



**OFFICE of the
REGULATOR**

Please address all correspondence
to the Regulator
Private Bag, Apia, Samoa

Tel: +685 30282
Fax: +685 30281
Email: admin@regulator.gov.ws



Government of Samoa

**INVITATION TO QUOTE
("ITQ")**

**PROCUREMENT FOR THE SUPPLY OF THE QUALITY STANDARDS MONITORING HARDWARE
FOR THE OFFICE OF THE REGULATOR ("OOTR")**

FEBRUARY 2017



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PROJECT TITLE: SUPPLY OF A QUALITY STANDARDS MONITORING HARDWARE (the Equipment") FOR THE OFFICE OF THE REGULATOR ("PURCHASER")

SOURCE OF FUNDING: WORLD BANK ("Bank")

CONTRACT REFERENCE: OOTR-G1

TO:

DEAR SUPPLIER,

1. You are invited to submit your price quotation(s) for the supply of a Quality Standards Monitoring Hardware Equipment in accordance with the specifications and requirements set out in **Annexure A** of this Invitation to Quote ("ITQ").
2. The Purchaser will also accept quotations that include a trade in of the existing OOTR Equipment (**specified in Annexure D**) as part of the payment for the new equipment; this is provided that the new equipment is more advanced than the current equipment and is subject to terms and conditions as determined by the Purchaser.
3. The Supplier will also be responsible for providing training for the new equipment on terms and conditions provided by the Purchaser.
4. You must quote for the item under this Invitation. Price quotations will be evaluated for the item and the contract will be awarded to the firm offering the lowest evaluated total cost of the item.
5. Your price quotation in the form attached as **Annexure B and Annex C** must be submitted by hand delivery or courier service at the following address:

*The Secretary
Tenders Board
Level 4
Central Bank of Samoa Building
Apia, Samoa*

6. The deadline for receipt of your quotation(s) by the Purchaser at the address indicated in Paragraph 3 above is **Monday, 20th March 2017 at 11.00am** (local time).

7. Your quotation in duplicate and in English language, should be accompanied by adequate technical documentation and catalogue(s) and other printed material or pertinent information.

7. Your quotation(s) should be submitted as per the following instructions and in accordance with the attached Contract. The attached Terms and Conditions of Supply is an integral part of the Contract.

(i) **PRICES:** The prices should be quoted for delivery CIP for imported goods or Ex – Works for domestically supplied goods plus the price of delivery to the place of destination listed below according to INCOTERMS, 2000. The prices can be quoted in any Bank's country currency including Euro , but no more than three currencies. Price quoted for the three users for the same item should not vary. The place of destination is Office of the Regulator, Apia, Samoa.

(ii) **EVALUATION OF QUOTATIONS:** Offers determined to be substantially responsive to the technical specifications will be evaluated by comparison of their prices by converting the C.I.P price, to the Samoa Tala (national currency of the Purchaser) based by the Central Bank of Samoa on the date specified in Paragraph 5 of this invitation for submission of quotations.

In evaluating the quotations, the Purchaser will determine for each bid the evaluated price by adjusting the price quotation by making any correction for any arithmetical errors as follows:

- a) where there is a discrepancy between amounts in figures and in words, the amount in words will govern;
- b) where there is a discrepancy between the unit rate and the line item total resulting from multiplying the unit rate by the quantity, the unit rate as quoted will govern;
- c) if a Supplier refuses to accept the correction, his quotation will be rejected.

(iii) **AWARD OF CONTRACT/PURCHASE ORDER:** The award will be made to the bidder offering the lowest evaluated price and that substantially meets the required standards of technical and financial capabilities. The successful bidder will sign a Contract as per attached form of contract and terms and conditions of supply.

(iv) **VALIDITY OF THE OFFER:** Your quotation(s) should be valid for a period of sixty (60) days from the deadline for receipt of quotation(s) indicated in paragraph 5 of this Invitation to Quote.

