



Bid Number/बोली क्रमांक (बिड संख्या): GEM/2024/B/51539

Dated/दिनांक : 16-07-20

Bid Document/ बिड दस्तावेज़

Bid Details/बिड विवरण	
Bid End Date/Time/बिड बंद होने की तारीख/समय	13-08-2024 11:00:00
Bid Opening Date/Time/बिड खुलने की तारीख/समय	13-08-2024 11:30:00
Bid Offer Validity (From End Date)/बिड पेशकश वैधता (बंद होने की तारीख से)	180 (Days)
Ministry/State Name/मंत्रालय/राज्य का नाम	Ministry Of Defence
Department Name/विभाग का नाम	Department Of Military Affairs
Organisation Name/संगठन का नाम	Indian Air Force
Office Name/कार्यालय का नाम	*****
Total Quantity/कुल मात्रा	1
Item Category/मद केटेगरी	LAYING OF JFC-OFC CABLE WITH ACCESSORIES
Minimum Average Annual Turnover of the bidder (For 3 Years)/बिडर का न्यूनतम औसत वार्षिक टर्नओवर (3 वर्षों का)	50 Lakh (s)
Years of Past Experience Required for same/similar service/उन्हीं/समान सेवाओं के लिए अपेक्षित विगत अनुभव के वर्ष	3 Year (s)
MSE Exemption for Years Of Experience/अनुभव के वर्षों से एमएसई छूट/	Yes
Startup Exemption for Years Of Experience/अनुभव के वर्षों से स्टार्टअप छूट/	Yes
Document required from seller/विक्रेता से मांगे गए दस्तावेज़	Experience Criteria,Past Performance,Bidder Turnover,Certificate (Requested in ATC),Additional Doc 1 (Requested in ATC),Additional Doc 2 (Requested in ATC),Additional Doc 3 (Requested in ATC),Additional Doc 4 (Requested in ATC),Compliance of BoQ specification and supporting document *In case any bidder is seeking exemption from Experience / Turnover Criteria, the supporting documents to prove his eligibility for exemption must be uploaded for evaluation by t buyer
Past Performance/विगत प्रदर्शन	10 %
Bid to RA enabled/बिड से रिवर्स नीलामी सक्रिय किया	Yes
RA Qualification Rule	H1-Highest Priced Bid Elimination

Bid Details/बिड विवरण

Annual Maintenance Charges Required	Yes
Type of Bid/बिड का प्रकार	Two Packet Bid
Time allowed for Technical Clarifications during technical evaluation/तकनीकी मूल्यांकन के दौरान तकनीकी स्पष्टीकरण हेतु अनुमत समय	2 Days
Inspection Required (By Empanelled Inspection Authority / Agencies pre-registered with GeM)	No
Evaluation Method/मूल्यांकन पद्धति	Total value wise evaluation
Financial Document Required/वित्तीय दस्तावेज की आवश्यकता है।	Yes

EMD Detail/ईएमडी विवरण

Advisory Bank/एडवाइजरी बैंक	State Bank of India
EMD Amount/ईएमडी राशि	562496

ePBG Detail/ईपीबीजी विवरण

Advisory Bank/एडवाइजरी बैंक	State Bank of India
ePBG Percentage(%) / ईपीबीजी प्रतिशत (%)	5.00
Duration of ePBG required (Months) / ईपीबीजी की अपेक्षित अवधि (महीने).	38

(a). EMD EXEMPTION: The bidder seeking EMD exemption, must submit the valid supporting document for the relevant category as per GeM GTC with the bid. Under MSE category, only manufacturers for goods and Service Providers for Services are eligible for exemption from EMD. Traders are excluded from the purview of this Policy./जेम की शर्तों के अनुसार ईएमडी छूट के इच्छुक बिडर को संबंधित केटेगरी के लिए बिड के साथ वैध समर्थित दस्तावेज प्रस्तुत करने हैं। एमएसई केटेगरी के अंतर्गत केवल वस्तुओं के लिए विनिर्माता तथा सेवाओं के लिए सेवा प्रदाता ईएमडी से छूट के पात्र हैं। व्यापारियों को इस नीति के दायरे से बाहर रखा गया है।

(b). EMD & Performance security should be in favour of Beneficiary, wherever it is applicable./ईएमडी और संपादन जमानत जहां यह लागू होती है, लाभार्थी के पक्ष में होनी चाहिए।

Beneficiary/लाभार्थी :

AOC, 43WG, AF

AIR FORCE STATION SULUR COIMBATORE 641401, Department of Military Affairs, Indian Air Force, Ministry of Defence (Air Force Public Fund Accounts)

Splitting/विभाजन

Bid splitting not applied/बोली विभाजन लागू नहीं किया गया.

MII Purchase Preference/एमआईआई खरीद वरीयता

MII Purchase Preference/एमआईआई खरीद वरीयता	Yes
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MSE Purchase Preference/एमएसई खरीद वरीयता

MSE Purchase Preference/एमएसई खरीद वरीयता	Yes
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1. If the bidder is a Micro or Small Enterprise as per latest definitions under MSME rules, the bidder shall be exempted from the requirement of "Bidder Turnover" criteria and "Experience Criteria" subject to meeting of quality and technical specifications. If the bidder is OEM of the offered products, it would be exempted from the "OEM Average Turnover" criteria also subject to meeting of quality and technical specifications. In case any bidder is seeking exemption from Turnover / Experience Criteria, the supporting documents to prove his eligibility for exemption must be uploaded for evaluation by the buyer.

