

Rate Contract
Government of India
Directorate General of Supplies & Disposals
Jeevan Tara Building, 5 Sansad Marg
New Delhi-110001
Tel Number 23360610/23360537

Digitally signed By:
KAVINDRA SINGH BRIJWAL
Email id:
KSBRIJWAL-DGSND@NIC.IN

Rate Contract no. S_ANA/IT-4/RC-D2060000/0317/84/OC017/1818
Dated 30-MAY-16

To,

ROHDE & SCHWARZ INDIA PVT LTD
A-27, FIRST FLOOR MOHAN CO-OPERATIVE INDUSTRIAL
ESTATE, MATHURA ROAD,
NEW DELHI.

Contact Person: Suvrat Verma, 9899020352
Mr. Nasser Jariwala, Mob.9820418813
Email: suvrat.verma@rohde-schwarz.com

NEW DELHI

Sub: Rate Contract for supply of Spectrum Analyzer & Signal Analyzer
Validity: From 30-MAY-16 To 22-JAN-17 .

Ref:(1) This Office Tender Enquiry No. S_ANA/IT-4/RC-D2060000/0317/84
Opened on 18-MAR-16.
(2) Your Quotation No. 9338 And Dated
18-MAR-16.

Dear Sir,

You are hereby informed that your above referred tender read with subsequent letters mentioned above for the Stores specified in the Schedules annexed has been accepted. This rate contract will be governed by the terms and conditions brought in the Form no. DGS&D 1001 including DGS&D Arbitration Clause available from DGS&D sales counter on payment of Rs. 50/- The dispute cannot be referred by the contractor or entertained by facilitation Council or any other adjudicating forum. The Rate Contract and the schedules annexed here to shall be the sole repository of this Rate Contract/Transaction.

SCHEDULES ANNEXED

- 1.Schedule "A" Description of stores,prices,duties/taxes.
- 2.Schedule "B" special conditions of contract / Other information.
- 3.Schedule "C" Information to DDOs about parallel rate contracts.
- 4.Annexure - Technical Specification

Yours Faithfully,

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Assistant Director(S)/Section Officer/Dy.Director/Director/DDG(S)

For and on behalf of the purchaser named in the Form DGS&D 1001.

SCHEDULE - A

1. Rate Contract No.: -S_ANA/IT-4/RC-D2060000/0317/84/OC017/1818
 Dated 30-MAY-16 For the Supply of Spectrum Analyzer & Signal Analyzer

2. Advance Rate Contract No.: - Nil
 Dated

3.(a) Name and Full Address of the Firm :-

ROHDE & SCHWARZ INDIA PVT LTD
 A-27, FIRST FLOOR MOHAN CO-OPERATIVE
 INDUSTRIAL ESTATE, MATHURA ROAD,
 NEW DELHI.

Contact Person: Suvrat Verma, 9899020352
 Mr. Nasser Jariwala, Mob.9820418813
 Email: suvrat.verma@rohde-schwarz.com

NEW DELHI
 DELHI - 110044
 Tel. No. - 9899020352, 011-42535400
 Fax - 011-42535433
 Email - suvrat.verma@rohde-schwarz.com

(b) Name and Full Address of Manufacturer :-
 M/s. Rohde & Schwarz GmbH & Co.
 KG Muehldorfstrasse 15, 81671, Munchen,
 Germany

(c) Brand: R&S

4. Validity of Rate Contract: 30-MAY-16 To 22-JAN-17

5. Description of Item, Specification, Unit, Rate

| Item No. | Model No. | Store Description | Description | | | Unit | Rate (in Rs) |
|----------|--|------------------------------------|-------------|-----|---|------|--|
| | | | ED | ED% | CST/VAT | | |
| 14 | R&S/ZVH8- Cable & Antenna Analyzer till 8 GHz, ZVH- K39- Transmission Measurements, ZVH-K1- Spectrum An | 2-Port Vector Network Analyzers | | | Description: Vector Network Analyzer 6 GHz | NOS. | 1693243 Rs. SIXTEEN LAKHS NINETY- THREE THOUSAN D TWO HUNDRED FORTY- THREE ONLY |
| | | | N.A | | Excl. | 5 | |

| | Min.Order Qty(in unit):- 1 | Lead Time(in days):-21 | Rate of Supply(monthly):-50 |
|----|---|---|--|
| 16 | R&S/ZVH8- Vector Network Cable & Analyzers (VNA) Antenna without Spectrum Analyzer till 8 Analyzers GHz, ZVH- K39- Transmission Measurements, ZVH-K45- Vector Vol | Description: Vector Network analyzer 6 GHz (without SA) | NOS. 1381799 Rs. THIRTEEN LAKHS EIGHTY- ONE THOUSAN D SEVEN HUNDRED NINETY- NINE ONLY |
| | N.A | Excl. | 5 |
| | Min.Order Qty(in unit):- 1 | Lead Time(in days):-21 | Rate of Supply(monthly):-50 |

