Are you ready for Oct 1, 2020?

Part 2: Practical Considerations for Implementing Outdoor EMV

December 12, 2019

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Agenda

- Housekeeping

- Presenters

- About Conexxus

- Presentation

- Q & A

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Housekeeping

This webinar is being recorded and will be made available in about 7 days.

- YouTube (youtube.com/conexxusonline)
- Website Link (conexxus.org)

Slide Deck

- Survey Link – Presentation provided at end

Participants

- Ask questions via webinar interface
- Please, no vendor specific questions
- Our webinars may be used toward PCI continuing education credits. Please contact arussell@conexxus.org for questions regarding a certificate of webinar attendance.

Email: **info@conexxus.org**

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About Conexxus

- **We are an independent, non-profit, member driven technology organization**

- **We set standards…**
  - Data exchange
  - Security
  - Mobile commerce

- **We provide vision**
  - Identify emerging tech/trends

- **We advocate for our industry**
  - Technology is policy

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2019-2020 Conexxus Webinar Schedule

Month/Date	Webinar Title	Speakers	Company
November 14, 2019	Impending Consumer Privacy Laws	Alan Thiemann Paige Anderson	Conexxus NACS
November 21, 2019	Applicability of PCI DSS requirements for Merchants and MNSP's	Sam Pfanstiel	ControlScan
December 5, 2019	EMV Part 1: EMV Fundamentals and the Risk of Not Upgrading	Brian Russell Linda Toth Robert Alandt	Verifone Conexxus Visa
December 12, 2019	EMV Part 2: Practical Considerations for Implementing Outdoor EMV	Gray Taylor Russ Haecker Dan Harrell Dan Witkemper	Conexxus Dover Fueling Invenco Gilbarco
January 23, 2020	How to Elevate Your Business Through Digital Transformation	TBD	Cybera

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2020 Conexxus Annual Conference

April 26 – April 30, 2020

Loews Ventana Canyon
Tucson, AZ

More about Sponsorship Opportunities
& Registration: www.Conexxus.org

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SECURITY INNOVATION

GILBARCO VEEDER-ROOT

Stuzo

DN
Diebold Nixdorf

wex

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Today's EMV Takeaways…

- EMV will change how merchants do business and maintain their equipment

- EMV is about fraud prevention and cost avoidance (insurance against chargebacks)

- Waiting to upgrade to EMV may result in undesired consequences

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EMV

Outdoor — MARKET SUMMARY

North America (U.S.)

- Outdoor liability shift begins Oct. 2020
- Card brands confirm deadline will not shift
- Some large retailers already on upgrade path
- High dollar investment required
- 60% of U.S. market are "Single Site Owners"
- "Some" SSOs nervous about chargebacks …others not
- EMV L3 certification is gating step…
- Hardware suppliers must be ≥ PCI 4.x by April 2020
- No incentives from refiners or MOCs for to upgrade
- EMV-ready hardware on ~35% of installed base
- ASO tech deficit for upgrade support by deadline
- Labor costs will increase closer to deadline
- …but is driven by customers and POS vendors

Fraud at the Dispenser
What it may cost you and how to fight it

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The Fraud is Very Real

$400M+

In outdoor CC fraud every year using skimming devices

Secret Service alone recovers 20 to 30 skimmers a week, each holding information for about 80 payment cards

Gas pump skimmers are getting worse because there's more technology to look for skimmers in ATMs, so bad actors move towards gas pump skimmers."

Matthew O'Neill, Agent, Secret Service

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The Costs are Real

"Gas stations are the lowest- hanging fruit for bad guys when it comes to skimming."