2. If the bidder is a Startup, the bidder shall be exempted from the requirement of "Bidder Turnover" criteria and "Experience Criteria" subject to their meeting of quality and technical specifications. If the bidder is OEM of the offered products, it would be exempted from the "OEM Average Turnover" criteria also subject to meeting of quality and technical specifications. In case any bidder is seeking exemption from Turnover / Experience Criteria, the supporting documents to prove his eligibility for exemption must be uploaded for evaluation by the buyer.

3. The minimum average annual financial turnover of the bidder during the last three years, ending on 31st March of previous financial year, should be as indicated above in the bid document. Documentary evidence in the form of certified Audited Balance Sheets of relevant periods or a certificate from the Chartered Accountant / Cost Accountant indicating the turnover details for the relevant period shall be uploaded with the bid. In case the date of constitution incorporation of the bidder is less than 3-year-old, the average turnover in respect of the completed financial years as of the date of constitution shall be taken into account for this criteria.

4. Experience Criteria: In respect of the filter applied for experience criteria, the Bidder or its OEM {themselves or through reseller(s)} should have regularly, manufactured and supplied same or similar Category Products to any Central / State Govt Organization / PSU for number of Financial years as indicated above in the bid document before the bid opening date. Copies of relevant contracts to be submitted along with bid in support of having supplied some quantity during each of the Financial year. In case of bunch bids, the category of primary product having highest value should meet this criterion.

5. Preference to Make In India products (For bids < 200 Crore): Preference shall be given to Class 1 local supplier as defined in public procurement (Preference to Make in India), Order 2017 as amended from time to time and its subsequent Orders/Notifications issued by concerned Nodal Ministry for specific Goods/Products. The minimum local content to qualify as a Class 1 local supplier is denoted in the bid document. If the bidder wants to avail the Purchase preference, the bidder must upload a certificate from the OEM regarding the percentage of the local content and the details of locations at which the local value addition is made along with their bid, failing which no purchase preference shall be granted. In case the bid value is more than Rs 10 Crore, the declaration relating to percentage of local content shall be certified by the statutory auditor or cost auditor, if the OEM is a company and by a practicing cost accountant or a chartered accountant for OEMs other than companies as per the Public Procurement (preference to Make-in -India) order 2017 dated 04.06.2020. Only Class-I and Class-II Local suppliers as per MII order dated 4.6.2020 will be eligible to participate. Non - Local suppliers as per MII order dated 04.06.2020 are not eligible to participate. However, eligible micro and small enterprises will be allowed to participate. The buyers are advised to refer the OM No.F.1/4/2021-PPD dated 18.05.2023. [OM No.1 4 2021 PPD dated 18.05.2023](#) for compliance of Concurrent application of Public Procurement Policy for Micro and Small Enterprises Order, 2012 and Public Procurement (Preference to Make in India) Order, 2017

6. Purchase preference will be given to MSEs having valid Udyam Registration and whose credentials are validated online through Udyam Registration portal as defined in Public Procurement Policy for Micro and Small Enterprises (MII Order, 2012 dated 23.03.2012 issued by Ministry of Micro, Small and Medium Enterprises and its subsequent Orders/Notifications issued by concerned Ministry. If the bidder wants to avail themselves of the Purchase preference, the bidder must be the manufacturer / OEM of the offered product on GeM. Traders are excluded from the purview of Public Procurement Policy for Micro and Small Enterprises and hence resellers offering products manufactured by some other OEM are not eligible for any purchase preference. In respect of bid for Services, the bidder must be the Service provider of the offered Service. Relevant documentary evidence in this regard shall be uploaded along with the bid in respect of the offered product or service and Buyer will decide eligibility for purchase preference based on documentary evidence submitted, while evaluating the bid. If L-1 is not an MSE and MSE Seller (s) has / have quoted price within L-1 15% (Selected by Buyer) of margin of purchase preference /price band defined in relevant policy, such MSE Seller shall be given opportunity to match L-1 price and contract will be awarded for 25% (selected by Buyer) percentage of total

quantity. The buyers are advised to refer the OM No. F.1/4/2021-PPD dated 18.05.2023

[OM No.1_4_2021_PPD_dated_18.05.2023](#) for compliance of Concurrent application of Public Procurement Policy for Micro and Small Enterprises Order, 2012 and Public Procurement (Preference to Make in India) Order, 2017. Benefits MSE will be allowed only if seller is validated on-line in GeM profile as well as validated and approved by Buyer after evaluation of documents submitted.

7. Past Performance: The Bidder or its OEM {themselves or through re-seller(s)} should have supplied same or similar Category Products for 10% of bid quantity, in at least one of the last three Financial years before the bid opening date any Central / State Govt Organization / PSU. Copies of relevant contracts (proving supply of cumulative order quantity any one financial year) to be submitted along with bid in support of quantity supplied in the relevant Financial year. In case of bunch bids, the category related to primary product having highest bid value should meet this criterion.