| 6-Terms of Delivery: | Free delivery at site (i.e. at consignee place) including installation / commissioning. | | | | | | | | | | | | | | | | | | |
|---|---|------------|----|------------|---------|---------|----|---------|---------|-----|---------|---------|----|---------|----------|------|----------|----------|------|
| 7-Excise Duty: | ED NA at present and will not be charged even if it is applicable later on. | | | | | | | | | | | | | | | | | | |
| 8-Sales Tax: | CST / VAT Extra @ 5%. | | | | | | | | | | | | | | | | | | |
| 9-Delivery Period: | Upto first 50 Nos. within 51 days from the date of receipt of clear Order. Thereafter @ 50 Nos. per month. | | | | | | | | | | | | | | | | | | |
| 10(a)-Annual Turnover: | 0 00 | | | | | | | | | | | | | | | | | | |
| (b)-Monetary Limit(In Rs.): | Without Any Limit | | | | | | | | | | | | | | | | | | |
| 11-Payment Terms: | 90% against provisional receipt of stores by consignee, after delivery of stores by Green Channel firms on selfcertification with OEM warranty/Guarantee certificate and balance 10% on acceptance of stores by consignee within 60 days of receipt of stores. | | | | | | | | | | | | | | | | | | |
| 12-Slab Discount Clause: (Click here to see the details) | Applicable | | | | | | | | | | | | | | | | | | |
| | <table border="0"> <thead> <tr> <th>Value From</th> <th>To</th> <th>% Discount</th> </tr> </thead> <tbody> <tr> <td>1000000</td> <td>2500000</td> <td>.5</td> </tr> <tr> <td>2500001</td> <td>5000000</td> <td>.55</td> </tr> <tr> <td>5000001</td> <td>7500000</td> <td>.7</td> </tr> <tr> <td>7500001</td> <td>10000000</td> <td>1.45</td> </tr> <tr> <td>10000001</td> <td>12500000</td> <td>3.45</td> </tr> </tbody> </table> | Value From | To | % Discount | 1000000 | 2500000 | .5 | 2500001 | 5000000 | .55 | 5000001 | 7500000 | .7 | 7500001 | 10000000 | 1.45 | 10000001 | 12500000 | 3.45 |
| Value From | To | % Discount | | | | | | | | | | | | | | | | | |
| 1000000 | 2500000 | .5 | | | | | | | | | | | | | | | | | |
| 2500001 | 5000000 | .55 | | | | | | | | | | | | | | | | | |
| 5000001 | 7500000 | .7 | | | | | | | | | | | | | | | | | |
| 7500001 | 10000000 | 1.45 | | | | | | | | | | | | | | | | | |
| 10000001 | 12500000 | 3.45 | | | | | | | | | | | | | | | | | |
| 13-Prices: | FIXED | | | | | | | | | | | | | | | | | | |
| 14-Quantity Offered: | @ 50 Nos. per month basis. | | | | | | | | | | | | | | | | | | |
| 15-Minimum Quantity in Single Supply Order: | | | | | | | | | | | | | | | | | | | |
| 16-Minimum order Value in Single Supply Order: | 0 | | | | | | | | | | | | | | | | | | |
| 17-Status of the RC Holding Firm: | LSI | | | | | | | | | | | | | | | | | | |
| 18-Paying Authority: | PAO,User Deptt | | | | | | | | | | | | | | | | | | |

(a)The payment to the suppliers in all the adhoc Contract

(A/Ts) and / or Supply Order placed against DGS&D Rate Contracts shall be made directly by indentors i.e. order placing authority through their concerned Pay & Accounts Offices only, instead of CCA(Supply) or its Regional Pay & Accounts Offices of Department of Commerce.

(b)The payment to the supplier shall be paid by the indentors as per prescribed forms of payments including timelines for payments within 60 days of due date which must be ensured by the indentors.Delays,if any, in this regard would render the indentors responsible and not the DGS&D in any manner whatsoever.

(c)Consequently,the requisite Departmental charges + prevailing Service Tax thereon shall be deposited by the respective Pay & Account offices (PAO) of the indentors directly to the Receipt Head Account of DGS&D as prescribed by CGA.

(d)Indentors shall be directly responsible for any non-compliance/default for the afore-said provisions.

19-Inspection Authority:

Not applicable since the firm is holding Green channel status for subject stores

20-Quality Assurance Officer/Inspecting officer:

-do-

For stores procured against DGS&D Rate Contract the Inspection Officer would be:

- (i) User Departments/DDO/Consignee itself or any authority/agency appointed by them or
- (ii) Additional Director General (QA) in DGS&D (if desired by user Departments/DDO/Consignee).

21-Place where the Stores are to be Tendered for Inspection:

Not Applicable being Green Channel Firm

22-R/C is DDOs Operated:

Yes

With effect from First October two thousand eight (01-10-2008),all supply order(s) against this Rate Contract must be placed by Direct Demanding Officer(s) on-line through D.G.S&D web site (www.dgsnd.gov.in) (indentor's page) only. Supply order(s) in any other form placed on or after 01-10-2008 shall not be valid and shall not be acted upon by the contractor or any other concerned agencies.

DDO shall download the supply order and send an ink signed copy to the concerned paying authority specified in the rate contract through Registered / speed post immediately after on-line placement of Supply Order(s).

23-Packing & Specification :

see annexure

24. Operation of Rate Contract and Fee.

a) All the Government Indentors/ users including Central Government, Union Territories, State Governments, Autonomous Organisations, PSUs, Municipalities and Corporations are authorized to operate Rate Contract of DGS&D as Direct Demanding Officers (DDOs).

b) They will place online supply orders of DGS&D e-portal against DGS&D R/Cs for which user Login ID and Password shall be given to them. All supply orders against DGS&D Rate Contract shall be placed on-line only to treat such transactions under the preview of DGS&D Rate Contract. Consequently, provision of placement of Direct / Referral

orders is deleted.

c) Furthermore, the payment has been decentralized and is to be made by User Department. The inspection of Stores by DGS&D has already been made optional and left to the Indentor to get the stores inspected by any competent agency, if it desires so.

d) Fee for Purchase Service:

The departmental charges for Purchase Service of DGS&D shall be Nil for online supply orders through DGS&D portal for all category of user departments i.e. Central or State Government Ministries/ Departments, PSUs, Autonomous Bodies, Corporations or Municipalities etc.

e) Fee for Inspection:

(i) Online supply orders through DGS&D portal by Central Government Ministries/ Departments:

Inspection activities have been decentralised. Indentors can select Inspection Agency of their choice, including third party or Quality Assurance Office of DGS&D, while placing the supply order against rate contracts. Inspection fee for Inspection service through DGS&D, if opted by user department, shall be levied @ 1% of the value of the supply order in case of stores procured under DGS&D Rate Contract by Central Govt. Ministries/Departments.