Matt Schulz, Chief Industry Analyst, CompareCards

Fuel Transaction Value	**$75**
Transaction Fee (4%)	$3
Product Cost (71%)	$53
Marketing & Operational Costs (25%)	$19
Chargeback Fee ($35-50+)	$35
Total Cost to Retailer	**$185**

Fraud losses = 2-3X of sale

Real-World Examples…

- Florida Jobber, 2 Sites, April-May 2019 Chargebacks – $15,000
- Chicago Site Owner, August 2019 Chargebacks – $5,500
- Phoenix Site Owner, September 2019 – $3,600

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Counterfeit Fraud Can Occur Without Warning

Actual examples of counterfeit fraud from US Forecourts

Sites \ Months	1	2	3	4	5	6	7	8	9	10	11	12	TOTAL
C-Store #1	$0	$85	$0	$0	$122	$53	$0	$64	$189	$783	$211	$3,565	$5,072
C-Store #2	$0	$0	$0	$56	$0	$0	$0	$0	$710	$4,329	$9,276	$6,343	$20,714
C-Store #3	$0	$0	$0	$0	$25	$37	$0	$0	$2,438	$3,411	$7,043	$4,010	$16,964
C-Store #4	$0	$0	$0	$0	$0	$0	$0	$0	$0	$4,263	$10,180	$8,918	$23,361
C-Store #5	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$48,032	$53,147	$101,179

*Secret Service seeing foreign crime organizations move across
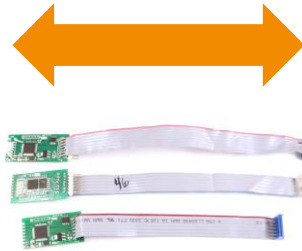Mexico border, trained to commit white-card fraud*

Waiting until the counterfeit fraud is 'bad enough' is not a plan!

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Mag-Stripe Card Skimmers

Gas Pump Skimmers
https://learn.sparkfun.com/tutorials/gas-pump-skimmers

Prevention

- Physical inspection
- Dispenser electronic door access security
- Upgrade to Secure Hybrid (EMV) Card Readers

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Prevention – Door Security

Unique Door Lock & Key

Custom Door Lock and Key

SECURE ACCESS REQUIRED

- Wayne Smart Secure Access™
- Gilbarco Veeder-Root's Insite360™ + Door Entry Detection System

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Prevention – EMV Chip Card Reader

Comprehensive Security Protections:

- Unauthorized removal detection
- Device authentication
- Encrypted interface and data links with chip and mag stripe data encryption

Mag-Stripe Only Mode

Most POS support disablement of chip mechanism until EMV software is ready

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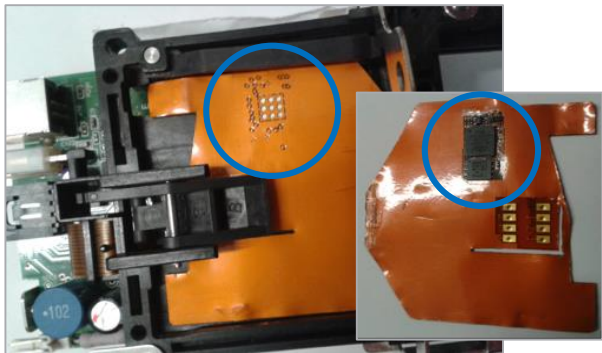# EMV Chip Reader – New Attacks

