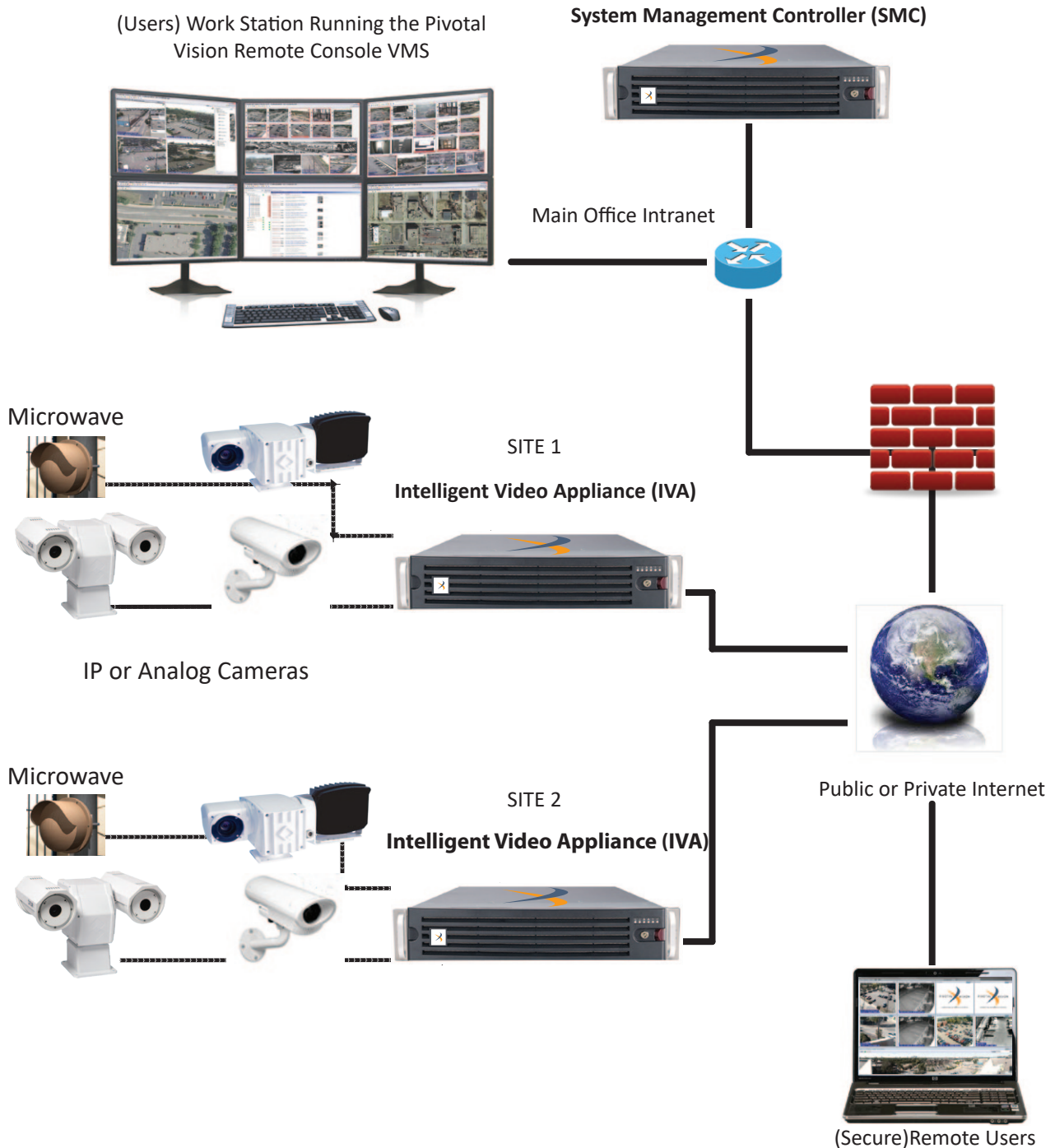


PivotalSenseAI™

autonomous surveillance platform



PIVOTAL VISION™
autonomous surveillance solutions

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System Management Controller (SMC)

The Pivotal Vision™ System Management Controller (SMC) is the central command Appliance that manages the PivotalSenseAI™ system. The SMC is the event-based NVR as well as the traffic and repository of all priority system information. It also manages and authenticates all user access for cameras, alarm and I/O's and system configuration. The SMC provides superior security, access, and reporting. There is no direct user communication with any of the Intelligent Video Appliances - IVA (Geospatial AI Engine, Camera Controller, Event-based NVR). All communication and viewing control of the devices are via the PivotalSenseAI™ Remote Console VMS Software, which connects users to the SMC.

