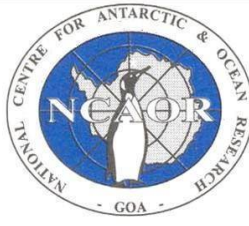


राष्ट्रीय अंटार्कटिक एवं
समुद्री अनुसंधान केन्द्र
पृथ्वी विज्ञान मंत्रालय
भारत सरकार
हेड लैंड सडा, वास्को डा गामा
गोवा- ४०३ ८०४ भारत



NATIONAL CENTRE FOR
ANTARCTIC & OCEAN RESEARCH

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PROCUREMENT SECTION

INDIGENOUS ENQUIRY

M/s.

Ref. No.:

PR-1359

Date:

14.10.2016

Due Date:

31.10.2016

Dear Sir,

You are requested to send your offer for the following items as per the terms and conditions mentioned below and in Annexure II.

SL. NO.	Description	Quantity
1.	24 Port Fiber Termination LIU Rack Mount (Technical Specifications as per Annexure-I)	02
2.	SC Pigtail Multi Mode 1 Meter (Technical Specifications as per Annexure-I)	24
3.	6U wall Mount Rack (Technical Specifications as per Annexure-I)	02
4.	Cat 6 24 Port Patch Panel (Technical Specifications as per Annexure-I)	02
5.	Cat 6 keystone Module (Technical Specifications as per Annexure-I)	24
6.	Face Plate (Technical Specifications as per Annexure-I)	24
7.	1 Meter Cat 6 Patch cord (Technical Specifications as per Annexure-I)	24
8.	2 Meter Cat 6 Patch cord (Technical Specifications as per Annexure-I)	24
9.	CAT6 UTP Cable 305M Box (Technical Specifications as per Annexure-I)	2 Box
10.	6 Core Multi Mode Armoured Fiber Cable (Technical Specifications as per Annexure-I)	500 Meter
11.	1000BASE-SX Mini Gigabit Interface Converter (Technical Specifications as per Annexure-I)	08
12.	SC-LC Fiber Patch Cord 3 Meter (Technical Specifications as per Annexure-I)	08
13.	SC Adapter Multi Mode	24
14.	1x12 SC Adapter Panel	04
15.	Surface Mount Box	24
16.	HDPE pipe 50 mm nylon Duct	250 Meter
17.	Laying and commissioning of OFC underground One Feet depth of 250 Meters	250 Mtr
18.	OFC Splicing	24 Core
19.	Fixing of 6U Network Rack	02

Your offer should contain the following information:

1. Validity period
2. Quantity / Trade discounts, if any.
3. Delivery Schedule.
4. Terms of Price.
5. Mode of Dispatch.
6. Taxes/VAT applicable with Full Rate/Percentage ('C' / 'D' form not available).
7. Indicate if Excise Duty included or extra and Rate/Not Applicable.
8. Specify Brand/Make Model of the item.
9. Warranty / Guarantee.

Yours faithfully,

Sd/-

**Executive (Procurement)
For and on behalf of Director, NCAOR**

Specifications for 24 Port Fiber Termination Rack Mount & Patch Cords

Sr. No-1 Technical Specifications

	Specifications
	Complete Aluminum housing, fully powder coated
	Rubber grommets are provided at the cable entry points, for tight sealing
	Should be 1U size, 24 port
	Proper space should be provided for service loops and to ensure minimum bend radius of the fiber.
	The LIU should be rack mountable
	Adapter should be SC type, multimode
	All SC adaptors should be Simplex or duplex type. Adapters should have compact design & high precision, which perform well under various circumstances & maintain good plug retention strength.
	SC Adapter Telcordia, TIA/EIA, IEC compliance
	Insertion Loss for Adapters should be 0.20db for Zirconia Sleeve
	Sleeve/Ferrule Withdrawal Force for SC Adapter should be 2.0N ~ 5.9N
	L.I.U should have adapter plates accordingly

Sr. No-2 Technical Specifications

	Specification
Connector Type	Multi mode SC -Style, Simplex
Operating temperature	-40 Degree C to +85 Degree C
Standard	Fully in compliance with JIS C5973 F04 Type.
Durability	(500 Mappings): < 0.2 dB Max
Ferrules	Pre-radius Ceramic Zirconia Ferrule. Bayonet Coupling: 2.5 mm Zirconia Ferrule
Attenuation	Not more than 0.75 dB per mated pair
Parameters / standard	Meets and exceeds ITU specifications, UL listed and 3rd Party RoHS compliant