External Skimmers

- Molded replica of hybrid card reader front with built-in mag-stripe reader

Internal Shimmers

- Paper-thin film with mag-stripe reader
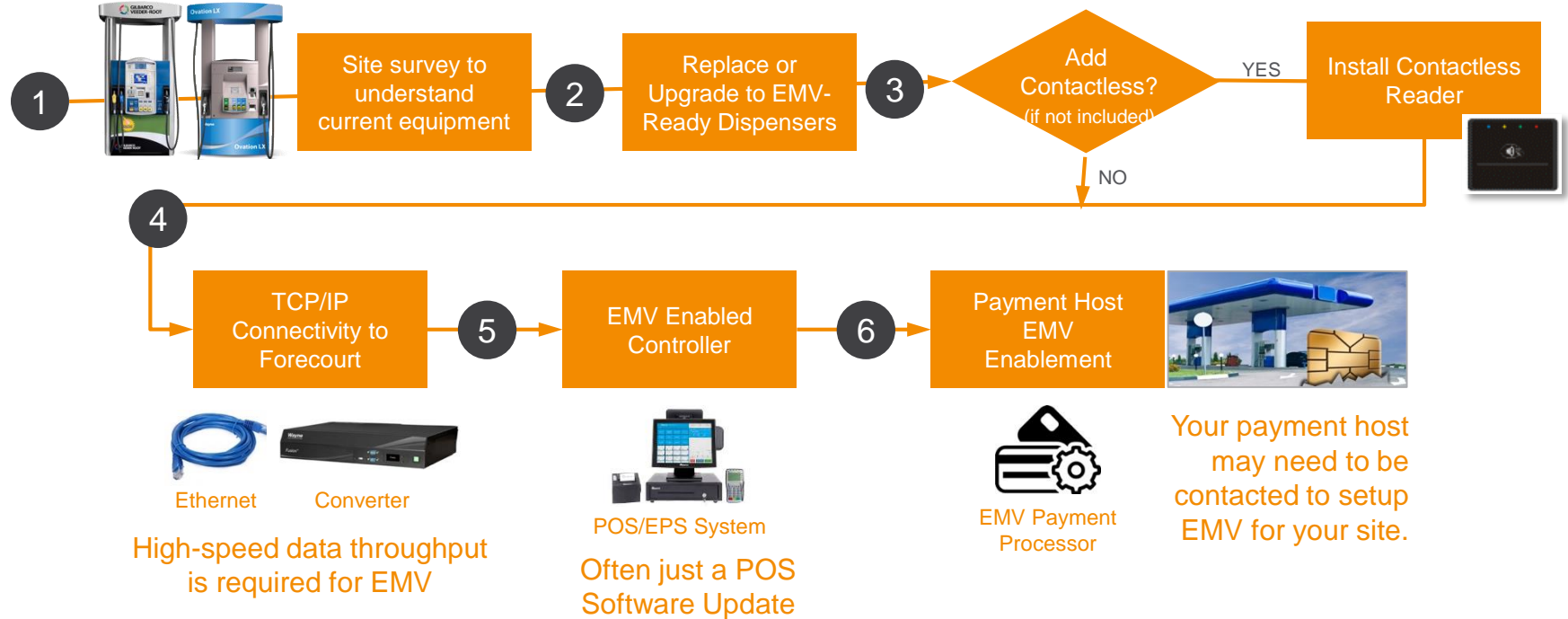- Draws power from chip power contacts

Prevention

- Visual inspection:
  - Reader should be flush-mounted; no external devices
  - Use flashlight to inspect card reader slot
  - Listen to cues from customers

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EMV Enablement

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6 Steps to Enable Forecourt EMV

1 → Site survey to understand current equipment → **2** → Replace or Upgrade to EMV-Ready Dispensers → **3** → Add Contactless? (if not included) → YES → Install Contactless Reader

NO

4 → TCP/IP Connectivity to Forecourt → **5** → EMV Enabled Controller → **6** → Payment Host EMV Enablement

Ethernet   Converter

High-speed data throughput is required for EMV

POS/EPS System

Often just a POS Software Update

EMV Payment Processor

Your payment host may need to be contacted to setup EMV for your site.

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EMV Site Activation

Dual Trip: Hands On

1 Hardware Deployed (Mag Only)

2 EMV Software Installation

EMV-Enabled Site

- Hands on monitoring
- Increases logistical issues
- More uptime during conversion

Single Trip: POS Activated

Hardware Deployed (Mag Only)

POS-Distributed EMV Software

EMV-Enabled Site

- Remote monitoring
- Synchronization challenges

Single Trip: "Big Bang"

Hardware Deployed

EMV Software installed and activated

EMV-Enabled Site

- Hands on monitoring
- Logistical and synchronization challenges

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Outdoor EMV: Network Considerations

