

Nidec
All for dreams



INDUSTRIAL SOLUTIONS

Port Crane Control Systems

Crane Control Systems Your Way!



The Crane Team Story

Nidec Avtron Crane Control Systems partners with its customers to offer high tech solutions for the dockside and overhead crane markets. An engineering and service oriented company in business since 1953, Nidec Avtron's product and automation expertise provide state-of-the-art solutions for all types of cranes. Our high level of service and support ensures your cranes operate in a safe and reliable manner.

- Dedicated group of crane engineers and service technicians
- Experienced in all types of port, shipyard and harbor cranes
- Engineered control systems to match your crane's unique requirements
- AC and DC drives for new installations and upgrades
- Scalable crane management systems to fit your needs and budget
- Customized crane automation programs to minimize cycle time
- Advanced sway control systems
- Complete installation and commissioning services
- Service when and where you need it, 24/7/365

Digital Drive Systems

ACCEL500™ Products

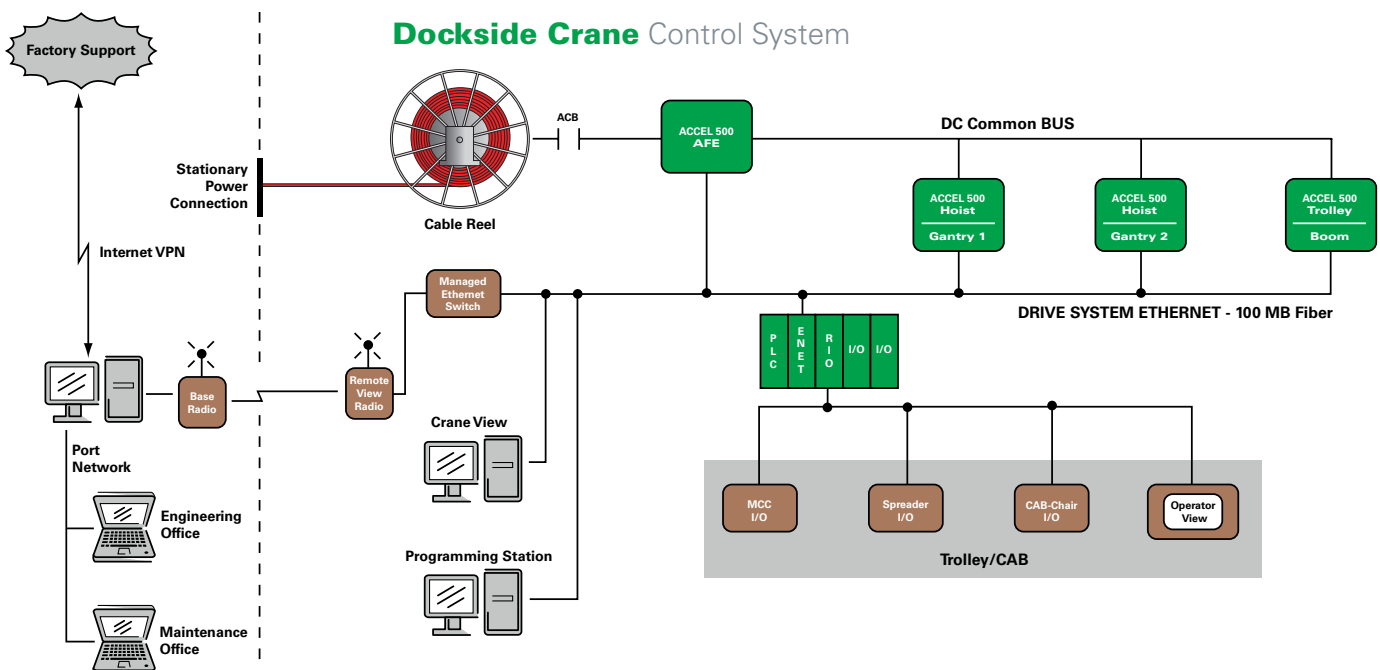
- Stand-alone & common bus solution
- Compact space saving design
- Integrated DB chopper up to 1000HP
- Dedicated crane control firmware
- Energy saving regenerative solution
- Up to 2000HP and 690VAC



Open Architecture

Nidec drive systems are based on a distributed control strategy. Intelligent drives are connected to other smart devices like PLCs and operator terminals using an industry standard Ethernet communications backbone. Support for multiple Ethernet protocols including Rockwell's Ethernet IP™, General Electric's Ethernet Global Data® (EGD), and Modicon/Schneider's MODBUS® TCP is built into every drive.

Nidec's multi-vendor support allows you to choose the PLC and operator interface for basic machine logic and control. This approach reduces the spares your port must maintain, and minimizes programming software and training costs.



