



# e-ASK Systems

(electronic Access & Security Keyless-entry)



Entrance doors, compartment doors or baggage doors, RF transmitter FOB, keypad or both...now you can have it all. Keyless convenience and security from a simple push of a button. You can count on TriMark to be your partner in keyless-entry integration.

## **TriMark continues to innovate with ever-increasing door system integration**

TriMark's expertise in system integration solves ever-increasing access or immobilization system challenges, regardless of complexity. TriMark has proven solutions, whether the system requirements are for perimeter security/safety or further integration with electronic door components and comprehensive vehicle integration.

TriMark's comprehensive components selection allows for complete keyless entry, security, and ignition control for varied levels of sophistication of on- or off-highway vehicles, machine, or other equipment. Standard electronic controls are available for immediate integration, but also quick adaptations can be provided for specific OEM and customer requirements.

These access and immobilization systems add a further dimension of functionality, convenience and security to advanced vehicle architecture. By networking with existing vehicle components, TriMark's modules are complementary for achieving optimal vehicle utility.

### **TriMark ADVANTAGE:**

- Compatible with CAN SAE J1939, RV-C, LIN 2.0, and other multiplexing protocols
- Integrated systems approach
- Rugged and reliable systems for on- and off-road applications
- Advanced technology expertise
- Ability to integrate with various vehicle, machine, and equipment sub-systems
- Patented products
- Full service supplier
- Excellent design and applications support
- Global presence

These products are covered by one or more of the following:

