

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

Rate Contract no. Oscope/IT-3/RC-D2040000/0312/83/F0197/1728
Dated 24-MAR-11

To,

SRB INSTRUMENTS PVT. LTD.,
B-28/34 Subhash Chowk, Laxmi Nagar, Delhi- 110092

Mr. Rakesh Pandita: 09810190551
Mr. Vinod Pandita: 09810445563
E-mail: info@srb-instruments.com

Sub: Rate Contract for supply of Oscilloscopes
Validity: From 01-APR-11 To 31-MAR-12 .

Ref:(1) This Office Tender Enquiry No. Oscope/IT-3/RC-D2040000/0312/83
Opened on 01-DEC-10.
(2) Your Quotation No. And Dated

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 available from dgs&d sales counter on payment of Rs. 50/- .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

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

SCHEDULE - A

1. Rate Contract No.: - Oscope/IT-3/RC-D2040000/0312/83/F0197/1728

Dated 24-MAR-11 For the Supply of Oscilloscopes

2. Advance Rate Contract No.: - Nil

Dated

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

SRB INSTRUMENTS PVT. LTD.,
B-28/34 Subhash Chowk, Laxmi Nagar, Delhi- 110092

Mr. Rakesh Pandita: 09810190551

Mr. Vinod Pandita: 09810445563

E-mail: info@srb-instruments.com

DELHI - 110092

Tel. No. - 011-22413422

Fax - 011-22459443

Email - info@srb-instruments.com

(b) Name and Full Address of Manufacturer :-

As per Schedule B

(c) Brand: AGILENT TECHNOLOGIES

4. Validity of Rate Contract: 01-APR-11 To 31-MAR-12

5. Description of Item, Specification, Unit, Rate

Item No.	Model No.	Store Description	Unit	Rate (in Rs.)
10	Agilent DSO1012A	Digital Storage Oscilloscopes	Bandwidth: 100 MHz, No. of Channels: Two, Display: Colour	NOS. 49359 Rs. FORTY-NINE THOUSAND THREE HUNDRED FIFTY-NINE ONLY
11	Agilent DSO1014A	Digital Storage Oscilloscopes	Bandwidth: 100 MHz, No. of Channels: Four, Display: Colour	NOS. 78588 Rs. SEVENTY-EIGHT THOUSAN

					D FIVE HUNDRED EIGHTY- EIGHT ONLY
12	Agilent DSO1022A	Digital Storage Oscilloscopes	Bandwidth: 200 MHz,No. of Channels: Two,Display: Colour	NOS.	88102 Rs. EIGHTY- EIGHT THOUSAN D ONE HUNDRED TWO ONLY
13	Agilent DSO1024A	Digital Storage Oscilloscopes	Bandwidth: 200 MHz,No. of Channels: Four,Display: Colour	NOS.	118400 Rs. ONE LAKHS EIGHTEEN THOUSAN D FOUR HUNDRED ONLY
20	Agilent DSO7104B	Digital Storage Oscilloscopes, High Performance	Bandwidth: 1 GHz,Memory: 8 M,No. of Channels: Four,Display: Colour	NOS.	675897 Rs. SIX LAKHS SEVENTY- FIVE THOUSAN D EIGHT HUNDRED NINETY- SEVEN ONLY
40	Agilent 1146A	Other Add-on items for Oscilloscopes	Description: Current Probe 100A AC/DC 100 KHz	NOS.	31027 Rs. THIRTY- ONE THOUSAN D TWENTY- SEVEN ONLY
45	Agilent N2783A	Other Add-on items for Oscilloscopes	Description: Current Probe 30A ,100 MHz	NOS.	151716 Rs. ONE LAKHS FIFTY-ONE THOUSAN D SEVEN HUNDRED SIXTEEN ONLY

47	Agilent U1881A	Other Add-on items for Oscilloscopes	Description: Power measurement and analysis software	NOS.	80678 Rs. EIGHTY THOUSAN D SIX HUNDRED SEVENTY- EIGHT ONLY
49	Agilent 1156A	Other Add-on items for Oscilloscopes	Description: Active Probe 1.5 GHz	NOS.	99890 Rs. NINETY- NINE THOUSAN D EIGHT HUNDRED NINETY ONLY
59	Agilent N2744A- T2A	Other Add-on items for Oscilloscopes	Description: Interface Adaptor with BNC	NOS.	21845 Rs. TWENTY- ONE THOUSAN D EIGHT HUNDRED FORTY- FIVE ONLY
60	Agilent 82357B	Other Add-on items for Oscilloscopes	Description: GPIB to USB adaptor	NOS.	26837 Rs. TWENTY- SIX THOUSAN D EIGHT HUNDRED THIRTY- SEVEN ONLY
104		Additional Calibration Charges from 1 year to 3 years	Description: 60MHz ,Two Channels, color, Digital	NOS.	972 Rs. NINE HUNDRED SEVENTY- TWO ONLY
105		Additional Calibration Charges from 1 year to 3 years	Description: 100MHz ,Two Channels, Color, Digital	NOS.	1234 Rs. ONE THOUSAN D TWO HUNDRED THIRTY- FOUR

106	Additional Calibration Charges from 1 year to 3 years	Description: 100MHz ,Four Channels, Color, Digital	NOS.	1964 Rs. ONE THOUSAN D NINE HUNDRED SIXTY-FOUR ONLY
107	Additional Calibration Charges from 1 year to 3 years	Description: 200MHz ,Two Channels, Color, Digital	NOS.	2202 Rs. TWO THOUSAN D TWO HUNDRED TWO ONLY
108	Additional Calibration Charges from 1 year to 3 years	Description: 200MHz ,Four Channels, Color, Digital	NOS.	2960 Rs. TWO THOUSAN D NINE HUNDRED SIXTY ONLY
111	Additional Calibration Charges from 1 year to 3 years	Description: 500MHz ,10K ,Two Channels, Color, Digital	NOS.	9667 Rs. NINE THOUSAN D SIX HUNDRED SIXTY-SEVEN ONLY
112	Additional Calibration Charges from 1 year to 3 years	Description: 500MHz ,10K ,Four Channels, Color, Digital	NOS.	11789 Rs. ELEVEN THOUSAN D SEVEN HUNDRED EIGHTY-NINE ONLY
113	Additional Calibration Charges from 1 year to 3 years	Description: 500MHz ,8M ,Four Channels, Color, Digital	NOS.	13396 Rs. THIRTEEN THOUSAN D THREE HUNDRED NINETY-SIX ONLY
114	Additional Calibration Charges from 1 year to 3 years	Description: 1GHz ,8M ,Four Channels, Color, Digital	NOS.	16897 Rs. SIXTEEN

					THOUSAN D EIGHT HUNDRED NINETY- SEVEN ONLY
120		Additional Calibration Charges from 1 year to 3 years	Description: 500 MHz,Mixed Signal Oscilloscope	NOS.	18591 Rs. EIGHTEEN THOUSAN D FIVE HUNDRED NINETY- ONE ONLY
124	Agilent MSO7054B	Mixed Signal Oscilloscopes	Bandwidth: 500 MHz,No. of Channels: 4 Analog and 16 Digital,Display: Colour,Sample Rate: 2 GS/s	NOS.	743678 Rs. SEVEN LAKHS FORTY- THREE THOUSAN D SIX HUNDRED SEVENTY- EIGHT ONLY
125	Agilent MSO7104B	Mixed Signal Oscilloscopes	Bandwidth: 1 GHz,No. of Channels: 4 Analog and 16 Digital,Display: Colour,Sample Rate: 2 GS/s	NOS.	888098 Rs. EIGHT LAKHS EIGHTY- EIGHT THOUSAN D NINETY- EIGHT ONLY
126	Agilent MSO7034B	Mixed Signal Oscilloscopes	Bandwidth: 350 MHz,No. of Channels: 4 Analog and 16 Digital,Display: Colour,Sample Rate: 2 GS/s	NOS.	574207 Rs. FIVE LAKHS SEVENTY- FOUR THOUSAN D TWO HUNDRED SEVEN ONLY

6-Terms of Delivery:

Free delivery at consignee's premises including installation & commissioning with 3 years warranty.