8. Further information can be obtained from:

Leiautau Eteuati

ACEO – Technical
Services
Office of the Regulator
Mulinu’u Peninsula,
Apia Fax: +685 30281
[Email:eeteuati@regulator.gov.ws](mailto:eeteuati@regulator.gov.ws)

9. INSPECTIONS AND AUDITS:

- 9.1 The Supplier shall carry out all instructions of the Purchaser, which comply with the applicable laws of the Independent State of Samoa.
- 9.2 The Supplier shall permit, and shall cause its Subcontractors and consultants to permit, the Bank and / or persons appointed by the Bank to inspect the Supplier’s offices and all accounts and records relating to the performance of the Contract and the submission of the bid, and to have such accounts and records audited by auditors appointed by the Bank if requested by the Bank. The Supplier’s and its Subcontractors and consultants’ attention is drawn to Clause 5 and Corruption of the Form of Contract (Annexure C), which provides, inter alia, that acts intended to materially impede the exercise of the Bank’s inspection and audit rights constitute a prohibited practice subject to contract termination (as well as to a determination of ineligibility pursuant to the Bank’s prevailing sanctions procedures).
10. The Purchaser reserves the right to amend the invitation to quote, accept or reject any quote, and to annul this process and reject all quotes at any time prior to contract award, without incurring any liability.
11. The Bidder shall bear all costs associated with the preparation and submission of its quote, and the Purchaser shall not be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.
12. Quotations delivered late will be rejected.

13. Please confirm by fax/e-mail the receipt of this invitation and whether or not you will submit the price quotations(s).

Sincerely,

A handwritten signature in black ink, consisting of a large, stylized 'U' followed by a series of loops and a long horizontal stroke extending to the right.

Unutoa Auelua-Fonoti
REGULATOR



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ANNEXURE A: TECHNICAL SPECIFICATION FOR QSMH

Sl.No.	Item No	Description of Goods	Quantity	Unit Price	Total Price at final destination (includes all taxes, VAT, customs, duties, inland transportation and insurance)	Delivery Date
	1	Quality Standards Monitoring hardware	1			Within 60 Days of receipt of contract.
	1	Training	1			
TOTAL COST						
With Specifications set out below.						

RF Data		
Frequency Range		9 kHz to 7.5 GHz
		Option: 7.5 GHz to 18GHz
RF input		

Impedance		50Ω
Preselection	9kHz to 30 MHz	30 MHz lowpassfilter
	20 MHz to 1.5 GHz	Turned bandpass filters
	1.5 GHz to 7.5 GHz	Highpass/lowpass filter combination
IF data		
IF spectrum display range		1 kHz to 10 MHz
		1/2/5/10/20/50/100/200/500 kHz

		1/2/5/10 MHz
Display modes		Normal (clear/write), average, max.hold, min.hold
IF demodulation bandwidths	15 filters (specified values indicate 3 dB bandwidth)	150/300/600 Hz, 1.5/2.4/6/9/15/30/50/120/150/250/300/500 kHz
Demodulation modes	all demodulation bandwidths	AM, FM, PULSE, I/Q
	demodulation bandwidth \leq 9 kHz	LSB
	demodulation bandwidth \leq 15 kHz	ISB
	demodulation bandwidth \leq 9 kHz	CW
Scan modes		
Frequency scan (FScan)	start and stop frequency, step width	User-selectable
	scan speed	Up to 200 channels
Memory scan (MScan)	memory locations	1024, user-programmable
	scan speed	Up 150 channels
Panorama scan (PScan)	start and stop frequency	User-selectable
	resolution bandwidths (bin widths)	125/250/500/625 Hz 1.25/2.5/3.125/6.125/12.5/25/50/100 kHz
	scan speed (RBW = 100 kHz, measurement time = 500 μ s, IF spectrum = normal, clear/write, display mode = IF spectrum)	Up to 2 GHz/s
DF mode		
Frequency range		20 MHz to 18 GHz
DF method	20 MHz to 173 MHz	Watson-Watt
	173 MHz to 6 GHz	Correlative interferometer
Display resolution	selectable	0.1° or 1°

