QT Technologies M3000 Pro Bid Specification

1.0 GENERAL DESCRIPTION

This specification establishes the performance and design requirements for an Automated Fuel Management System that will control and record the dispensing of fuel at an airport. The vendor shall provide a stand-alone system, capable of unattended operation for 7 days a week, 24 hours a day. Products shall be limited to users/customers with authorized credit cards and/or private issue cards. Dial up of the island card reader shall be by analog, voice grade telephone with user-friendly software loaded on a remotely located PC. The fuel management system shall reliably read all credit cards and other access devices. The system must be QT Technologies M3000 Pro.

2.1 PERFORMANCE.

2.2 System Components.

The fuel management system shall, as a minimum, consist of:

- A card reader device located on the fuel island, capable of turning fuel dispensers on and off, monitoring fuel dispensed, recognizing authorized cards; and with the capability to interface with existing/new dispensers. With credit cards, the system is capable of dialing up the clearing authority for acceptance prior to fueling.

- A thermal receipt printer must come standard on the fuel island and must print 40 column receipts containing information including site name and address, date, time, fuel type, pump number, quantity, price, purchase total, payment type, customer name and approval number.

- Fuel management software installed on a PC, which permits the manipulation of transaction data for printing reports, downloading of transactions, uploading of authorized user lists and transfer and storage of data. Software must include an invoicing capability that allows the user to generate invoices for selectable customers or agencies from the central controller printer. Invoices must list each transaction for a user-selected period. Software must be Windows XP or newer compatible.

2.1.1 The system shall accept the following access devices:

- Major Credit Cards. The credit card system will obtain pre-authorization, dispense up to the credit limit, store the transaction data, settle up with the network, and provide the data to the system software, residing on a PC. The pre-authorization amount shall be determined by the site operator and the card network or bank. Major credit cards are considered to be American Express, MasterCard, Visa, and Discover. Additionally, the system shall accept the following branded cards: Epic, Avfuel, Texaco, Phillips Petroleum, World Fuel Services Shell Aviation and Multiservice.

- Private issue (Proprietary) cards may be issued which are unique to each airplane, individual customer, line person or manager and will activate the system by insertion into the card reader. Private Issue cards may be used by proprietary customers in place of credit cards or as access cards to activate the system.

2.1.2 The System will permit the following functions;

- Acceptance of reduced rate transaction processing as determined by the participating aviation fuel companies.
- There shall be up to 9 pricing levels in the system for use by the site operator.
- Up to 1000 credit card numbers may be stored in the island card reader for repeat customers and each may be assigned a discounted price level.
- Pre-paid cards may be used with the system. The system operator can assign a dollar amount to a private issue card and each time the card owner uses the card, the appropriate amount will be subtracted from the card. The card may be assigned a specific price level.
- Administrative control function is handled at the controlling computer by the system operator and is regulated by use of a password.

2.2 **System Configuration**. The system shall be capable of operating as a credit card reader on a specified network, as well as allowing proprietary cards in conjunction with a credit card. The system has the option of asking for the aircraft tail number for both credit and proprietary card transactions.

2.3 **System Capability.** The card reader shall have the ability to simultaneously control up to four (4) hoses. The fuel management system shall also be capable of controlling bulk fuel or other liquid products.

- The system will have a timeout to deactivate the dispenser if selected but not activated.
- Each hose controller shall have a missing pulse detector to shut off the dispenser if pulses indicating fuel flow is not received at programmed intervals.
- Each hose shall be individually set table for any number of pulses between 1 and 1000 for each unit of measurement.
- System must have the capability to change hose prime and overshoot pulses easily through the software without requiring hardware changes.

2.4 **Operator Input at Fueling Station**. The system must include an insert style card reader that will capture ANSI track one and track two data with a liquid crystal display (LCD) that is a minimum of 4 lines by 40 characters. It must also include a numeric keypad and a second keypad with color-coded keys for fuel type selection and alpha characters for tail number entry. The operator shall be prompted by the LCD to input information for each transaction in accordance with the system configuration. The LCD will query the operator to confirm that the aircraft is grounded prior to turning on the dispenser.

2.5 **Data Management and Reporting**.

2.5.1 The transactions must be stored in the on-site transaction memory in the card reader and may be downloaded by the central controller operator at his/her convenience or at a time of day programmable by the central controller operator. The system must be capable of unattended dialing and downloading, thus permitting downloading during off-peak periods. The method of communication may be either voice grade telephone connection or RS-232 / RS-485 direct connect.