8. Reverse Auction would be conducted amongst all the technically qualified bidders except the Highest quoting bidder. The technically qualified Highest Quoting bidder will not be allowed to participate in RA. However, H-1 will also be allowed to participate in RA in following cases:

- If number of technically qualified bidders are only 2 or 3.
- If Buyer has chosen to split the bid amongst N sellers, and H1 bid is coming within N.
- In case Primary product of only one OEM is left in contention for participation in RA on elimination of H-1.
- If L-1 is non-MSE and H-1 is eligible MSE and H-1 price is coming within price band of 15% of Non-MSE L-1
- If L-1 is non-MII and H-1 is eligible MII and H-1 price is coming within price band of 20% of Non-MII L-1

Pre Bid Detail(s)

Pre-Bid Date and Time	Pre-Bid Venue
29-07-2024 10:00:00	COMN & IT SECTION, AIR FORCE STATION SULUR, COIMBATORE (TAMIL NADU) - 641401

LAYING OF JFC-OFC CABLE WITH ACCESSORIES (1 pieces)

(Minimum 40% and 20% Local Content required for qualifying as Class 1 and Class 2 Local Supplier respectively/क्रमशः श्रेणी 1 और श्रेणी 2 के स्थानीय आपूर्तिकर्ता के रूप में अर्हता प्राप्त करने के लिए आवश्यक)

Technical Specifications/तकनीकी विशिष्टियाँ

Buyer Specification Document/क्रेता विशिष्टि दस्तावेज़	Download
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Annual Maintenance	
Warranty of required product	3 Year
Annual Maintenance Charges Duration (Post Warranty)	7 Year
Annual Maintenance Charges Frequency	Annually

*Warranty displayed under the AMC/CMC Details section will supersede the warranty displayed under the catalog specification

Consignees/Reporting Officer/परेषिती/रिपोर्टिंग अधिकारी and/ तथा Quantity/मात्र

S.No./क्र.सं.	Consignee Reporting/Officer/परेषिती/रिपोर्टिंग अधिकारी	Address/पता	Quantity/मात्र	Delivery Days/डिलीवरी : दिन
1	*****	*****Coimbatore	1	120

Buyer added Bid Specific Additional Scope of Work

S.No.क्र.सं.	Document Title	Description	Applicable/रिवर्स प्रभार के अनुसार जीएसटी i.r.o. Items
1	PROCUREMENT AND LAYING OF UNARMOURED JFC 50 PAIR(03KMS), 20 PAIR (6KMS) AND UNARMOURED OFC 48 CORE (08KMS) &12 CORE (20KMS) WITH COMPLETE ACCESSORIES AT 43 WG View	The complete scope of work for the said project is uploaded. the project is carried out as per the scope of work and other terms and conditions uploaded.	LAYING OF JFC-OFC CABLE WITH ACCESSORIES(1)

The uploaded document only contains Buyer specific Additional Scope of Work and / or Drawings for the bid items added w due approval of Buyer's competent authority. Buyer has certified that these additional scope and drawings are generalized would not lead to any restrictive bidding.

Buyer Added Bid Specific Terms and Conditions/क्रेता द्वारा जोड़ी गई बिड की विशेष शर्तें**1. Generic**

OPTION CLAUSE: The Purchaser reserves the right to increase or decrease the quantity to be ordered up to 25 percent of bid quantity at the time of placement of contract. The purchaser also reserves the right to increase ordered quantity by up to 25% of the contracted quantity during the currency of the contract at the contract rates. Bidders are bound to accept the orders accordingly.

2. Buyer Added Bid Specific ATC

Buyer Added text based ATC clauses

PART- II**ESSENTIAL DETAILS OF ITEMS/SERVICES REQUIRED**

1. **Schedule of Requirements (OFC).** Requirements for Procurement and Laying of unarmoured OFC (48 Core (08kms) & 12 Core (20kms) With Complete accessories at 43 Wg, AF is as under: -

Sl No	Project	Qty	UOM
01	48 Core OFC	8000	Mtr
02	12 Core OFC	20000	Mtr
03	HDPE Pipe	24000	Mtrs
04	48 port Fully loaded FDF	10	Nos
05	12 port fully loaded FDF	30	Nos
06	Splicing	1000	Nos
07	Manhole Chamber	05	Nos
08	Casing & Laying for indoor cabling	500	Mtrs
09	Concrete Route Marker	100	Nos
10	GI Pipe (4") under road crossing	140	Mtrs
11	Manual Road crossing	140	Mtrs
12	HDD for Runway Link crossing	100	Mtrs
13	Manual digging, Trenching and closing 1.65 Mtrs depth	24000	Mtrs

SPECIFICATIONS OF THE ITEM/SERVICES I/R/O OFC FOR UPLOADING ON GeM

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2. **48 / 12 CORE OFC:** The 12F/48F Fiber Optic Cable must be compliant with ITU-T recommends G.652 characteristics of 9.5/125-micrometer single mode optical fiber cables. Manufacturing date of cable supplied is not more than six months from the date of supply. The OFC will be purchased from DoT/BSNL approved suppliers only. In addition, the cable should have the following specification requirements: -

- (a) All fibers shall be colored, single mode, double window (1310/1550nm) composite design with p index suitable for DWDM and campus LAN operations.
- (b) The Fiber Optic Cable shall be suitable for direct burial in the ground.
- (c) Physical makeup of the supplied fiber optical cables shall include single mode fibers with composite coating on each fiber, loose tube configuration, color coded buffer tubes, a non-metallic central strength member, filled core, a polyethylene inner jacket and a protective outer jacket.
- (d) Physical makeup of the supplied fiber optical cable shall include but not limited to the following
 - (i) Should have loose tube configuration with the following specifications:
 - Must be made of hard abrasion resistant compound.
 - Must provide mechanical and environmental protection of the optical fibers
 - Must be of appropriate quantity to accommodate optical fiber requirements

Must be individually color-coded.

- (ii) Outer jacket shall be resistant to crude oil, petrochemicals and its derivatives and be on black in color for protection against ultraviolet radiation.
- (iii) Should have single mode fibers with composite coating on each fiber.
- (iv) Should have color coded buffer tubes.
- (v) The central strength member shall be of KEVLAR with polyethylene overcoat, or dielec glass fiber reinforced plastic.
- (vi) Water-blocking compound shall be provided within the interstices of the grooves. The pound shall be non-conducting, non-toxic, non-nutrient to fungus and rodent resistant.

