



DERRY SAK
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21 FEBRUARY 2019

HONEYWELL: PLATFORM FOR FUTURE

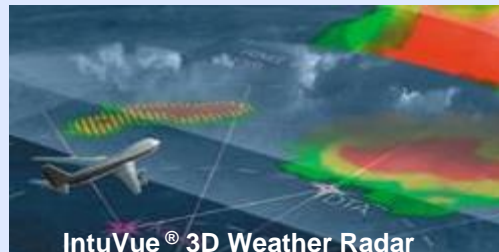
Honeywell
THE POWER OF CONNECTED

Honeywell Overview

NYSE: HON | ~1,300 sites | ~131,000 employees | Morris Plains, N.J. headquarters | Fortune 100

Aerospace

\$14.8B
Sales



IntuVue® 3D Weather Radar

Unmatched Scope of Offerings

- Mechanical, Cockpit, and Software Systems From Nose to Tail
- Propulsion, Wheels & Brakes
- Apps, Services, Maintenance, Subscriptions
- A/C Connectivity Solutions
- Runway & Flight Safety technology
- Turbochargers for Fuel Efficiency

Home and Building Technologies

\$10.7B
Sales



evohome

Connecting Homes and Buildings

- Building Control Systems
- Fire Alarm and Security Systems
- Access and Intrusion Control
- Home Comfort and Security
- Remote Health Monitoring & Gas Detection
- Smart Grid / Demand Response Technology

Performance Materials and Technologies

\$9.3B
Sales



Experion® Orion Console

Winning Technology

- Oil and Gas Process Technology, Equipment, Catalysts
- Gas Processing Modular Offerings
- Solstice® LGWP Materials
- Asset Optimization Software
- Advanced Fibers, Composites, Chemicals, EM and Additives
- Connected Plant and Software
- Industrial Automation Controls

Safety and Productivity Solutions

\$4.6B
Sales



Vocollect™

Connecting Workers

- Wireless, Voice, Mobility, Data Analytic Solutions for Workers
- Intelligent Warehouse Automation
- Industrial safety equipment
- Sensors, Switches, and Controls
- Personal Protective Equipment for Industrial / Firefighting
- Workflow Software and Mobile Cloud Technology

Reflects 2016 Full Year Results

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Aligned to Key Global Macro Trends

HONEYWELL - SPS PRIORITIES

Transform the Business Through Data-Driven Connected Platforms

1 Connected Worker



Digitize the worker and the work experience in order to **improve safety, drive productivity and ensure regulatory compliance**

2 Connected Supply Chain Logistics



Design, digitize and deploy best practice, self-improving workflow management systems to **enhance productivity and improve quality**

3 Connected DC



Digitize the distribution center and goods flow to **improve visibility, increase throughput and enhance productivity**

4 Sensors For IOT



Own key sensing platforms to **differentiate and create new IoT growth streams**

Connected Worker

1

CONNECTED WORKER OF THE FUTURE

Honeywell Connected Worker Platform

SENSE & PROTECT



MONITOR & ANALYZE



Honeywell Safety Platform

Share Application Services

Sentience IoT Platform

Big Data, Analytics, Security

Edge Devices

PPE, Wearable, Transportable, Fixed, 3rd Party

SPS OFFERINGS

Software Applications

- Compliance Management
- Device Configuration
- Training Simulators
- Hearing Management

Analytics / Insights

- Data Collection from Fixed and Portable Gas Detectors
- Safety Score Mobile
- Noise Exposure

Connected PPE

- RFID in Fall Protection
- Connected Portable Gas Detection
- Telemetry / Indoor / Outdoor Locationing

CURRENT LANDSCAPE¹



VALUE DRIVERS



1. Safer Workers And Work Environments

Reduction in safety incidents



2. Improved Compliance

Reduction in cost



3. Improved Worker And Enterprise Productivity

Increase in productivity

1. Frost & Sullivan, Honeywell analysis

Connected Worker Safety Suite



Solving Three Problems



Compliance

- ✓ Data capture reduces compliance costs by 25%
- ✓ Ensures workers get/use proper PPE
- ✓ Protects workers better when incidents occur



Worker Productivity

- ✓ Improves data capture speed by 30%
- ✓ Reduced error rate by 40%
- ✓ Less paperwork helps focus workers on task



