

FURNISH AND DELIVER

**EIGHTY SIX (86) TELEDESIGN SYSTEMS TS4000 RADIO MODEMS AND
ACCESSORIES**

FOR THE DEPARTMENT OF WATER SUPPLY

COUNTY OF MAUI

FORMAL BID

JOB NO. IFB # DWSP 2012-17

INVITATION TO BIDDERS


JOB NO. IFB # DWSP 2012-17

Pursuant to Chapter 103-D, HRS, sealed offers shall be received up to and be publicly opened at 10: 00 o'clock a.m. on JUN 13 2012, by the Fiscal Division, Purchasing Branch, Department of Water Supply, 5th Floor, Kalana O Maui(County Building), 200 South High Street, Wailuku, Maui, Hawaii, 96793, to:

FURNISH AND DELIVER EIGHTY SIX (86) TELEDESIGN SYSTEMS TS4000 RADIO MODEMS AND ACCESSORIES

Specifications and Offer Form may be obtained at the Office of the Purchasing Agent, Fiscal Division, located on the fifth floor of the County Building. Office hours are 8:00 a.m. to 4:00 p.m., Monday thru Friday, or visit the Maui County website: www.mauicounty.gov, under Bids & Proposal/Good – All non vehicle goods.

Bidders are required to comply with the newest procurement code, HRS, Chapter 103-D, any rules and regulations and policy directives issued with respects to Chapter 103-D and any amendments.



DANILO F. AGSALOG
Director of Finance
County of Maui

SPECIAL PROVISIONS

JOB NO. IFB # DWSP 2012-17

1. To furnish and deliver eighty six (86) Teledesign Systems TS4000 Radio Modems and accessories for the Department of Water Supply, County of Maui, shall be subject to the Minimum Specifications, Special Provisions, Offer Form and General Conditions (bid documents).
2. Offer shall include all applicable taxes, except Federal Excise Tax from which the County is exempt, and freight/delivery charges F.O.B. Department of Water Supply, County of Maui at 614 Palapala Drive in Kahului, Maui.
3. Bidder shall complete the offer form, enclosing current literature describing the Teledesign Systems TS4000 Radio Modem and Accessories.
4. The Director reserves the right-
 - a. to accept or reject any or all offers and to waive any minor or inadvertent discrepancy in the bid documents.
 - b. to withhold award of contract for a period of thirty (30) calendar days from the date of bid opening; and,
 - c. to increase or decrease the quantities anytime prior from the charges.
5. Manufacturer's brands and stock/part numbers specified, exact model and spec must match. No substitutes will be accepted.
6. Delivery date shall be computed from the Official Commencement Date as specified in the "Notice to Proceed" issued by the Director.
7. A contract shall be awarded to the lowest responsible and responsive bidder, based on the **TOTAL OF THE OUT RIGHT PURCHASE**.
8. A bid bond and performance bond shall not be required.
9. No offer shall be withdrawn after the hour set for the bid opening.
10. Bidder shall deposit sealed offer with the Bid Receiver, Division.

11. Bidder must be a manufacturer authorized dealer.
12. Bidder shall deposit sealed offer with the Bid Receiver, Fiscal Division, Purchasing Branch, Department of Water Supply, located on the 5th Floor of the County Building at 200 South High Street, Wailuku, Maui 96793. Faxed offers shall be rejected.
13. Any questions pertaining to the technical aspect of this solicitation shall be directed to Dean Tanimoto: Telephone (808) 270-6126 or Joe Mendonca (808) 270-7551
Hours of operation 7:00 am to 3:30 pm Hawaiian standard time Monday to Friday .

Any questions pertaining to the solicitation shall be directed to Ken Bissen Jr.,
Purchasing Specialist: Telephone (808) 270-7684 or Fax (808) 270-7136.

Any acceptable modifications or clarifications shall be made by issuance of an addendum, shall be given by written notice to all parties.
14. Offers must be in hand by 10:00 o'clock a.m. on the date designated for the bid opening. Offers mailed and postmarked earlier than the date and time specified, but received later shall be rejected. Offers received and time stamped earlier at other locations, but received by the bid receiver later than the date and time specified, shall be rejected.
15. Before entering into contract and invoicing for final payment, bidders shall submit a current Tax Clearance Certificate, Certificate of Good Standing, and Certificate of Compliance by using the Hawaii Compliance Express, which allows businesses to register online through a simple wizard interface at:
<http://vendors.ehawaii.gov/hce/splash/welcome.html>

Bidders registered with Hawaii Compliance Express may submit a one-page printout from the Hawaii Compliance Express website.
16. For Terms and Conditions for Goods and Service go to:
www.mauicounty.gov/department/Finance/purchasing. Look for Purchasing Terms and Conditions, Goods and Services.
17. All Bidders must submit with their bids, exact detailed specifications for products and accessories they will supply. Final approval by the department to ensure conformability with bid specifications will be made before winning bid is awarded.