USER ACCESS AND MANAGEMENT FEATURES

- Streams cameras to many users using only one video stream from the remote Intelligent Video Appliance
- Adjust video quality and frame rate from remote sites on-demand according to user settings and network conditions
- Receives video streams only from cameras that are being used
- Distributes video recordings and alarms to users viewing the system via the PivotalSenseAI™ Remote Console client VMS software
- Archives videos based on site and event

MODELS:

SMC1U-67 Series-6 System Management Controller



The Series 6 SMC1U-67 is Pivotal Vision's System Management Controller specifically designed for cyber security, and capable of recording high-quality event based video to its on-board one terabyte of usable video storage and is designed to easily expand that storage by adding an iSCSI external video storage device. Protected from network threats, the SMC employs Pivotal Vision's proprietary configuration and encryption between Users and each Intelligent Video Appliance (IVA). The Pivotal Vision™ Series 6 System Management Controller is designed to meet small security focused environments.

SMC1U-77 Series-7 System Management Controller



The Series 7 SMC1U-77 is Pivotal Vision's System Management Controller specifically designed for cyber security, and external video storage appliances. Capable of recording high-quality event based images via a Video Storage Appliance (VSA), four Gigabit network ports and for optional redundancy expandable to two 300 GB drives Raid 1 Mirroring configurations available. The SMC is the only point of entry into the system, each Intelligent Video Appliance and User connection is secure from network threats via Pivotal Vision's proprietary configuration and encryption— the Pivotal Vision™ Series 7 System Management Controller is designed for medium single site camera deployments or a network of remote sites.

SMC2U-87R Series-8 System Management Controller



The Series 8 SMC2U-87R is Pivotal Vision's high powered System Management Controller specifically designed for cyber security, redundancy and external video storage appliances. Capable of recording high-quality event based Images via a Video Storage Appliance (VSA), 800W Redundant AC power supply, four Gigabit network ports and two 300 GB drives configured for Raid 1 Mirroring for the OS and Raid 10 for the Video Events Storage. Additionally, the SMC2U-87R utilizes Pivotal Vision's proprietary configuration and encryption between Users and each Intelligent Video Appliance (IVA) to ensure the system is secure from network threats — the Pivotal Vision™ Series 8 SMC2U-87R System Management Controller is designed to meet the highest security focused environments.

SMC2U-97 Series-9 System Management Controller



The Series 9 SMC2U-97 is Pivotal Vision high powered Management Controller specifically designed for cyber security and onboard video storage. Capable of recording high-quality event based Images to an on-board Raid 5 or 10 Storage Repository. Additionally, the SMC2U-97 utilizes Pivotal Vision's proprietary configuration and encryption between Users and each Intelligent Video Appliance (IVA) to ensure the system is secure from network threats — the Pivotal Vision™ Series 9 SMC2U-95 System Management Controller is designed for medium to large systems.

Intelligent Video Appliance (IVA)

The PivotalSenseAI™ Intelligent Video Appliances (IVA) are the brains of the system; all the site processing is accomplished on the IVA's. The IVA's are the main hub for a site and all local resources attach to the IVA's. They are responsible for all site functions and drives the AI Geospatial Engine, which connects all your devices to the 4-D world to create a unique and unified view of your site. Each IVA includes the embedded AI video and data analytics engine, local 24-hour NVR, automation engine, communications manager, self-health monitor, and sensor manager. The IVA processes all inputs and autonomously produces the outputs of videos, images, meta-data and alerts to the PivotalSenseAI™ System Management Controller.

GENERAL FEATURES

- Autonomous PTZ Tracking - Object tracking with moving camera and moving background
- Automated Guard Tours - Areas Defined by GPS Coordinates
- Object detection on all Sensors of a Multi-Sensor PTZ - Multi-Sensor Autonomous PTZ Tracking
- AI GeoSpatial Engine
- Encoding of video to h.264 for 24 hour archiving
- Megapixel and HD Camera Capable
- Event-based video extraction which is sent to the System Management Controller for reporting

MODELS:

IVA1U-67G Series-6 Intelligent Video Appliance (IVA)



The PivotalSenseAI™ Series 6 IVA is Pivotal Vision's GPU powered Intelligent Video Appliance. Powered by a Nvidia's Telsa GPU, the IVA2U-67G is capable of 300 frames per second output at 1080p (10x 1080p cameras at 30 fps). The IVA1U-67G contains dual 10-gigabit network interface card so that the system can segment the network traffic to the incoming IP camera traffic, while the other connects to the System Management Controller, transmitting all of the outputs of videos, images and alerts. With the embedded AI GeoSpatial engine, automation engine and bandwidth management, the Series 6 IVA is designed to meet small security environments.