Drive System Retrofits

- Benefits:**
- Significantly reduce cost compared to system replacement
 - Minimize costly installation downtime
 - Extend the life of your mission-critical capital equipment
 - Increase crane availability and performance



ADDvantage-32 Plus™ DC Drive

- The next step in DC drive evolution
- Backward compatible with every ADDvantage-32™ DC drive built since 1990!
- Ethernet communications support advanced diagnostics and troubleshooting
- Available up to 1000HP and 575VAC

Advanced Firing Module

- Extend the life of your drive system by replacing the “brains”- keep the muscle!
- Complete front-end upgrades for DC drives
- Retain costly SCR bridges, cabinets, wiring, and DC motors
- Avtron has pre-engineered solutions for aging drive systems:
 - Cutler-Hammer - GH95
 - GE - Siltron/Siltron, DC300/DC2000
 - Reliance - AutoMax
 - Schneider - Rectivar
 - Siemens - Simoreg

Before retrofit

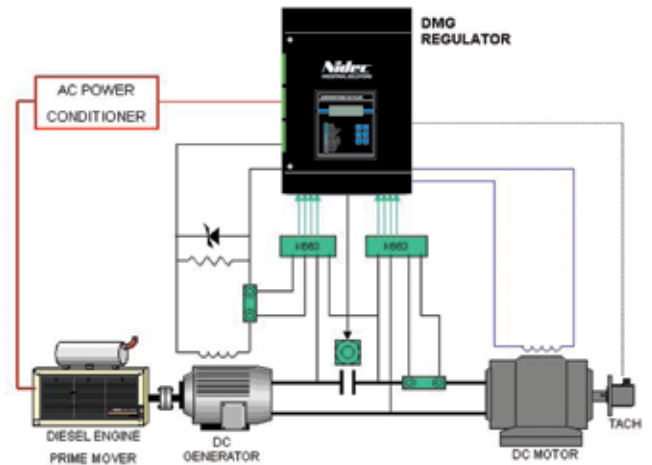


After retrofit



Digital Motor-Generator Set Controller

- Upgrade at a fraction of the cost of new drives
- Replace obsolete electronic equipment
- Controls up to 3 motions
- Built-in contactor and brake control
- State-of-the-art advanced diagnostics



Advanced Crane Automation



- Sway control
- Auto/Semi-Auto loading & unloading
- Collision avoidance
- Load weigh calculations
- Synchronized hooks
- Smart spreader control

Advanced Diagnostic Systems



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LEVEL 5 CraneView™

*System Wide
Diagnostics*

- Monitor and troubleshoot all aspects of crane operation
- Electronic access to all documentation: drawings, manuals, device data sheets and spare parts lists
- Supports office access via RemoteView™
- Supports wireless tablet access via MobileView

- Crane overview, DriveView features + PLC connectivity
- Preventive maintenance scheduler
- Remote access via RemoteView

LEVEL 4 DriveView Lite™

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*Drive and PLC
Advanced Diagnostics*



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LEVEL 3 CraneMate™

*Drive and PLC
Basic Diagnostics*

- 15" Panelview™ touchscreenterminal
- Fault/Alarm/Event history recording
- Motion limit/interlocks bypass control

CRANEMATE HOME

CRANE	TRUCK	TRUCK	TRUCK	TRUCK	TRUCK	TRUCK	TRUCK
TRUCK ADDRESS							
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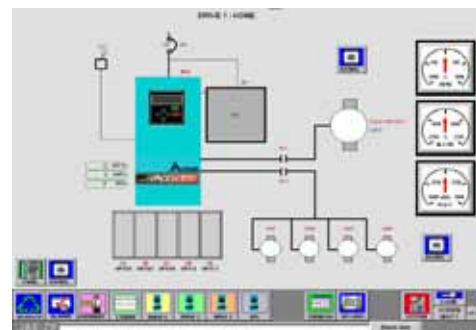
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- Windows-based touchscreen PC
- Real-time and historical trending
- View schematics & manuals electronically

LEVEL 2 DriveView™

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*Multiple Drive
Advanced Diagnostics*



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LEVEL 1 CraneMate Jr.™

*Multiple Drive
Basic Diagnostics*

- 3.5" touchscreen display
- Monitor all motions from one location
- Synchronized & time stamped data storage

