

A single drilling rig at an oil field can generate terabytes of data every day, but only a small fraction of it is used for decision-making.¹

While the digital oil field is not a new concept, aging infrastructure and new security risks provide a greater opportunity to mobilize field operations even more and integrate digital as the core strategy behind upstream oil & gas applications.

technological, digital innovation

From exploration, extraction and production, to metering, storage and export, to man camps, offshore platforms and more—integrated, digital technology will provide vast improvements in oil & gas areas. For example, improvements in securing the health and safety of sites and its employees; in how data is collected, processed and measured from the oil field; in operational productivity and efficiencies; and in the ongoing transition of traditional oil and gas companies becoming the global energy providers of tomorrow.

At Siemens, we address the security needs of your upstream applications through integrated digital technologies and security platforms that enable infrastructure-wide transparency and integrity through centralized monitoring and control, local and remote diagnostics, intersystem connectivity, and advanced analytics. Our consultative approach to tailor life safety and security solutions to upstream applications means your employees remain safe and secure—no matter the location.

This document provides you the detail you need on Siemens Smart Infrastructure's security portfolio that is ready to serve you today and for decades into the future. From perimeter security, to access control, real-time people and asset tracking, incident and danger management, and more, here are the solutions that will help you to create your perfect place to source and deliver energy.

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The information in this document contains general descriptions of technical options available, which do not always have to be present in individual cases. The required features should therefore be specified in each individual case at the time of closing the contract.

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"Digital Transformation Initiative Oil and Gas Industry," Jan. 2017, World Economic Forum http://reports.weforum.org/digital-transformation/wp-content/blogs.dir/94/mp/files/pages/files/dti-oil-and-gas-industry-white-paper.pdf

usa.siemens.com/bt-oilandgas

	Solutions/Products for Man camps, offshore platforms, metering storage and export
Perimeter Security	Intrusion – partnerships
	Video analytics and video detection Laser based detection - for highly secured locations/areas
	Video surveillance
	Siveillance VMS • Single Server □ Siveillance VMS50 - supports up to 50 cameras □ Siveillance VMS100 - supports over 100 cameras, single location □ Siveillance VMS200 - supports over 50 cameras, monitoring wall with multiple locations, redundancy • Federated Servers □ Siveillance VMS300: supports over 50 cameras, dual verification, retention times evidence log, specific use case features
	IP cameras
	AXIS (IP, Edge-based analytics, thermal) BOSCH (IP, Edge-based analytics) FLIR (Thermal)
Access Control	SiPass Integrated:
	Starter package – 16 doors (locked), 1,000 cards, mustering Standard package – 24 doors baseline (open), 1,000 cards, mustering Facility package – 32 doors baseline (open), 5,000 cards, Feature sets: graphics, photo IDs, mustering Optima package – 64 doors baseline (open), 10,000 cards –mustering Corporate – 128 doors baseline (open), 25,000 cards, feature sets, visitor management, guard tours
	License Plate Recognition
	Card readers – cards and biometric
	Voice Communication/Intercom
	Wireless Locks
	Mobile Credentials



Perimeter security

Intrusion

- Fence line detection
- Ground-based sensing (RF's)

Access Control

License Plate Recognition

Real Time People/Assets tracking

Siveillance Vantage - supports over 5 dedicated clients

Incident and danger management (based on the customer application and requirements policies and procedures)

Siveillance Viewpoint - 5 dedicated clients, 50,000 data points, 2,500 cams, and 5,000 doors Siveillance Vantage - supports over 5 dedicated clients MNS (including Audio and Visual annunciation) **Shooter Detection**

Perimeter security

Intrusion

• Automatic Identification System (AIS) boat/ship identification, marine traffic control

Incident and danger management (based on the customer application and requirements policies and procedures)

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Body cameras (EDESIX)

EHS

Body cameras (EDESIX)

Access Control

License Plate Recognition

Perimeter security Intrusion

- Fence line detection
- Ground-based sensing (RF's)





Advisory and performance services for oil, gas and petrochemical upstream operations

■ Manage System Operation & Compliance

Facility Assessment and Planning

- Maintenance Planning & Scheduling
- Physical Security Assessment
- Security Compliance and Policy Planning

Test & Inspection

- Test & Inspection
- Test & Inspection Security

Preventive Services

- Calibration Services
- Data Backup and Restore Services
- Network Maintenance
- Preventive Maintenance Security
- Preventive Maintenance System / Other

Documentation Management

- Performance Reporting
- System Documentation Management and Update

Corrective Services

- Online/Phone Responsive Services
- Onsite Responsive Services
- Repair & Replacement Services -Labor & Materials
- Spare Parts Inventory Management

■ Optimize Performance and **Productivity**

Optimization Planning

- System Performance Assessment & Strategy

Predictive Services

System Improvements & Integration

- Integration Services
- System Optimization Services

Training & Operational Support

- Customer Directed Support
- Education Services
- Operator Coaching

Managed Services

- Access Control Management
- Alarm Management Services -Security
- Hosting Services
- Onsite System Operator / Staffing **Support Services**
- Video Monitoring and Management

■ Protect Lifecycle Investment

Technology Planning

- Lifecycle Planning

System Updates / Upgrades

- Firmware Updates
- Software Upgrades

System Migration / Modernization

- Server and Client Workstation Upgrades
- Technology Migration

Retrofits & Extensions

- System Retrofit and Extension Services

New Installation Services