ADDITIONAL INFORMATION

Designation	Type, Description
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Base Unit		
Portable Receiver	[brand name/model]	
	<i>IF spectrum (max. 10 MHz or 20 MHz), spectrogram (waterfall display), 6-cell lithium-ion battery, plug-in power supply, SD card for storing user settings, shoulder strap</i>	
Documentation of calibration values	[bidder to provide the information]	
Software options		
Panorama Scan	[bidder to provide the information]	
	<i>RF scan, high-speed FFT scan across user-selectable scan range, selectable spectral resolution (bin width)</i>	
Internal Recording	[bidder to provide the information]	
	<i>recording of measured data in the receiver (64 Mbyte RAM) or on SD card, recording of audio data in WAV format (replay using Windows Media Player, for example), recording of I/Q data, spectra and spectrogram (waterfall) data, R&S®PR100-Control software for viewing measured data on customer PC</i>	
Remote Control	[bidder to provide information]	
	<i>remote control of receiver via LAN interface (SCPI protocol); transfer of measured data via LAN interface; transfer of demodulated I/Q data (up to 500 kHz bandwidth) via LAN interface; R&S®PR100-Control software (for remote control, data recording and data playback via PC)</i>	
Externally triggered measurements	[bidder to provide the information]	
	<i>an external sensor (not supplied with the receiver) triggers a measurement in the [receiver brand]; the sensor is connected via the AUX interface</i>	
Field Strength Measurements	[bidder to provide information]	
	<i>the field strength is calculated using antenna factors stored in the receiver; the receiver displays the field strength directly in dBµV/m</i>	
Mapping Software	[bidder to provide information]	
	<i>Build in Digital mapping software required to plot field strength mapping for broadcasting service (TV, Radio and Mobile coverage) etc.</i>	
SHF Frequency Processing for down converter antennas	[bidder to provide information]	
	<i>the down converter unit of the [brand & type] antenna is connected to the receiver via a control cable; the receiver recalculates the down converted signals to display them with their original frequencies up to 18 GHz and with the sidebands in their original positions, thus relieving the user from having to convert signals subsequently</i>	
Demodulation	<i>The receiver shall integrate with digital demodulation function for digital radio transmission detection.</i>	

Spare Accessory	<i>Spares accessories are required for maintenance of the equipment; spare antenna cable 5 meters in length with the rf connectors.</i>	
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	<i>(antenna and down converter is optional)</i>	
GPS Software interface	[bidder to provide information]	
	<i>for data stream processing of external GPS module</i>	
Direction finder upgrade kit	[bidder to provide information]	
	<i>adds accurate direction finding functionality to the receiver</i>	
Accessories		
Battery Pack	[bidder to provide information]	
Suitcase kit	[bidder to provide information]	
	<i>hard-shell transit case with headphones and telescopic antenna and extra space for accessories</i>	
Vehicle adapter	[bidder to provide information]	
Carrying holster	[bidder to provide information]	
	<i>Chest strap and rainproof cover</i>	
Carrying bag	[bidder to provide information]	
	<i>Soft carrying bag</i>	
GPS Receiver	[bidder to provide information]	
	<i>External GPS receiver for the [receiver brand name]</i>	
Active Directional Antenna	[bidder to provide information]	
	<i>three antenna modules covering the range from 20 MHz to 7.5 GHz, grip piece housing switchable preamplifier, hard-shell transit case with extra space for [receiver brand name] (model including mechanical compass)</i>	
HF option for the receiver	[bidder to provide information]	
	<i>loop antenna from 9 kHz to 20 MHz for [antenna type] active directional antenna</i>	
SHF antenna and accessories		
SHF directional antennal with down converter	[bidder to provide information]	
Cable set	[bidder to provide information]	
Tripod adapter	[bidder to provide information]	
Carry case	[bidder to provide information]	
DF antennas and accessories		
Compact VHF/UHF DF antenna	[bidder to provide information]	
Compact UHF/SHF DF antenna	[bidder to provide information]	



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Vehicle adapter with magnet mount	[bidder to provide information]	
Wooden tripod	[bidder to provide information]	
Cable set with converter	[bidder to provide information]	
WARRANTY (12 months)	Bidder to confirm warranty	



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ANNEXURE B: FORM OF QUOTATION (SHOPPINGS-GOODS)

(Date)

To: UnutoaAuelua
Regulator
Office of the Regulator
Mulinnu Peninsula, Apia
Fax: +685 30281
Email: uf@regulator.gov.ws

We offer to execute the **SUPPLY OF THE QUALITY STANDARDS MONITORING HARDWARE FOR THE OFFICE OF THE REGULATOR [INSERT CONTRACT NUMBER OOTR – G1]** in accordance with the Conditions of Contract accompanying this Quotation for the Contract Price of _____ . We propose to complete the delivery of Goods described in the Contract within a period of Sixty (60) calendar days from the Date of Signing of the Contract.

This Quotation and your written acceptance will constitute a binding Contract between us. We understand that you are not bound to accept the lowest or any Quotation you receive.