OFFER FORM

JOB NO. IFB# DWSP 2012-17

Director of Water Supply
County of Maui
Wailuku, Maui, Hawaii

Dear Sir:

I agree to furnish, deliver and sell outright to the Department of Water Supply of the County of Maui, F.O.B. to NASKA base yard at 614 Palapala Drive, Kahului, Maui, all in strict compliance with the Special Provisions, Minimum Specifications, General Conditions and Offer Form, the following:

FURNISH, DELIVER eighty six (86) Teledesign Systems TS4000 Radio Modems and accessories.

TOTAL OUTRIGHT PRICE \$ _____

DELIVERY WILL BE MADE IN 60 CALENDAR DAYS OR LESS FROM "NOTICE TO PROCEED" ISSUED BY THE DIRECTOR OF WATER SUPPLY.

It is understood and agreed that if a contract is awarded, the undersigned shall enter into and execute a contract for the faithful delivery of the eighty six (86) Teledesign Systems TS4000 Radio Modems and accessories.

36 each. TS4000A05E45HBR RADIO MODEM WITH REMOTE DIAGNOSTICS OPTION AND WITHOUT HEAT SINK.

50 each. TS4000A05E45SBR RADIO MODEM WITH REMOTE DIAGNOSTICS OPTION AND HEAT SINK.

60 each. TS4000 DIN RAIL MOUNTING BRACKET OPTION TS0117.

20 each. TS4000 5 WATT HEAT SINK KIT OPTION TS4000-Htsnk-Kit

86 each. RF JUMPER CABLE – TEFLON RG-400/U (TS0157-2B/N) RF ANTENNA CABLE RG-400/U DOUBLE SHIELDED COAXIAL CABLE, 24" END TO END, STRAIGHT MALE BNC AND N CONNECTORS.

50 each. YAGI ANTENNA "KATHREIN SCALA" MODEL CA7-460 12 dBI
<http://www.kathrein-scala.com/catalog/CA7-460.pdf>

OFFER FORM

**TELEDESIGN SYSTEMS (TS4000A05E45HBR) RADIO MODEM WITH REMOTE DIAGNOSTICS
OPTION AND WITHOUT HEAT SINK.**

AND

**TELEDESIGN SYSTEMS (TS4000A05E45SBR) RADIO MODEM WITH REMOTE DIAGNOSTICS
OPTION AND HEAT SINK.**

1.0 Radio Specifications

1.1 The radio modem shall support a user programmable operating frequency of 450 to 470 MHz configurable in 6.25kHz increments.

1.2 The radio modem shall support a user programmable radio channel occupied bandwidth of 5.0 to 11.2 kHz configurable in 100 Hz increments to support 12.5kHz and 6.25kHz channels.

1.3 The radio modem shall support a user programmable transmit out power of 0.5 watts to 5.0 watts configurable in 0.1 watt increments.

1.4 The radio modem shall support programming of a minimum of 99 simplex or half-duplex receive/transmit channel pairs.

1.5 The radio modem shall support a user programmable over the air data rate of 2,000 to 9,600 bps configurable in 100 bps increments.

1.6 The radio modem shall support a user programmable receive carrier detect threshold from -110 to -60 dBm configurable in 1 dBm increments.

1.7 The radio modem shall include a front panel mounted 50 ohm female BNC connector for connection to an external 50 ohm antenna feed line and antenna.

Radio Network Options

2.1 The radio modem shall support a user programmable transparent and packet data operating modes.

2.2 The radio modem shall support a user programmable data scrambling code with a minimum of 254 selectable codes.

2.3 The radio modem shall support a user selectable Forward Error Correction (FEC) option with 192-bit data interleaving.

2.4 The radio modem shall support a user programmable clear channel scan function which allows the radio modem to automatically and dynamically selects the best channel from a list of up to 9 available channels.

**TELEDESIGN SYSTEMS (TS4000A05E45HBR) RADIO MODEM WITH REMOTE DIAGNOSTICS
OPTION AND WITHOUT HEAT SINK.**

AND

**TELEDESIGN SYSTEMS (TS4000A05E45SBR) RADIO MODEM WITH REMOTE DIAGNOSTICS
OPTION AND HEAT SINK.**

3.0 Radio Network AirNet Packet Protocol

3.1 The radio modem shall support a Carrier Sense Multiple Access (CSMA) packet protocol with user programmable channel access slot times and independent fixed and variable slot time delays per active serial port.

3.2 The packet protocol shall provide network operation supporting any combination of star (point to multi-point) and mess (multi-point to multi-point) connected nodes.

3.3 The packet protocol shall support a user programmable slot time of 1 to 9,999 milliseconds configurable in 1 millisecond increments.

3.4 The packet protocol shall support user programmable fixed slot time delays of 0 to 99 slot times configurable in 1 slot time increments.

3.5 The packet protocol shall support user programmable variable slot time delay transmit Indexes of 1 to 9,999 configurable in 1 unit increments.

3.6 The packet protocol shall support a minimum of 60 network groups with a minimum of 999 individual addresses per group.

3.7 The packet protocol shall support user selectable Individual with Acknowledgment, Individual without Acknowledgment, Group Broadcast and Network Broadcast packet transfer modes.