(ii) Online supply orders through DGS&D portal by State Government Departments/Organizations, PSUs, Autonomous Bodies or Corporations: Inspection fee for Inspection service through DGS&D, if opted by user department, shall be levied @ 2% of the value of the supply order procured under DGS&D Rate Contract by State Govt. Departments/Organizations, PSUs, Autonomous Bodies or Corporations or Municipalities etc.

(iii) The expenses on TA/DA of the DGS&D officers and test charges for confirmatory tests shall be borne by DGS&D for (i) and (ii) above.

(iv) The requisite fee for inspection + prevailing Service Tax thereon shall be deposited by the respective Pay & Accounts Office (PAO) of the indentor directly to the Receipt Head Account of DGS&D as prescribed by CGA.

25.DGS&D reserves the right for pre-dispatch inspection at manufacturer"s premises or consignee end inspection after receipt of stores or at both places,at the option of indentors.

26.Jurisdiction/Arbitration Clause

a)Jurisdiction will be the place of issue of the rate contract.Sole Arbitrator will be appointed by DG(S&D).For details refer Clause-23 of DGS&D-1001.Further,where the Contract/Rate Contract is governed by DGS&D arbitration clause,the dispute cannot be referred by the supplier or entertained by Facilitation Council or any other Adjudicating Forum.

b)The arbitrary as appointed under provisions of para 18.1.1 of DGS&D Mannual shall adjudicate only on the disputes arising out of interpretation of terms & conditions stipulated in Rate Contracts.For settlement of disputes relating to execution of supply orders placed by various Direct Demanding officers (DD0s)/Indentors against DGS&D Rate Contracts, each DDO/INDENTOR shall himself nominate an arbitrator at the time of placement of supply orders,as per guidelines/instructions for appointment of arbitrator in indenting organisation.

c)DGS&D or its regional offices shall not be made a party in any dispute relating to execution of Supply Order placed by DDO/Indentor against DGS&D Rate Contracts including the case filed in MSME Facilitation Councils.

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Asstt. Director (S) / Section Officer / Dy. Director
For and behalf of the purchaser named in the Form DGS&D 1001.

All the R/C particulars including prices in respect of individual R/Cs are available on DGS&D website which can be accessed by all. The DGS&D website is <http://dgsnd.gov.in>

SCHEDULE - B

Guaranty/Warranty Certificate : It is certified that the stores supplied are brand new, unused, non-refurbished and original and they full confirm to the technical specifications and description given in the subject Rate contract. It is further certified that the supplied stores are covered by the OEM Guaranty/Warranty as per the Subject Rate Contract.
TEST REPORTS FOR REGISTRATION AND ACCEPTANCE OF GOODS:

In case of products having satisfactory test reports from International Laboratory Accreditation Cooperation (ILAC) or their worldwide affiliated/recognized labs or NABL approved labs, it would be sufficient to consider the products of requisite quality for acceptance without insistence for any further testing pursuant to DGS&D Manual Correction Slip No. 38 dated 18-12-2012.

RC Specification:

1. The Model No. mentioned under each item in Clause-5 under Schedule-A may be read as under:-

Item No.14:-

Main Model No. ZVH8- Cable & Antenna Analyzer till 8 GHz, ZVH-K39-Transmission Measurements, ZVH-K1-Spectrum Analysis, R&S ZVH-K45-Vector Voltmeter, FSH-Z29-Calibration Kit, 2 Nos. RF Cable and Carrying Case

Alternate Model Nos:-

1. ZVH8- Cable & Antenna Analyzer till 8 GHz, ZVH-K42-Full Two Port VNA, ZVH-K1-Spectrum Analysis, ZVH-K45-Vector Voltmeter, FSH-Z29-Calibration Kit, 2 Nos. RF Cables and carrying case.
2. ZVH8- Cable & Antenna Analyzer till 8 GHz, R&S ZVH-K42-Full Two Port VNA, ZVH-K1-Spectrum Analysis, ZVH-K45-Vector Voltmeter, ZVH-K9 - Firmware to support Power Sensor for ZVH, FSH-Z18- Power Sensor 10 MHz to 18 GHz, FSH-Z29-Calibration Kit, 2 Nos. RF Cables & carrying case.
3. ZVH8- Cable & Antenna Analyzer till 8 GHz, R&S ZVH-K42-Full Two Port VNA, R&S ZVH-K1-Spectrum Analysis, ZVH-K45-Vector Voltmeter, FSH-Z29-Calibration Kit, 2 Nos. RF Cables, GPS Rx & carrying case.
4. ZVL6 Bench-Top Full Two Port Model 9 KHz to 6 GHz with Options to comply DGS&D Tender.