7-Excise Duty:

N.A.

8-Sales Tax:

CST/VAT Extra @5%

9-Delivery Period:

Within 12 to 16 weeks from the date of receipt of confirmed order, custom duty exemption certificate, road permit, End-user

certificate & Octroi exemption certificate. In case of CDEC, the D/P will be counted from the date of issue of CDEC / EUC.

10(a)-Annual Turnover:	Without Limit
(b)-Monetary Limit(In Rs.):	Without Any Limit
11-Payment Terms:	As per Schedule B
12-Slab Discount Clause:	Applicable
13-Prices:	FIXED
14-Quantity Offered:	NA
15-Minimum Quantity in Single Supply Order:	Without Limit
16-Minimum order Value in Single Supply Order:	Without Limit
17-Status of the RC Holding Firm:	LSI
18-Paying Authority:	The Chief Controller of Accounts, Deptt. of Supply 16A, AKBAR ROAD New Delhi -110011
19-Inspection Authority:	For Civil ADG(QA),Jeevan Tara Building,Parliament Street New Delhi
20-Quality Assurance Officer:	For Civil Director(QA), Delhi Directorate, Jeevan Tara Building, 4th Floor, Sansad Marg New Delhi DELHI -110001
21-Place where the Stores are to be Tendered for Inspection:	B-28/34, Maurya Complex, Subhash Chowk, Laxmi Nagar, Delhi- 110092
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
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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

RC Specification: 1. Name & address of manufacturers:

i. M/s. Agilent Technologies (Chengdu) Co., Ltd. 79 Baicao Road, Qianfeng park, Chengdu Hi-Tech industrial Development Zone (West), Chengdu 611731, China

ii. Agilent Technologies Microwave Products (M) Sdn Bhd Bayan Lepas Free Industrial Zone, Bayan Lepas 11900, Penang, Malaysia

iii. Agilent Singapore Address: Agilent Technologies Singapore (Sales) Ptd. Ltd. Yishun Avenue 7 Singapore- 768923

Special Conditions of Contract:

1. Insurance: As per DGS&D standard transit insurance clause, it will be responsibility of supplier for safe arrival of stores in full and good conditions at user's point and purchaser will not pay separately for transit insurance clause.

2. Country of Origin : Malaysia / China

3. Payment terms :

98% payment would be payable against proof of inspection and consignee receipt certificate issued by consignee for having received the stores in full and in good conditions. The balance 2% after successful demonstration and acceptance of stores by consignee and on submission of Bank Guarantee for balance 2% value of order valid till 2 months beyond the warranty period of 3 years indemnifying the purchaser against all losses incurred by the purchase during the guarantee/warranty.

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

5. Octroi Duty and Local Taxes:

Normally materials to be supplied to Govt. Department against Govt. contracts are exempted from levy of town duty, Octroi duty, terminal tax and other levies of local bodies. The local Town/Municipal Body regulations at times, however, provide for such exemption only on production of such exemption certificate from any authorized officer. Contractors should ensure that stores ordered against contracts placed by this office are exempted from levy of town duty/Octroi duty, Terminal tax or other local taxes and duties. Wherever required, they should obtain the exemption certificate from the purchase officer or indenter concerned, to avoid payment of such local taxes or duties. Octroi, entry tax etc. on buyers account in absence of relevant exemption certificate.

6. Supply of Road Permits/ Way bill by the indenter/consignees:

In all such cases where the requirement of Road Permit/Way Bills for entry of goods into a particular State is mandatory, the following provisions shall be strictly followed: -.

(a) The supplier shall request the indenter/consignee for providing Road permit/ Way bill within 10 days of the receipt of the Supply order. The supplier shall furnish all the necessary information and documents in this regard to Indenter/consignee.

(b) On receipt of the above request from the supplier, the indenter/consignee concerned shall arrange to provide the Road permit/Way Bill in the prescribed form to the supplier within a maximum period of two weeks so that the same reaches the supplier before the dispatch of the stores. However, in cases where the Road permit/Way Bill is issued on proof of actual invoice of the material, the consignee shall arrange to provide the Road permit/Way Bill from appropriate authorities within a maximum period of 5 days from the receipt of invoice.

(c) The supplier shall not be held responsible for any delay in supply due to non- supply/delayed supply of Road permit/Way bill by

the indentor/consignee.

(d) All cases of abnormal delay in providing requisite details/ documents by the supplier or issue of Road permit/Way bill by indentor/consignee, the same shall be reported to DGS&D.

7. Signing of Inspection Notes issued by QA Wing of DGS&D : Instructions to Indentors/Consignees.

Advance Payment Copy of Inspection Note for claiming 98% payment (copy No.1):

This is a provisional receipt. It only be tokens the receipt of stores by the consignee and is without prejudice to his rights of inspection and rejection under the general condition to contact. It is issued on said to contain basis the Contractor remaining responsible for proving the total quantities actually delivered. Consignee mentioned in the Inspection Notes should sign (in INK) & put his official rubber stamp on the Advance Payment Copy of Inspection Notes IMMEDIATELY on the receipt of the material and handover the same to the company's authorized representative. Where this is not possible or inconvenient, it should be signed (in INK) by an official authorized by the consignee in that behalf. In such cases, the official signing the receipt certificate should indicate his designation and the official on whose behalf he is signing; and put his official rubber stamp.

Balance payment & Accounts Copy of Inspection Note (Copy no 2& 5) for claiming 2% balance payment.

Within 90 days from the date of material received, Consignee mentioned in the Inspection Notes should sign (in INK) & put his official rubber stamp on the Balance & Accounts office copy of Inspection Notes and should fill up the columns of Receipt Voucher No.

In cases where the supply is incomplete or defective or the supplier do not carry out commissioning/demonstration of the stores within the period as per (i) above, the consignee shall report such cases immediately to the supplier and DGS&D.

In cases where the consignees do not release copy 2 and 5 of I/Notes within the period as (i) above for the reasons which are considered not valid by the supplier, they may approach DGS&D with complete details for authorization of balance payment without copy 2 and 5 of I/Notes and the same shall be considered by DGS&D on merits of each case..

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 Agilent / US deptt of commerce.

