ThinManager & VersaView 5000: Securely Delivering Your Content

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- ControlLogix Compute Module
- CompactLogix 5480 Controller
- VersaView 5000 Industrial Computers
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IN-CHASSIS COMPUTING

- Enables easier information access by having compute functionality closer to the source of the information, where the true value of the data can be leveraged
- Can be used to help reduce downtime and improve operational efficiency by monitoring the equipment or machine in real time
- Can be used to help predict downtime before it occurs
**FLEXIBILITY**

- Easily add value to existing ControlLogix® applications without having to disrupt production with a phased migration approach
- Supports next generation machine or equipment designs allowing differentiation
**SIMPLIFIED ARCHITECTURES**

- Supports integrated visualization with on board DisplayPort for direct connection to high definition industrial monitors
- Built in API to allow for direct communication with a ControlLogix processor via the backplane
- Run commercially available off the shelf or custom applications in the same chassis as the ControlLogix controller
HARDWARE FEATURES

- ControlLogix Compute
  - Compute functionality in a single-slot ControlLogix module
  - Ability to directly communicate with a ControlLogix processor via the backplane

- Monitor Interface
  - DisplayPort supports standard converters for HDMI, DVI, VGA displays
  - Intel HD graphics (2650 x 1600 resolution)

- Windows® 10 IoT Enterprise LTSB (64-bit) or Linux (32-bit)
  - Intel Atom 1.46 GHz dual-core processor
  - 32 GB SSD (approx. 20 GB free space for user applications)
  - 4 GB RAM

- Ports
  - (1) USB 3.0 port
  - (2) 1-GB Embedded Ethernet ports
ControlLogix Compute Use Cases

Rockwell software or third-party applications may be installed on the compute module for applications such as:

- FactoryTalk View SE Station
- OPC UA data access with FactoryTalk Linx
- Data logging and processing
- SQL Server interface (For example, manage recipe, store recipe data, store production data)
- Machine optimization (For example, machine to machine comparisons)
- Communication gateway to read/write to remote devices
- Add local intelligence to stand-alone or unconnected machines
**Catalog Nomenclature and Description**

- **Bulletin number**: 1756 – ControlLogix family
- **Catalog Type**: CM – Compute Module
- **Performance**: S – Standard (dual core)
- **SSD Capacity**: 1 – 32 GB
- **Operating System**: B – Windows 10 IoT Enterprise 64-bit, C – Linux 32-bit
- **Pre-installed software**: 1 – None pre-installed

<table>
<thead>
<tr>
<th>No.</th>
<th>Catalog Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1756-CMS1B1</td>
<td>ControlLogix Compute, Intel Atom dual-core, 32 GB SSD, Windows 10 IoT Enterprise 64-bit OS</td>
</tr>
<tr>
<td>2</td>
<td>1756-CMS1C1</td>
<td>ControlLogix Compute, Intel Atom dual-core, 32 GB SSD, Linux 32-bit OS</td>
</tr>
</tbody>
</table>
# CompactLogix™ 5480 Controller

<table>
<thead>
<tr>
<th>5069-L46ERMW</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Real-time Control</td>
<td>Logix control engine</td>
</tr>
<tr>
<td>Open Operating System</td>
<td>Windows 10 IoT Enterprise (Independent of the Logix control engine)</td>
</tr>
<tr>
<td>CPU</td>
<td>Intel i7 2.4 GHz Quad</td>
</tr>
<tr>
<td>Storage</td>
<td>20 MB (Logix) Approx. 16 GB Free (OS)</td>
</tr>
<tr>
<td>SDRAM</td>
<td>5.75 GB (Windows)</td>
</tr>
<tr>
<td>GbE Ports (Logix)</td>
<td>3 (2 ports configurable for Dual IP or DLR)</td>
</tr>
<tr>
<td>GbE Ports (OS)</td>
<td>1</td>
</tr>
<tr>
<td>Monitor Interface</td>
<td>1 (DisplayPort) – supports standard converters for HDMI, DVI, VGA displays</td>
</tr>
<tr>
<td>USB Ports</td>
<td>1 Device Port (Logix) 2 USB 3.0 Host Ports (OS)</td>
</tr>
<tr>
<td>I/O</td>
<td>Supports up to 31 local 5069 Compact I/O™ Modules</td>
</tr>
</tbody>
</table>
VersaView 5000 Portfolio Offering