U.S. PATENT NO. 6,789,003

U.S. PATENT NO. 7,034,655

U.S. PATENT NO. 7,119,709

DESIGN PATENT D486,376

U.S. Patent No. 7,400,232

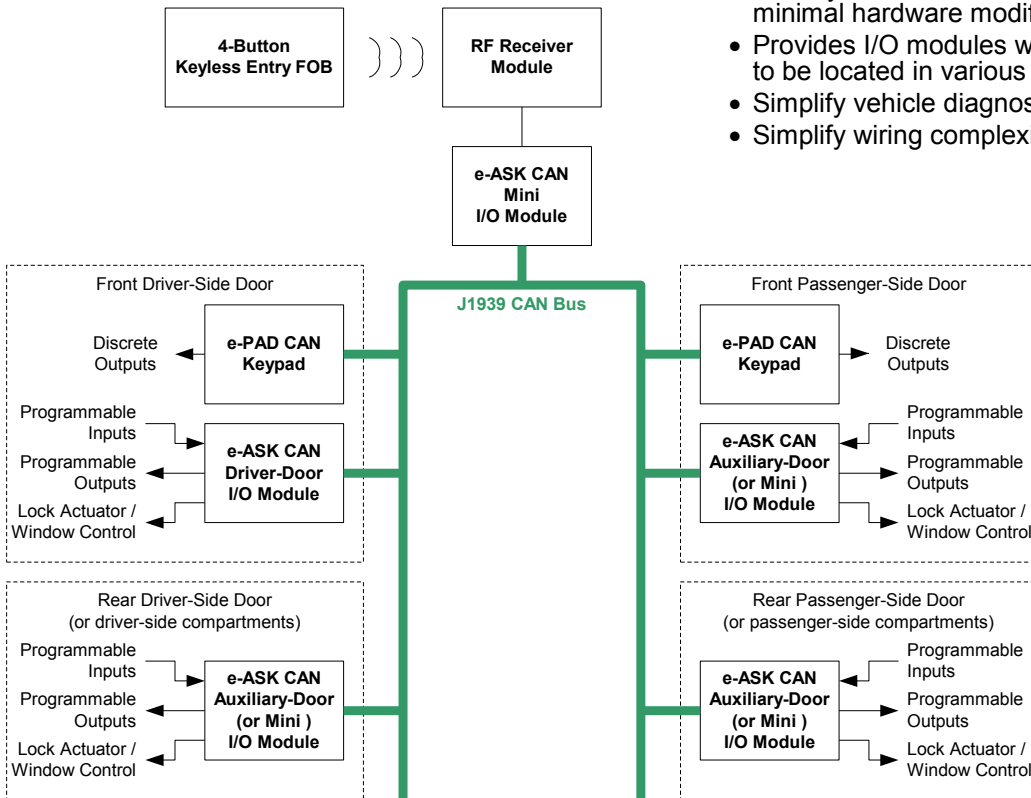
Design Patent No. D559,653

**e-ASK, e-FOB, and e-PAD are registered trademarks of TriMark Corporation**

**CAN J1939  
LIN per J2602**

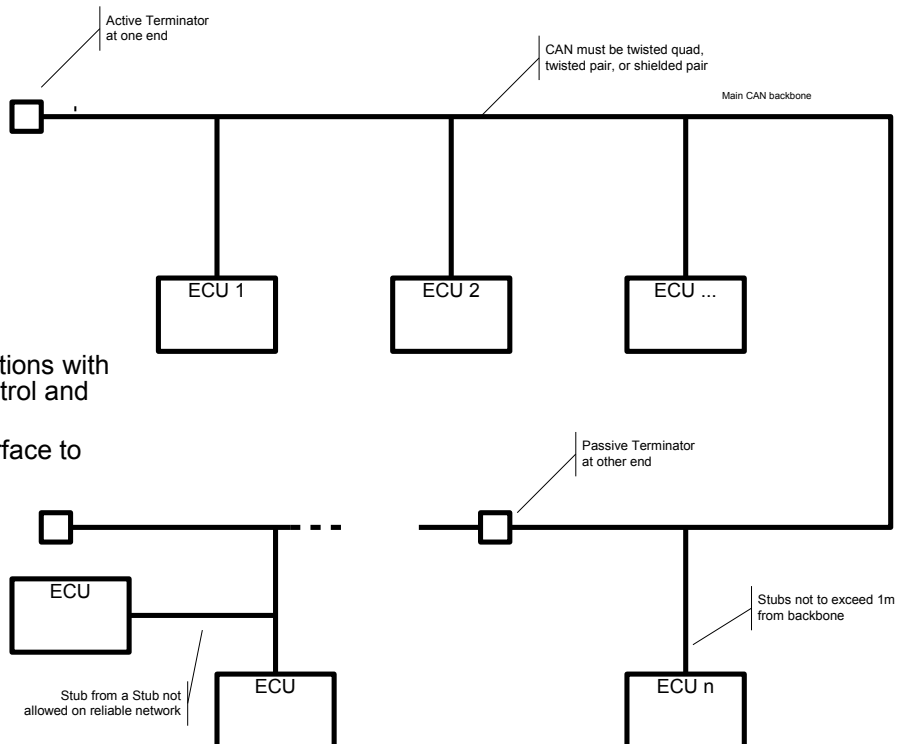
**BENEFITS OF MULTIPLEXING ARCHITECTURE:**

- Easily customize or expand vehicle functions.
- Quickly introduce new vehicle features with minimal hardware modifications
- Provides I/O modules with distributed intelligence control to be located in various functional locations.
- Simplify vehicle diagnostics and troubleshooting
- Simplify wiring complexity and cost



**BENEFITS OF TRIMARK MODULE  
MULTIPLEXING ARCHITECTURE:**

- Complement other vehicle telemetric functions with user identification, audit trails, access control and security provisions
- Add exterior user interface or remote interface to vehicle networks
- Integrate TriMark's "plug n play" module configuration technology



# Keypad (e-PAD) System

This integrated system offers increased security, convenience and functionality with reduced system installation complexity and lower installation costs for demanding users of heavy trucks, emergency vehicles, RV's, agricultural and construction equipment.

User friendly keypad system provides visual, audible and tactile feedback. Keypad can be mounted horizontally, vertically, and with means to protect against tampering.

## FEATURES/BENEFITS:

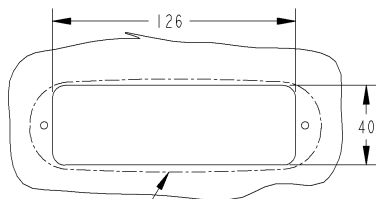
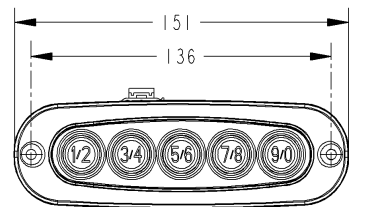
- Increased end user convenience, operation is easy and intuitive
- Rugged and durable construction, is compliant to on-road, off-road, and industrial environmental requirements
- Provides access control or vehicle immobilization
- Integration to existing vehicle network for enabling
  - ◊ User ID data storage
  - ◊ Audit trail
  - ◊ Safety interlocks
  - ◊ Additional customize functionality
- Can control numerous entry/compartament doors
- Independent control of multiple door zones
- Tactile, visual, and audible feedback
- Over 3000 code combinations with tamper lock-out feature
- Lighted keypad for more effective night time usage
- Vertical and horizontal orientations
- 5 user codes can be assigned
- Multiple layer code control
- Discrete communications protocol
- Keypad controlled timed lighting output