(e) **Optical fiber must meet following technical specifications**

- (i) Type of Fiber: Made of single mode, high-grade silica glass; Cores doped with germani and covered individually and tightly with UV acrylate. The interstices in the cable core shall b ed with jelly compound for moisture protection.
- (ii) Size of Fiber: 9.5/125 micrometer (9.5 +/- 10 % micrometer /125 +/- 10 % micrometer
- (iii) Operating wave length: 1310/1550 nm (double window).
- (iv) Attenuation at 1310 nm: Less than 0.36 dB/Km maximum.
- (v) Attenuation at 1550 nm: Less than 0.22 dB/Km maximum.
- (vi) Max. Dispersion loss over the range: Less than 3.5 ps/(nm x km) at 1310 nm and less n 18 ps/(nm x km) at 1550 nm.
- (vii) Cut off wavelength: 1260 nm Max.
- (viii) Fiber mode diameter: 9.5 \pm 3% micrometers.
- (ix) Fiber outer diameter: 125 \pm 1.0 micrometers.
- (x) Fiber protective coating diameter: 250 micrometers with mini m coating thickness of 40 micrometers.
- (xi) Optical bandwidth of fibers: 1.2 GHz/km minimum.
- (xii) Each fiber to be individually color coded.
- (xiii) No. of Fibers/cable: 04 & 48.
- (xiv) No. of tubes:2&6.
- (xv) No. of Fibers/tube: N/A &8.

(f) Mechanical Characteristics: The fiber must meet following mechanical characteristics:

- (i) The cable shall be capable of withstanding a pulling load (tension) of at least up to 25 ewtons upon and after installation.
- (ii) The allowable bending radius for the cable shall be 10 times the outer diameter.
- (iii) The cable shall have a minimum resistance of 344 lb/sq. inch (600 Newtons/sq. cm.) a st any crushing load.
- (iv) The operating temperature range shall be -10° C to 60° C.

(g) Cable Reel: The optical fiber cable reel must comply with following qualitative requirements:

- (i) The fiber optic cable to be supplied by Contractor shall be coiled on cable reels of mir m 1 Kilometer lengths. Each cable end shall be secured in order to withstand all conditions of sportation. Any damage during transportation due to poor packing will be sole responsibility o ntractor.

(ii) The cable shall be delivered on a reel with both ends accessible for testing purposes. Winding of the cable shall be possible without the need to unwind more than 2 meters of cable. The cable ends shall be suitably sealed to avoid the ingress of moisture. Also the cable ends shall be protected to avoid any damages to fibers.

(iii) Both flanges of each cable reel shall be distinctly marked with the following.

- Manufacturer's name and country of origin with detailed address.
- Purchase order number with date of placement of order.
- A short description of the cable stating the type and the number of fibers.
- The cable length in meters.
- A unique drum identification number.
- The weight of the drum both net and gross.

(iv) At the time of inspection in Contractor's storage area, if any cable reel of cable is found or is suspected to be damaged in any way, Contractor in the presence of the Company shall test the entire length of the cable on the reel. If the test results are not satisfactory, the entire length of the cable shall be rejected. No visible defect on the cable sheath shall be permitted.

Tech Parameters and Compliance Sheet other than OFC

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3. **HDPE Pipe:** The HDPE pipe used for laying of Optical fiber must be compliant to following specifications: -

- (a) Outer diameter: 40mm
- (b) Thickness: 3.5 mm
- (c) Co-efficient of friction: <0.1
- (d) Blowing Pressure: upto 10 Bar
- (e) Environmental stress crack resistance: As per TSM D-1693
- (f) Crush resistance test: As per TEC/GR/FA/CDS-008/04/Aug-19.
- (g) Internal pressure creep rupture test: 18hrs at 80° C as per IS 4984-1995.
- (h) Impact resistance test: No crack or split as per IS-122295 (Part 9) – 1995.
- (j) Reversion test: less than 3% as per IS-4984 – 1995.

4. **Man Hole:** The man hole/joint chambers shall be made of pre-cast RCC type and as per following specifications and must comply with the architectural diagram placed below:

- (a) The height of the manhole must be at least 1.22m.
- (b) All components must be made of M-30 grade concrete using vibro compaction process.
- (c) Each ring of the manhole must be reinforced with 2 nos. 8mm dia tor steel rings and 8mm dia bars at 150 mm cc along the periphery.
- (d) The cover shall be double reinforced with 8mm dia tor steel at 10mm c/c in the first plane and 16mm dia tor steel at 50 mm cc in the second plane.
- (e) The cover also consists of a 2mm thick ms sheet at the outer periphery and 2 nos. 16mm dia lifting hooks. Both the MS sheet and lifting hooks are to be dip galvanized to ensure

long life.

- Requirement of training/on-job training -N/A
- Requirement of installation/commissioning -Yes
- Requirement of Technical documentation - Yes
- Nature of assistance required on Completion of warranty
nce and - Mainte
- ult rectification
- Requirement of pre-site/equipment inspection -Yes
- Any other details, as considered necessary -N/A

5. **Enclosure:** The OFC will be terminated properly at Joint enclosures char
rs with proper labeling for easy identification of pairs. Entry and exit points of OFC
ide building are to be carried out properly in terms of safeguarding the cable.