- **VersaView™ 5100 Monitors**
- **VersaView 5200 Thin Clients**
  - Integrated display panel thin clients and non-display thin clients
- **VersaView 5400 PCs**
  - Integrated display panel PCs and non-display PCs

*Innovative open architecture and modern design!*
Environmental Ratings and Certifications

- Certifications: CE, cULus Listed, EAC, KC and RCM
- Integrated Display: panel mount IP65, 0°C - 50°C
- Non-Display: IP20, -20°C…60°C
- Maintenance free design with no battery to ever replace – also eases air shipping requirements
- Flush all-glass display design is easy to clean for food/pharma applications
- Ideal for 21 CFR part 11 applications when combined with FactoryTalk® View Site Edition
VersaView 5100 Monitors

- Uses the same modern design and cutout sizes as the VersaView 5400
- Widescreen 10-point multi-touch capacitive display
- Edgeless glass design for easier cleaning
- Combine monitors with any Allen-Bradley non-display industrial computer to create an efficient computing solution
### VersaView 5100 Monitors

<table>
<thead>
<tr>
<th>Description</th>
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</tr>
</thead>
<tbody>
<tr>
<td>VersaView 5100 12.1in Monitor</td>
<td>6200M-12WBN</td>
</tr>
<tr>
<td>VersaView 5100 15.6in Monitor</td>
<td>6200M-15WBN</td>
</tr>
<tr>
<td>VersaView 5100 18.5in Monitor</td>
<td>6200M-19WBN</td>
</tr>
<tr>
<td>VersaView 5100 21.5in Monitor</td>
<td>6200M-22WBN</td>
</tr>
</tbody>
</table>
VersaView 5400 Industrial Computers

- Intel Atom Bay Trail Quad Core (E3845), 4GB RAM, 128GB SSD
- Windows 7/WES 7/Windows 10 IoT Enterprise 64bit operating systems
- Fanless with no moving parts, no battery design for increased reliability

### Integrated Display Computer
- Single external display support (DisplayPort)
- Edge-to-edge glass widescreen multi-touch capacitive display
- 12”, 15”, 19” and 22”
- 22” is full HD 1920x1080

### Non-Display Computer
- Dual external display supports (VGA + DisplayPort)
- Small form factor
- Multiple mounting options
Available I/O Ports

- DisplayPort to VGA & DVI adaptors will be available
- All systems are 24V DC – an optional external AC/DC adaptor will be offered
## VersaView 5400 Industrial Computers

<table>
<thead>
<tr>
<th>Description</th>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>Non-Display PC</strong></td>
<td></td>
</tr>
<tr>
<td>VersaView 5400 Box PC Win 7</td>
<td>6200P-NS3A1</td>
</tr>
<tr>
<td>VersaView 5400 Box PC WES 7</td>
<td>6200P-NS3B1</td>
</tr>
<tr>
<td>VersaView 5400 Box PC Win 10</td>
<td>6200P-NS3C1</td>
</tr>
<tr>
<td><strong>Integrated-Display PC</strong></td>
<td></td>
</tr>
<tr>
<td>VersaView 5400 12.1in Panel PC Win 7</td>
<td>6200P-12WS3A1</td>
</tr>
<tr>
<td>VersaView 5400 12.1in Panel PC WES 7</td>
<td>6200P-12WS3B1</td>
</tr>
<tr>
<td>VersaView 5400 12.1in Panel PC Win 10</td>
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<td>6200P-15WS3A1</td>
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<td>6200P-19WS3B1</td>
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<td>6200P-19WS3C1</td>
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<td>VersaView 5400 21.5in Panel PC Win 7</td>
<td>6200P-22WS3A1</td>
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VersaView 5200 Panel Thin Clients

- Integrates with ThinManager® software for efficient centralized management
- No operating system for increased application flexibility
- Industrial grade components suitable for harsh environments

Integrate ThinManager software into a robust industrial thin client
VersaView 5200 with ThinManager

- VersaView 5200 is optimized with ThinManager software, providing an ideal single platform for industrial applications
- Ideal for distributed applications using FactoryTalk View Site Edition technology
- Reduces hardware and management costs to deliver reduced cost of ownership
# VersaView 5200 Panel Thin Clients