Sr. No-3 Technical Specifications

	Specifications
Type of Rack	Wall Mount type
Rack Standard	Should confirm to DIN 41494 or Equivalent
Construction type	Should be Welded
Front door	Lockable front Glass door
Mounting Angle	19 inch mounting angle made of formed steel
Standard finish	Powder coated
PDU	Should have Power distribution unit of minimum 4 Sockets
Dimensions	Height : 347mm, Depth : 450mm and width: 550mm

Sr. No-4 Technical Specifications

Characteristic	Min. Required Specification
Features	Be made of powder coated steel, in 24 port configurations.
	Allow for a minimum of 200 re-terminations without signal degradation below standards compliance limit.
	Have port identification numbers on the front of the panel.
	Should have self adhesive, clear label holders (transparent plastic window type) and white designation labels with the panel, with optional color labels / icons.
	IDC: Suitable for 22-26 AWG stranded and solid wire compatible with both 110 & Krone punch down tools
	Each port / jack on the panel should be individually removable on field from the panel.
	Improved cable management with optional cable management bar
	The Cat-6 transmission performance is in compliance with the ANSI/TIA/EIA 568C.2 standard
Mechanical Characteristics	Plastic Housing: ABS , UL94V-0 rated
Jack Connector	Operating Life: Minimum 750 insertion cycles
	Contact Material: Copper Alloy
	Contact Plating: 50µ" Gold plated on plug contact area
	Contact Force: 20N max (IEC 60603-7-4)
	Plug Retention Force: 15 lb.
IDC Connector	Plastic Housing: Polycarbonate, UL94V-0 rated or equivalent
	IDC cap : ABS, UL 94V -0
	Contact Material: Copper Alloy
	IDC Contact Plating: Phosphor bronze with tin plated
	Insertion Force: 20N max (IEC 60603-7-4)
	Wire Accommodation: 22-26 AWG solid

Sr. No-5 Technical Specifications

The specification of UTP Jacks should be meet standards as specified below:		
i	Type	Unshielded Twisted Pair, Category 6, conform to ANSI/TIA/EIA-568-B.2 Category 6, CENELEC EN 50173 and ISO/IEC-11801 (2nd Edition) requirements.
ii	Modular Jack	750 mating cycles
iii	Wire terminal	200 termination cycles
iv	Accessories	Strain relief and bend-limiting boot for cable
v	Dust cover	Integrated hinged dust cover
vi	Housing	Poly-phenylene oxide, 94V-0 rated
vii	Wiring blocks	Polycarbonate, 94V-0 rated
viii	Jack contacts	Phosphorous bronze, plated with 1.27micro-meter thick gold
ix	Approvals	UL listed

Sr. No-6 Technical Specifications

The specification of faceplates (Work area will have face plate with back box and jacks)	
Standard	Conforms to CAT6 Work Area Data I/O Outlet (RJ45) adhering to EIA/TIA-568-B2.1, ISO/IEC 11801(2002) and CENELEC EN50173-1 (2002) specifications
Type	1-port or 2 -port, WhiteFace plate
Material	ABS / UL 94 V-0
No. of ports	One/ Two

Sr. No-7 Technical Specifications

Characteristic	Min. Required Specification
Features	Should be Category 6 Equipment cords of length 1m Grey in color
	The work area equipment cords shall, at a minimum comply with proposed ANSI/TIA/EIA-568-C.2 Commercial Building Cabling Standards Transmission Performance Specifications for 4 pair 100Ω Category 6 Cabling.
	Equipped with modular 8-position modular plugs on both ends, wired straight through with standards compliant wiring.
	Should have 50 micro inches of gold plating over nickel contacts.
	Should be covered by ETL verification program for compliance with TIA 568.C.2
Mechanical – Cable	Conductor size: 24 AWG stranded bare copper
	Max O.D.: 5.6mm (.22")
	Jacket: PVC UL-94V-O
Mechanical Characteristics – Plug	Temperature range: -10oC to +80oC
	Operating life: Minimum 750 insertion cycles
	Contact blade: Phosphor bronze
Electrical Characteristics – Plug	Contact plating: 50μ" Gold
	Dielectric withstanding voltage : 500 V AC
	Insulation resistance : 35 M Ohm (Max)
	Operating temperature: -10oC to 80oC