Safety Costs

- ✓ Reduces lone worker incidents by 40%
- ✓ \$1 to \$3 million/site cost avoided by fewer incidents, fines, etc.
- ✓ Faster response, fewer FTEs

Real Time Monitoring

Map View Events Workers

5 Total Workers | 5 Online Workers | 1 Alarm | 0 Faults | 0 Non-Compliance

- Search Worker
- John
- Mark
- Herry
- Methew
- Lisa
- Andrew
- Daniel
- AreaRAE
- Dave
- Jasmine

John Doe

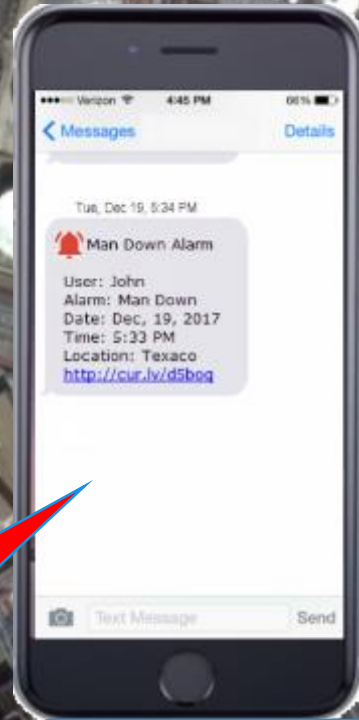
IMEI No: 861536030196001
 Lat: N 1.287408
 Lng: E 103.709569

M03100066111

H₂S (ppm) - 70.5 Lo Low
 CO (ppm) - 14.5 HI High
 O₂ (%) - 28.1 Ovr
 LEL (%LEL) - 82.0 TWA

First Name: John
 Last Name: Doe
 USERNAME: John
 Email: John@TexacoUS.Com
 Phone: 4155552671

Man Down Situation



Man Down SMS



Man Down Email



2 Connected Supply Chain / Logistics

CONNECTED SUPPLY CHAIN / LOGISTICS OF THE FUTURE

Honeywell Connected Supply Chain Platform



Movilizer Workflow Platform
Share Application Services

Sentience IoT Platform
Big Data, Analytics, Security

Edge Devices
Voice, AR/VR, Scan, Print, PPE, RFID, Drones, 3rd Party

SPS OFFERINGS

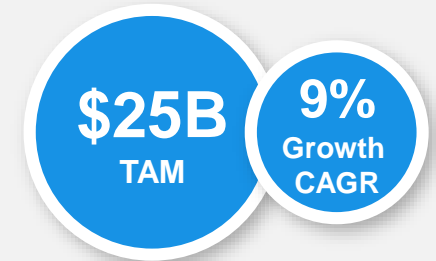
Connected Logistics

- Connected Freight, Freight Visibility
- Driver Brokerage
- Track & Trace

Connected Retail and Delivery

- Connected Store
- Operational Acuity
- Direct Store Delivery

CURRENT LANDSCAPE¹



VALUE DRIVERS

- 1. Truck Status / Location / Condition**
 Reduction in freight loss
- 2. Protect Assets And Workers**
 Reduction in accidents
- 3. Enhanced Productivity**
 Increase in productivity

1: Strategy&, IDC, Honeywell analysis

Connected Logistics and Retail In-Store Solutions

Transportation & Logistics



↓ **10%**

Reduction in freight loss



↓ **40%**

Reduction in accidents



↓ **50%**

Reduction in Driver Training Time

Retail In-Store



↑ **20%**

In worker productivity



↓ **25%**

In shelf out-of-stock



↑ **1%**

store sales increase

Innovative Technology & Domain Expertise To Unlock Productivity & Growth

Connected Freight: Eyes on the Inside



- Shipment monitoring solution leveraging sensor and connectivity to provide unprecedented visibility down to the package level
- Monitors for temperature, shock and tilt, humidity, theft tampering and more to drive out waste in the supply chain.

The Freight Visibility Gap

Costly Effects for the Supply Chain



Spoilage

- ~\$35B cost of pharmaceutical temp excursions
- ~15% to 30% of perishables destroyed



Theft

- \$60B cargo stolen
- 41% US cargo theft occurs when freight is at rest



Damage/ Non-Compliance

- 30% of all shipments damaged or delayed
- 1 in 5 cargo claims due to moisture
- ~35% of orders reach onetime to retail stores
- Kroger: \$500 fine for orders delays > 2 days

Source: Pharmaceutical Commerce, Evaluate Pharma, IMARC Group, BSI, Soligenix, European Space Agency (ESA), "RTICM – Real-Time Intelligent Cargo Monitoring," artes-apps.esa.int/projects/rticm.