Item No.16:-

Main Model No. ZVH8- Cable & Antenna Analyzer till 8 GHz, ZVH-K39-Transmission Measurements, ZVH-K45-Vector Voltmeter, FSH-Z29-Calibration Kit, 2 Nos. RF Cable and Carrying Case

Alternate Model Nos:-

1. ZVH8- Cable & Antenna Analyzer till 8 GHz, ZVH-K42-Full Two Port VNA, ZVH-K45-Vector Voltmeter, FSH-Z29-Calibration Kit, 2 Nos. RF Cables and carrying case.
2. ZVH8- Cable & Antenna Analyzer till 8 GHz, ZVH-K42-Full Two Port VNA, ZVH-K45-Vector Voltmeter, ZVH-K9 - Firmware to support Power Sensor for ZVH, FSH-Z18- Power Sensor 10 MHz to 18 GHz, FSH-Z29-Calibration Kit, 2 Nos. RF Cables & carrying case.
3. ZVL6 Bench-Top Full Two Port Model 9 KHz to 6 GHz with Options to comply DGS&D Tender.

2. Payment Terms:-

(a) Green Channel Firms : 90% against provisional receipt of stores by consignee, after delivery of stores by Green Channel firms on selfcertification with OEM warranty/Guarantee certificate and balance 10% on acceptance of stores by consignee within 60 days of receipt of stores.

(b) Others Firms : 80% against inspection of stores (wherever applicable) and provisional receipt of stores by consignee, and balance 20% on acceptance of stores by consignee within 60 days of receipt of stores.

Note: Provisional Receipt of stores by consignee are to be given on copy no. 1 of the I-Note for initial payment of 90% or 80% as the case may be, followed by acceptance of stores certificate to be given by consignees on copy no. 2 & 5 of I-Notes for balance 10% or 20% payments as the case may be.

3. Country of Origin: Germany and Singapore.

4. Name & Address of the Foreign Manufacturer :-
Rohde & Schwarz GMBH & Co. KG Muhldorfstrasse, Munich 81671

5. Warranty Terms : The period of Guarantee / warranty would be 36 months from the date of receipt of stores by consignee. For details refer Clause-27 of DGS&D-230 & Clause-18 of DGS&D-1001.

6. Demonstration will be carried out free of cost.

7. No assistance for import of finished product or raw material will be provided.

8. End User Certificate: Please note that End User Certificate is required for all products. Delivery shall be subject to approval of end user certificate by M/s. R&S

9. Discount against CDE Clause:-

a) 10% against valid CDE Certificate for eligible customers of Education institute as per custom notification 51/96.

b) Discount against Custom Duty Exemption / Waiver Certificate:-

(a) Wherever, Indentor / Consignee shall provide Custom Duty Exemption / Waiver Certificate, the R/C holder shall submit the certified copies of Bill of Entries to the Indentor / Consignee at the time of delivery.

(b) The R/C holder shall also submit certified copies of relevant Notifications, as amended from time to time, and / or other supporting documents indicating the Assessable value of the item, if applicable, and the Rate of Custom Duty applicable on the Item, to the Indentor / consignee.

(c) Indentor / Consignee shall calculate the custom duty waiver / exemption amount keeping in view of the CIP value indicate in Bill of Entries / Assessable value of the item, as the case may be and Custom Duty Waiver / Exemption Certificate given by them.

(d) The amount of custom duty waiver / exemption amount, as calculated above, shall be endorsed in the consignee receipt certificate (CRC) for recovery from the RC holder. It shall be explicitly stipulated in the CRC that recovery is on account of Custom Duty Waiver / Exemption Certificate.

Note:- The applicable rate of Custom Duty for the items, as offered by R/c holder may be indicated in the RC for Indentor / consignee guidance. However, it shall be the Indentor / Consignee's responsibility to ensure that custom duty waiver / exemption amount is properly calculated at the then prevailing rate of Custom Duty.

All other terms and conditions shall be as per standard conditions contained in Form DGS&D-1001.

SCHEDULE - C

List of Parallel Rate Contract For Spectrum Analyzer & Signal Analyzer

| Sr.No. | NAME & FULL ADDRESS OF FIRM | R/C NO & DATE |
|--------|---|---|
| 1 | <p>ROHDE & SCHWARZ INDIA PVT LTD A-27, FIRST FLOOR MOHAN CO-OPERATIVE INDUSTRIAL ESTATE, MATHURA ROAD, NEW DELHI. Contact Person: Suvrat Verma, 9899020352 Mr. Nasser Jariwala, Mob.9820418813 Email: suvrat.verma@rohde-schwarz.com</p> <p>NEW DELHI DELHI 110044</p> | <p>S_ANA/IT-4/RC- D2060000/0317/84/OC017/1818 30-MAY-16</p> |
| 2 | <p>AGMATEL INDIA PVT LTD E 366 IInd Floor Nirman Vihar Vikas Marg Delhi-110092 Contact Person: Mr. A.K. Aggarwal, Mob.9810054742, Email: aka@agmatel.com Toll Free: 1800113233 DELHI DELHI 110092</p> | <p>S_ANA/IT-4/RC- D2060000/0317/84/F0177/1817 30-MAY-16</p> |
| 3 | <p>CONVERGENT TECHNOLOGIES #204,2ND MAIN,MAHALAKSHMI LAYOUT,BANGALORE - 560086 Contact Person: Nitin Shetty, Mob.9900900055 R. Patil, Mob.9810124370 Email: sales@convergenttech.in BANGALORE KARNATAKA 560086</p> | <p>S_ANA/IT-4/RC- D2060000/0317/84/OA626/1819 30-MAY-16</p> |

NOTE:

(1) Before placing supply order, DDOs are advised to check with DGS&D or on the website whether any further RCs have been awarded or amendments to Rate Contract have been issued.