6. **Concrete Route Marker(CRM):**

(a) Concrete markers of milestone shape (as per Figure below) to be deployed along the cable pat
an interval of every 200-300mtrs. All cable markers shall be painted in orange color. Vendor shall writ
e following on the cable marker using black enamel paint. Height of each letter should be at least 4

- (i) Engraved Marking of "AFNET OFC"/ "CIAS OFC"
- (ii) Type of OFC
- (iii) Route (From / To)
- (iv) Date of Installation& Route marker number

(b) The OFC route marker / joint marker should be so placed that they di
ot get displaced / damaged in course of normal development plan of the sta
n. Also the markers should be away from traffic routes. Following places on t
cable route must have marker:

- (i) All bends in the OFC route
- (ii) Road/Bridge/Culvert or crossing
- (iii) Cable Joints

- (iv) Crossing of sewage system/underground electrical wire

7. **LIU's for termination of OFC with installation:** The LIU should support following specifications:-

- (a) Should accept SC type Adaptors.
- (b) Should have snap-in sub modules with 48 single fiber or 24 dual fiber ports. One 48 core single mode fiber will be terminated per LIU.
- (c) Should have integrated fiber splicing trays for termination of outdoor single mode fiber. The LIU should be supplied with cable glands and other required accessories for routing of outdoor single mode fiber.
- (d) Should have knockouts at the rear to enable termination of loose tube or tight buffered cables as well as blown fiber tubes.
- (e) Should be slide able and should have tamper proof positive locking mechanism by means of clips supplied as standard with each unit.
- (f) Should be made up of polycarbonate, PC/ABS or metal sheet.
- (g) Should meet EN50173 and ISO/IEC 11801 operating specifications.

8. **Digging, laying and trenching of OFC:** All laying will be strictly per DoT/BSNL standards. Cable will be laid underground by the vendor by excavating trenches 1.65 mtrs deep and 1 ft wide. The cable will be laid in the trench after putting 6 inches of sand and again 6 inches sand will be put on top of the cable. Then a layer of bricks will be laid breadth wise and thereafter backfilling of trenches ensuring leveling with respect to surrounding area will be carried out. Wherever it is not feasible to follow DoT/BSNL standards due to hostile terrain, laying standards will be decided by SCITO, Air Force Station Sular and will be binding on the vendor. Vendor is required to be liaising with MES/Various other authorities for requisite permission for the laying of the cable. However, SCITO, Air Force Station Sular will provide help in liaison process. Vendor will carry out joint testing of the cable along with the rep of Air Force Station, Sular to ensure that the test result confirm to the specifications. The following tests will be carried out for all the OFC in each drum and signed by representative of Air Force Station, Sular and vendor and the report is to be submitted to Air Force Station, Sular.

- (a) OTDR report
- (b) Attenuation test
- (c) Electronic route marker test

Testing after laying will be done as has been laid down by DoT/BSNL, for individual type of OFC. Two copies of test report containing test report of each core will be prepared and handed over duly bound. Test equipment required for testing will be provided by the vendor without any charges to the customer. Test reports of the OFC and accessories from OEM have to be provided along with supply of the stores. All joints in OFC will be properly spliced so that there is no loss / deterioration in specifications at laying of the cable. On successful laying of the cable, the vendor is required to submit the detailed document of the project in two copies (Hard Bound) mentioning the following aspects. The line diagrams should be neatly prepared by a reputed draftsman. Please note that handing over of the document by vendor is the pre-requisite for issuance of acceptance certificate by the user and it is non-negotiable.

- (a) Route Diagrams of the OFC.
- (b) Details of the testing points.

- (c) Termination details at man hole.
- (d) Joint Test report in respect of all tests

9. Fiber Optic Media Converter : Black box media converters enable to connect standard pair networks or devices to fiber optic networks links. This allows to transfer a secure, high speed fiber optic cable. The fiber optic media converter should support following specifications: -

- (i) Description:- Convert 1000 Base-T to 1000 Base-Lx.
- (ii) Fiber wavelength:- 1310 nm
- (iii) Mode :- Single mode
- (iv) Ports :- One RJ-45 and two fiber port (SC type connector)
- (v) Max Distance:- 10 Km
- (vi) Operating Voltage:- DC +5V or AC 240 V
- (vii) Network speed:- 1000 Mbps.
- (viii) Operating Temp:- 0° C to 70° C

10. FDF (48 and 12 port SC connector); - Rack mountable FDF with Sliding mechanism makes easy for fiber splicing & maintenance after installation of device in rack. The unit provides termination interface for incoming and outgoing fiber an compact system design makes easy installation of the unit anywhere. FDF must meet the following specifications: -

- (a) Fiber termination module: SC adapter
- (b) OFC pigtail: 48/12 core SC type
- (c) Cable entry from rear side
- (d) Stackable splice tray facilitates for 48/12 fibers
- (e) Interface : SC Type
- (f) External dimensions: in mm
 - (i) Width: 19" rack mountable (485mm)
 - (ii) Height: 1U (44.5mm)
 - (iii) Depth: 300mm
 - (iv) Enclosure material: CRCA 1.6mm
 - (v) Powder coating thick: 65 to 85 microns
 - (vi) Finish & color: texture / Siemens Gray

11. Patch/pigtailcord with square connector (SC):- A fiber patch cord is a single, short usually tight – buffered fiber optic cable with a factory installed connector on both side. High quality fiber patch cord combined with correct fusion splicing practices offer the best performance for fiber optic cable termination. SC abbreviated subscriber connector has also been referred to as square connector. It is a popular fiber optic connector due to its low cost, durability and simple installation for both point to point and passive optical networking. SC patch cord are consists of 9/125 micron multimode single mode fiber optic connector at both ends. Fiber optic patch cords are used to achieve accurate mounting for precision alignment of fiber optical components. The fiber patch cord are usually used with fiber optic management equipment like ODF with end equipment.