## AVAILABLE:

- Standalone keypad or multiplexed networked keypad
- Standard kit includes: Keypad, gasket, wiring, and optional network modules, and manual
- With e-FOB remote transmitter integration
- With security system integration
- Customized graphic
- Customized bezel
- Integration into other exterior components such as grab handle
- Customized wire harnesses
- Multiplexed or discrete communications

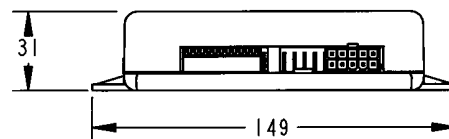
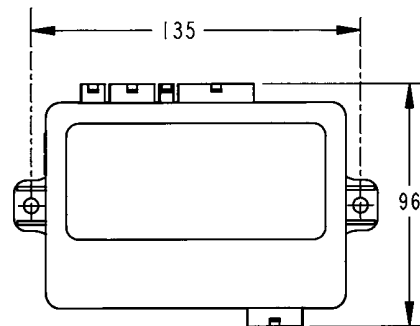
## INSTALLATION:

- Standard 12 VDC power
- Keypad is easy to install with (2) #8 or M4 flat head screws (not included)
- Keypad can be installed in a wide range of locations in door - either horizontal or vertical orientation
- I/O module is easily installed with (4) 1/4" or M6 screws (not included) and can be mounted in a concealed location



OUTER PERIMETER OF  
KEYPAD ASSEMBLY

RECOMMENDED KEYPAD  
CLEARANCE CUTOUT



This cost-effective, simple, and integrated system offers increased security, convenience and functionality with reduced system installation and lower installation costs for demanding users of RV's, heavy trucks, emergency vehicles, agricultural and construction equipment.

Base system provides added convenience and security via a standard remote radio frequency (RF) transmitter providing automotive convenience to your vehicle.

## FEATURES/BENEFITS:

- Increased end user convenience, operation is easy and intuitive
- Rugged and durable construction, is compliant to on-road, off-road, and industrial environmental requirements
- Increased vehicle security with multiple triggers and outputs
- Includes on-board locking and unlocking relays for up to 4 actuators
- Locking/unlocking confirmation
- Ignition controlled auto-locking
- Starter deactivation available for increased security
- High security with code hopping technology offers reliable radio frequency (RF) transmission and is FCC-Part 15 compliant

## INSTALLATION:

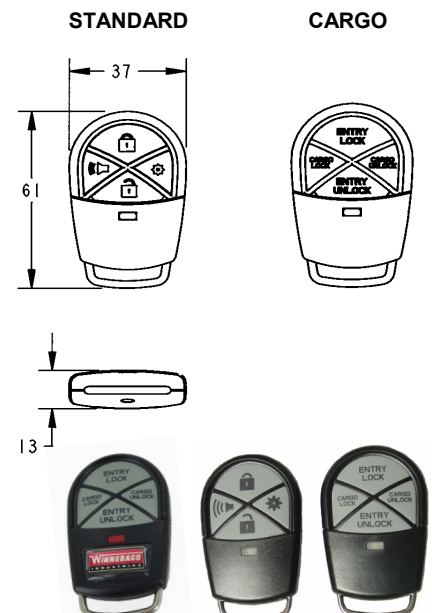
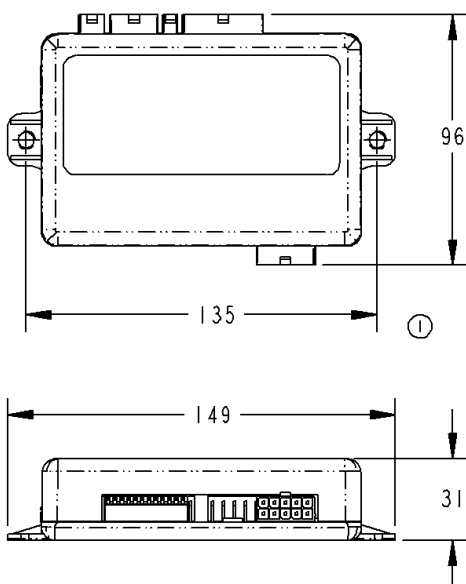
- Standard 12 VDC power
- e-FOB receiver is easily installed with (2) #6 or M3 screws (not included) and can be mounted in a concealed location