(2) All the R/C particulars including prices in respect of individual R/C's are available on DGS&D website, which can be accessed by all. The access code of DGS&D website is <http://dgsnd.gov.in>.

ANNEXURE

Common requirements for all main equipments :

1. Type test reports shall be from a Central Govt. Lab / International Laboratory Accreditation Corporation (ILAC) or their worldwide affiliated/recognized labs or NABL approved labs as per DoC Correction Slip No. 38 dated 18.12.2012 of DGS&D Manual to be read in conjunction with P&C Circular no.71 dated:29/10/2014.
2. Type testing shall consists of verification of all the features & functional requirements including environmental tests. The environmental tests sequence will be as under :
 - (a) Dry Heat Test : For 16 hrs. at a temp. of 55 degree C in accordance with IS:9000/ part-3/section-5/1977 (reaffirmed in 2007).
 - (b) Cold Test : For 4 hrs. at a temp. of (-)10 degree C in accordance with IS:9000/ part-2/section-4/1977 (reaffirmed in 2007).
 - (c) Damp Heat Test : For 2 Cycles of 24 hours (12+12h) each at a temp. of 40 degree C & 95 % RH in accordance with IS:9000/part-5/section-2/1981 (reaffirmed in 2007).

The analyzer shall be checked for all the functional requirements before and after 1 to 2 hours recovery period of the above environmental tests sequence. There shall be no deterioration in the functional parameters.

3. The OEM of the analyzers shall have ISO:14001 certification regarding Environmental Management.
4. Tenderers shall also indicate the additional features of the items, if available in the machine, in their offer.
5. The supply shall include one set of operation and maintenance manual for each equipment.
6. Supplier may supply accessories as deemed fit alongwith the equipment free of cost. List of accessories,if any, shall be indicated in the tender.
7. Software for transfer of screen shots/measurement data to PC shall be part of supply.

2-Port Vector Network Analyzers

"Common Requirements for all the 2 Port Vector Network Analyzers"

- (i) General : Spectrum Analyzer with built-in 2-port Vector Network Analysis for general purpose testing applications in field, specially for cable and antenna measurements
- (ii) Operating Temperature : 5 to 40 degree C temperature and 80% RH at 40 degree C
- (iii) Power Requirement : 230 +/- 10% VAC, 50 Hz & External DC Input +12.5V to 15 V with

(A) 2-Port Vector Network Analyzer 3 GHz

For Spectrum Analysis :

1. Frequency Range : 9 kHz to 3 GHz
2. Aging Rate : 1×10^{-6} /year
3. Frequency Counter
 - (a) Resolution : 1 Hz Min.
 - (b) Frequency span : 0 Hz (Zero span), 1 kHz to 3 GHz
4. spectral Purity
 - (a) SSB Phase Noise @ 10 KHz offset : < -90 dBc/Hz at 1 GHz
 - (b) Harmonics, @ -40 dBm level : -60 dBc
5. Sweep time
 - (a) span ≥ 1 kHz : 300 ms to 900 s
 - (b) span =0 Hz : 200 micro s to 20 s
6. Bandwidth
 - (a) Resolution Bandwidth (-3 dB) : 100 Hz to 3 MHz in steps
 - (b) video Bandwidth : 30 Hz to 1 MHz in steps
7. Amplitude
 - (a) Max.Input level for Protection : $+27$ dBm
 - (b) Max.input level for Measurement : $+20$ dBm
 - (c) Level measurement uncertainty : ≤ 2 dB
 - (d) Displayed average noise level,
(300 Hz RBW,10 Hz VBW) : ≤ -110 dBm
8. Markers : Normal and delta
9. Trigger : Free run, Video, External
10. Display : TFT color display
11. Interface : USB
12. Software : For transfer of screen shot /
measurement data / to PC

For Vector Network Analysis :

1. Frequency Range : 2 MHz to 3 GHz
2. Frequency Resolution (CW ON) : 10 Hz
3. Return Loss : 0.00 to 60.00dB
4. VSWR : 1.01 to 10.00 dB
5. Cable Loss : 0.00 to 30.00 dB
6. Calibration : Calibration with Precision Calibration
components-open, short,load should be
included to achieve directivity > 35 dB
7. Distance-To-Fault : It should be possible to locate faults in
Co-axial cables.
8. Phase Range : -180 to $+180$ deg.
9. Phase Resolution : 0.01deg
10. RF output port : Type N, female, 50 ohm
11. Dynamic Range : 60 dB
12. Nominal Port Power output : Hi-Power/Lo-Power selectable
(power levels corresponding to Hi and Lo
levels shall be indicated by the bidder).
13. Measurement : Measurement of S11 & S21,
Smith Chart measurement shall be
possible
14. Vector Voltmeter : For Comparison and verification of the
phase of the phase-matched cables.
15. Group Delay : Group delay measurement shall be possible.
Tenderers to furnish the details.