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</tr>
</thead>
<tbody>
<tr>
<td>Integrated-Display Thin Client</td>
<td></td>
</tr>
<tr>
<td>VersaView 5200 12.1in ThinManager Thin Client</td>
<td>6200T-12WA</td>
</tr>
<tr>
<td>VersaView 5200 15.6in ThinManager Thin Client</td>
<td>6200T-15WA</td>
</tr>
<tr>
<td>VersaView 5200 18.5in ThinManager Thin Client</td>
<td>6200T-19WA</td>
</tr>
<tr>
<td>VersaView 5200 21.5in ThinManager Thin Client</td>
<td>6200T-22WA</td>
</tr>
<tr>
<td>Non-Display Thin Client</td>
<td></td>
</tr>
<tr>
<td>VersaView 5200 Box Thin Client</td>
<td>6200T-NA</td>
</tr>
</tbody>
</table>
Leverage the **value of the data** that exists on the plant floor architecture and **make real-time decisions** with that data at the **right level** in the architecture, including smart devices and integrated control.

**Compute Power**

- Compute is being driven down the architecture to smart devices
- Compute is now a value on top of machine control for automation
- Resides at the right level to make a decision and serves different purposes

**Impactful Trends**

- Control + Compute
- White boxes are now being eliminated from the plant floor
- Compute capabilities are now native to plant floor control devices and products
- Prognostics and diagnostics are expected from each device
- Visualization integration
SCALABLE COMPUTE

ENTERPRISE (Level 4)
- Private or Public Cloud
- On premise scales virtually, in cloud scales elastically
- Remotely administered

SYSTEM (Levels 2 through 3)
- Industrial or white-box computing
- Miniature IDC
- Virtually runs any application, has wider breadth

DEVICE (Levels 1 through 2)
- In cabinet, in chassis, in controller computing
- Right size and form for function
- Helps analytics happen at correct level of hierarchy

CONNECTED SERVICES
- Design / Implementation / Integration
- Application Specific Support
- 24x7 Monitoring and Administration
- On-site Response
ThinManager Demonstration
1609 Uninterruptible Power Supply

Bulletin 1609 Uninterruptible Power Supplies
UPS Topologies: Offline / Stand-By

- Off-Line/Stand-By
  - Inverter connected in parallel
  - Transfer switch toggles between line power & battery (typ. 10msec or >)
  - Quasi Sine Wave Output

How does an Offline / Stand-by UPS work?
- Utility powers load during regular operation
- Inverter is off
- Inverter is energized and transfer of load from utility to inverter occurs when power is lost
UPS Topologies: Line Interactive

- **Line Interactive**
  - Inverter connected in parallel
  - Bi-directional inverter enables battery to charge with line power
  - Active Voltage Regulation
  - Transfer Time to battery – 2-5ms
  - Pure Sine Wave Output

How does a Line-Interactive UPS work?

- Inverter & battery always connected to output of UPS
- Inverter operated in reverse while AC power is present, charging battery
- On AC failure, transfer switch opens, to prevent backfeeding of the battery
UPS Topologies: On-Line

- **Online/Double Conversion**
  - Inverter connected in series & converting 100% of the time
  - Double conversion AC/DC/AC (rectifier/charger, inverter)
- **Active Voltage & Frequency Regulation**

**How does a On-Line UPS work?**
- Inverter always on and supplying load
- Input is rectified (or chopped) to feed battery charger and DC buss.
- Should have static bypass
Next Generation UPS Products

- Two Family of products ranging from 600VA to 1.5kVA

- 1609-B

- 1609-D
1609-B (Basic)

- 1609-B
  - 600VA and 1kVA
  - Multiple Voltages:
    - 120V, 208/230VAC
  - Din rail or Panel/Floor Mount
  - Line Interactive
  - Simulated Sinewave
  - Dry Contacts
  - Integrated Remote On/Off
  - Replaceable Surge protection
  - USB Communication

- 600 VA (1609-B600N)
- 1000 VA (1609-B1000N)

Low Cost Solution with lower feature set
1609-D (Downtime Defender)

- 1609-D
  - 600VA, 1kVA and 1.5kVA
  - Multiple Voltages:
    - 120V, 208/230VAC
  - Panel/Floor Mount
  - Expandable Batteries
  - Dry I/O Contacts
  - Remote On/Off
  - Replaceable Surge Protection
  - Line Interactive
  - Pure Sinewave
  - AVR
  - 600 VA (1609-D600N)
  - 1000 VA (1609-D1000N)
  - 1500VA (1609-D1500N)

Full featured solution Integration to the architecture