- Network security and compliance just got **more complex**
  - *New Ethernet/IP interfaces extended out to the forecourt for EMV solutions*
  - *Need **secure connections** to Internet and public cloud*

- IP network enablement of dispensers "changes the rules", e..g.,
  - *Some solutions have very restrictive network firewall configurations and may require a Managed Network Service Provider to be in place*

- EMV updates and enhanced capabilities

  - *Payment kernels likely to require updates over the lifetime of the terminal*

  - *Similar network provides remote diagnostics, prompt management, and media capabilities*

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Lessons Learned

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Special Considerations - Permitting

- **Don't underestimate the time required to receive a permit when updating your sites to Forecourt EMV**
  - **California:** Permits can take anywhere from a couple of weeks to a year to obtain
    - Location dependent (Large metro areas take longer)
    - Scope of work dependent (Which areas of the site are being modified)
  - **All Other States/Districts:**
    - May also have similar permitting challenges – plan accordingly

There are no provisions in the liability shift to deal with "I'm waiting for a permit"

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Waiting to Upgrade Will Cost More

Project Costs for EMV Implementation…

Equipment Cost

Installation Cost

Cost of Capital

Installation Costs (Labor) Tend to Increase Due to High Demand Leading up to an Industry-Wide Change

Historical Increase in Installation Cost During Major Industry/Regulatory Changes

	6-Mos. Before Deadline	3-Mos. Before Deadline	At the Deadline	3-Mos. After Deadline
Average Historical Project Cost Increase	14%	23%	33%	31%

■ Average Historical Project Cost Increase

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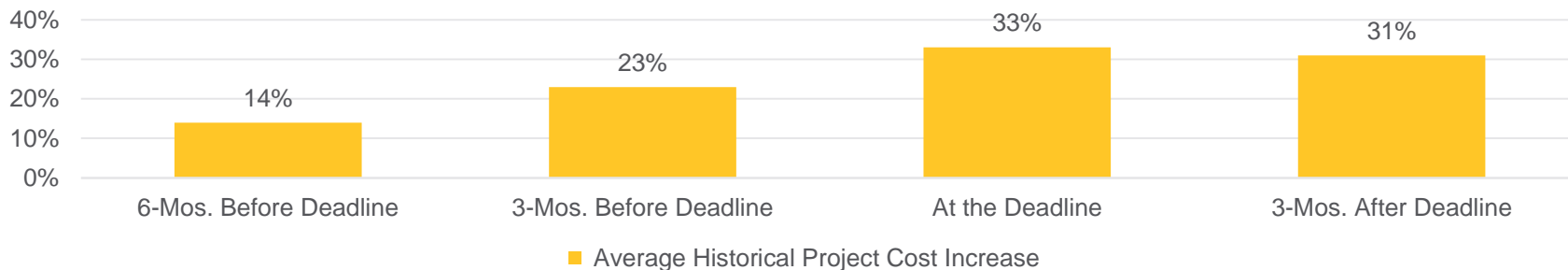
Avoiding Increased Costs

1.	**Reach out to your Equipment Supply Companies and Service Technicians**	• Ask if your equipment is ready to Process Forecourt EMV Transactions, or if it requires upgraded hardware (note – this often will require a site survey)
2.	**Order your equipment early**	• The key to locking in an installation slot before costs rise is to order the necessary hardware
3.	**Schedule the Technician(s) to Perform the EMV Upgrade (Q1 2020)**	• Remember – costs tend to increase six months prior (that's March 2020) • One Visit, Two Visits. Depending on the hardware and software at your site you may have a choice.