9. Individual Validated License: Please note that organizations requiring individual validated licenses (IVL), as determined by US government, need to furnish license application. Please note that order acceptance & shipment will be performed only after receipt of IVL from US government.

10. Liquidated Damages: Levy of Liquidated Damages shall be exempted in cases where delay is due to non-receipt of CDE certificate, Road Permit or other such relevant documents (for effecting deliveries) from the customer or under force-de-majeure conditions.

11 Custom Duty Exemption :

a. 10% against valid CDE certificate, for customers, such as education institutes, where present rate custom duty is 9.3% as per custom notification 51/96. To qualify for this discount, education institutes must be Post-Secondary, Degree-granting, Non-Profit, Government-accredited colleges, duty-paid rate contract prices of oscilloscopes.

b) 17.7% against valid CDE certificate, for Defense customers, where present rate custom duty is nil as per custom notification 39/96.

SCHEDULE - C

List of Parallel Rate Contract For Oscilloscopes

Sr.No.	NAME & FULL ADDRESS OF FIRM	R/C NO & DATE
1	AGMATEL INDIA PVT LTD E-366, 2nd Floor, Nirman Vihar, Vikas Marg, Delhi 110092 Mr. A.K.Aggarwal- 9810054742, E- mail:aka@agmatel.com Ph:011-22462256 / 22456529 / 43064306 Fax:011- 22019833 . DELHI 110092	Oscope/IT-3/RC- D2040000/0312/83/F0359/1727 24-MAR-11
2	SRB INSTRUMENTS PVT. LTD., B-28/34 Subhash Chowk, Laxmi Nagar, Delhi- 110092 Mr. Rakesh Pandita: 09810190551 Mr.Vinod Pandita: 09810445563 E-mail: info@srb-instruments.com . DELHI 110092	Oscope/IT-3/RC- D2040000/0312/83/F0197/1728 24-MAR-11
3	SYNERGY MEASUREMENT TECHNOLOGIES PVT. LTD. 25/C, Nicholson Road, Tarbund,Secunderabad- 500009 (AP) E-mail: debashis@synergytech.in Tele No. 040-44444040/50/35 Mr. Debashis: 09830067183 . ANDHRA PRADESH 500015	Oscope/IT-3/RC- D2040000/0312/83/F0710/1729 24-MAR-11

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

Type Test Reports shall consist of functional tests and environmental tests for each Model for the claimed parameter and shall be from any Govt. laboratory in India.

Environmental tests:

1. Dry Heat Test : 50 deg C for 16 hours as per IS:9000/Pt.3/sec.5/1977 (reaffirmed in 2004)
2. Cold test : 0 deg C for 4 hours as per IS:9000/Pt.2/sec.4/1977 (reaffirmed in 2004)
3. Damp Heat Test: 95% RH at 40 deg C, two cycles of 24 hours each separated by a gap of 4 hours as per IS:9000/Pt.5/sec.1/1991 (reaffirmed in 2004)

The oscilloscopes shall be checked functionally before and after recovery period of 1-2 hours of the environmental test sequence as above. Functional tests shall include switching ON and calibration. Calibration shall also be checked at supplier's premises in presence of DGS&D QA officer to verify compliance of stores offered for inspection.

Type Test report shall be required at the time of registration and inspection.

Digital Storage Oscilloscopes

(I) Digital Storage Oscilloscope 60 MHz Two Channel Colour Display

1. General : Portable, rugged for automatic measurements, auto set features, cursor measurements, FFT, on line help
and Waveform and set up memories
2. Real Time Bandwidth : DC- 60 MHz simultaneously on all channels
3. No. of Channels : Two with external channel
4. Sample Rate (Max.) : 200 MS/s on all channels
5. Record Length : 2500 Points per channel
6. Vertical Resolution : 8 Bits
7. Vertical Sensitivity : 5 mv to 5 Volts per division
8. Time Base Range : 5 ns to 50 sec per division
9. Time Base Accuracy : 100 ppm
10. Trigger Mode : Auto, Normal and Single Sequence
11. Max.Input Voltage : 300 VRMS CAT II
12. Input Coupling : AC, DC, & Ground
13. Triggering : Edge, Video, Pulse width, External
14. Analysis Modes : Peak Detect, Average, Normal,
15. Measurements : Automatic Measurements, Time & Voltage Cursors,

Math (Add, Subtract), FFT

- 16. Display : LCD/CRT (Colour)
- 17. Interpolation : Sin x/x
- 18. Format : Y-T and X-Y
- 19. Power Supply : 230 V +/- 10%, 50 Hz. AC Supply
- 20. I/O Interface : USB, one Centronics or USB and Software for waveform Analysis
- 21. Operating Conditions : 10 to 40 degree C and 80% RH at 30 degree C
- 22. Standard Accessories to be supplied : Two 10X probes, Power Cord, Manual, Calibration Certificates
- 23. Applications : Digital Design and Debug Manufacturing testing and quality control Education and training Service and repair

(II) Digital Storage Oscilloscope 100 MHz Two Channel Colour Display

- 1. General : Portable, rugged for automatic measurements, auto set features, cursor measurements, FFT, on line

help

feature and Waveform and set up memories

- 2. Real Time Bandwidth : DC- 100 MHz simultaneously on all channels
- 3. No. of Channels : Two with external channel
- 4. Sample Rate (Max.) : 500 MS/s on all channels
- 5. Record Length : 2500 Points per channel
- 6. Vertical Resolution : 8 Bits
- 7. Vertical Sensitivity : 5 mv to 5 Volts per division
- 8. Time Base Range : 5 ns to 50 sec per division
- 9. Time Base Accuracy : 100 ppm
- 10. Trigger Mode : Auto, Normal and Single Sequence
- 11. Max .Input Voltage : 300 VRMS CAT II
- 12. Input Coupling : AC, DC, & Ground
- 13. Triggering : Edge, Video, Pulse width, External
- 14. Analysis Modes : Peak Detect, Average, Normal
- 15. Measurements : Automatic Measurements, Time & Voltage Cursors, Math (Add, Subtract), FFT
- 16. Display : LCD/CRT (Colour)
- 17. Interpolation : Sin x/x
- 18. Format : Y-T and X-Y
- 19. Power Supply : 230 V +/- 10%, 50 Hz. AC Supply
- 20. I/O Interface : USB, one Centronics or USB and Software for waveform Analysis
- 21. Operating Conditions : 10 to 40 degree C and 80% RH at 30 degree C
- 22. Standard Accessories to be supplied : Two 10X probes, Power Cord, Manual, Calibration Certificates
- 23. Applications : Digital Design and Debug Manufacturing testing and quality control Education and training Service and repair

(III) Digital Storage Oscilloscope 100 MHz Four Channel Colour Display

- 1. General : Portable, rugged for automatic measurements, auto set features, cursor measurements, FFT, on line

help

feature and Waveform and set up memories

- 2. Real Time Bandwidth : DC- 100 MHz simultaneously on all channels
- 3. No. of Channels : Four with external channel
- 4. Sample Rate (Max.) : 1 GS/s on all channels

