC 61034
- Per meter marking
- Copper conductor quality: 23AWG or better
- Copper conductor type: Solid bare copper
- Consists of 8 insulated wires formed into 4 pairs, each pair individually screened with an aluminium/polyester tape, with overall screening
- All materials used shall be of uniform brand throughout as for items Ref. 1A, 4A, 4B, 4C within this document

Ref.4D: 24 Port Cat6A Screened RJ45 Patch Panel

- Krone IDC punch down type, accepts 22 to 26 AWG wires
- Category 6A compliant
- Wiring Specification: T568A & T568B
- Port Density: 24 ports per 1U (44mm)
- Identification tags or numbering for ease of socket identification, preferably on top of the sockets
- Contact compatibility: 22 to 26 AWG Solid & 24 AWG stranded wires

- Panel material: black powder painting coat finish
- 1U rack space design (19 inch racks)
- All materials used shall be of uniform design and the same brand for items Ref 4A, 5A, 5B, 5C within the technical specifications document
- Grounding Wire
- Contacts: Phosphor Bronze

Ref.5A: Socket Outlet Cat6 RJ45

- Specification: Category 6 RJ45 socket outlet
- Supplied with faceplate (3"x3") and screws
- Compliant to Industry Standards - Official TIA/EIA568-B.2-10 and ISO/IEC 11801-compliant
- Wiring Specification color code: T568A & T568B
- Labelling: ample space for proper identification labelling for each socket, preferably with a plastic sheet cover to protect the tagging of the outlet
- Spring-loaded shutter
- IDC Contacts: Suitable for LSA compatible tool
- IDC Compatibility: 22 to 26 AWG Solid / 24 AWG Stranded wire
- Complete with box or brackets for surface mount or integrated in trunking
- Bevelled faceplate
- All materials used shall be of uniform design and the same brand for items Ref 2A, 4A within the technical specifications document

Ref.5B: Data Socket Outlet Cat6A RJ45 Screened Complete

- Specification: Category 6A screened RJ45 socket outlet
- Supplied with trunking plate/back box, faceplate, and screws
- Compliant to Industry Standards - Official TIA/EIA568-B.2-10 and ISO/IEC 11801-compliant
- Wiring termination colour code: T568B

- Labelling: ample space for proper identification labelling for each socket, preferably with a plastic sheet cover to protect the tagging of the outlet
- Accepts 22 to 26 AWG Solid wire
- All materials used shall be of uniform design throughout as for items Ref. 1A, 3B within this document.

Ref. 6: – Left intentionally blank

Ref.7A: CAT6 Patch Leads

- UTP Category 6 as per ANSI/TIA-568-C.1 standard
- Terminated with RJ-45 male connectors on both ends
- Conductor quality: 24AWG or better
- High mechanical flexibility
- Backward Compatible with Category 5e
- Insulation: Solid polyethylene
- Type: Stranded plain copper
- LSOH Outer Sheath

Ref.7B: CAT6A Patch Leads

- Terminated with blade booted RJ-45 male connectors on both ends
- Conductor quality: type stranded bare copper
- Electrically compliant beyond 500MHz
- Insulation: Solid polyethylene
- Suitable for 10GBASE-T, 10 Gigabit Ethernet
- LSOH Outer Sheath

Fiber Optic:

Ref.8A: Fiber Optic Tray

- Sliding drawer design
- 1U rack space design (19-inch racks)
- Adjustable fixing arms
- Port identification numbers
- Multiple cable entry to rear
- Supports Pigtail 900-micron 50/125 OM4
- Supports Pigtail 900-micron 9/125 SM2
- 2m cable with LC connector
- Pigtails individually bagged and labeled
- Pigtail Insertion Loss dB @850nm < 0.3
- Pigtail Ferrule LC 1.25mm ceramic
- Pigtail Connector Design IEC61754-20

Ref.8B: OM4 Fiber Optic Cable

- External Grade
- Duct Grade
- Corrugated Steel Tape Armoured
- Rodent Resistant
- Sequentially meter marked
- Bend insensitive core construction
- 50/125 OM4 multimode fibre
- LSOH sheath

Ref.8C: OS2 Fiber Optic Cable

- External Grade

- Duct Grade
- Corrugated Steel Tape Armoured
- Rodent Resistant
- Sequentially meter marked
- Bend insensitive core construction
- 9/125 OS2 Single Mode fiber
- LSOH sheath

Multimode OM4 LC-LC Patch Leads

- Test Certificate with each cable
- Batch Number Tracking
- Low smoke zero halogen cable
- OM4 50/125 μ m duplex cable
- High quality ceramic ferrules connectors
- Each cable is individually bagged and labeled

Single mode OS2 LC-LC Patch Leads

- Test Certificate with each cable
- Batch Number Tracking
- Low smoke zero Halogen cable
- OS2 9/125 μ m duplex cable
- High quality ceramic ferrules connectors
- Each cable is individually bagged and labeled

HDPE Duct 25/21mm and Accessories (Optional)

- Suitable for underground/ground fiber optic installations
- Diameter: 25/21mm
- A draw rope provided in each HDPE duct
- Pre-lubricated

- HDPE pipe should be free from defects impairing its performance
- Colour: beige and uniform throughout
- Fittings and Accessories: high corrosion resistant, such as:
 - a) Stainless steel cable ties for securing duct with cable management
 - b) Hot dipped galvanized steel staples for securing ducts for riser or drops
 - c) Stainless Steel bolts
 - d) IP rated PVC enclosure boxes
- UV rated
- Impact resistant
- Suitable marking on the HDPE pipe to highlight (Fibre Optic Cable)
 - a) Labels suitable for harsh environment, durable, and water resistant
 - b) Labelling applied at regular intervals of not more than 10 meters
- Pipes joined tightly & properly through plastic couplers, with joints smooth and free from steps
- All joints assembled with proper tools only
- Irrigation pipes are not acceptable