30 % of discarded Pharmaceuticals attributed to logistics issues

25 % of vaccines reach their destination degraded

20 % of temperature sensitive products damaged due to broken cold chain

Current Solutions

Visual Indicators



Cost \$3-\$5/ tag, ~15/ pallet*

- Issues**
- Need Visual inspection at every point
 - Manual
 - Error Prone
 - No alerts
 - No history
 - Easy to manipulate
 - Reactive

Data Loggers



~\$15-\$25 / pallet*

- Costly data retrieval
- Time lag (up to 3 months)
- Manual
- Dependent on "consignee"
- Reactive

Communicators



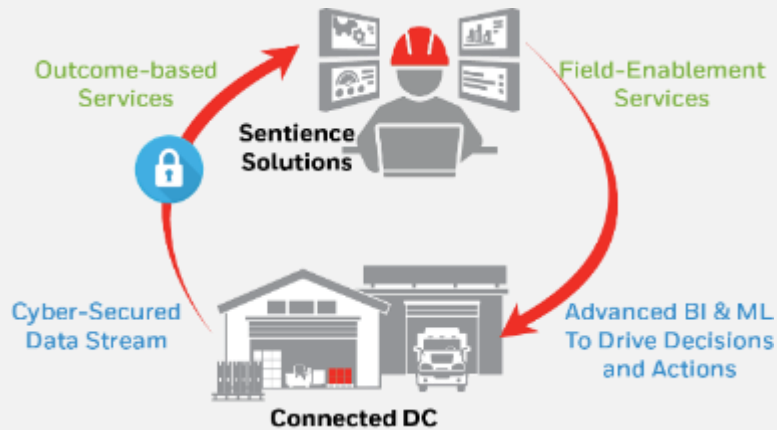
\$50 - \$350 / shipment*
Plus \$0 - \$15 / month / device

- Wide variation in accuracy
- One "tracker" / "package" even if multiple packages / shipment
- Non-standard, niche startups
- Not Cost effective

3 Connected Distribution Center

CONNECTED SUPPLY CHAIN / LOGISTICS OF THE FUTURE

Honeywell Connected DC Platform



Software Layer

WES, WMS Elements
Labor Management

Subsystems Machine Control Layer

Connected Workers
Robotics & Automation

Sensing and Device Layer

Instrumented & Connected

SPS OFFERINGS

Connected Systems

- I-Watch data for line sorter reliability

Connected Worker

- Op Acuity real-time voice data collection

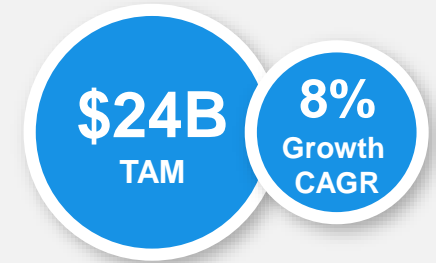
Warehouse Software

- GoalPost labor management
- WES: picking, order processing, carton routing, reporting