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Training – Staff & Consumers

- Guided Messaging on the Dispenser's Display
  - Can be helpful; but requires the consumer to read the prompts

- Staff Training
  - Make sure your staff understands what changed
  - Ask them to look for consumers struggling at the forecourt

- Consider using 'EMV Ambassadors' at your sites
  - Bring the assistance to your customers on the forecourt
  - Be mindful of safety on the forecourt – bright safety vests

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EMV Solutions

- **Invenco**
- **Wayne**
- **Gilbarco**

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Invenco EMV Solutions

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Invenco EMV Retrofit Solutions

Invenco's OPT retrofit kit options include barcode readers and NFC contactless as standard:

G6 – All in one, EMV option
- Gilbarco Encore 300 / 500 / 700
- Wayne Ovation I & II
- Gilbarco Advantage
- Wayne Vista
- Tokheim - Premier B & C
- Wayne Helix

G7 – 8", 12", 15" color touch screens
- Gilbarco Encore 300 / 500 / 700
- Wayne Ovation I & II
- Wayne Helix

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Invenco Network Solutions

Options…

- **Ethernet Switch & CAT-6**

- **Invenco Link high-speed two wire Ethernet (AES encrypted)**

Invenco Purchase Options

Buy retrofit EMV solutions up front
- Experienced EMV outdoor retrofits
- Screen options / service models to fit your business

Or sign up for EMV Pay @ Pump as a Service:
- Up front installation
- Small fee per terminal per month
- All service and warranty included

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Better ROI on EMV Investment

Media Advertising

- Ad revenue share
- Self-managed options
- Several media partner options

Food/In-Store Ordering

- Drive higher margin sales
- Streamlined customer experiences

Gamification Apps

- Lottery sales
- Fuel discounting
- Instant rewards

Personalization Apps

- Personalized Experiences
- Loyalty auto-enrollment
- Beacon mobile engagement

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PCI DSS Cloud Management

Mobile Payment Enablement Services

Managing Assets / Keys

Device / Asset Dashboard

Device Remote Upgrades

Payment Host Integration

Invenco Cloud Services

Device Configuration Management

Device Reporting

Device SaaS management

Device prompt / screen management

3rd party media integration and distribution

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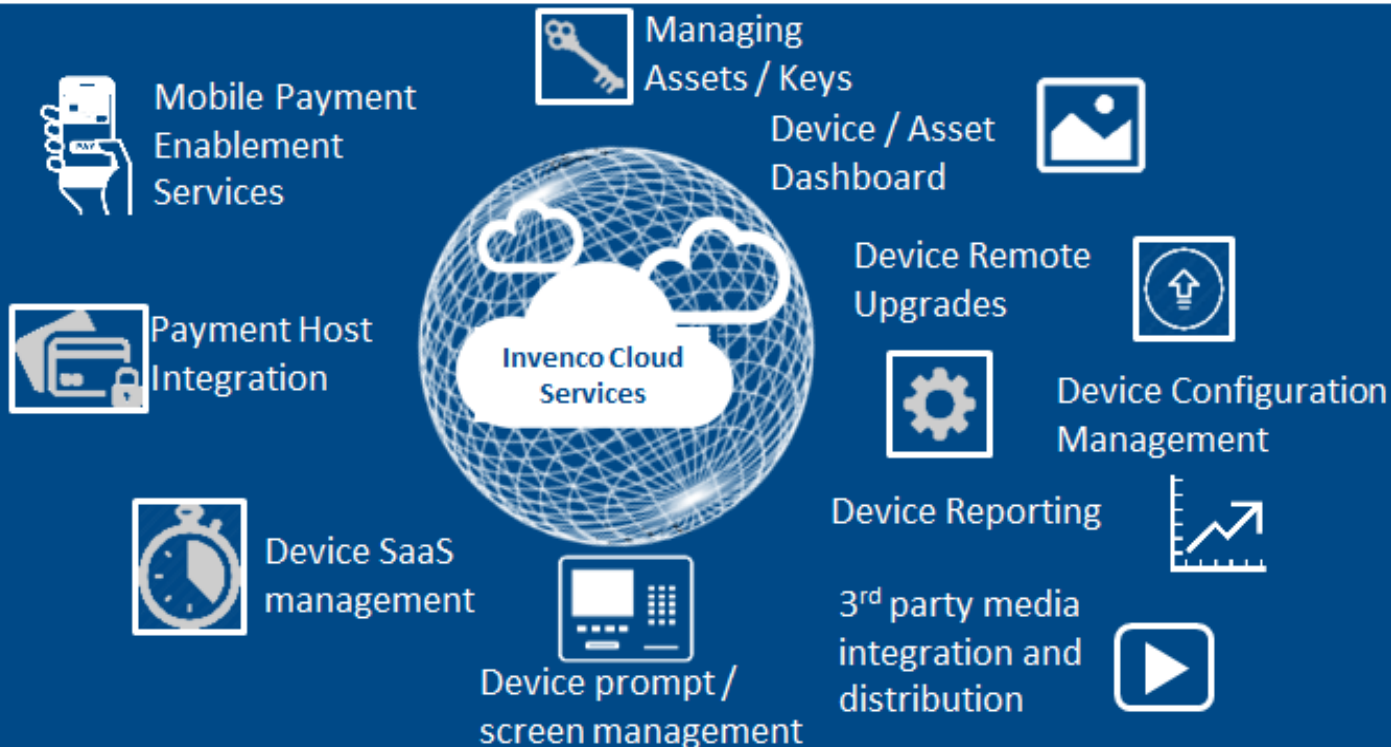
Wayne EMV Solutions