3.8 The packet protocol shall support a user packet size of 1 to 9,999 bytes.

3.9 The packet protocol shall support an automatic packet retry mode with user programmable retry count to ensure packet delivery for non-broadcast packet transfer modes.

3.10 The packet protocol shall support store and forward data repeating with user programmable address filtering and independent fixed and variable slot time delays per repeater.

3.11 The packet protocol shall support multiple store and forward data repeaters operating in the same radio network.

3.12 The packet protocol shall provide store and forward data repeater operation supporting any combination of star (point to multi-point) and mess (multi-point to multi-point) connected nodes.

TELEDESIGN SYSTEMS (TS4000A05E45HBR) RADIO MODEM WITH REMOTE DIAGNOSTICS OPTION AND WITHOUT HEAT SINK.

AND

TELEDESIGN SYSTEMS (TS4000A05E45SBR) RADIO MODEM WITH REMOTE DIAGNOSTICS OPTION AND HEAT SINK.

4.0 Radio Modem Data Interface

4.1 The radio modem shall have two independent serial ports.

4.2 At least one serial port shall support asynchronous data with odd, even or no parity and data rates from 1,200 to 19,200 baud.

4.3 The serial ports shall support RS-232 signal levels and at least one of the serial ports shall support TTL signal levels.

4.4 The serial ports shall support a data activation "3-wire" mode using only transmit data (TD), receive data (RD) and ground with user programmable end of transmit data timeout period.

4.5 At least one serial port shall support a full handshake mode with full control and monitoring of the RTS, CTS, DCD, DSR and DTR control lines.

4.6 The serial ports shall support radio modem configuration via either serial port.

4.7 The serial port connectors shall be front panel mounted female 9-pin D connectors configured as data communications equipment (DCE) interfaces as defined by the TIA/EIA-232F RS-232 specifications.

5.0 Radio Modem Diagnostics

5.1 The radio modem shall provide real-time diagnostics that monitors at a minimum the input supply voltage, internal regulated voltage, internal temperature, receive signal level (RSSI) of "last signal received from another TS4000 radio modem", transmit forward power, transmit reflected power, and carrier frequency phase lock loop (PLL) status.

5.2 The radio modem shall support retrieval of the diagnostics data via either serial port using a serial data control string or diagnostics menu within the radio modem's configuration program.

5.3 The radio modem shall be capable of retrieving remote diagnostics data from any other remote diagnostics enabled radio modem it has a communications path with in an AirNet packet network.

5.4 The radio modem shall be capable of retrieving remote diagnostics information on the RF path or paths used to communicate between the requesting radio modem and remote radio modem, including address information for up to five of the repeaters used to relay the remote diagnostics messages.

**TELEDESIGN SYSTEMS (TS4000A05E45HBR) RADIO MODEM WITH REMOTE DIAGNOSTICS
OPTION AND WITHOUT HEAT SINK.**

AND

**TELEDESIGN SYSTEMS (TS4000A05E45SBR) RADIO MODEM WITH REMOTE DIAGNOSTICS
OPTION AND HEAT SINK.**

6.0 Radio Modem General

6.1 The radio modem shall operate from a supply voltage of 11 to 28 VDC.

6.2 The radio modem shall include a front panel mounted 2-pin male Molex MicroFit 3.0 power connector for connection to an external power cable and DC power source.

6.3 The radio modem shall operate over a temperature range of -30C to +60C (-22F to +140F).

6.4 The radio modem shall provide an option for vertical or horizontal mounting on a DIN rail mounting bracket.

6.5 The radio modem shall include front panel mounted solid state activity indicators showing the active state of the transmitter, the receiver, and power management circuitry, and a front panel visual indication of a fault condition detected within the unit.

6.6 The radio modem shall include a user programmable transmitter time-out timer with configurable time-out time of 1 to 500 seconds in 1 second increments.

6.7 The radio modem shall include a low supply voltage power down mode for battery powered installations with user programmable power down and power up trip points configurable from 6.0 to 26.5 VDC in 0.1 VDC increments.

6.8 Seller warrants that the Product will be free from defects in materials and workmanship for a period ending twenty-four (24) months after the date of shipment.

6.9 The Product furnished under this Agreement is newly manufactured current model product.

Respectfully submitted,

NAME OF FIRM

SIGNATURE OF BIDDER**

ADDRESS OF FIRM

PRINT OR TYPE NAME OF BIDDER

TELEPHONE NUMBER

PRINT OR TYPE TITLE OF BIDDER

DATE SIGNED

FEDERAL ID/SOCIAL SECURITY NUMBER

HAWAII STATE GENERAL EXCISE TAX LICENSE NUMBER* _____

PLEASE SPECIFY TYPE OF ORGANIZATION:

INDIVIDUAL _____ PARTNERSHIP _____ CORPORATION _____

STATE OF INCORPORATION: HAWAII _____

OTHER _____ PLEASE SPECIFY _____

** If Corporation, please attach to this page your corporate seal; also evidence of the authority of this officer to submit a bid on behalf of the corporation. Such authority must be in the form of a corporate resolution. Give also the names and addresses of the officers of the Corporation.

(SEAL)