IVA2U-77G Series-7 Intelligent Video Appliance (IVA)



The PivotalSenseAI™ Series 7 IVA is Pivotal Vision's GPU powered Intelligent Video Appliance. Powered by Nvidia's Telsa GPU's, the IVA2U-77G is capable of 600 frames per second output at 1080p (20x 1080p cameras at 30 fps). The IVA2U-77G contains four 10-Gigabit network interface ports so that the system can segment the network traffic from the incoming IP camera traffic, while the other connects to the System Management Controller, transmitting all of the outputs of videos, images, meta-data and alerts. Capable of recording high quality images combined with the embedded AI GeoSpatial engine automation engine, bandwidth management, four 10-gigabit NIC's, and Raid-5 video storage with options up to 60TB -the Pivotal Vision™ IVA2U-77G Intelligent Video Appliance is designed for single site environments with 60 plus camera deployments without the redundancy needs of the Series 8 IVA.

IVA2U-87RG Series-8 Intelligent Video Appliance (IVA)



The PivotalSenseAI™ Series 8 IVA is Pivotal Vision's GPU powered Intelligent Video Appliance. Powered by Nvidia's Telsa GPU's, the IVA2U-87RG is capable of 600+ frames per second output at 1080p (20x 1080p cameras at 30 fps). With six 10-gigabit network ports so that the system can segment the network traffic from the incoming IP camera traffic, while the other connects to the System Management Controller, transmitting all the outputs of videos, images, meta-data and alerts. The IVA2U-87RG is capable of recording high-quality images combined with the embedded AI GeoSpatial engine, automation engine, bandwidth management, 1000W Redundant AC power supply and Raid-10 Video Storage, options up to 60TB -the Pivotal Vision IVA2U-87RG Intelligent Video Appliance is designed to meet highest security focused environments with 60 plus camera deployments.

PivotalSenseAI™ System Management Controller (SMC) Details

Models:	Series 6 SMC1U-67	Series 7 SMC1U-77	Series 8 SMC2U-87R	Series 9 SMC2U-97
Software:	WinSvr2019 IOT OS, PV PivotalSenseAI™ System	WinSvr2019 IOT OS, PV PivotalSenseAI™ System	WinSvr2019 IOT OS, PV PivotalSenseAI™ System	WinSvr2019 IOT OS, PV PivotalSenseAI™ System
Processor:	Xeon Core 2.93GHz	Xeon Core 2.93GHz	2x Xeon Quad Core 2.20GHz	2x Xeon Core 2.20GHz
Hard Drive:	300GB 15k RPM - 1TB Video	300GB 15k RPM	2x 300GB 15k RPM Raid-1	300GB 15k RPM
Video Storage:	Onboard 20TB Usable Video Storage , optional Via External network or iSCSI configuration for a Video Storage Appliance	Up to 20TB Usable Video Storage (Raid-5), optional Via External network or iSCSI configuration for a Video Storage Appliance	Up to 40TB Usable Video Storage (Raid-5 or 10), optional Via External network or iSCSI configuration for a Video Storage Appliance	Up to 40TB Usable Video Storage (Raid-5 or 10), optional Via External network or iSCSI configuration for a Video Storage Appliance
Network Protocol:	TCP/IP and Proprietary Pivotal Vision™ protocol between the RCVMS Client, SMC and IVA's	TCP/IP and Proprietary Pivotal Vision™ protocol between the RCVMS Client, SMC and IVA's	TCP/IP and Proprietary Pivotal Vision™ protocol between the RCVMS Client, SMC and IVA's	TCP/IP and Proprietary Pivotal Vision™ protocol between the RCVMS Client, SMC and IVA's
Network Interface:	2x Ethernet (RJ-45, 10-gigabit)	4x Ethernet (RJ-45, 10-gigabit)	6x Ethernet (RJ-45, 10-gigabit)	4x Ethernet (RJ-45, 10-gigabit)
Power Supply:	400 Watts	560 Watts	1000W (1 + 1) Redundant	560 Watts
System Update:	Via Network or USB	Via Network or USB	Via Network or USB	Via Network or USB
Features Access:	Via front panel, PivotalSenseAI™ SMC GUI and via the network-the PivotalSenseAI™Remote Console VMS (RCVMS) GUI	Via front panel, PivotalSenseAI™ SMC GUI and via the network-the PivotalSenseAI™Remote Console VMS (RCVMS) GUI	Via front panel, PivotalSenseAI™ SMC GUI and via the network-the PivotalSenseAI™Remote Console VMS (RCVMS) GUI	Via front panel, PivotalSenseAI™ SMC GUI and via the network-the PivotalSenseAI™Remote Console VMS (RCVMS) GUI
Rack Mount/Size:	1U / Depth: 25.6" Width: 17.2" Height: 1.7"	1U / Depth: 25.6" Width: 17.2" Height: 1.7"	2U / Length: 25.2" Width: 17.2" Height: 3.5"	2U / Length: 25.2" Width: 17.2" Height: 3.5"