- 5. Record Length : 2500 Points per channel
- 6. Vertical Resolution : 8 Bits
- 7. Vertical Sensitivity : 5 mv to 5 Volts per division
- 8. Time Base Range : 5 ns to 50 sec per division
- 9. Time Base Accuracy : 100 ppm
- 10. Trigger Mode : Auto, Normal and Single Sequence
- 11. Max. Input Voltage : 300 VRMS CAT II
- 12. Input Coupling : AC, DC, & Ground
- 13. Triggering : Edge, Video, Pulse width, Glitch, External
- 14. Analysis Modes : Peak Detect, Average, Normal, Roll Mode
- 15. Measurements : Automatic Measurements, Time & Voltage Cursors, Math (Add, Subtract), FFT
- 16. Display : LCD/CRT (Colour)
- 17. Interpolation : Sin x/x
- 18. Format : Y-T and X-Y
- 19. Power Supply : 230 V +/- 10%, 50 Hz. AC Supply
- 20. I/O Interface : USB, one Centronics or USB and Software for waveform Analysis
- 21. Operating Conditions : 10 to 40 degree C and 80% RH at 30 degree C
- 22. Standard Accessories to be supplied : Four 10X probes, Power Cord, Manual, Calibration Certificates
- 23. Applications : Digital Design and Debug Manufacturing testing and quality control Education and training Service and repair

(IV) Digital Storage Oscilloscope 200 MHz Two Channel Colour Display

- 1. General : Portable, rugged for automatic measurements, auto set features, cursor measurements, FFT, on line help and Waveform and set up memories
- 2. Real Time Bandwidth : DC- 200 MHz simultaneously on all channels
- 3. No. of Channels : Two with external channel
- 4. Sample Rate (Max.) : 1 GS/s on all channels
- 5. Record Length : 2500 Points per channel
- 6. Vertical Resolution : 8 Bits
- 7. Vertical Sensitivity : 5 mv to 5 Volts per division
- 8. Time Base Range : 2.5 ns to 50 sec per division
- 9. Time Base Accuracy : 50 ppm
- 10. Trigger Mode : Auto, Normal and Single Sequence
- 11. Max. Input Voltage : 300 VRMS CAT II
- 12. Input Coupling : AC, DC, & Ground
- 13. Triggering : Edge, Video, Pulse width, Glitch, External
- 14. Analysis Modes : Peak Detect, Average, Normal, Roll Mode
- 15. Measurements : Automatic Measurements, Time & Voltage Cursors, Math (Add, Subtract), FFT
- 16. Display : LCD/CRT (Colour)
- 17. Interpolation : Sin x/x
- 18. Format : Y-T and X-Y
- 19. Power Supply : 230 V +/- 10%, 50 Hz. AC Supply
- 20. I/O Interface : USB, one Centronics or USB and Software for waveform Analysis
- 21. Operating Conditions : 10 to 40 degree C and 80% RH at 30 degree C
- 22. Standard Accessories : Two 10X probes, Power Cord, Manual, Calibration Certificates
- 23. Applications : Digital Design and Debug Manufacturing testing and quality control Education and training Service and

repair

(V) Digital Storage Oscilloscope 200 MHz Four Channel Colour Display

1. General : Portable, rugged for automatic measurements, auto set features, cursor measurements, FFT, on line help
feature and Waveform and set up memories
2. Real Time Bandwidth : DC- 200 MHz simultaneously on all channels
3. No. of Channels : Four with external channel
4. Sample Rate (Max.) : 1 GS/s on all channels
5. Record Length : 2500 Points per channel
6. Vertical Resolution : 8 Bits
7. Vertical Sensitivity : 5 mv to 5 Volts per division
8. Time Base Range : 2.5 ns to 50 sec per division
9. Time Base Accuracy : 50 ppm
10. Trigger Mode : Auto, Normal and Single Sequence
11. Max. Input Voltage : 300 VRMS CAT II
12. Input Coupling : AC, DC, & Ground
13. Triggering : Edge, Video, Pulse width, Glitch, External
14. Analysis Modes : Peak Detect, Average, Normal, Roll Mode
15. Measurements : Automatic Measurements, Time & Voltage Cursors, Math (Add, Subtract), FFT
16. Display : LCD/CRT (Colour)
17. Interpolation : Sin x/x
18. Format : Y-T and X-Y
19. Power Supply : 230 V +/- 10%, 50 Hz. AC Supply
20. I/O Interface : USB, one Centronics or USB and Software for waveform Analysis
21. Operating Conditions : 10 to 40 degree C and 80% RH at 30 degree C
22. Standard Accessories to be supplied : Four 10X probes, Power Cord, Manual, Calibration Certificates
23. Applications : Digital Design and Debug Manufacturing testing and quality control Education and training Service and repair

Digital Storage Oscilloscopes, High Performance

(I) Digital Storage Oscilloscope 300 MHz Two Channel Colour Display

1. General : Portable, rugged for automatic measurements, auto set features, cursor measurements, FFT, on line help
and Waveform and set up memories
2. Real Time Bandwidth : DC- 300 MHz simultaneously on all channels
3. No. Of Channels : Two Channel with External channel
4. Sample Rate (Max.) : 1 GS/s on all channels
5. Record Length : 10000 Points per channel
6. Vertical Resolution : 8 Bits
7. Vertical Sensitivity : 2 mv to 5 Volts per division
8. Time Base Range : 2 ns to 10 sec per division

- 9. Time Base Accuracy : 25 ppm
- 10. Waveform Capture Rate : 3500 waveforms/sec Real Time
- 11. Trigger Mode : Auto, Normal and Single Sequence
- 12. Max. Input Voltage : 150 VRMS CAT I
- 13. Input Coupling : AC, DC, & Ground
- 14. Triggering : Edge, Video, Pulse width, Glitch, External
- 15. Analysis Modes : Peak Detect, Average, Normal, Roll Mode
- 16. Measurements : Automatic Measurements, Time & Voltage Cursors, Math (Add, Subtract, Divide, Multiply, Integration, Differentiation), FFT
- 17. Display : Colour LCD/CRT
- 18. Interpolation : Sin x/x
- 19. Format : Y-T and X-Y
- 20. Power Supply : 230 V +/- 10%, 50 Hz. AC Supply
- 21. I/O Interface : GPIB, Centronics/USB, Ethernet, VGA ports and waveform processing Software
- 22. Operating Conditions : 10 to 40 degree C and 80% RH at 30 degree C
- 23. Standard Accessories to be supplied : Two 10X Passive probes, Power Cord, Manual, Calibration Certificates
- 24. Applications : Digital Design and Debug Telecommunication testing Video design, installation and service Education and training Service and repair