We hereby confirm that this Quotation complies with the Validity of the Quotation required by the proposal documents.

Authorized Signature:

Name and Title of Signatory:

Name of Supplier:

Address:

Phone Number:

Fax Number (if any):

ANNEXURE C: FORM CONTRACT

CONTRACT (SHOPPING-GOODS)

THIS AGREEMENT number _____ made on __ (day)__, _ (month)_ , __ (year)__ between (hereinafter called “the Purchaser”) on the one part and (hereinafter called “the Supplier”) on the other part.

WHEREAS the Purchaser has invited quotation for Quality Standards Monitoring hardware (description of goods) to be supplied by Supplier, viz. Contract _____, (hereinafter called “Contract”) and has accepted the Bid by the Supplier for the supply of goods under Contract at the sum of _____ hereinafter called “the Contract Price”.

NOW THIS AGREEMENT WITNESSETHES as follows:

1. The following documents shall be deemed to form and be read and construed as part of this agreement, viz:
 - a) Invitation to Quote; Term and Conditions of Supply, Technical Specification;
 - b) Addendum (if applicable);
2. Taking into account payments to be made by the Purchaser to the Supplier as hereinafter mentioned, the Supplier hereby concludes an Agreement with the Purchaser to execute and complete the supply of Contract and remedy any defects therein in conformity with the provisions of Contract.
3. The Purchaser hereby covenants to pay in consideration of the goods supply and acceptance of Contract and remedying of defects therein, the Contract Price in accordance with Payment Conditions prescribed by Contract.

4. Termination

4.1 Termination for Default

- a) The Purchaser, without prejudice to any other remedy for breach of Contract, by written notice of default sent to the Supplier, may terminate the Contract in whole or in part:
 - i. if the Supplier fails to deliver any or all of the Goods within the period specified in the Contract, or within any extension thereof granted.
 - ii. if the Supplier fails to perform any other obligation under the Contract; or

iii. if the Supplier, in the judgment of the Purchaser has engaged in fraud and corruption, as defined in Clause 5 below, in competing for or in executing the Contract.

b) In the event the Purchaser terminates the Contract in whole or in part, the Purchaser may procure, upon such terms and in such manner as it deems appropriate, Goods or Related Services similar to those undelivered or not performed and the Supplier shall be liable to the Purchaser for any additional costs for such similar Goods or Related Services. However, the Supplier shall continue performance of the Contract to the extent not terminated.

4.2 Termination for Insolvency.

a) The Purchaser may at any time terminate the Contract by giving notice to the Supplier if the Supplier becomes bankrupt or otherwise insolvent. In such event, termination will be without compensation to the Supplier, provided that such termination will not prejudice or affect any right of action or remedy that has accrued or will accrue thereafter to the Purchaser.

4.3 Termination for Convenience.

- a) The Purchaser, by notice sent to the Supplier, may terminate the Contract, in whole or in part, at any time for its convenience. The notice of termination shall specify that termination is for the Purchaser's convenience, the extent to which performance of the Supplier under the Contract is terminated, and the date upon which such termination becomes effective.
- b) The Goods that are complete and ready for shipment within twenty-eight (28) days after the Supplier's receipt of notice of termination shall be accepted by the Purchaser at the Contract terms and prices. For the remaining Goods, the Purchaser may elect:
- (i) to have any portion completed and delivered at the Contract terms and prices; and/or
 - (ii) to cancel the remainder and pay to the Supplier an agreed amount for partially completed Goods and Related Services and for materials and parts previously procured by the Supplier

Fraud and Corruption

5. If the Purchaser determines that the Supplier and/or any of its personnel, or its agents, or its Subcontractors, consultants, service providers, suppliers and/or their employees has engaged in corrupt, fraudulent, collusive, coercive or obstructive practices (as defined in the prevailing Bank's sanctions procedures), in competing for or in executing the Contract, then the Purchaser may, after giving 14 days' notice to the Supplier, terminate the Supplier's employment under the Contract and cancel the contract, and the provisions of Clause 4 shall apply as if such expulsion had been made under Sub-Clause 4.1.