PivotalSenseAI™ Intelligent Video Appliance (IVA) Details

Models:	Series 6 IVAMINI-67	Series 6 IVA1U-67G	Series 7 IVA2U-77G	Series 8 IVA2U-87RG
Software:	Embedded Windows 10 IOT and PivotalSenseAI™IVA	Embedded Windows 10 IOT and PivotalSenseAI™IVA	Embedded Windows 10 IOT and PivotalSenseAI™IVA	Embedded Windows 10 IOT and PivotalSenseAI™IVA
Nvidia Tesla GPU:	No	1x Tesla Pascal - 21 teraFLOPS and 16 GB RAM	2x Tesla Pascal - 21 teraFLOPS and 16 GB RAM	2x Tesla Pascal - 21 teraFLOPS and 16 GB RAM
Video Storage Config:	Approx. 300GB	Options up to 8TB Raid-5	Options up to 40TB Raid-5	Options up to 60TB Raid-10
Camera Input:	4 Ch @720p or 2 Ch @1080p	300fps @1080p (10 cameras) Up to 4k Resoultion compatible	600fps @1080p (20 cameras) Up to 4k Resoultion compatible	600fps @1080p (20 cameras) Up to 4k Resoultion compatible
Third Party Device:	Serial: RS-232 - ASCII TCP/IP: ASCII, MetaData -TCP sender/listener, API, Other	Serial: RS-232 - ASCII TCP/IP: ASCII, MetaData -TCP sender/listener, API, Other	Serial: RS-232 - ASCII TCP/IP: ASCII, MetaData -TCP sender/listener, API, Other	Serial: RS-232 - ASCII TCP/IP: ASCII, MetaData -TCP sender/listener, API, Other
Network Protocol:	TCP/IP, HTTP, UDP, RTSP	TCP/IP, HTTP, UDP, RTSP	TCP/IP, HTTP, UDP, RTSP	TCP/IP, HTTP, UDP, RTSP
Network Interface:	4x Ethernet (RJ-45, 10-gigabit)	2x Ethernet (RJ-45, 10-gigabit)	4x Ethernet (RJ-45, 10-gigabit)	6x Ethernet (RJ-45, 10-gigabit)
Power Supply:	120 Watts -12VDC (10 Amp)	650 Watts	800 Watts	1000 Watts Redundant
System Updates:	Via Network SMC Federated	Via Network SMC Federated	Via Network SMC Federated	Via Network SMC Federated
Features Access:	Via front panel, PivotalSenseAI™ IVA GUI, and via the network-the PivotalSenseAI™ Remote Console VMS Client (RCVMS) GUI via the SMC	Via front panel, PivotalSenseAI™ IVA GUI, and via the network-the PivotalSenseAI™ Remote Console VMS Client (RCVMS) GUI via the SMC	Via front panel, PivotalSenseAI™ IVA GUI, and via the network-the PivotalSenseAI™ Remote Console VMS Client (RCVMS) GUI via the SMC	Via front panel, PivotalSenseAI™ IVA GUI, and via the network-the PivotalSenseAI™ Remote Console VMS Client (RCVMS) GUI via the SMC
Rack Mount/Size:	Wall Mount / Depth: 10.5" Width: 8.0" Height: 4.0"	1U / Depth: 25.6" Width: 17.2" Height: 1.7"	2U / Length: 25.2" Width: 17.2" Height: 3.5"	2U / Length: 25.2" Width: 17.2" Height: 3.5"