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Specification:-

Patch cord connectors : SC – SC type

Channels : Duplex

Precision : Single-mode

Cable Type : LSZH 0.9mm

Working Temperature - 40C-85C

Optical Specification

Insertion Loss : Typical: 0.2dBm Max 0.3dB MTRJ : Max. 0.5Db

Return Loss : Length : 10 mtr

12. **Road crossing using HDD method**: - On roadcrossings, the HDPE Pipe B Blowing Type/Pre-installed ropes shall be laid a depth 165 cm. Encased with R pipe. The RCC pipes shall be extended 3 meters on either side of the road. At road ssings, two or more extra HDPE Pipe/PLB Blowing Type/Pre-installed ropes shall be d as per direction of Site in-charge.

13Schedule of Requirements

JFC project 50 Pair (0.5mm) unarmoured 3 KM

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Sl No	Project	Qty	UOM
01	50 Pair (0.5 mm) Jelly Filled UG Cable	3000	Mtr
02	Jointing Kit 50 Pair-TSF-2 Type	4	Nos
03	Krone Type Piller Box with Jumpering facility (100 Pair)	4	Nos
04	Concrete Route marker	30	Nos
05	Cable Joint Marker	4	Nos
06	Road Crossing (GI Pipe)	100	Mtr
07	Krone Type DP Box 100 Pair	4	Nos
08	Manual digging, Trenching and closing (5 feet depth) alongwith sand and bricks	2980	Mtrs

09	HDD Digging and trenching (5 Ft)	100	Mtrs
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JFC project 20 Pair (0.5mm) unarmoured 6 KM

SI No	Project	Qty	UOM
01	20 Pair (0.5 mm) Jelly Filled UG Cable	6000	Mtr
02	Jointing Kit 20 Pair-TSF-1 Type	6	Nos
03	Krone Type Piller Box with Jumping facility (20 Pair)	10	Nos
04	Concrete Route marker	60	Nos
05	Cable Joint Marker	6	Nos
06	Krone Type DP Box 100 Pair	8	Nos
07	Manual digging, Trenching and closing (5 feet depth) along with sand and bricks	5950	Mtrs

Technical Details

14 **Tech Parameters of JFC** - The specifications of the UG cable are governed by TEC specification No. GR/CUG-01/03 Aug 2003 and its latest amendments issued by Deptt of Telecom (DoT), Telecom Engg centre Jan path New Dehli. In case of any doubt, the said DoT publication will be treated as authority. It will be ensured that the manufacturing date of UG cable supplied is not more than six months from the date of supply. The UG cable will be purchased from SNL approved suppliers only. In addition the cable should have the following specifications:

SI No	Parameter	Specification required
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(a)	Conductor Dia	0.5 mm
(b)	Individual Conductor resistance (per Kilometer in Ohms)	86±4
(c)	Conductor Resistance Unbalance (%)	
	Individual	2%
	Average	1%
(d)	Conductor Elongation (minimum %)	18%
(e)	Attenuation(Db/Km) at 150 KHz	6.3
(f)	Insulation	Solid(MDPE/HDPE)/ Foam
(g)	Spark Test (1 spark per 5 km)	3 KV RMS AC
(h)	Retraction of Insulation (shall not exceed)	2.5 mm after 1 min
(j)	Resistance to Compression	200 N, 12 V DC
(k)	Insulation resistance at 500V	5000 mega Ohm per km
(l)	Filling compound	Water Resistant Compound (Pet Jelly)
(m)	Core wrap	Polyester tape or better
(n)	Moisture barrier	Poly aluminum or better
(o)	Sheath / Jacket	LDPE
(p)	Far End Cross talk(db) at 150 KHz	Better than 67.8 RMS, individual 5 RMS
(q)	Near End Cross talk(db) at 150 KHz	Better than 55 RMS (individual value)
(r)	Manufacturing Date	Should not be older than six months from date of supply
(s)	Make & Brand	ISI 9001/14001
(t)	Life of the Product	Min 20 Years

Tech Parameters and Compliance Sheet other than JFC

15. **Brief Details of the Project and services required.** New infrastructure on the southern side of runway. There is an essential requirement of procurement and laying of UG cable/ OFC to these new buildings for extending internet (through CIAS legacy and Analog (AVG) phones to these new buildings/sections so as to cater for routine operational and administrative requirements. The vendor may inspect the geography of the project area before submitting the bids. Details (quantum) of works in

ved against ROW charges shall mandatorily form part of the Tech bids. The onus on any disruption of services (electrical/communication/water) caused during implementation of this project will lie on the firm (L1).The vendor will be responsible to repair rectify such faults at his own expenses so as to restore the services in a short possible time.

16. **Laying Standard** All laying of cable will be strictly as per DoT/BSNL standards. Cable will be laid underground by the vendor by excavation of trenches 1.6 m deep and 1 ft wide. The cable will be laid in the trench after putting 6 inches of sand and again 6 inches sand will be put on top of the cable. Then a layer of bricks will be laid breadth wise and thereafter backfilling of trenches ensuring leveling with respect to surrounding area will be carried out. Wherever it is not feasible to follow DoT/BSNL standards due to hostile terrain, laying standards will be decided by SCITO, Air Force Station Sular and will be binding on the vendor. Vendor is required to be liaise with MES/Various other authorities for requisite permission for the laying of the cable. However, SCITO, Air Force Station Sular will provide help in liaison process. Test of cable after Laying will be done as has been laid down by DoT/BSNL, for individual type of JFC/OFC UG cables. Two copies of test report containing test report of each pair of wire will be prepared and handed over after binding. Test equipment required for testing will be provided by the vendor without any charges to the buyer. Test reports of the UG cable and accessories from OEM have to be provided along with supply to the stores. All joints in UG cable will be proper and soldered so that there is no loss or deterioration in specifications after laying of the cable. On successful laying of the cable, the vendor is required to submit the detailed document containing line diagram of UG cable, details of testing points, termination details of MDFs and DPs of the project in two copies (Hard Bound).