Sr. No-8 Technical Specifications

Characteristic	Min. Required Specification
Features	Should be Category 6 Equipment cords of length 2m Grey in color
	The work area equipment cords shall, at a minimum comply with proposed ANSI/TIA/EIA-568-C.2 Commercial Building Cabling Standards Transmission Performance Specifications for 4 pair 100Ω Category 6 Cabling.
	Equipped with modular 8-position modular plugs on both ends, wired straight through with standards compliant wiring.
	Should have 50 micro inches of gold plating over nickel contacts.
	Should be covered by ETL verification program for compliance with TIA 568.C.2
Mechanical – Cable	Conductor size: 24 AWG stranded bare copper
	Max O.D.: 5.6mm (.22")
	Jacket: PVC UL-94V-O
	Temperature range: -10oC to +80oC

Mechanical Characteristics – Plug	Operating life: Minimum 750 insertion cycles
	Contact blade: Phosphor bronze
	Contact plating: 50µ" Gold
Electrical Characteristics – Plug	Dielectric withstanding voltage : 500 V AC
	Insulation resistance : 35 M Ohm (Max)
	Operating temperature: -10oC to 80oC

Sr. No-9 Technical Specifications

Type	Unshielded twisted pair cabling system, TIA / EIA 568-B.1 addendum Category 6 Cabling system
Networks Supported	10 / 100 Ethernet, 155 Mbps ATM, 1000 Mbps IEEE 802.3ab Ethernet, and proposed Cat 6 Gigabit Ethernet
TIA / EIA 568-B.1	ETL Verified, UL and 3P certified - All three Certificates are mandatory
IEEE 802.3ab	Zero-bit Error, ETL verified
Warranty	25-year systems warranty; Warranty to cover Bandwidth of the specified and installed cabling system, and the installation costs
Performance characteristics to be provided along with bid	Attenuation, Pair-to-pair and PS NEXT, ELFEXT and PSELFEXT, Return Loss, ACR and PS ACR for 4-connector channel
Type	Unshielded Twisted Pair, Category 6, TIA / EIA 568-C.1
Conductors	23 AWG solid bare copper
Insulation	Polyethylene
Separator	Should be a cross Fluted filler. Any other filler type, like bi-directional strip would not be acceptable.
Jacket	Flame Retardant PVC
Approvals	UL and 3P Listed
	ETL verified to TIA / EIA Cat 6
Operating temperature	-20 Deg. C to +60 Deg. C
Frequency tested up to	600 MHz
Packing	Box of 305 meters
Delay Skew	25ns / 100m MAX.
Attenuation	22.8dB/100m at 250MHz (or less attenuation values)
Impedance	100 Ohms + / - 15 ohms
Performance characteristics to be provided along with bid	Attenuation, Pair-to-pair and PS NEXT, ELFEXT and PSELFEXT, Return Loss, ACR and PS ACR

Sr. No-10 Technical Specifications

	6 Core Multimode Fiber
1	Feature & Specification
	Fiber Shall be as per either of the standards ITU–T Rec. G.651; TIA/EIA/455-220; IEC 60973-2-10; ISO 14000 & 9001
	Optical Fiber cable Shall be of Multi Mode 50µ (OM2 Type), Unitube Armoured, gel-filled variety.
	Multimode fiber Shall have core of 50 microns, cladding of 125 microns and coating of 250 microns
	Cable Shall have 6 cores with distinguishing colours which shall comply MUNSSELL colour Standards (For EIA standard EIA-359-A or IEC Publication 304(4)
	Fiber Shall be suitable for operation at 1300/850nm wavelength. Operating temperature should be - 20 to +50°C

	fiber Shall be supporting bandwidth in excess of 500 Mhz/km. Should have Single HDPE jacket outside the corrugated steel tape
	Cable shall be Suitable for direct burial in ground.
	Cable Shall be laid in cable trays/pipes/tunnels/alone structures as required.
	Unitube Armoured Cable Shall consist of a Loose Tube containing upto 6 Fibers which Shall be wrapped with Corrugated steel tape and Polyethylene outer sheath shall be applied over corrugated steel tape. Diameter of the cable shall 8.6mm (Nominal).
	Cable shall meet all international standards.