2.5.2 System transaction data.

The system shall provide the following information at the central controller as a transaction record for all transactions:

- Date & time
- Customer name
- Account number
- Total amount
- Price per unit
- Number of units
- Product type
- Pump number
- Payment method
- Transaction status

2.5.3 The system shall keep a declining balance inventory of fuel remaining in storage. The inventory report shall give a summary of the remaining fuel in each storage tank monitored. It must also note when fuel should be purchased for a specific tank.

2.5.4 The system shall allow the operator to compile summary reports for all transactions.

2.5.5 The system shall be capable of displaying reports on the central controller monitor before the reports are printed.

3.0 POWER OUTAGE REQUIREMENTS

In the event of a power failure to the card reader equipment located at the pump, the system shall have the capability to store all data collected up to the time of the power failure for a minimum period of one year. There shall be a method to access dispenser transaction information should there be data transmission problems. Support for this shall also be provided by the factory when required.

4.0 REQUIRED FEATURES

4.1 **On-site transaction memory.** There must be on-site transaction memory at the self-service fueling station to record each transaction as it occurs, thus allowing the manager to maintain a record of transactions, as well as the capability to print those transactions at his/her convenience.

4.2 **Receipt Printer.** The system must provide a thermal receipt printer at the self-service fueling station that prints 40 column receipts. The information on the receipts will include site name and address, date, time, pump number, quantity, price, purchase total, payment type, customer name and approval number.

4.3 **Liquid Crystal Display.** The display must be four line with 40 characters per line LCD. Display must be able to show detailed operating instructions or any other messaging determined by the airport.

4.4 **True Manual Override.** The system must permit manual override of the fuel management system should any problem occur. The override must be a complete, total by-pass of the fuel management system.

4.5 **Toll Free Support**. The vendor must provide toll free support during the warranty or extended maintenance period for the hardware and software. Additionally, a means of dialing the vendor's product support technicians directly from the island key reader is desired.

4.6 **Extended Maintenance Agreements**. The vendor must offer extended maintenance agreements on an annual basis for the life of the system.

4.7 **Surge Protection**. The standard system must have surge protection, with additional surge protection available for lightning prone areas. Surge protection shall be designed specifically for the voltage and current requirements of the fuel management system.

4.8 **Modifiable Prompts**. The system must have the capability to customize all of the prompts that appear on the LCD by making the changes using the fuel management software and downloading the customized prompts to the card reader.

4.9 **Lap Top Computer Support**. The system must have the appropriate interfaces available to permit the operator to connect a lap top computer to the island key/card reader to download transactions and upload equipment and personnel lists, as well as providing local diagnostics capabilities.

5.0 DESIGN. The equipment shall be designed to operate for a minimum 10- year life. Repair parts for the unit shall be available for this period. Equipment should be designed in a modular manner to permit replacement of components by non-technical personnel.

5.1 **Operability**. The equipment shall be simple to operate and supplied with operating instructions. The computer and data collection/download interface shall require a minimum of operating instructions and require little or no prior computer operating experience.

5.2 **Environment**. The vehicle operator interface with the equipment will be outdoors and exposed to the elements. Thus, the fuel island unit must have an operating range of -40 degrees F to +130 degrees F and withstand rain, snow, and blowing sand. The system shall have been tested by an independent environmental testing organization to provide outside affirmation of environmental limits.

5.3 **Services**. This equipment shall be designed to operate from 120 volt AC, 60 Hz single-phase power.

5.4 **Safety.** The equipment shall be provided with all necessary safety devices and guards to protect the operator. Installation manuals and maintenance manuals shall include all necessary safety and hazardous conditions warnings.

6.0 TRAINING. The supplier shall provide on-site training of personnel in the functions of operation, maintenance, and repair as they apply to each specific item of equipment. Supervisors and operators at each refueling site will be provided training in the operation of the island fuel management units.

7.0 MAINTENANCE AND SPARE PARTS.

7.1 **Spare parts**. The manufacturer shall agree to sell spare parts for the operating life of the equipment, estimated to be a minimum of 10 years.

7.2 **Maintenance Agreement.** The manufacturer shall agree to provide system maintenance on a yearly renewable contract for the life of the system.

8.0 WARRANTY. The Manufacturer shall warrant parts and provide telephone labor assistance of all equipment supplied for a period of one (1) year from the time of acceptance. All replacement parts shall be provided by the Manufacturer for this one (1) year period, except those required by acts of nature (i.e., flood, lightning, etc.).