Lifecycle Services

- 24/7 remote services
- IRIS asset management
- Assessments

CURRENT LANDSCAPE¹



VALUE DRIVERS



1. Increase Operational Efficiency

Increase in volume



2. Optimize Warehouse Productivity

Increase in productivity

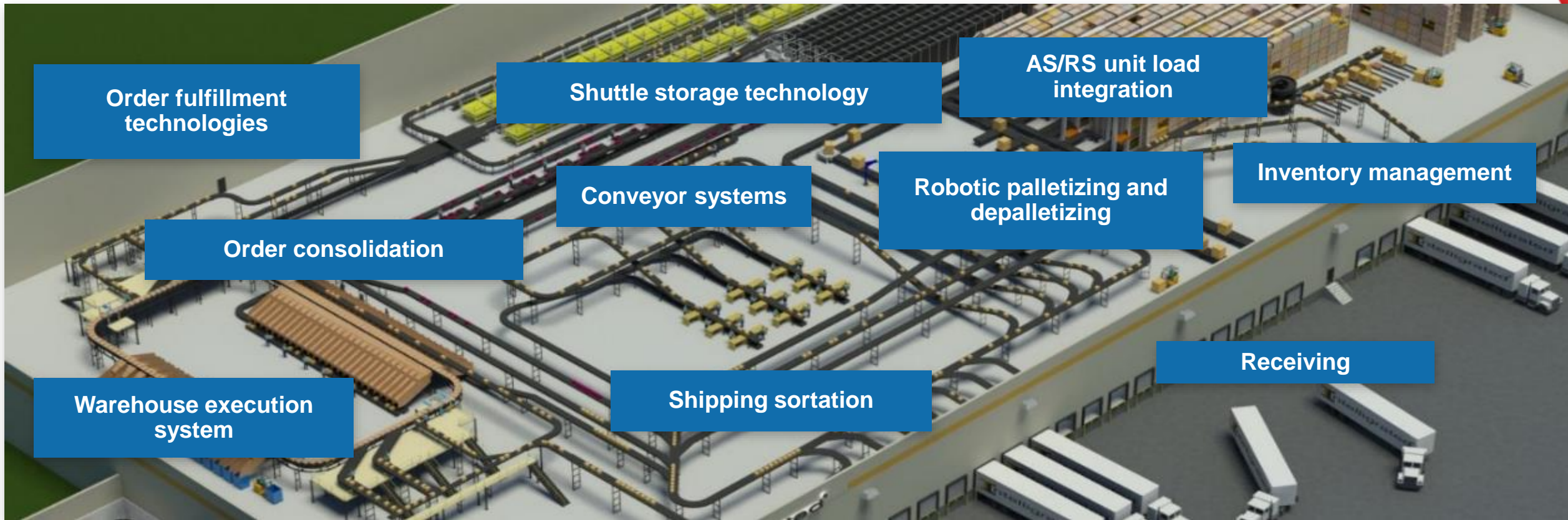


3. Improve System Reliability

Increase in uptime

1: Strategy&, QYR, Industry ARC, BCC Research, Markets&Markets, Technavio, Freedonia, Honeywell analysis

Connected Distribution Center Solutions



- ↑ Improves productivity by up to 60%
- ↑ Flex capacity for peak operations
- ↓ Reduce turnover by 20%
- ↑ Increase volume +30%
- ↑ Increase accuracy to +99%
- ↑ Increase uptime +99%

Connected Warehouse



4 Sensors for IoT

CONNECTED SENSORS OF THE FUTURE

Worker (\$100M, 10% CAGR)



Gas Safety

- Gas detection
- Multi-gas sensing



Health/Productivity

- Temp and humidity
- Posture



Hazard Identification

- Object recognition
- Hazardous sound



Equipment Tracking

- Indoor location

Supply Chain / Logistics (\$200M, 7% CAGR)



Automated Identification

- Scanning
- Pattern recog.
- Dimensioning
- Package cond



Wearable/AR

- Scanning
- Gesture and controls



Asset and People Tracking

- Indoor location
- Inventory tracking



Truck and Freight

- Package condition

Warehouse (\$140M, 9% CAGR)



Autonomous Equipment/Robot

- Object recognition
- Dimensioning
- Proximity
- Position



Connected equipment

- Vibration
- Temperature
- Pressure



Asset and People Tracking

- Package condition
- Indoor location



Environment Monitoring

- Environmental

High Growth Applications/HGA (\$1B, 15% CAGR)



Home and Building

- Camera
- Vibration



Industrial Automation

- Pressure
- Magnetics
- Position
- Switches
- Gas detection



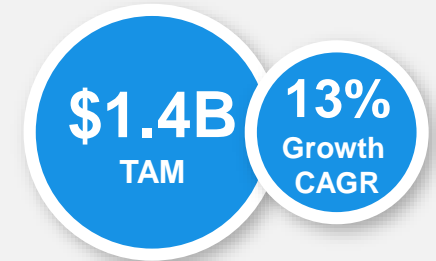
Automotive

- Environmental
- Scanning
- Current
- 3D imaging
- Wireless



Mobile/Wearable

CURRENT LANDSCAPE¹



DEMAND FOR SENSORS

1 Trillion

networked sensors will be embedded in the world around us, by 2022 with up to 45 trillion in 20 years.