(II) Digital Storage Oscilloscope 300 MHz Four Channel Colour Display

- 1. General : Portable, rugged for automatic measurements, auto set features, cursor measurements, FFT, on line help and Waveform and set up memories
- 2. Real Time Bandwidth : DC- 300 MHz simultaneously on all channels
- 3. No. Of Channels : Four Channel with External channel
- 4. Sample Rate (Max.) : 2 GS/s on all channels
- 5. Record Length : 10000 Points per channel
- 6. Vertical Resolution : 8 Bits
- 7. Vertical Sensitivity : 2 mv to 10 Volts per division
- 8. Time Base Range : 2 ns to 10 sec per division
- 9. Time Base Accuracy : 25 ppm
- 10. Waveform Capture Rate : 3500 waveforms/sec Real time
- 11. Trigger Mode : Auto, Normal and Single Sequence
- 12. Max. Input Voltage : 150 VRMS CAT I
- 13. Input Coupling : AC, DC, & Ground
- 14. Triggering : Edge, Video, Pulse width, Glitch, External
- 15. Analysis Modes : Peak Detect, Average, Normal, Roll Mode
- 16. Measurements : Automatic Measurements, Time & Voltage Cursors, Math (Add, Subtract, Divide, Multiply, Integration, Differentiation), FFT
- 17. Display : Colour LCD/CRT
- 18. Interpolation : Sin x/x
- 19. Format : Y-T, X-Y
- 20. Power Supply : 230 V +/- 10%, 50 Hz. AC Supply
- 21. I/O Interface : GPIB, Centronics/USB, Ethernet, VGA ports and waveform processing Software
- 22. Operating Conditions : 10 to 40 degree C and 80% RH at 30 degree C
- 23. Standard Accessories to be supplied : Four 10X Passive probes, Power Cord, Manual, Calibration Certificates
- 24. Applications : Digital Design and Debug Telecommunication testing Video design, installation and service Education

and training Service and repair

(III) Digital Storage Oscilloscope 500 MHz Two Channel Colour Display

1. General : Portable, rugged for automatic measurements, auto set features, cursor measurements, Automatic anomaly detection.
2. Real Time Bandwidth : DC- 500 MHz simultaneously on all channels
3. No. Of Channels : Two Channel with External channel
4. Sample Rate (Max.) : 4 GS/s on all channels
5. Record Length : 10000 Points per channel
6. Vertical Resolution : 8 Bits
7. Vertical Sensitivity : 2 mv to 5 Volts per division
8. Time Base Range : 1 ns to 10 sec per division
9. Time Base Accuracy : 25 ppm
10. Waveform Capture Rate : 3500 waveforms/sec Real Time
11. Trigger Mode : Auto, Normal and Single Sequence
12. Max. Input Voltage : 150 VRMS CAT I
13. Input Coupling : AC, DC, & Ground
14. Triggering : Edge, Video, Pulse width, Glitch, External
15. Analysis Modes : Peak Detect, Average, Normal, Roll Mode
16. Measurements : Automatic Measurements, Time & Voltage Cursors, Math (Add, Subtract, Divide, Multiply, Integration, Differentiation), FFT
17. Display : Colour LCD/CRT
18. Interpolation : Sin x/x
19. Format : Y-T and X-Y
20. Power Supply : 230 V +/- 10%, 50 Hz. AC Supply and Battery operation for 2 hour (Optional)
21. I/O Interface : GPIB, Centronics/USB, Ethernet, VGA ports and waveform processing Software
22. Operating Conditions : 10 to 40 degree C and 80% RH at 30 degree C
23. Standard Accessories to be supplied : Two 10X Passive probes, Power Cord, Manual, Calibration Certificates
24. Applications : Digital Design and Debug Telecommunication testing Video design, installation and service Education and training Service and repair

(IV) Digital Storage Oscilloscope 500 MHz Four Channel Colour Display

1. General : Portable, rugged for automatic measurements, auto set features, cursor measurements, Automatic anomaly detection.
2. Real Time Bandwidth : DC- 500 MHz simultaneously on all channels
3. No. Of Channels : Four Channel with External channel
4. Sample Rate (Max.) : 4 GS/s on all channels
5. Record Length : 10000 Points per channel
6. Vertical Resolution : 8 Bits
7. Vertical Sensitivity : 2 mv to 5 Volts per division
8. Time Base Range : 1 ns to 10 sec per division
9. Time Base Accuracy : 25 ppm
10. Waveform Capture Rate : 3500 waveforms/sec.
11. Trigger Mode : Auto, Normal and Single Sequence
12. Max. Input Voltage : 150 VRMS CAT I
13. Input Coupling : AC, DC, & Ground

- 14. Triggering : Edge, Video, Pulse width, Glitch, External
- 15. Analysis Modes : Peak Detect, Average, Normal, Roll Mode
- 16. Measurements : Automatic Measurements, Time & Voltage Cursors, Math (Add, Subtract, Divide, Multiply, Integration, Differentiation), FFT
- 17. Display : Colour LCD/CRT
- 18. Interpolation : Sin x/x
- 19. Format : Y-T, X-Y
- 20. Power Supply : 230 V +/- 10%, 50 Hz. AC Supply and Battery operation for 2 hour (Optional)
- 21. I/O Interface : GPIB, Centronics/USB, Ethernet, VGA ports and waveform processing Software
- 22. Operating Conditions : 10 to 40 degree C and 80% RH at 30 degree C
- 23. Standard Accessories to be supplied : Four 10X Passive probes, Power Cord, Manual, Calibration Certificates
- 24. Applications : Digital Design and Debug Telecommunication testing Video design, installation and service Education and training Service and repair

(V) Digital Storage Oscilloscopes 500 MHz Four Channel Colour Display

- 1. General : The Digital Oscilloscopes shall be rugged and portable with user-friendly front Panels for various Types of measurements quickly and precisely. It shall provide Facilities for commonly used automatic Measurements, auto set features, Cursor Measurements, IVI Drive.
- 2. Real Time Bandwidth : DC-500MHz simultaneously on all channels
- 3. No. Of Channels : Four Channels
- 4. Sample Rate : 2 GS/s on all Channels
- 5. Record Length : 5M on all channels
- 6. Vertical Resolution : 8 Bits
- 7. Vertical Sensitivity : 2 mV/div to 5 V/div.
1 Mohm
- 8. Time Base Range : 1ns to 50 sec. Per division
- 9. Time Base Accuracy : +/- 15ppm
- 10. Waveform Capture Rate : 50000 waveform/sec.
- 11. Sweep Mode : Auto, Normal and Single Sequence
- 12. Max.Input Voltage 1Mohm: 250Vrms with peaks<+/-400V
- 13. Input Coupling : AC, DC, GND
- 14. Triggering : Edge, Pulse Width, Logic, Setup and Hold, Rise/Fall Time, Video, 12C, SPI, CAN, Trigger Delay by time, Trigger Delay by events, Auto, Normal and Single, Trigger markers
- 15. Acquisition Modes : Sample, Peak Detect, Averaging, Hi-Resolution, Roll
- 16. Measurements : 25 Automatic Measurement, (4 can be displayed on screen at any one time), Measurement Statics, Reference Levels, Gating, Math (Add, Subtract, Multiply and Divide Waveforms), FFT, Math Functions Integrate, Differentiate, Advanced Math- Define extensive algebraic expressions including waveforms, math functions, scalars, up to two user adjustable variables and results of parametric measurements.

- 17. Display : Colour Display, 6.3 inches LCD TFT,
- 18. Interpolation : Sin x/x
- 19. Format : YT, XY
- 20. Power Supply : 230 +/- 10% Volts, 50 Hz. AC Supply
- 21. I/O Interface : USB, LAN Port
- 22. Operating Conditions : 10 to 40 degree C and humidity of 80% at 30 degree C
- 23. Accessories : 500M Hz Probe one per channel, Front Cover, User Manual, Compact Flash Memory Card, Calibration Certificate, Power Cord & Accessories Bag etc.