(B) 2-Port Vector Network Analyzer 6 GHz

For Spectrum Analysis :

1. Frequency Range : 9 kHz to 6 GHz
2. Aging Rate : 1×10^{-6} /year
3. Frequency Counter
 - (a) Resolution : 1 Hz Min.
 - (b) Frequency span : 0 Hz (Zero span), 1 kHz to 6 GHz
4. Spectral Purity
 - (a) SSB Phase Noise @ 10 KHz offset : < -90 dBc/Hz at 1 G Hz
 - (b) Harmonics, @ -40dBm level : -60 dBc
5. Sweep time
 - (a) span ≥ 1 kHz : 200 ms to 900 s
 - (b) span =0 Hz : 200 micro s to 20 s
6. Bandwidth
 - (a) Resolution Bandwidth (-3dB) : 100 Hz to 3 MHz in steps
 - (b) video Bandwidth : 30 Hz to 1 MHz in steps
7. Amplitude
 - (a) Max.Input level for Protection : +27 dBm
 - (b) Max.input level for Measurement : +20 dBm
 - (c) Level measurement uncertainty : ≤ 1 dB
 - (d) Displayed average noise level, : ≤ -110 dBm
(300 Hz RBW,10 Hz VBW)
8. Markers : Normal and delta
9. Trigger : Free run, Video, External
10. Display : TFT color display
11. Interface : USB
12. Software : For transfer of screen shot /
measurement data / to PC
13. Measurement features : C/N Ratio , AM % , Time domain
Power Measurement, Channel Power
Measurement,Phase Noise Measurement,
TOI, .

For Vector Network Analysis :

1. Frequency Range : 2 MHz to 6 GHz
2. Frequency Resolution (CW ON) : 10 Hz
3. Return Loss : 0.00 to 60.00dB
4. VSWR : 1.01 to 10.00 dB
5. Cable Loss : 0.00 to 30.00 dB
6. Calibration : Calibration with Precision Calibration
components-open, short,load should be
included to achieve directivity > 35 dB
7. Distance-To-Fault : It should be possible to locate faults in
Co-axial cables.
8. Phase Range : -180 to + 180 deg.
9. Phase Resolution : 0.01deg
10. RF output port : Type N, female, 50 ohm
11. Dynamic Range : 55 dB
12. Nominal Port Power output : Hi-Power/Lo-Power selectable
(power levels corresponding to Hi and Lo
levels shall be indicated by the bidder).
13. Measurement : Measurement of S11 & S21,
Smith Chart measurement shall be
possible.
14. Vector Voltmeter : For Comparison and verification of the
phase of the phase-matched cables.
15. Group Delay : 180 deg. of the phase settable within the
aperture.

Vector Network Analyzers (VNA) without Spectrum Analyzers

"Common Requirements for all the 2 Port Vector Network Analyzers"

- (i) General : Built-in 2-port Vector Network Analysis for general purpose testing applications in field, specially for cable and antenna measurements
- (ii) Operating Temperature : 5 to 40 degree C temperature and 80% RH at 40 degree C
- (iii) Power Requirement : 230 +/- 10% VAC, 50 Hz & External DC Input +12.5V to 15 V with Rechargeable Battery of 1500 mAH or higher

A) For Vector Network Analyzer 3 GHz (without SA) :

- 1. Frequency Range : 2 MHz to 3 GHz
- 2. Frequency Resolution (CW ON) : 10 Hz
- 3. Return Loss : 0.00 to 60.00dB
- 4. VSWR : 1.01 to 10.00 dB
- 5. Cable Loss : 0.00 to 30.00 dB
- 6. Calibration : Calibration with Precision Calibration components-open, short,load should be included to achieve directivity > 35 dB
- 7. Distance-To-Fault : It should be possible to locate faults in Co-axial cables.
- 8. Phase Range : -180 to + 180 deg.
- 9. Phase Resolution : 0.01deg
- 10. RF output port : Type N, female, 50 ohm
- 11. Dynamic Range : 60 dB
- 12. Nominal Port Power output : Hi-Power/Lo-Power selectable (power levels corresponding to Hi and Lo levels shall be indicated by the bidder).
- 13. Measurement : Measurement of S11 & S21, Smith Chart measurement shall be possible
- 14. Vector Voltmeter : For Comparison and verification of the phase of the phase-matched cables.
- 15. Group Delay : Group delay measurement shall be possible. Tenderers to furnish the details.
- 16. Markers : Normal and delta
- 17. Trigger : Free run, Video, External
- 18. Display : TFT color display
- 19. Interface : USB
- 20. Software : For transfer of screen shot / measurement data / to PC

B) For Vector Network Analyzer 6 GHz (without SA) :

- 1. Frequency Range : 2 MHz to 6 GHz
- 2. Frequency Resolution (CW ON) : 10 Hz
- 3. Return Loss : 0.00 to 60.00dB
- 4. VSWR : 1.01 to 10.00 dB
- 5. Cable Loss : 0.00 to 30.00 dB
- 6. Calibration : Calibration with Precision Calibration components-open, short,load should be included to achieve directivity > 35 dB
- 7. Distance-To-Fault : It should be possible to locate faults in Co-axial cables.
- 8. Phase Range : -180 to + 180 deg.
- 9. Phase Resolution : 0.01deg
- 10. RF output port : Type N, female, 50 ohm

- 11. Dynamic Range : 55 dB
- 12. Nominal Port Power output : Hi-Power/Lo-Power selectable
(power levels corresponding to Hi and Lo levels shall be indicated by the bidder).
- 13. Measurement : Measurement of S11 & S21,
Smith Chart measurement shall be possible.
- 14. Vector Voltmeter : For Comparison and verification of the phase of the phase-matched cables.
- 15. Group Delay : 180 deg. of the phase settable within the aperture.
- 16. Markers : Normal and delta
- 17. Trigger : Free run, Video, External
- 18. Display : TFT color display
- 19. Interface : USB
- 20. Software : For transfer of screen shot / measurement data / to PC

LIST OF ALL AMENDMENTS

For RC No. S_ANA/IT-4/RC-D2060000/0317/84/OC017/1818

NOTE: No Amendments issued till date 31-MAY-16

Government of India
Directorate General of Supplies & Disposals
Jeevan Tara Building, 5 Sansad Marg
New Delhi-110001
Tel Number 23360610/23360537