## AVAILABLE:

- Standard kit make up includes: 2 pre-trained RF remote fob transmitters, RF receiver, 14 wire harness, 10 wire harness, 2 wire harness, push button switch, and LED assembly key rings and manual
- Customized wire harnesses
- Customized graphics possible (buttons and logos - please inquire)
- Can add up to 40 fob transmitters to vehicle
- 3 different programming functions; standard mode, cargo mode and sustained mode. Standard mode allows for the lock/unlocking of doors plus panic mode and one auxiliary output (controls lighting, opens compartment etc). Cargo mode allows for the lock/unlocking of main personnel doors plus independent control of many cargo/compartament doors. Sustained mode allows for the lock/unlocking of doors plus continuous output control with lower buttons pressing.



U.S. Design Patent No. D563,097; D589,000; D590,780



# Immobilizer

The immobilizer keypad can be used stand alone or as part of a machine immobilizer system. As a J1939 system, the immobilizer keypad meets the needs of demanding users of heavy truck, emergency vehicles, RV's, agricultural and construction equipment.

## FEATURES/BENEFITS:

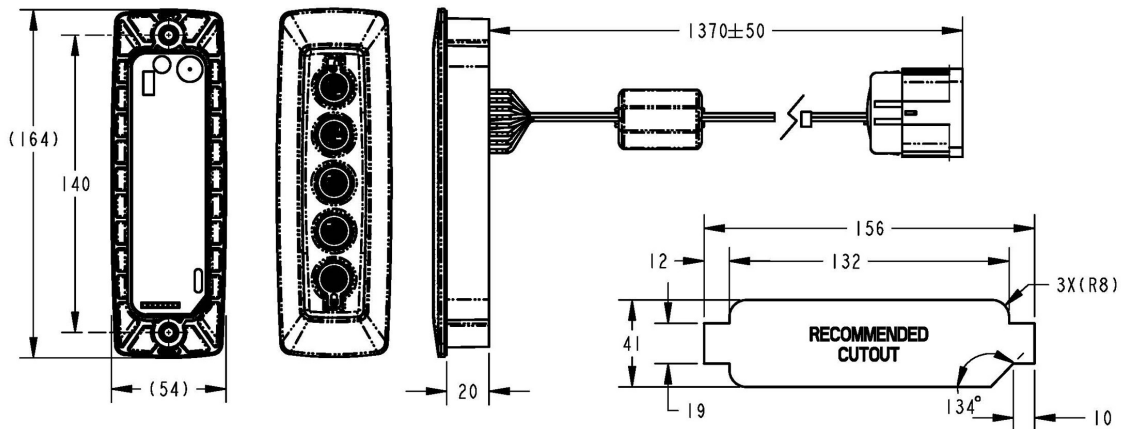
- J1939 encrypted messaging
- CAN bootloader firmware updating available.
- Rugged and durable construction is compliant to on-road, off-road, and industrial environmental requirements.
- Four discrete outputs to control multiple machine functions ( ex. transmission, ECU, fuse box,)
- Multi-color indicator lights for system status.
- Tactile, visual, and audible feedback
- Over 10,000 code combinations with tamper lock-out feature
- Lighted keypad for more effective night time usage
- An integral part of a Thatcham compliant security system.



## INSTALLATION:

- Standard 12 VDC power
- M6 rear thread mount or screw mount (M4) fastening
- Keypad can be installed in a wide range of locations - either horizontal or vertical orientation

U.S. Patent No. 8,976,014



# Power Lock Actuators

TriMark has several high quality power door lock actuators available with a variety of features and configurations. The actuators have been tested and validated to meet stringent requirements thus ensuring a long life of trouble free operation.