(VI) Digital Storage Oscilloscope 500 MHz Four Channel Colour with Windows Interface

- 1. General : Portable, rugged for automatic measurements, auto set features, cursor measurements, Automatic anomaly detection, Windows ,User Interface.

- 2. Real Time Bandwidth : DC- 500 MHz simultaneously on all channels
- 3. No. Of Channels : Four with External Channels
- 4. Sample Rate (Max.) : 1 GS/s (all channels)
- 5. Record Length(1/2/4 Ch): 16M/8M/4M
- 6. Vertical Resolution : 8 Bits
- 7. Vertical Sensitivity : 2 mv to 5 Volts per division
- 8. Time Base Range : 500 ps to 20 sec per division
- 9. Time Base Accuracy : 15 ppm
- 10. Waveform Capture Rate : 1,00,000 waveforms/sec.
- 11. Sweep Mode : Auto, Normal and Single Sequence
- 12. Max .Input Voltage : 150 VRMS CAT I
- 13. Input Coupling : AC, DC, & Ground
- 14. Triggering : Edge, Video, Glitch, Width, Window, Timeout, Transition, Setup/Hold, Pattern, State
- 15. Analysis Modes : Sample, Peak Detect, Average, Hi resolution, Waveform database.

- 16. Measurements : Automatic Measurements (Amplitude, time, Combination, Histogram, Communication related), Time & Voltage Cursors, Advance Math (Add, Subtract, Divide, Multiply, Integration, Differentiation), Frequency Domain functions,Mathematical uncluding Algebraic Expressions ,User Defined

Maths/Functions, Custom Development,Environment/Customizable GOI.

- 17. Display : colour LCD
- 18. Interpolation : Sin x/x
- 19. Format : Y-T, X-Y
- 20. Power Supply : 230 V +/- 10%, 50 Hz. AC Supply
- 21. I/O Interface : GPIB, Centronics/USB, Ethernet, 2 USB ports, VGA port and waveform processing Software, LAN port
- 22. Operating System : Windows User Interface.
- 23. Operating Conditions : 10 to 40 degree C and 80% RH at 30 degree C
- 24. Standard Accessories to be supplied : Four 10X Passive probes, Power Cord, Manual, Calibration Certificates
- 25. Applications : Digital Design and Debug Telecommunication testing Video design, installation and service Education and training

(VII) Digital Storage Oscilloscopes 1 GHz Four Channel Colour Display

1. General : The Digital Oscilloscopes shall be rugged and portable with user-friendly front panels for various Types of measurements quickly and precisely. It shall provide facilities for commonly user automatic Measurements, auto set features, Cursor Measurements.
2. Real Time Bandwidth : DC-1GHz simultaneously on all channels
3. No. Of Channels : Four Channels
4. Sample Rate : 4 GS/s on all Channels
5. Record Length : 4M on All channels & 8M on Two Channels
6. Vertical Resolution : 8 Bits
7. Vertical Sensitivity : 2 mV/div to 5 V/div.
1Mohm
8. Time Base Range : 500 ps to 50 sec. Per division
9. Time Base Accuracy : +/- 15 ppm
10. Waveform Capture Rate : 50000 waveform/sec.
11. Sweep Mode : Auto, Normal and Single Sequence
12. Max.Input Voltage 1Mohm: 250 Vrms with peaks<+/-400V
13. Input Coupling : AC, DC, GND
14. Triggering : Edge, Pulse Width, Logic, Setup and Hold, Rise/Fall Time, Video, I2C, SPI, CAN, Trigger Delay by time, Trigger Delay by events, Auto, Normal and Single, Trigger markers
15. Acquisition Modes : Sample, Peak Detect, Averaging, Hi- Resolution, Roll
16. Measurements : 25 Automatic Measurement, (4 can be displayed on screen at any one time), Measurement Statics, Reference Levels, Gating, Math (Add, Subtract, Multiply and Divide Waveforms), FFT, Math Functions Integrate, Differentiate, Advanced Math- Define extensive algebraic expressions including waveforms, math functions, scalars, up to two user adjustable variables and results of parametric measurements.
17. Display : Colour Display, 6.3 inches LCD TFT,
18. Interpolation : Sin x/x
19. Format : YT, XY
20. Power Supply : 230 +/- 10% Volts, 50 Hz. AC Supply
21. I/O Interface : USB, LAN Port
22. Operating Conditions : 10 to 40 degree C and humidity of 80% at 30 degree C
23. Accessories : 500 MHz Probe one per channel, Front Cover, User Manual, Compact Flash Memory Card, Calibration Certificate, Power Cord & Accessories Bag etc.

(VIII) Digital Storage Oscilloscope 1 GHz Four Channel Colour Display with Windows Interface

1. General : Portable, rugged for automatic measurements, auto set features, cursor measurements, Should be capable to detect the anomaly in the waveform automatically, Windows User Interface.

2. Real Time Bandwidth : DC- 1GHz simultaneously on all channels
3. No. Of Channels : Four Channels with external channel
4. Sample Rate (1/2/4 Ch.): 1 GS/s on all channels
5. Record Length(1/2/4Ch.): 16M/8M/4M
6. Vertical Resolution : 8 Bits
7. Vertical Sensitivity : 1 mv to 5 Volts per division
8. Time Base Range : 500 ps to 20 sec per division
9. Time Base Accuracy : 15 ppm
10. Waveform Capture Rate : 1,00,000 waveforms/sec.
11. Sweep Mode : Auto, Normal and Single Sequence
12. Max. Input Voltage : 150 Vrms CAT I
13. Input Coupling : AC, DC, & Ground
14. Triggering : Edge, Video, Width, Glitch, Window, Timeout, Transition, Setup/Hold, Pattern, State
15. Analysis Modes : Sample, Peak Detect, Average, Hi resolution, Waveform database.
16. Measurements : Automatic Measurements (Amplitude, Time, Combination, Histogram, Communication related), Time & Voltage Cursors, Math (Add, Subtract, Divide, Multiply, Integration, Differentiation), Frequency Domain function ,Mathematical including Algebraic Expressions,User Defined Maths/Functions, Custom Development Environment/Customizable GOI.
17. Display : Colour LCD
18. Interpolation : Sin x/x
19. Format : Y-T, X-Y
20. Power Supply : 230 V +/- 10%, 50 Hz. AC Supply
21. Operating System : Windows
22. I/O Interface : GPIB, Centronics/USB, Ethernet, 2 USB ports, VGA port and waveform processing Software, LAN port
23. Operating Conditions : 10 to 40 degree C and 80% RH at 30 degree C
24. Standard Accessories to be supplied : Four 10X Passive probes, Power Cord, Manual, Calibration Certificates
25. Applications : Digital Design and Debug Telecommunication testing Video design, installation and service Education and training

(IX) Digital Oscilloscopes 2.5 GHz, 4 channel Colour Display with Windows Interface