Sr. No-11 Technical Specifications

Module (Multi-Mode Fiber Transceiver)	
Feature	
1	1000 Base-SX port (IEEE 802.3z standard)
2	Duplex LC connector
3	Full Duplex operation
4	802.3x flow control support
5	Fiber type: 50um or 62.5um multi-mode fiber up to 550m
6	Wave length: 850nm
7	Power support: 3.3V
8	Hot Pluggable
9	Class 1 laser product complies with EN 60825-1
10	TTL signal detect indicator
11	Metal enclosure for lower EMI

Sr. No-12 Technical Specifications

Specification	
Cable type	SC-LC type MM
Fiber type	Multi Mode 50 micron primary coated buffers
No of cores	2 Cable construction Type PVC outer jacket
Minimum Cable Retention Strength	1.6mm: 11.24 lbs (50 N)
Operating Temperature	-40 Degree to + 60 Degree
Length	3 meter

PURCHASE ENQUIRY – GENERAL TERMS AND CONDITIONS

1. This quotation and any order resulting from this Enquiry shall be governed by Terms and Conditions mentioned in this enquiry.
2. Where counter terms and conditions of business have been offered by this supplier, we shall not be deemed to be governed by these unless our specific written/ acceptance there of has been given.
3. No conditions and terms notice of which has not been given by the Supplier while submitting quotation will be considered by us if put forward in subsequent correspondence.
4. **Quotation:** Quotation should be submitted in a sealed envelope super scribed with Enquiry Number and Due Date and the same must reach our office on or before the Due Date. Quotations should preferably be typed and without any corrections and over writings.
5. **Specifications:** Materials should be offered strictly conforming to our specification. The deviation in specification if any should be clearly indicated by the supplier in his quotation. The supplier should also indicate make/type No. of the materials offered. Vague terms such as Best Indian, Best Indigenous. Imported Make should not be used.
6. The rate quoted against each should be in units stated in the Enquiry. Where quotations are in terms of units other than those specified, relationship between the two sets of units must be furnished.
7. **Samples:** Samples where asked for shall be submitted, free of all charges and should reach us before the Due Date of the Enquiry. Sample must be carefully packed and labeled clearly with enquiry No. & due date. We shall not be responsible in any way for the loss or damage of samples due to any reasons whatsoever. In the event of the non-acceptance of offer, supplier will have to remove the samples at his own expenses.
8. **Terms of prices:** Quotation should be submitted on F.O.R. Vasco or F.O.R. Destination price including transit Insurance. Preference will be given to such quotations. For quotations Ex-Works, Ex-godown/F.O.R. Dispatching Station, the approximate packing, forwarding & freight should be indicated by the supplier. Quotations from Local Suppliers should be delivered at our stores.
9. **Validity:** The quotation should remain valid for a minimum period of 90 days from the Due Date of the Enquiry.
10. **Sales Tax: NCAOR is not entitled to issued Form C or D.** No Sales Tax or any other tax shall be payable by us unless payment of the same is specifically mentioned by the suppliers in their quotation and same is legally leviable.
11. **NCAOR is exempted from payment of Excise duty / Custom duty as per Government notification hence the rate should be split into Basic Cost and Excise Duty, if any.**
12. **Duties / Taxes:** Approximate percentage to be charged should be clearly mentioned in the quotation.
13. **Insurance:** The supplier will be responsible for and should cover the insurance for all transit risks if the terms of prices are F.O.R. Vasco or F.O.R. Destination unless otherwise stated specifically by the supplier in his quotation.
14. **Delivery:** Preference will be given to Ex-Stock offers Suppliers submitting quotation on forward delivery basis must indicate earliest firm delivery date by which the materials will be dispatched by them from the date of receipt of order. Offer such as "Ex-stock Subject to prior Sale" or "Delivery at the earliest" may not be entertained.
15. **Inspection:** Material on its arrival at our site will be inspected by our Inspection Department and their decision in the matter will be considered final and binding on the Supplier.
16. **Payment:** Payment for accepted quantity will be made as agreed to while placing order. Discount, Rebate, if any, for early Payment should be clearly stated.
17. Director NCAOR reserves the right to reject any or all the offers received or to accept any offer wholly or in a part of order of a lesser quantity without assigning any reason. The tenders shall be bounded to execute such an order.
18. In case the supplier does not deliver the goods according to the delivery schedule, he will be liable to pay 0.5% of the value of the goods not delivered according to schedule, as liquidated damages for delay of week or party thereof subject to maximum 5% of the value of goods not delivered, without prejudice to the right of NCAOR
19. In case an order placed by the NCAOR based on the quotation submitted by the supplier is not executed by him, the NCAOR may buy the ordered goods from elsewhere and recover, the additional amount if may have to spend in procuring the stores plus 10% to cover the incidental expenses.
20. All disputes arising in connection with executing the purchase order will be subject to the Jurisdiction of the Courts in Goa only.

Sd/-
Executive Procurement
For and on behalf of Director, NCAOR