## FEATURES/BENEFITS:

- High impact sealed case design
- Long travel distance - .83 to .86 inches (21-21.8mm)
- High output force for reliable locking, unlocking and power release functions
- Reliable and durable to high cycle counts in various environmental extremes
- Compact design allows for application in restricted space
- Compatible for use with TriMark power adaptable products
- Product selection options to ensure optimal fit for various applications



Integrated Actuator

## INSTALLATION:

- Easy to install either by integrating mounting directly into available TriMark latches or paddle or with universal hardware parts that include fasteners, a zinc clamp, a mounting strap and a rod
- 12 volt supply

## AVAILABLE:

- In a compact, rectangular design with an overload protected motor, clutching mechanism for smooth operation and a rotatable/detachable tip
- With individual bullet style connectors or spade connector for ease of installation
- Possible customization available to include special connectors, custom wire length and kitting options

## OPTIONS:

There are numerous options available to allow the e-ASK systems to provide extra value and functionality. Here is a partial listing of what's available:

- Optional kits can include: any wiring harnesses for all connection points of system, extra relays, switches, door contacts, actuators, mounting hardware, mounting brackets, door latches, and door paddle handles
- Customized wiring harnesses
- Additional fob transmitters and custom graphics
- Different programming functions allows for customized functionality with e-FOB or e-PAD outputs including standard mode, cargo mode or sustained mode
- Security system integration
- Multiplexed or discrete communications

## ELECTRONIC ACCESSORIES:

The following are TriMark accessories that are available to assist you in completing your total system requirements. All of the accessories have been approved and are compatible with our e-ASK products, so you can be assured that they will perform and be trouble free for many years.



- 550-0200 Solenoid
- 590-0100 Wire Harnesses
- 590-0200 Door Contacts
- 590-0300 Relays
- 590-0400 Sirens
- 590-0500 Rocker Switches
- 590-0600 Plunger Switches
- 590-0800 Lighting
- 590-0900 Security Accessories

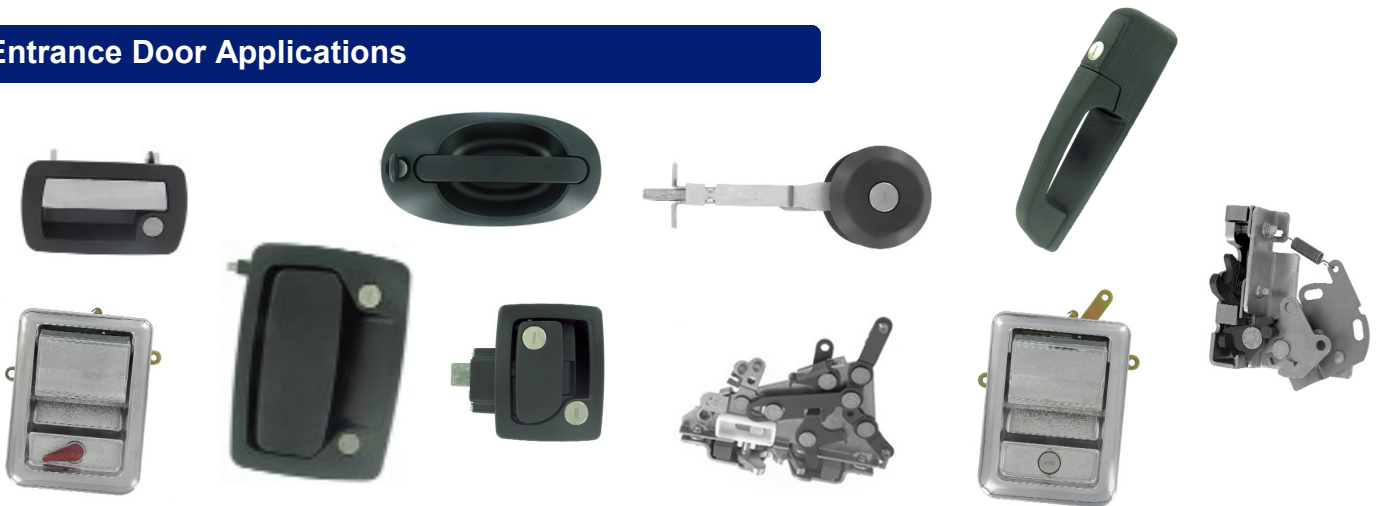


TriMark supplied or existing OEM security system components (e.g. motion detectors, door ajar detectors, glass break sensors, etc.)

The following TriMark products are power lockable and are compatible with the e-ASK Systems. Please inquire about TriMark's ability to assist in the system design and product selection that is right for your requirements and needs.

System kits are available and include handles, latches, remote transmitter FOB's and power lock actuators to provide a comprehensive access solution.

## Entrance Door Applications



## Compartment and Baggage Door Applications





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