JACE® 8000 Features and Niagara 4 Licensing
Agenda

• JACE 8000 overview
• Niagara 4 licensing
• Distribution
• Selection process
• Q&A
JACE 8000 platform at-a-glance

- Premier Niagara 4 engine providing software task compression
- Modular hardware design for faster, easier installation
- Global design with enhanced enclosure compatibility
- Enhanced wireless capability, reducing installation labor and materials
- Prominent brand ID, allowing for OEM differentiation
- Address hardware obsolescence for enhanced availability and cost
Tool-less Installation

Existing JACE
• Requires tools to install an option card
• Error prone if pins misaligned
• Limited to two option modules

JACE 8000
• Tool-less installation
• Hot pluggable expansion
• Allows up to 4 modules
• Improved DIN rail clip
Faster, easier installation

Existing JACE
- Limited support for wireless protocols
- Limited resources for emerging standards

JACE 8000
- Lower installation costs
- Enable use of wireless devices
- Reduce installation labor
- Reduce material costs

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High Performance Core

Hardware specifications

- TI AM3352 @ 1GHz
- 1GB RAM
- 4GB flash total storage / 2GB user storage
- Wi-Fi (Client or WAP)
- USB flash drive
- High-speed field bus expansion
- (2) Isolated RS 485
- (2) 10/100MB Ethernet ports
- -20-60°C Ambient operating temp

Agency certifications

- UL 916
- CE 61326
- FCC Part 15 Subpart B, Class B
- FCC Part 15 Subpart C
- C-Tick
- C-UL

Accessories

- NPB-8000-2X-485 – Dual RS 485 Expansion (2)
- NPB-8000-LON – LON FTT10A Expansion (4)
- NPB-8000-232 – RS 232 Expansion (4)
- IO-16-485 – RS485 16 point IO module (16)
Simplified licensing model

Niagara AX
Multiple Hardware Platforms

- JACE 7 (~200 Devices)
- JACE 6E+ (~80 Dev)
- JACE 6E (~40 Dev)
- JACE 3E+ (~20 Dev)
- JACE 3E (~10 Dev)

Drivers:
Standard included, special/custom – add on

Niagara 4
One Hardware Platform: JACE 8000

- 8200 (200 Devices)
- 8100 (100 Devices)
- 8025 (25 Devices)
- 8010 (10 Devices)
- 8005 (5 Devices)

Software license

Drivers:
Standard included, special/custom – add on

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Simplifying the Distribution

OEMs and distributors only need to stock hardware

- Less inventory (fewer parts on the shelf)
- Less inventory (no SW to stock)
- Easier upgrades
- Added rebrand flexibility

JACE 8000 Hardware

USD Card

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Consistent capacity-based licensing

Niagara AX

Various license restrictions

- Supervisor-UNL
- Supervisor-10
- WorkBench

Drivers:
- BACnet
- LON
- Modbus
- KNX
- SNMP
- IP Video

Niagara 4 Portfolio

Consistent capacity packs

- Supervisor-UNL
- Supervisor-100
- Supervisor-10
- Supervisor-3
- Supervisor-2

Add JACEs or devices as needed

Drivers:
- Standard IP included
- Special IP – Ad hoc
  - 10, 25, 50, 100 device packs

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# Buying Niagara 4: JACE 8000

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
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<tbody>
<tr>
<td>JACE 8000</td>
<td>Single JACE 8000, includes branding &amp; uSD card</td>
</tr>
<tr>
<td>NC-8005</td>
<td>5 Device Core</td>
</tr>
<tr>
<td>NC-8010</td>
<td>10 Device Core</td>
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<tr>
<td>NC-8025</td>
<td>25 Device Core</td>
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<tr>
<td>NC-8100</td>
<td>100 Device Core</td>
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<tr>
<td>NC-8200</td>
<td>200 Device Core</td>
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<tr>
<td>SMA-8005-1YR</td>
<td>1 Year Maintenance (Included)</td>
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<tr>
<td>SMA-8005-3YR</td>
<td>3 Year Maintenance</td>
</tr>
<tr>
<td>SMA-8005-5YR</td>
<td>5 Year Maintenance</td>
</tr>
<tr>
<td>DEVICE-UP-10</td>
<td>10 Device Upgrade</td>
</tr>
<tr>
<td>DEVICE-UP-25</td>
<td>25 Device Upgrade</td>
</tr>
<tr>
<td>DEVICE-UP-50</td>
<td>50 Device Upgrade</td>
</tr>
</tbody>
</table>