6. Inspections and Audits

6.1 The Supplier shall carry out all instructions of the Purchaser which comply with the applicable laws where the destination is located

The Supplier shall permit, and shall cause its Subcontractors and consultants to permit, the Bank and/or persons appointed by the Bank to inspect the Supplier's offices and all accounts and records relating to the performance of the Contract and the submission of the bid, and to have such accounts and records audited by auditors appointed by the Bank if requested by the Bank. The Supplier's and its Subcontractors and consultants' attention is drawn to Clause 5 Fraud and Corruption, which provides, inter alia, that acts intended to materially impede the exercise of the Bank's inspection and audit rights constitute a prohibited



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practice subject to contract termination (as well as to a determination of ineligibility pursuant to the Bank's prevailing sanctions procedures).

Signature and seal of the Purchaser:

Signature and seal of the Supplier:

FOR AND ON BEHALF OF

FOR AND ON BEHALF OF

[INSERT NAME OF AUTHORIZED REPRESENTATIVE]

INSERT NAME OF SUPPLIER REPRESENTATIVE

TERMS AND CONDITIONS OF SUPPLY (SHOPPING-GOODS)

PROJECT NAME: SUPPLY OF A QUALITY STANDARDS MONITORING HARDWARE

PURCHASER: OFFICE OF THE REGULATOR

CONSIGNEE: [INSERT INFORMATION – IF NECESSARY]

PACKAGE NO: [INSERT INFORMATION]

1. Prices and Schedules for Supply

Sl.No.	Item No	Description of Goods	Quantity	Unit Price	Total Price at final destination (includes all taxes, VAT, customs, duties, inland transportation and insurance)	Delivery Date
	1	Quality Standards Monitoring hardware	1			Within 60 Days of receipt of contract.
	1	Training	1			
TOTAL COST						

prevail)

With specifications as per annexure A

(Note: In case of discrepancy between unit price and total derived from unit price, the unit price shall

2. Fixed Price:

2.1 The prices indicated above are firm and fixed and not subject to any adjustment during contract performance.

2.2 The Purchaser reserves the right at the time of contract finalization to increase by up to 15% the quantity of goods and services originally specified without any change in unit prices as well as other terms and conditions.

3. Delivery Schedule:

3.1 The delivery should be completed as per above schedule but not exceeding 60 calendar days from contract signature.

4. Insurance:

4.1 The supplier is responsible for all kinds of insurance until the goods delivered and installed (if applicable) to the address of the Purchaser. For the readily available goods in the country of Purchase, the Purchaser will not assume any responsibility until goods are delivered and installed to the final place of destination. In case of goods supplied from abroad specifically for this Contract; the Goods supplied shall be fully insured in a freely convertible currency against loss of damage incidental to manufacture or acquisition, transportation, storage and delivery. The insurance shall be in an amount equal to 110 percent of the total value of the Goods from «Warehouse» to «Warehouse» on «All risks» basis, including «War Risks». The Supplier shall arrange and pay for cargo insurance, naming the Purchaser as the beneficiary.

5. Applicable Law:

5.1 The Contract shall be interpreted in accordance with the laws of the Independent State of Samoa.

6. Resolution of Disputes:

6.1 The Purchaser and the Supplier shall make every effort to resolve amicably by direct informal negotiation any disagreement or dispute between them under or in connection with the Contract. In the case of a dispute between the Purchaser and the Supplier, the dispute shall be settled in accordance with the country procedures of the Purchasers country. The dispute shall be referred to jurisdiction at the Courts of the Independent State of Samoa.

7. Delivery and Documents:

7.1 Upon shipment, the Supplier shall notify the Purchaser and the Insurance Company by facsimile or email the full details of shipment, including purchase order number, description of the good, quantity, the vessel, the Shipping and Forwarding Receipt from freight Company showing full details, port of loading, date of shipment, port of discharge, etc. The Supplier shall mail the following documents to the Purchaser, with a copy to the Insurance Company:

- (i) Copies of the Supplier's invoice showing goods' description, quantity, unit price, and total amount;
- (ii) Duplicate air/ truck transport document and/ or duplicate of railway transport document, and/or duplicate FCR (Forwarders Certificate of Receipt) in 1 Original and 2 Copies marked «freight prepaid»;
- (iii) Copies of the packing list identifying contents of each package;
- (iv) Manufacturer's or supplier's warranty certificate;
- (v) Certificate of origin;
- (vi) Certificate of quality.