Digitally signed By:
RANVIR SINGH
Email id:
ranvirsingh.dgsnd@nic.in

Amendment No. S_ANA/IT-4/RC-D2060000/0317/84/OC017/1818/59172

Dated: 08-JUN-16

Effective Date: 06-JUN-16

To
M/S ROHDE & SCHWARZ INDIA PVT LTD
A-27, FIRST FLOOR MOHAN CO-OPERATIVE INDUSTRIAL ESTATE, MATHURA ROAD,
NEW DELHI.
Contact Person: Suvrat Verma, 9899020352
Mr. Nasser Jariwala, Mob.9820418813
Email: suvrat.verma@rohde-schwarz.com

NEW DELHI
DELHI-110044.

Sub : This office R/C No. S_ANA/IT-4/RC-D2060000/0317/84/OC017/1818
Dated 30-MAY-16 for the Supply of Spectrum Analyzer & Signal Analyzer.

Ref : Your Letter No. Nil Dated 06-JUN-16.

Dear Sir,

The following amendment to the schedule of the subject Rate Contract is hereby authorised :-

UNDER SCHEDULE-A

Item: Spectrum Analyzers

Item Description

1 Description: Spectrum Analyzer 3GHz NOS.
Final Price 703690.05

| Minimum OrderQty | Lead time(In days) | Rate of supply(per month) |
|------------------|--------------------|---------------------------|
| 1 | 21 | 50 |

Revised Rate
Rs. 670181
Rs. SIX LAKHS
SEVENTY
THOUSAND ONE
HUNDRED
EIGHTY-ONE
ONLY

Item: Spectrum Analyzers

Item Description

2 Description: Spectrum Analyzer 7GHz NOS.
Final Price 892172.4

| Minimum OrderQty | Lead time(In days) | Rate of supply(per month) |
|------------------|--------------------|---------------------------|
| 1 | 21 | 50 |

Revised Rate
Rs. 849688
Rs. EIGHT LAKHS
FORTY-NINE
THOUSAND SIX
HUNDRED

1

EIGHTY-EIGHT
ONLY

Item: Spectrum Analyzers

Item Description

3 Description: Spectrum Analyzer 13GHz NOS.
Final Price 1560573

Revised Rate

Rs. 1486260
Rs. FOURTEEN
LAKHS EIGHTY-
SIX THOUSAND
TWO HUNDRED
SIXTY ONLY

| Minimum OrderQty | Lead time(In days) | Rate of supply(per month) |
|------------------|--------------------|---------------------------|
| 1 | 21 | 50 |

Item: Spectrum Analyzers

Item Description

5 Description: Spectrum Analyzer 26.5GHz NOS.
Final Price 1814285.55

Revised Rate

Rs. 1727891
Rs. SEVENTEEN
LAKHS TWENTY-
SEVEN THOUSAND
EIGHT HUNDRED
NINETY-ONE
ONLY

| Minimum OrderQty | Lead time(In days) | Rate of supply(per month) |
|------------------|--------------------|---------------------------|
| 1 | 21 | 50 |

Item: Spectrum Analyzers

Item Description

6 Description: Spectrum Analyzer 40GHz NOS.
Final Price 2810496.15

Revised Rate

Rs. 2676663
Rs. TWENTY-SIX
LAKHS SEVENTY-
SIX THOUSAND
SIX HUNDRED
SIXTY-THREE
ONLY

| Minimum OrderQty | Lead time(In days) | Rate of supply(per month) |
|------------------|--------------------|---------------------------|
| 1 | 21 | 50 |

The Model No. for above mentioned items are as under:-

Item No.1:

Main Model No. FSH4 9 KHz to 3.6 GHz, Inbuilt Pre-Amp, 75 Ohm Adaptor & Hard suit-case

Alternate Model No.

(Alt 1 - FSL3 9 KHz to 3 GHz with FSL-B7-Narrow Resolution Filters, FSL-B22-Preamplifier)

(Alt 2 - FSH4 9 KHz to 3.6 GHz Inbuilt Pre-Amp with FSH-K14 - Spectrogram.)

(Alt 3 - FSH4 9 KHz to 3.6 GHz, Inbuilt Pre-Amp with FSH-Z14 Directional Power Sensor 20 MHz to 1 GHz)

(Alt 4 - FSH4 9 KHz to 3.6 GHz, Inbuilt Pre-Amp with FSH-Z18 Avg Power Sensor 10 MHz-18 GHz)

(Alt 5 - FSH4 9 KHz to 3.6 GHz, Inbuilt Pre-Amp with FSH-Z44 Directional Power Sensor 200 MHz-4 GHz)

Item No.2:

Main Model No.FSH8 - 9 KHz to 8 GHz with Inbuilt Pre-Amp, 75 Ohm Adaptor & Hard suit-case.

Alternate Model No.

(Alt 1 - FSH8 9 KHz to 8 GHz, Inbuilt Pre-Amp with FSH-Z44 Directional Power Sensor 200 MHz - 4 GHz.)

(Alt 2 - FSH4 9 KHz to 3.6 GHz, Inbuilt Pre-Amp with FSH-Z14 Directional Power Sensor 20 MHz to 1 GHz)

(Alt 3 - FSH8 9 KHz to 8 GHz Inbuilt Pre-Amp with FSH-K14 - Spectrogram & Carrying case.)