**Add Niagara**
Includes standard drivers

**Add Maintenance**

**Upgrades**

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### Buying Niagara 4: Supervisor

<table>
<thead>
<tr>
<th>Supervisor</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>SUP-0</td>
<td>0 Niagara network connections</td>
</tr>
<tr>
<td>SUP-1</td>
<td>1 Niagara network connection</td>
</tr>
<tr>
<td>SUP-10</td>
<td>10 Niagara network connections</td>
</tr>
<tr>
<td>SUP-UNL</td>
<td>Unlimited Niagara network connections</td>
</tr>
<tr>
<td>SUP-DEVICE-10</td>
<td>10 Device Core (Std drivers included)</td>
</tr>
<tr>
<td>SUP-DEVICE-25</td>
<td>25 Device Core (Std drivers included)</td>
</tr>
<tr>
<td>SUP-DEVICE-50</td>
<td>50 Device Core (Std drivers included)</td>
</tr>
<tr>
<td>SUP-DEVICE-100</td>
<td>100 Device Core (Std drivers included)</td>
</tr>
<tr>
<td>SUP-0-SMA-1YR</td>
<td>Supervisor Maintenance – 1 Year (Included)</td>
</tr>
<tr>
<td>SUP-0-SMA-3YR</td>
<td>Supervisor Maintenance – 3 Year</td>
</tr>
<tr>
<td>SUP-0-SMA-5YR</td>
<td>Supervisor Maintenance – 5 Year</td>
</tr>
</tbody>
</table>

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**Choose Niagara Connections**

**Choose Field Device Capacity**

*Includes std drivers Optional*

**Add Maintenance**

*1-5 years*
## Comparing Niagara AX and Niagara 4

<table>
<thead>
<tr>
<th>Small job comp</th>
<th>JACE-3E</th>
<th>JACE 8000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity</td>
<td>Heap/kRU</td>
<td>Devices/points</td>
</tr>
<tr>
<td>Power Supply</td>
<td>NPB-PWR</td>
<td>Included</td>
</tr>
<tr>
<td>Drivers</td>
<td>Add-on</td>
<td>Standard included</td>
</tr>
<tr>
<td>Additional Options</td>
<td>Embedded workbench</td>
<td>Included</td>
</tr>
<tr>
<td>Maintenance</td>
<td>JACE-MA-AX</td>
<td>Included</td>
</tr>
</tbody>
</table>

### Additional enhancements

<table>
<thead>
<tr>
<th>Niagara 4</th>
<th>Visualization improvements</th>
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<tbody>
<tr>
<td></td>
<td>Tagging/templating</td>
</tr>
<tr>
<td></td>
<td>Advanced security features</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>JACE 8000</th>
<th>Faster UI (stronger CPU)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Wi-Fi</td>
</tr>
<tr>
<td></td>
<td>Upgradeable!</td>
</tr>
</tbody>
</table>
JACE 8000 in action: ESSI Beta project

**Goals**
- Upgrade Niagara software and hardware for several K-12 schools
- Manage energy usage, optimize efficiency and reduce costs
- Provide fast, reliable performance; large capacity for history and alarming; suitability for HTML5

**Solution: JACE 8000**
- Six JACE 8000 controllers connecting 63,291 points and 1,147 devices
- Initial JACE connected 261 BACnet devices to monitor and manage chillers, air handlers, VAVs, FCUs, Modbus power meters, and lighting
- 150-200 edge devices managed per site

**Results**
- Increased capacity, flexibility and ease of use
- Overall CPU usage 30 percent less compared to NXS
- History and alarming capacity more than met the requirements

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**Optimizing greater connectivity and the Internet of Things**

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Thank You!

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