Wayne iX Pay™ EMV Upgrades

- **iX Pay T7, 2/ & 3/Vista**
- **iX Pay T7, Gilbarco Advantage**
- **iX Pay T7, Encore 300/500**

- Wireless options available
- Encore S ECIM added (Bezel and component replacement)

- **2/ & 3/Vista**

- Complete bezel upgrade to 4/Vista solution
- Includes SPM PIN Pad, soft keys, EMV card reader, new grade selects & UPDs

iX Pay kits for Ovation…

- **qCAT replacement**
- **iX boards**
- **SPM PIN Pads**
- **Mag-stripe card readers**

- Wireless options available

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iX Pay™ Encore 500/S & 700S ECIM

Before

After

- Mid panel replaced, matching existing bezel
- Sales / Volume display, Push-to-Start buttons removed / reused
- Paper roll accessed through separate panel
- New power supply included
- New decal for Unit Price Displays needed

12" Touch Screen Option!

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EMV TCP/IP Connectivity

Available Solutions		Recommended…
1	Ethernet Switch (for CAT 5/6 Cable)	■ Sites w/ existing CAT 5/6 cable ■ CAT cable can be easily pulled ■ Pump within 300 ft of store
2	Wayne Connect™ IP-485® network solution	■ Pulling cable costly or impossible ■ EMV payment traffic only OR ■ EMV + iOTV media
3	Wireless encrypted TCP/IP communication solution	■ Pulling cable costly or impossible OR ■ Not enough conduits/wiring ■ EMV + New Media solutions

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Cloud Services

The iSense™ Remote Monitoring and Management Solution is an end-to-end solution that enables remote management of gas station dispensers.

Keep dispensers up and running

Simplify service and reduce maintenance costs

Boost security and systems integration

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Boost security and systems integration

A variety of innovative features automate and streamline remote dispenser management. You get more security, more scalability—and more data you can do something with.

Protect against skimmers & card fraud with remote updates

Remotely access security reports via user-friendly interface

Easily export *PCI asset management reports*

Scalable ability to easily add as many dispensers as you need

Gain centralized, easy access to all your site-level information

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Gilbarco EMV Solutions

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Gilbarco - EMV Migration Checklists

To streamline the upgrade process, we compiled a checklist for dispenser models already deployed in the field

Encore® 700 S Dispensers

- ☐ EMV hybrid (chip and magnetic stripe) card reader
- ☐ High-speed site connectivity
- ☐ EMV software upgrade

Advantage, Encore® 300, 500, and S Dispensers

- ☐ Purchase
  - ☐ New Encore® 700 S, or
  - ☐ FlexPay™ IV CRIND® retrofit
- ☐ High-Speed site connectivity
- ☐ Future EMV software upgrade (in conjunction with POS)
- ☐ Reimage Kit Options (applies to retrofit kit only)