World Economic Forum

1:BCG, BCC Research, Yole, IHS, Markets&Markets, Intecho, Strategy Analytics, Honeywell analysis

Sensing: Building on Broad Portfolio

Micro Pressure Platform



High accuracy in a small size and low-cost design



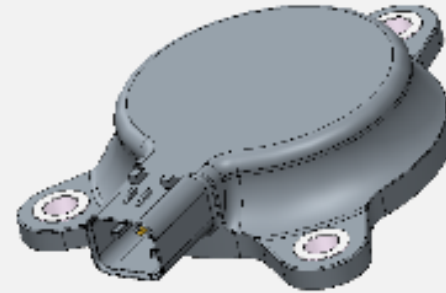
Particle Sensors



Able to sense contaminants at 2.5 micrometers in diameter



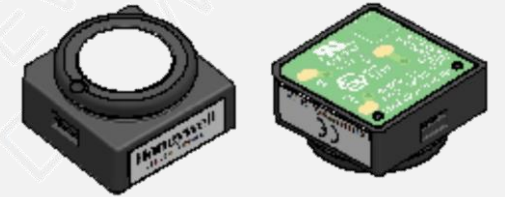
Tilt Sensor



Protecting heavy vehicles from damage or loss



Intelligent Gas Sensor



New platform for Connected gas sensors



Mobility

Warehouse

Thor CV31 8600 Series Thor VM1 / CV41 CK3X Thor VM2 CK75 Thor VM3 Tecton Wearable Solution

Direct Store Delivery

Dolphin 60s Dolphin 70e CN51 CN70e Captuvo SL42 Captuvo SL62 CT60

Retail In-Store

Captuvo SL22 Dolphin 60s Dolphin 70e/75e Dolphin CT50 Dolphin 6110 CK3R Captuvo SL62 EDA50 EDA60K CT40

T&L / Postal / Courier

Dolphin 70e CN51 CN75 CT60 Dolphin 99EX Thor CV31 Wearable Solution

Field Services

Captuvo SL42 Dolphin 60s Dolphin 70e Dolphin 7800 CN51 Captuvo SL62 CN75 / CN75e CN80

Healthcare

Captuvo SL22h/SL42h Captuvo SL62 Dolphin 7800 Dolphin 9700 Dolphin 99EX

Hazardous Locations

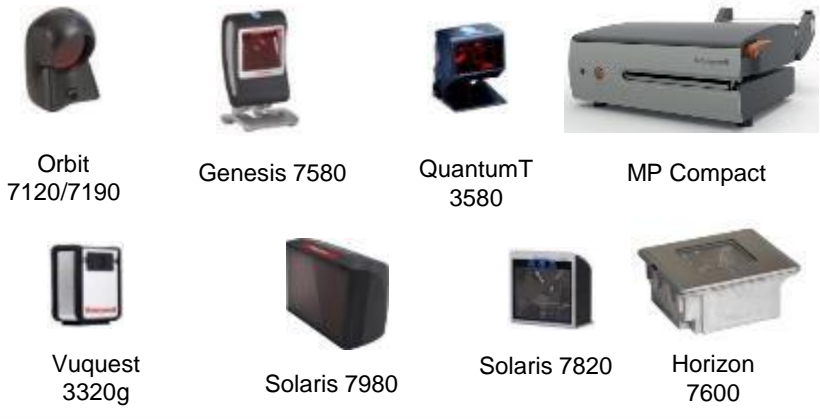
CK3X CK70 CN70 D99EXni CN75 NI

Scanning Solution

General Duty



Hands-Free



Wearable



Healthcare



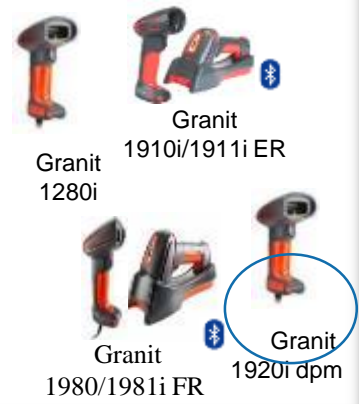
Document Reader



Pocketable Scanners



Industrial



Dimensioning



Printer Solution

Mobile Printers

Durable Receipt



PR Series
2", 3"

Rugged Receipt



MF Series
2", 4"



PB21/31/51



RP2/4

Label



RLe Series
3", 4"



PB22/32/50

Desktop Printers



PC42t



PC43t/PC43d



E class

Industrial Printers



PD43/43c



M-Class



PM42



PM43/c



I-Class



H-Class



PX4i/6i

Questions?



**THANK
YOU**



Honeywell
THE POWER OF CONNECTED