



The KEY to Fuel Consumption Access Control / Data Logging

MegaTronics International Corporation

MegaTronics International Corporation (MTI), based in San Antonio, Texas, has developed a flexible and expandable fueling system called the MegaTrak® Series 3000. MTI's customers include: cities, counties, school districts, mass transits, the U.S. Army, the largest bus fleet in Mexico, the entire state of South Dakota and private fleets of Xerox, Coca-Cola and other Fortune 500 companies.



Cost-effective Fuel Control

As MTI developed the MegaTrak Series 3000, they realized they needed a data transport system that would stand up to the harsh environmental conditions of fueling stations. MTI wanted an easy-to-use portable device that would monitor the fuel operator, vehicle, people, and administrative users. Their device needed to be:

- Rugged and reliable to stand up to the harsh fueling environment
- Fully-engineered to reduce R&D costs and time-to-market
- Long-term supported to avoid expensive re-design and implementation costs

- instant recording of new data during use
- immunity to magnetic and RF interference
- convenient form factor
- wide range of memory capacities
- easy-to-program; easy-to-use

The re-programmable Key can be taken out of the system to change the quantity to be pumped or to designate a particular time of day. Smart-Chip Keys™ can monitor the fuel operator, vehicle, people and administrative users. In addition, the user-friendly software makes it easy to track department billings, vehicles and people. This gives fleet users complete control.

The Solution is KEY

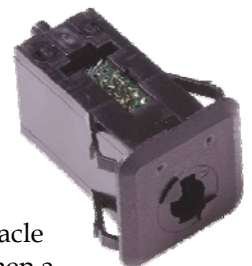
To meet these special demands, MTI turned to Datakey Electronics' LCK Series of Keys and renamed them the "Smart-Chip Key™". When MTI compared the LCK Series of Keys to other alternatives, there was no comparison. The LCK Series offered MTI:



- high-impact composite material (estimated 7-year life expectancy)
- chemically-resistant exterior
- 1000 times greater memory capacity than magnetic cards

Fully Engineered

The Smart-Chip Key inserts into a mating KC4210L Keyceptacle®, featuring LED acknowledgement that a legitimate Key had been inserted. Designed into MTI's MegaTrak unit, Datakey Electronics' Keyceptacle is a high-cycle life Receptacle that also offers tactile confirmation when a Key is inserted and turned. A Last-on, first-off (LOFO) feature is also used to protect the host bus by ensuring that Key has made secure contact with the Receptacle before any signals are transmitted.



Over, please...





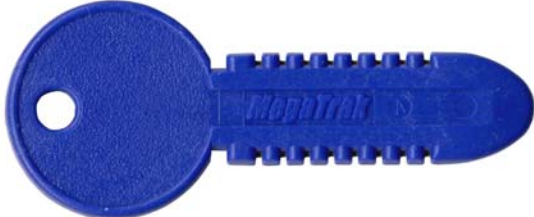
Datakey[®]
ELECTRONICS

CASE STUDY

MegaTronics, cont.

They Chose Datakey Electronics

MTI chose Datakey Electronics as their serial memory device partner because of their long history to provide a rugged product that could withstand the harsh fueling environment. The versatile, yet familiar form factor of the Key helps to increase users' comfort level, shortening any user adjustment period. Additionally, Datakey Electronics' 30+ years of experience in serial memory devices and their fully-engineered solutions decreased R&D costs, technical risk and time-to-market.



South Dakota
Saves 25-40 Cents Per Gallon
with Fueling Technology

State Fueling Coordinator Patti Earley says the MegaTrak system will be installed at more than 100 state sites. The system allows fleet managers to sort, filter, and retrieve fuel data in different formats.

In 1997, the South Dakota state government decided to centralize its fleet under the auspices of the state's Fleet and Travel Management department, which then began the search for a fuel management system to install at state-owned sites. The state was looking for a system that would be adaptable to the varied needs of the several different state agencies, able to withstand extreme weather conditions, and economical enough to facilitate state-wide expansion.

After researching several systems, South Dakota State Fueling System Coordinator Patti Earley and her team found the MegaTrak system at the Petroleum Equipment Institute Trade Show in Minneapolis. Earley noticed the software that makes tracking and billings easy by permitting managers to sort, filter, and retrieve data under different scenarios and formats. She also noticed the direct, single-hose, "pay-at-the-pump" architecture using a microchip in the key technology. The keys can be reprogrammed remotely to change the amount of fuel dispensed, the time of day it is pumped, and the credit limit on pre-paid keys.

By the end of June 2000, more than 7,000 vehicles and pieces of equipment belonging to the state of South Dakota will be able to fuel at more than 80 state-controlled sites

using the MegaTrak automated fuel management and accounting system. The MegaTrak system can be fitted to existing dispensers and offers dial-up technical support.

The state contracts for fuel in bulk and Earley said that by May 2000, when the state had just 40 sites installed, the department was able to save 25 to 40 cents a gallon versus what it used to pay retail at off-site locations.

State Uses System's 4 Levels of Data Acquisition

The MegaTrak system includes a smart-chip key, which fits on a key chain. It is a portable database carrier, which can be reprogrammed remotely to change the amount of fuel dispensed and the time of day it is pumped. The key can be used like a floppy disk in transferring data.

With MegaTrak, South Dakota fleet personnel have complete control over their vehicles and can send vehicle operators personal messages, such as a reminder to inspect or service their vehicle, via the LED reader on the micro control unit.

The state of South Dakota uses MegaTrak's four levels of fallback data acquisition (the main office, the remote site, the micro control unit itself, and the computer chip in the key) inherent in the MegaTrak sys-



Patti Earley, state fueling system coordinator for South Dakota, says the MegaTrak system, with its direct, single hose and "pay-at-the-pump" architecture, has saved the state 25 to 40 cents per gallon.

tem. All levels record transactions for backup purposes.

All MegaTrak fueling sites are posted on the state's web page at www.state.sd.us, as they are completed. The sites will eventually be displayed on a map within the website for ease of location by state employees.

Other fleet users of MegaTrak include Xerox, Coca-Cola, and the U.S. Army.



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