MAIN USB WRITE AVTRON

Message	Date	Time
MH LIMITS NORMAL	08/04/11	07:52:38
AH LIMITS NORMAL	08/04/11	07:52:49
TR LIMITS NORMAL	08/04/11	07:53:11
TR LIMITS NORMAL	08/04/11	07:53:28
MH RAISE	08/04/11	07:53:45
TR FORWARD	08/04/11	07:53:54
MH UPPER SLOW LS	08/04/11	07:54:16
MH UPPER STOP LS	08/04/11	07:54:25
MH STOPPED	08/04/11	07:54:41
TR STOPPED	08/04/11	07:54:56
TR REVERSE	08/04/11	07:55:13
TR STOPPED	08/04/11	07:55:25
AH RAISE	08/04/11	07:56:15
AH OL ALARM	08/04/11	07:56:25
AH STOPPED	08/04/11	07:56:43
AH OL OVERRIDE	08/04/11	07:57:04
AH RAISE	08/04/11	07:57:14
AH OVERCURRENT D	08/04/11	07:58:13
AH STOPPED	08/04/11	07:58:19
AH FAULT RESET	08/04/11	07:58:51

- Monitor/Trend real-time data
- Enhanced event logger

LEVEL 0 ACCel500 & ADD-32-Plus™

*Individual Drive
Basic Diagnostics*

Service & Support

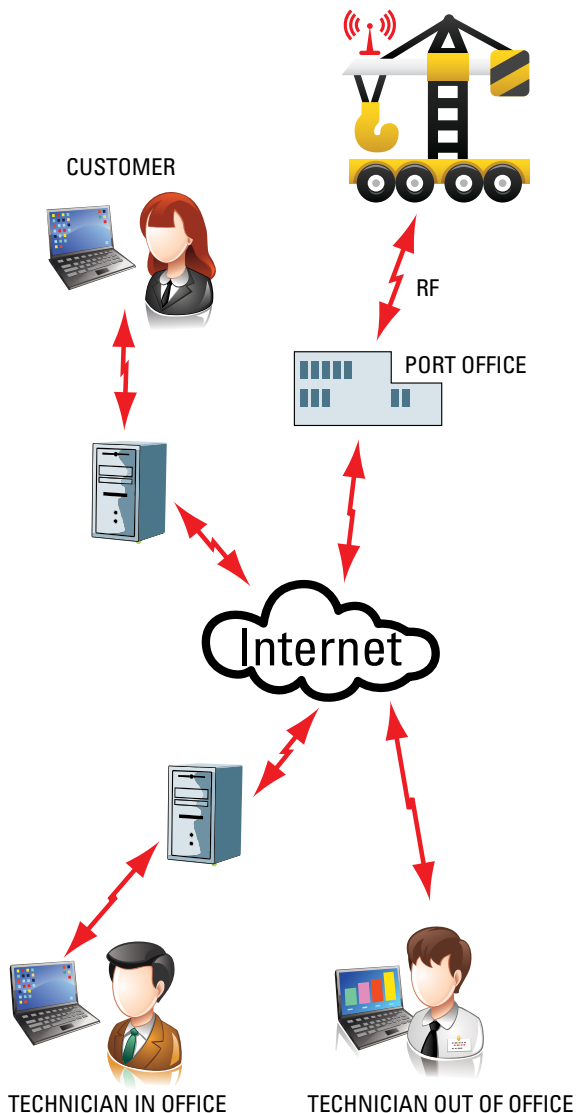


Nidec is committed to helping you maximize your crane's performance

Our Pillars of Support programs will minimize down-time and maximize machine availability.

- Emergency service 24 hours/day, 365 days/year
- Emergency shipment of critical spare parts
- After hours phone support
- Predictive and preventive maintenance contracts
- Online software and documentation backup

Remote Diagnostics



A Remote Diagnostics connection allows Nidec engineers to access your crane control system in real time, 24/7/365.

Looking at the same diagnostic screens as your technicians, our engineers can help determine the root cause of a problem. They can guide you through a repair and return your equipment to service before a service tech could travel to your site.

Increased Crane Availability

- Improved Mean Time To Repair
- Problem resolution begins remotely, immediately

Reduced Maintenance Costs

- Eliminate the need for a site visit
- Avoid unscheduled down-time by monitoring device wear

Greater Collaboration with Specific Experts

- Compare data from multiple cranes and sites
- Improve utilization of equipment by optimizing performance

MobileView

- Portable CraneView system display with full access to the system
- Allows wireless connection to Crane (WiFi Hotspot)
- Housed in a fully-rugged 10.1" Tablet (Windows OS)



Customer Training



Nidec provides an array of training options, emphasizing a “hands-on” approach:

On-Site Training at your business or work site

- More cost effective
- Flexible scheduling
- System specific
- **Regional Training** classes in centralized locations throughout the country
- **In-House Training** sessions at our facility in Cleveland, Ohio

Visit www.nidec-avtron.com/training for a schedule of classes and more information.



Nidec

All for dreams



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