1. General : The Digital Oscilloscope shall be rugged and portable with user-friendly front panels for various Types of measurements quickly and precisely. It shall provide facilities for commonly used automatic Measurements, auto set features,Cursor measurements, CD-RW Drive, Hard Disk Drive,Open environment with Windows XP OS Delivers Built-In Networking and Analysis (third party software like Math lab.
2. Real Time Bandwidth : DC- 2.5GHz simultaneously on all channels
3. No. Of Channels : Four Channels with external channel
4. Sample Rate(1/2/4 Ch.) : 40 GS/s /20GS/s/10GS/s

5. Record Length(1/2/4 Ch): 10M on All channels
6. Vertical Resolution : 8 Bits
7. Vertical Sensitivity : 2 mv to 1 Volts per division
8. Time Base Range : 25 ps to 1000 sec per division
9. Time Base Accuracy : 2.5 ppm + Aging <1ppm
10. Waveform Capture Rate : 250000 waveforms/sec.
11. Sweep Mode : Auto, Normal and Single Sequence
12. Max. Input Voltage : 150 Vrms CAT I
13. Input Coupling : AC, DC, & Ground
14. Triggering : Edge, Glitch, Width, Glitch, Runt, Window, Timeout, Transition, Setup/Hold, Pattern, State
15. Analysis Modes : Sample, Peak Detect, Average, Envelope, Hi resolution, Waveform database.
16. Measurements : 53 Automatic Measurements which 8 can be displayed at any one time (Amplitude, Time, Combination, Histogram, Communication related), Time & Voltage Cursors, Math (Add, Subtract, Divide, Multiply, Integration, Differentiation), Frequency Domain functions, Mathematical including Algebraic Expressions User Defined Maths/Functions, Custom Development Environment/Customizable GOI.
17. Display : Colour LCD (8.4 inches)
18. Interpolation : Sin x/x, Linear
19. Format : Y-T, X-Y
20. Power Supply : 230 +/- 10% Volts, 50 Hz. AC Supply
22. I/O Interface : USB 2.0 Port, Parallel Port, LAN Port, Serial Port, GPIB Port
23. Operating Conditions : 10 to 40 degree C and humidity of 80% at 30 degree C
24. Standard Accessories : Power Cord, Manual, Calibration Certificates to be supplied

(X) Digital Oscilloscopes 4 GHz, 4 channel Colour Display with Windows Interface

1. General : The Digital Oscilloscope shall be rugged and portable with user-friendly front panels for various Types of measurements quickly and precisely. It shall provide facilities for commonly used automatic Measurements, auto set features, Cursor measurements, CD-RW Drive, Hard Disk Drive, Open environment with Windows XP OS Delivers Built-In Networking and Analysis(third party software like Math lab).
2. Real Time Bandwidth : DC- 4GHz simultaneously on all channels
3. No. Of Channels : Four Channels with external channel
4. Sample Rate : Min 20 GS/s on all channels
5. Record Length : 10 M on All channels
6. Vertical Resolution : 8 Bits
7. Vertical Sensitivity : 10 mv to 1 Volts per division
8. Time Base Range : 50 ps to 10 sec per division
9. Time Base Accuracy : 2.5 ppm
10. Waveform Capture Rate : 250000 waveforms/sec.
11. Sweep Mode : Auto, Normal and Single Sequence
12. Max. Input Voltage : 5 Vrms
13. Input Coupling : DC, & Ground

- 14. Triggering : Edge, Glitch, Width, Glitch, Window, Timeout, Transition, Setup/Hold, Pattern, State
- 15. Analysis Modes : Sample, Peak Detect, Average, Hi resolution, Waveform database.
- 16. Measurements : 53 Automatic Measurements which 8 can be displayed at any one time (Amplitude, Time, Combination, Histogram, Communication related), Time & Voltage Cursors, Math (Add, Subtract, Divide, Multiply, Integration, Differentiation), Frequency Domain functions, Mathematical including Algebraic Expression,
User Defined Maths/Functions, Custom Development Environment/Customizable GOI.
- 17. Display : Colour LCD (8.4 inches).
- 18. Interpolation : Sin x/x.
- 19. Format : Y-T, X-Y .
- 20. Power Supply : 230 +/- 10% Volts, 50 Hz. AC Supply.
- 22. I/O Interface : USB 2.0 Port, Parallel Port, LAN Port, Serial Port, GPIB Port.
- 23. Operating Conditions : 10 to 40 degree C and humidity of 80% at 30 degree C
- 24. Standard Accessories : Power Cord, Manual, Calibration Certificates to be supplied.

Other Add-on items for Oscilloscopes

Specification : As per General Technical Requirement.

Additional Calibration Charges from 1 year to 3 years

Specification : As per General Technical Requirement.

Mixed Signal Oscilloscopes

(I) Mixed Signal Oscilloscope 100 MHz 2 Analog and 16 Digital Channels
Colour Display(High End)

- 1. Input Channels : 2 Analog Channel + External Triggering + 16 (Logic Analyser)
- 2. Analog Channels
 - (a) Bandwidth : 100 MHz on all channels
 - (b) Number of Channels : 2
 - (c) Record Length : 1 M points on one channel
 - (d) Sample Rate : 1GS/s
 - (e) Time base range : 5 nsec/div to 50 sec/div
 - (f) Acquisition Mode : Normal, Peak Detect, Averaging
 - (g) Resolution : 8 bits
 - (h) Input sensitivity : 2 mV/div. to 5 div
- 3. Digital Channels
 - (a) Channels : 16 Channels
 - (b) Record Length : 1M
 - (c) Sampling rate : 1 GS/s
- 4. Trigger
 - (a) Trigger types : Edge, Pulse, Slope, Video, Alternate, Pattern and Duration.
 - (b) Auto Measure : Vpp, Vmax. Vmin, Vtop, Vbase, Vrms, Vavg, Vover, Vpre, Freq. Period, Rise, Fall, + Width, - Width, +Duty, -Duty, DelayA, DelayB.

- (c) Math : Add, Subtract, Multiply
- 5. Display
 - (a) Display type : TFT Color Display 5.6inch 320 x 23
- 6. General Specification
 - (a) Waveform Storage : Internal storage of setups, waveforms, USB, BMP, CSV, Waveforms, Setups.
 - (b) I/O : USB or RS232
 - (c) Probes for Analog Channels : Probe x 2 (10x)
 - (d) Probes for Digital channels : Should provide 16 channels logic probes channels
- 7. Power Supply : 230 Volts +/-10%, 50 Hz AC Supply
- 8. Operating Condition : 10 to 40 deg. C and 80% RH at 30 degree C

(II) Mixed Signal Oscilloscope 100 MHz 4 Analog and 16 Digital Channels
Colour Display(High End)

