

**GPU** TECHNOLOGY  
CONFERENCE

# Universal Robotics, Inc.

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PRESENTED BY  **NVIDIA.**

## Mission

- Universal Robotics is a software company
- Flagship product is Neocortex - *Software with an IQ*
- It is a new form of AI that learns from experience
- Neocortex expands automation into dynamic environments
- Application targets include jobs that are difficult and dangerous
- Universal Robotics is.....

***...AUTOMATING INTELLIGENCE™***



## Benefits of Flexible Automation

Improves safety and efficiency across numerous industries including materials handling, warehousing, mining, hazardous waste handling and industrial vehicle automation



## Neocortex - *Software with an IQ*

### ■ Self-Learning

- New form of Artificial Intelligence allows machines to think and learn for themselves. As it learns, it becomes “smarter”, continuously improving its skill

### ■ Eliminates common failure in AI

- the inability to preprogram all possible variables into the system

### ■ Hardware Independent

- doesn't require a specific hardware platform
- will radically expand the use of automation into a wide variety of new hardware applications

## Materials Handling Market

- Strong market pull for increased use of automation
  - Poor employee retention, repetitive stress & back injuries, bottlenecks
- Applications for Neocortex
  - Mixed size box handing, bin picking, Automated Forklifts, Mining
- Customers
  - Big Box Retailers, Shippers, Mining Cos.
- Market Size
  - \$2.95 Billion



## Neocortex Skill - Box Mover

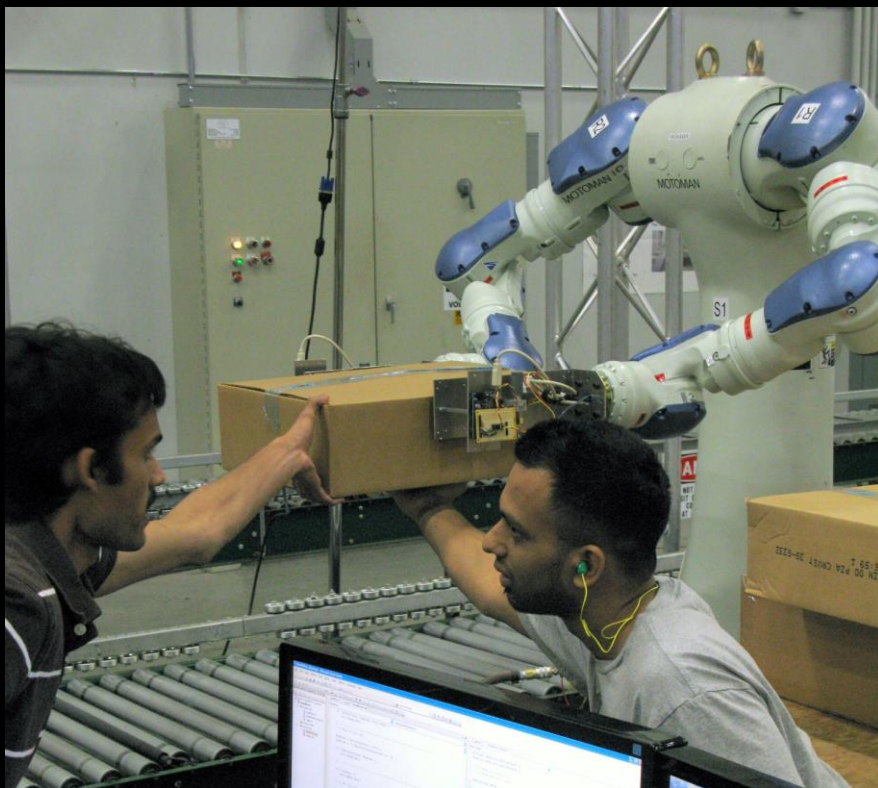


- Adapts to Task
  - When engaged with box
  - Type of box
  - Strategies to move (6 possible x 2)
- Appropriate suite of sensors (>50)

## Benefits Metrics

- **IMPROVED EFFICIENCY** 33% or greater
- **COST REDUCTION** \$25,000 saving annually per seat
- **RAPID ROI** 18 to 24 months
- **IMPROVED INVENTORY CONTROL** Interfaces directly to WMS
- **USES OFF-THE-SHELF HARDWARE** Operates on standard computers
- **WORKS ON RETROFITTED GEAR** Runs on existing machines
- **OPERATES IN EXISTING FACILITIES** Plant changes not necessary

## Market - Strategic Positioning



- Superior value
- Multiple ways to win
- Sell through Hardware Channel Partners
- Engineering Experts
- First mover advantage
- Highly scalable
- Recurrent Revenue
- 18-24 month ROI





## Universal Robotics Timeline

- **2001** NASA research begins, Holding Company Established
- **2004** US Patent Issued for Robot Intelligence
- **2008** Commenced Operations at Smith Springs
- **APR 2009** Historic First: Reactive control of an industrial robot
- **AUG 2009** US Patent filed for Spatial Vision
- **OCT 2009** Off-site Alpha testing begins at major retailer
- **JUL 2010** Spatial Vision Released
- **AUG 2010** Revenue Stage: contract with General Motors



## Summary

- Neocortex is Automating Intelligence
- Learns From Experience
- Provides Flexible Automation
- Hardware Independent
- Value proposition metrics similar to other Automation Solutions
- First mover advantage
- Highly scalable solution



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