17. **DP Boxes.** 50/20 Pair DP Box with Krone module and lock & keys made of 16 Gauge CRCA sheet in accordance with the DoT/BSNL standard, complete with rubber gasket, Krone Disconnection Module (KDM) with lock and key arrangement. The DP will be fixed at a convenient place for maintenance without any disturbance to the occupants. The external DP will be fixed 3.5 feet from the ground with the help of bricks, sand and Cement. The DP will be fixed in such a manner that it is protected from rain and dust. Proper housing with locking arrangement will be provided for DPs. DPs are not to be fixed near doors and windows.

18. **Cable Route Markers / Joint Markers.** A minimum of 10 UG cable route markers per km of UG cable will be installed. The cable route marker / Joint Marker will be 5 feet long steel rod with a 6 inch diameter metal disc at one end and fixed on a concrete block to prevent any unintentional shifting. The marker will be fixed 3.5 feet in the ground and 1.5 feet above the ground with cemented grouting after the trench is filled "JFC" to be engraved on the plate.

19. **Jointing Kit 50/20 pair :-** All joints in UG cable will be proper and soldered so that there is no loss / deterioration after laying of the UG cable.

20. **Route Markers :- Concrete Route Marker(CRM):**

- (a) Concrete route markers of milestone shape (as per Figure below) to be deployed along the cable path at an interval of every 50-100mtrs. All cable markers shall be painted in blue color. Vendor shall write the following on the cable marker using black enamel paint. Height of each letter shall be at least 4inch.

JFC / Type of JFC

Date of installation

- (i) Engraved Marking of "JFC"
- (ii) Type of JFC
- (iii) Route (From / To)
- (iv) Date of Installation & Route marker number

(b) The JFC / joint marker should be so placed that they do not get displaced / damaged in course of normal development plan of the station. Also the markers should be away from traffic routes. Following places on the cable route must have marker:

- (i) All bends in the JFC
- (ii) Road/Bridge/Culvert or crossing
- (iii) Cable Joints
- (iv) Crossing of sewage system/underground electrical wire

21. **Road crossing with GI pipe 4 inch diameter galvanized and repair of road after crossing.:** - On road crossings, the GI Pipes shall be laid a depth of 165 cm and encased with RCC.

22. **Manufacturing date of cable.** It will be ensured that the manufacturing date of UG cable supplied is not more than six months from the date of supply. The UG cable will be purchased from BSNL approved suppliers only.

23. **Specification Testing after Laying.** This will be done as has been laid down by DoT/BSNL, for individual type of JFC UG cables. Two copies of test report containing test report of each pair of wire will be prepared and handed over after binding. Test equipment required for testing will be provided by the vendor without any charges to the buyer. Test reports of the UG cable and accessories from OEM have to be provided along with supply of the stores.

24. **Cable Joints & Document.** All joints in UG cable will be proper and ordered so that there is no loss / deterioration in specifications after laying of the cable. On successful laying of the cable, the vendor is required to submit the detailed document of the project in two copies (Hard Bound) mentioning the following aspects. Line diagrams should be neatly prepared by a reputed draughtsman. Please note that handing over of the document by vendor is the pre-requisite for issuance of acceptance certificate by the user and it is non-negotiable.

- (a) Line Diagrams of the UG Cables.
- (b) Details of the testing points.
- (c) Termination details of MDF and DPs.
- (d) Joint Test report in respect of all tests mentioned at para 32 below.

25. **Joint Testing Prior to Commencement of Laying.** Vendor will carry out joint testing of the cable along with the rep of Air Force Station, Sullur to ensure that the test result confirm to the specifications. The following tests will be carried out on all the UG cables in each drum and signed by representative of Air Force Station, Sullur and vendor.

- (a) Conductor resistance
- (b) Insulation test
- (c) Cross talk (Far End & Near End)
- (d) Attenuation / transmission equivalents
- (e) Spark test

26. **Delivery Period.** Delivery period for supply of items would be **60** days from the effective date of the contract. The Vendor shall complete commissioning of the complete project within **120** days from the effective date of the contract. The project will be treated as complete on signing of Acceptance Certificate. Buyer holds the right to cancel the contract unilaterally in case the items are not received/service does not commence within the contracted delivery period. Extension of contracted delivery period will be at the sole discretion of the Buyer with applicability of LD clause.

27. **Two-Bid System.** Bidders are required to furnish clause by clause compliance of specifications bringing out clearly the deviations from specification, if any. Bidders are advised to submit the compliance statement in the following format along with Technical Bid. No financial matters related to items to be revealed in technical bid, over ruling same would result in rejection of bid.