- 7.2 The above documents shall be received by the Purchaser at least one week before arrival of the good at the port of place of arrival and, if not received, the Supplier shall be responsible for any consequent expenses.
- 7.3 The Supplier shall provide training for the equipment for the technical staff of the Purchaser on terms and conditions as agreed to by the Purchaser.
8. Payment: for your invoice will be made as follows:
- 8.1 Suppliers' invoice will be made 100% against delivery of the good in Samoa . The Payment will be after 14 working days upon receipt and acceptance of good and original invoice(s) for delivered and final acceptance document for installed equipment.
- 9 Warranty:
- 9.1 The Good offered should be covered by manufacturer's warranty for at least 12 months from the date of delivery to the Purchaser. Please specify warranty period and terms in detail.
10. Packaging and Marking Instructions:
- 10.1 The Supplier shall provide standard packing of the Goods as required to prevent their damage or deterioration during transit to their final destination, as indicated in the Contract.
11. Defects:
- 11.1 All defects will be corrected by the Supplier without any cost to the Purchaser within 30 calendar days from the date of notice by Purchaser. Name and address of service facility which the defects are to be corrected by the supplier within the warranty period:
Address _____
12. Force-Majeure:
- 12.1 The supplier shall not be liable for penalties or termination for default if and to the extent that it's delay in performance or other failure to perform its obligations under the Contract is the result of an event of Force-Majeure.
- 12.2 For purposes of this clause, "Force-Majeure" means an events beyond the control of the Supplier and not involving the Supplier's fault or negligence and not foreseeable. Such events may include, but not restricted to, act of Purchaser in its sovereign capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions, and freight embargoes.
- 12.3 If a Force-Majeure situation arises, the Supplier shall promptly notify the purchaser in writing of such condition and the cause thereof. Unless otherwise directed by the Purchaser in writing, the Supplier shall continue to perform its obligations under the Contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by Force-Majeure event.
13. Required Technical Specifications
- (i) General Description
 - (ii) Specific details and technical standards
 - (iii) Performance Parameters



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Supplier confirms compliance with above specifications **(In case of deviations supplier to list all such deviations).**

14. Failure to Perform:

- 14.1 The Purchaser may cancel the Agreement if the Supplier fails to deliver the Goods, in accordance with the above terms and conditions, in spite of a 21 day notice given by the Purchaser, without incurring any liability to the Supplier.

NAME OF SUPPLIER

Authorized Signature

Place:

Date:

ANNEXURE D: TECHNICAL SPECIFICATION OF THE EXISTING OOTR EQUIPMENT

RF Data		
Frequency Range		9 kHz to 7.5 GHz
RF input		
Impedance		50Ω
Preselection	9kHz to 30 MHz	30 MHz low pass filter
	20 MHz to 1.5 GHz	Turned band pass filters
	1.5 GHz to 7.5 GHz	High pass/low pass filter combination
IF data		
IF spectrum display range		1 kHz to 10 mHz
		1/2/5/10/20/50/100/200/500 kHz
		1/2/5/10 MHz
Display modes		Normal (clear/write), average, max.hold, min.hold
IF demodulation bandwidths	15 filters (specified values indicate 3 dB bandwidth)	150/300/600 Hz, 1.5/2.4/6/9/15/30/50/120/150/250/300/500 kHz
Demodulation modes	all demodulation bandwidths	AM, FM, PULSE, I/Q
	demodulation bandwidth ≤ 9 kHz	LSB
	demodulation bandwidth ≤ 15 kHz	ISB
	demodulation bandwidth ≤ 9 kHz	CW
Scan modes		
Frequency scan (FScan)	start and stop frequency, step width	User-selectable
	scan speed	Up to 200 channels
Memory scan (MScan)	memory locations	1024, user-programmable
	scan speed	Up 150 channels
Panorama scan (PScan)	start and stop frequency	User-selectable
	resolution bandwidths (bin	125/250/500/625 Hz



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	widths)	1.25/2.5/3.125/6.125/12.5/25/50/100 kHz
	scan speed (RBW = 100 kHz, measurement time = 500 μ s, IF spectrum = normal, clear/write, display mode = IF spectrum)	Up to 2 GHz/s
DF mode		
Frequency range		20 MHz to 6 GHz
DF method	20 MHz to 173 MHz	Watson-Watt
	173 MHz to 6 GHz	Correlative interferometer
Display resolution	selectable	0.1° or 1°