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Gilbarco - EMV Hardware Options

New Dispenser
Gilbarco Encore 700S

- **Reduced Total Cost of Ownership**
- **Future Proof with Cloud Services**
- **Fuel Flexibility – Including E25 & E85**
- **Enhanced Security**

Upgrade Kits
Gilbarco FlexPay IV

	The Advantage	Encore® 300	Encore® 500	Encore® S	Encore® S ECIM
Prod Years	1990-2003	2002-2013	2000-2005	2006-2007	2008-Present

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Gilbarco – Connectivity and Point of Sale

FlexPay Connect V2

- **Option1:** Use FlexPay Connect v2 with existing wiring
  - Eliminate the cost of breaking concrete
  - Works with existing legacy 2-wire

- **Option2:** Install Ethernet *CAT5e/CAT6* cabling
  - Length limitation of 300 ft.

Passport Point of Sale

- Forecourt EMV support for nearly two years on many networks
- Talk to your local Gilbarco ASC or Distributor about the EMV software update or to quote a new system

Insite360 Cloud Services

Gilbarco - Additional EMV Information

EMV Migration Guide:

- https://www.gilbarco.com/us/emv-migration-guide

Products:

- https://www.gilbarco.com/us/products/retail-fuel-dispensers
- https://www.gilbarco.com/us/products/forecourt-payment
- https://www.insite360suite.com/
- https://www.gilbarco.com/us/products/c-store-solution/point-sale-pos-systems

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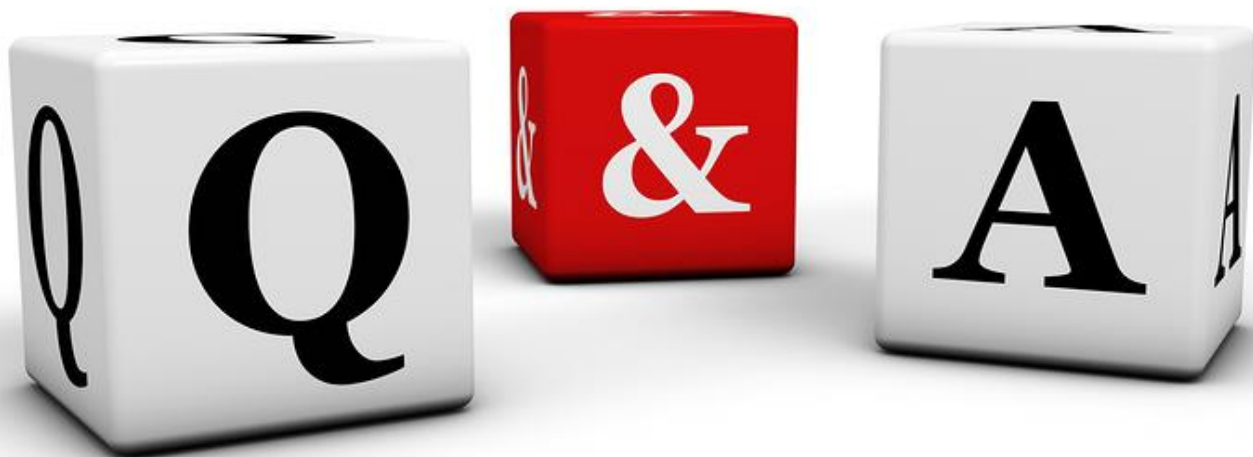
Resources

Conexxus.org

- Resources/EMV Resources (Resource Guide, Survey Results)

  Coming soon: Risk vs Reward Tool

- Webinars (webinars@conexxus.org)

Secure Technology Alliance/US Payments Forum

https://www.emv-connection.com/emv-resources/

Visa.com

- Visa Payment Acceptance Best Practices for US Retail Petroleum Merchants
  usa.visa.com/dam/VCOM/regional/na/us/support-legal/documents/visa-petroleum-best-practices.pdf

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