Para of RFP specifications item-wise	Specification of item offered	Compliance to RFP specification - whether Yes /No	In case of noncompliance, deviation from RFP to be specified in unambiguous terms

28. Consignee details- AOC

**43 Wing, Air Force Sular
Kangayampalayam
Coimbatore-641401**

3. Buyer Added Bid Specific ATC

Buyer uploaded ATC document [Click here to view the file.](#)

Disclaimer/अस्वीकरण

The additional terms and conditions have been incorporated by the Buyer after approval of the Competent Authority Buyer Organization, whereby Buyer organization is solely responsible for the impact of these clauses on the bidding process, its outcome, and consequences thereof including any eccentricity / restriction arising in the bidding process due to these ATCs and due to modification of technical specifications and / or terms and conditions governing the bid. Any clause(s) is / are incorporated by the Buyer regarding following, the bid and resultant contracts shall be treated null and void and such bids may be cancelled by GeM at any stage of bidding process without any notice:-

1. Definition of Class I and Class II suppliers in the bid not in line with the extant Order / Office Memorandum issued by DPIIT in this regard.
2. Seeking EMD submission from bidder(s), including via Additional Terms & Conditions, in contravention to exemption provided to such sellers under GeM GTC.
3. Publishing Custom / BOQ bids for items for which regular GeM categories are available without any Category item bunched with it.
4. Creating BoQ bid for single item.
5. Mentioning specific Brand or Make or Model or Manufacturer or Dealer name.
6. Mandating submission of documents in physical form as a pre-requisite to qualify bidders.
7. Floating / creation of work contracts as Custom Bids in Services.
8. Seeking sample with bid or approval of samples during bid evaluation process. (However, in bids for [attached categories](#), trials are allowed as per approved procurement policy of the buyer nodal Ministries)
9. Mandating foreign / international certifications even in case of existence of Indian Standards without specifying equivalent Indian Certification / standards.
10. Seeking experience from specific organization / department / institute only or from foreign / export experience.
11. Creating bid for items from irrelevant categories.
12. Incorporating any clause against the MSME policy and Preference to Make in India Policy.
13. Reference of conditions published on any external site or reference to external documents/clauses.
14. Asking for any Tender fee / Bid Participation fee / Auction fee in case of Bids / Forward Auction, as the case may be.

Further, if any seller has any objection/grievance against these additional clauses or otherwise on any aspect of this they can raise their representation against the same by using the Representation window provided in the bid details

field in Seller dashboard after logging in as a seller within 4 days of bid publication on GeM. Buyer is duty bound to reply to all such representations and would not be allowed to open bids if he fails to reply to such representations.

Additional Clause For Annual Maintenance Charges

1. AMC charges to be indicated as percentage of cost of Product/Equipment quoted for each year after the warranty period.

2. GST shall be included in the AMC Charges quoted.

3. The AMC functionality shall be available in bid only and no direct RA shall be applicable. In case of bid to RA decrement rules shall be applicable on total price inclusive of AMC charges.

3.1 Buyer shall indicate number of years of warranty by selecting option of 1- 10 Years available in the field depending on warranty parameter applicable in category parameters for the equipment. The Seller while participating in Bid/RA will get fields to indicate AMC charges as percentage depending on number of years of AMC selected by Buyer. The following shall be applicable if 5 year AMC selected.

3.1.1 AMC charges for first year after warranty period – Percentage to be indicated- A1.

3.1.2 AMC charges for second year after warranty period – Percentage to be indicated A2.

3.1.3 AMC charges for third year after warranty period – Percentage to be indicated A3.

3.1.4 AMC charges for fourth year after warranty period – Percentage to be indicated A4.

3.1.5 AMC charges for 5th year after warranty period – Percentage to be indicated A5.

3.2 The calculation of AMC Charges shall take into account of number of years of warranty and duration of AMC as specified while creating bid.

3.3 AMC charges to be indicated for each subsequent year should be same or higher than preceding year.

3.4 The AMC charges shall be offered within range of 3 to 10% of cost of equipment.

4. Since AMC charges are to be paid only later for each year during AMC period, applicable performance guarantee amount after placement of contract shall be based on the cost of product/equipment and not on basis of cost of equipment along with AMC Charges.

5. Performance bank guarantee applicable for AMC is to be submitted at start of the AMC and shall be applicable as 10% on the total contract value including AMC Charges. The PBG submitted after award of contract shall be released only after new PBG for the AMC period is submitted and accepted by buyer/consignee after due verification. Bank guarantee for AMC is to remain valid till completion of AMC period plus one year. The bank guarantee for AMC shall be submitted to buyer directly.

6. In case of splitting of quantity product/equipment cost and AMC charges offered by L-1 in the evaluated cost shall be matched by higher quoting eligible bidders on one to one basis. The equipment cost shall be matched and AMC charges shall be matched year to year.

7. The AMC Contract shall be an offline contract to be handled by buyer. The payment of AMC will be made on AMC frequency (as indicated above) basis after satisfactory completion of said period, duly certified by end user and scope of AMC will be as per para 1 above.

[This Bid is also governed by the General Terms and Conditions/ यह बिड सामान्य शर्तों के अंतर्गत भी शासित है](#)

In terms of GeM GTC clause 26 regarding Restrictions on procurement from a bidder of a country which shares a land border with India, any bidder from a country which shares a land border with India will be eligible to bid in this tender only if the bidder is registered with the Competent Authority. While participating in bid, Bidder has to ensure compliance of this and any false declaration and non-compliance of this would be a ground for immediate termination of the contract and further legal action in accordance with laws. /जेम की सामान्य शर्तों के खंड 26 के संदर्भ में भारत के साथ भूमि सीमा साझा करने वाले देश के बिडर से खरीद पर प्रतिबंध के संबंध में के साथ भूमि सीमा साझा करने वाले देश का कोई भी बिडर इस निविदा में बिड देने के लिए तभी पात्र होगा जब वह बिड देने वाला सक्षम प्राधिकारी के पास पंजीकृत हो। बिड में भाग लेते समय बिडर को इसका अनुपालन करना होगा और कोई भी गलत घोषणा किए जाने व इसका अनुपालन करने पर अनुबंध को तत्काल समाप्त करने और कानून के अनुसार आगे की कानूनी कार्यवाई का आधार होगा।

---Thank You/धन्यवाद---