- 1. Input Channels : 4 Analog Channel + External Triggering + 16 (Logic Analyser)
- 2. Analog Channels
 - (a) Bandwidth : 100 MHz on all channels
 - (b) Number of Channels : 4
 - (c) Record Length : 1 M points on one channel
 - (d) Sample Rate : 1GS/s
 - (e) Time base range : 5nsec/div to 50 sec/div
 - (f) Acquisition Mode : Normal, Peak Detect, Averaging
 - (g) Resolution : 8 bits
 - (h) Input sensitivity : 2 mV/div. to 5 div
- 3. Digital Channels
 - (a) Channels : 16 Channels
 - (b) Record Length : 1M
 - (c) Sampling rate : 1 GS/s
- 4. Trigger
 - (a) Trigger types : Edge, Pulse, Slope, Video, Alternate, Pattern and Duration.
 - (b) Auto Measure : Vpp, Vmax. Vmin, Vtop, Vbase, Vrms, Vavg, Vover, Vpre, Freq. Period, Rise, Fall, + Width, - Width, +Duty, -Duty, DelayA, DelayB.
 - (c) Math : Add, Subtract, Multiply.
- 5. Display
 - (a) Display type : TFT Color Display 5.6inch 320 x 23
- 6. General Specification
 - (a) Waveform Storage : Internal storage of setups, waveforms, USB, BMP, CSV, Waveforms, Setups.
 - (b) I/O : USB or RS232
 - (c) Probes for Analog Channels : Probe x 2 (10x)
 - (d) Probes for Digital channels : Should provide 16 channels logic probes.
- 7. Power Supply : 230 Volts +/-10%, 50 Hz AC Supply
- 8. Operating Condition : 10 to 40 deg. C and 80% RH at 30 degree C

(III) Mixed Signal Oscilloscope 350 MHz 4 Analog and 16 Digital Channels
Colour Display

- 1. Input Channels : 4 Analog Channel + External Triggering + 16 (Logic Analyser)

2. Analog Characteristics
 - (a) Bandwidth : 350 MHz on all channels.
 - (b) Number of Channels : 4
 - (c) Record Length : 2.5 M points on one channel.
 - (d) Sample Rate : 2 GS per second
 - (e) Time base range : Normal ,Peak, Detect ,Averaging.
 - (f) Acquisition Mode : Sample rate,Peak Detect, Averaging.
 - (g) Resolution : 8 bits
 - (h) Input sensitivity : 2 mV/div. to 5 div
3. Digital Channels
 - (a) Channels : 16 Channels.
 - (b) Record Length : 8 M points.
 - (c) Sampling rate : 2 GS/s.
4. Trigger
 - (a) Trigger types : Edge, Pulse, Slope, Video, Alternate, Pattern and Duration.
 - (b) Auto Measure : Vpp, Vmax. Vmin, Vtop, Vbase, Vrms, Vavg, Vover, Vpre, Freq. Period, Rise, Fall, + Width, - Width, +Duty, -Duty, DelayA, DelayB.
 - (c) Math : Add, Subtract, Multiply.
5. Display
 - (a) Display type : TFT Color Display 5.6inch 320 x 23
6. General Specification
 - (a) Waveform Storage : Internal storage of setups, waveforms, USB, BMP, CSV, Waveforms, Setups.
 - (b) I/O : USB or RS232
 - (c) Probes for Analog Channels : Probe x 2 (10x)
 - (d) Probes for Digital channels : Should provide 16 channels logic probes.
7. Power Supply : 230 Volts +/-10%, 50 Hz AC Supply
8. Operating Condition : 10 to 40 deg. C and 80% RH at 30 degree C.

(IV) Mixed Signal Oscilloscope 500 MHz 4 Analog and 16 Digital Channels
Colour Display

1. Input Channels : 4 Analog & 16 Digital Channels should be integrated into one instrument chassis without requiring any external module connection.
2. Analog Characteristics
 - (a) Bandwidth : 500 MHz on all channels
 - (b) Number of Channels : 4
 - (c) Record Length : 8 M points
 - (d) Sample Rate : 2 GS per second
 - (e) Time base range : 1nsec/div to 50 sec/div
 - (f) Acquisition Mode : Sample rate,Peak Detect, Averaging, High resolution
 - (g) Resolution : 8 bits
 - (h) Input sensitivity : 2 mV/div. to 5 div
3. Digital Channels
 - (a) Channels : 16 Channels that can be easily accessed from the front panel
 - (b) Record Length : 8 M points
 - (c) Sampling rate : 500 MS/s

- (d) Min. Detectable Pulse width : 2 ns.
- 4. Trigger
 - 4. Trigger
 - (a) Trigger types : Edge, Sequence, Pulse Width, should be available across all Analog and Digital Channel.
 - (b) Measurement & Maths: Built-in Measurement like time, period frequency, rise time, fall time, etc, with Advance math like integrate, differentiate, FFT along with Add, subtract, divide and multiply.
- 5. Display
 - (a) Display type : 6.3 inches XGA Colour Display
- 6. General Specification
 - (a) Waveform Storage : Internal storage of setups, waveforms, USB, Standard.
 - (b) PC Connectivity : Standard, LAN, USB Ports.
 - (c) Probes for Analog Channels : Passive probes 500 MHz, 10 X, 1 per channel.
 - (d) Probes for Digital channels : Should provide 16 channels logic probes.
- 7. Power Supply : 230 Volts +/-10%, 50 Hz AC Supply 8.
- 8. Operating Condition : 10 to 40 deg. C and 80% RH at 30 degree C

(V) Mixed Signal Oscilloscope 1 GHZ 4 Analog and 16 Digital Channels Colour Display

- 1. Input Channels : 4 Analog & 16 Digital Channels should be integrated into one instrument chassis without requiring any external module connection.
- 2. Analog Characteristics
 - (a) Bandwidth : 1 GHZ on all channels.
 - (b) Number of Channels : 4
 - (c) Record Length : 8 M points
 - (d) Sample Rate : 2 GS per second
 - (e) Time base range : 500 p.sec/div
 - (f) Acquisition Mode : Sample rate, Peak Detect, Averaging, High resolution.
 - (g) Resolution : 8 bits
 - (h) Input sensitivity : 2 mV/div. to 5 div
- 3. Digital Channels
 - (a) Channels : 16 Channels that can be easily accessed from the front panel
 - (b) Record Length : 8 M points
 - (c) Sampling rate : 500 MS/s
 - (d) Min. Detectable Pulse width : 2 ns.
- 4. Trigger
 - 4. Trigger
 - (a) Trigger types : Edge, Sequence, Pulse Width, should be available across all Analog and Digital Channel.
 - (b) Measurement & Maths: Built-in Measurement like time, period frequency, rise time, fall time, etc, with Advance math like integrate, differentiate, FFT along with Add,

substact,divide and multiply.

5. Disply

(a) Display type : 6.3 inches XGA Colour Display

6. General Specification

(a) Waveform Storage : Internal storage of setups, waveforms,
USB, Standard.

(b) PC Connectivity : Standard, LAN,USB Ports.

(c) Probes for Analog : 2 Passive probes 500 MHz, 10 X,1 per channel.
Channels

(d) Probes for Digital : Should provide 16 channels logic probes.
channels

7. Power Supply : 230 Volts +/-10%, 50 Hz AC Supply8.

8. Operating Condition : 10 to 40 deg. C and 80% RH at 30 degree C

LIST OF ALL AMENDMENTS

For RC No. [Oscope/IT-3/RC-D2040000/0312/83/F0197/1728](#)

Sr No.	Amendment No.	Amendment Date	Effective From	Amendment In
1	Oscope/IT-3/RC-D2040000/0312/83/F0197/1728/35537	25-MAR-11	01-APR-11	Amendment in Rate,Supplier Information