(Alt 4 -FSL18- 9 KHz to 18 GHz, FSL-B22-Preamplifier, FSL-B7-Narrow Resolution Filters.)

(Alt 5 - FSH8 9 KHz to 8 GHz Inbuilt Pre-Amp with FSH-K15 - Interference Analysis, HL300 - Log Periodic Antenna 450 MHz to 8 GHz & GPS Rx.)

Item No.3:

Main Model No.FSH13 - 9 KHz to 13.6 GHz with Inbuilt Pre-Amp & Hard suit-case.

Alternate Model No.

(Alt 1 - FSH8 9 KHz to 8 GHz, Inbuilt Pre-Amp with FSH-Z44 Directional Power Sensor 200 MHz - 4 GHz.)

(Alt 2 - FSH4 9 KHz to 3.6 GHz, Inbuilt Pre-Amp with FSH-Z14 Directional Power Sensor 20 MHz to 1 GHz)

(Alt 3 - FSH8 9 KHz to 8 GHz Inbuilt Pre-Amp with FSH-K14 - Spectrogram & Carrying case.)

(Alt 4 -FSL18- 9 KHz to 18 GHz, FSL-B22-Preamplifier, FSL-B7-Narrow Resolution Filters.)

(Alt 5 - FSH8 9 KHz to 8 GHz Inbuilt Pre-Amp with FSH-K15 - Interference Analysis, HL300 - Log Periodic Antenna 450 MHz to 8 GHz & GPS Rx.)

Item No.5: Model No.FSV30 - 10Hz to 30GHz with FSV-K54-EMI Measurement Application.

Item No.6: Model No.FSV40 10 Hz to 40 GHz, FSV-K54-EMI Measurement Application, FSVK40-Phase Noise Measurement Application.

All other terms and conditions of the R/C Shall remain unaltered.

Please ack. receipt.

Yours faithfully,

(Section Officer/A.D./D.D./Director/DDG(S))
For & on behalf of Purchaser named in DGS&D-1001

With effect from First October Two thousand eight (01-10-2008), all Supply Order(s) against this Rate Contract must be placed by Direct Demanding Officer(s) on-line through D.G.S.&.D. web site (www.dgsnd.gov.in) (indentor's page) only. Supply order(s) in any other form placed on or after 01-10-2008 shall not be valid and shall not be acted upon by the contractor or any other concerned agencies.

DDO shall download the Supply order and send an ink signed copy to the concerned paying authority specified in the Rate Contract through Registered / Speed post immediately after on-line placement of Supply Order(s).

Government of India
Directorate General of Supplies & Disposals
Jeevan Tara Building, 5 Sansad Marg
New Delhi-110001
Tel Number 23360610/23360537

Digitally signed By:
KAVINDRA SINGH BRIJWAL
Email id:
KSBRIJWAL-DGSND@NIC.IN

Amendment No. S_ANA/IT-4/RC-D2060000/0317/84/OC017/1818/59340

Dated: 23-JUN-16

Effective Date: 06-JUN-16

To
M/S ROHDE & SCHWARZ INDIA PVT LTD
A-27, FIRST FLOOR MOHAN CO-OPERATIVE INDUSTRIAL ESTATE, MATHURA ROAD,
NEW DELHI.
Contact Person: Suvrat Verma, 9899020352
Mr. Nasser Jariwala, Mob.9820418813
Email: suvrat.verma@rohde-schwarz.com

NEW DELHI
DELHI-110044.

Sub : This office R/C No. S_ANA/IT-4/RC-D2060000/0317/84/OC017/1818
Dated 30-MAY-16 for the Supply of Spectrum Analyzer & Signal Analyzer.

Ref : Your Letter No. Nil Dated 06-JUN-16.

Dear Sir,

The following amendment to the schedule of the subject Rate Contract is hereby authorised :-

UNDER SCHEDULE-A

1) The existing Main Model No. and Alternate Models mentioned against R/C Item No.3 in Schedule-B may be read as under:-

Main Model No.FSH13 - 9 KHz to 13.6 GHz with Inbuilt Pre-Amp & Hard suit-case.

Alternate Model Nos:

Alt 1 - FSH13 9 KHz to 13.6 GHz Inbuilt Pre-Amp with FSH-K14 - Spectrogram & Carrying case.

Alt 2 - FSH13 9 KHz to 13.6 GHz Inbuilt Pre-Amp with FSH-K29-Pulse Measurements App, NRP-Z85- 50MHz - 40GHz Wideband power sensor.

Alt 3 - FSL18- 9 KHz-18 GHz, FSL-B22-Preamplifier, FSL-B7-Narrow Resolution Filters, FSL-K14-Spectrogram.

Alt 4 - FSH13 9 KHz to 13.6 GHz Inbuilt Pre-Amp, TG (300 KHz to 8 GHz), VSWR Bridge & Carrying case.

All other terms and conditions of the R/C Shall remain unaltered.

Please ack. receipt.

Yours faithfully,

(Section Officer/A.D./D.D./Director/DDG(S))
For & on behalf of Purchaser named in DGS&D-1001

With effect from First October Two thousand eight (01-10-2008), all Supply Order(s) against this Rate Contract must be placed by Direct Demanding Officer(s) on-line through D.G.S.&.D. web site (www.dgsnd.gov.in) (indentor's page) only. Supply order(s) in any other form placed on or after 01-10-2008 shall not be valid and shall not be acted upon by the contractor or any other concerned agencies.

DDO shall download the Supply order and send an ink signed copy to the concerned paying authority specified in the Rate Contract through Registered / Speed post immediately after on-line placement of Supply Order(s).