SuZhou, China ●

● Chicago

● Walnut, CA

HENRICH™

Excellence in Industrial Ethernet
Switches and Wireless Communications

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About Us

Henrich--Your Trusted Partner for Industrial Ethernet Solutions

Founded in 2003 in Walnut, CA , USA, Henrich Electronics Corporation has been helping customers across the globe to manage their industrial systems with rugged and secured Ethernet Networking Products in various industries, such as power utilities, transportation, oil and gas, factory automation, remote monitoring, etc. Working with world-leading suppliers, Henrich's team focuses on designing, engineering, manufacturing and marketing a full range of leading edge products and services. Always keeping up with the technology trend changes, we ensure that you are working with a trusted partner and one-stop shop for all your needs in industrial Ethernet products and services .

Complete Industrial Product Offering

- IEC61375 Switches for Train Communications
- IEC61850-3 Switches for Utilities Applications
- Industrial Core Routers Supporting Large Scale Networks with 10G Ports
- Full Layer 3 Gigabit Ethernet Switches
- Multi-Industry Certified Din-Rail/Rack-mount Managed Ethernet Switches
- Low Cost Full Line of Din-Rail/Rack-Mount Unmanaged Ethernet Switches
- Modular Switches Supporting up to 64 Ports
- Full Line of PoE/PoE+ Industrial Ethernet Switches
- Ethernet/Fiber Media Converters
- Industrial Wireless AP and 4G Routers with Redundancy
- Network Management Software Supporting Large-scale Networks
- Your OEM/ODM Products

Applications

- Train Controls and Other On-board Data Communications
- Utilities
- Solar and Wind Systems Communications
- Intelligent Cities
- Intelligent Transportation Systems
- Water Treatment
- Chemical/Petroleum Processing
- Mining
- Industrial Automation
- Laboratory Testing
- Security Access Systems
- Machinery and Robotics Communications

Proven Capabilities

- Selected Industrial Controls Advisor for the Ministry of Transport Information Security Committee, China (2016)
- Successful Implementations for Ethernet Solutions for Subway Systems in Seven Cities in China
- Chosen Supplier for China Rail, out of 20+ competitors, for the Next Generation Industrial Switches for on-board Train Communications Networks
- Premium Supplier for On-board Layer 3 Switches for Multiple City Tram Systems
- Successful Delivery of Industrial Switches for the World's Largest ITS Systems in the City of Changchun, China, 2015
- Qualified Supplier for Major Solar-Power OEM companies in Germany (SMA) and Others Around the World
- Qualified Supplier for Huawei Enterprise Business Unit Group

Global Customers

中华人民共和国交通运输部
Ministry of Transport of the People's Republic of China

CRRC

CHANG CHUN CHINA

SMA

Henrich™

SND Tram

HUAWEI

ADVANTECH B+B SmartWorx

ITS Case Study

The Intelligent City ITS Project in the City of Changchun, China

Project Profile

- Initial Project Survey and On-site Investigation was Done Through 2014
- Henrich Engineers Spent 2 Month On-site Time to Help Develop the Complete Project Topology
- Over 2,000 Layer 2 Switches + Layer 3 Switches were Deployed in This Project
- Project was Approved by The City of Changchun in 2015

## Case Topology
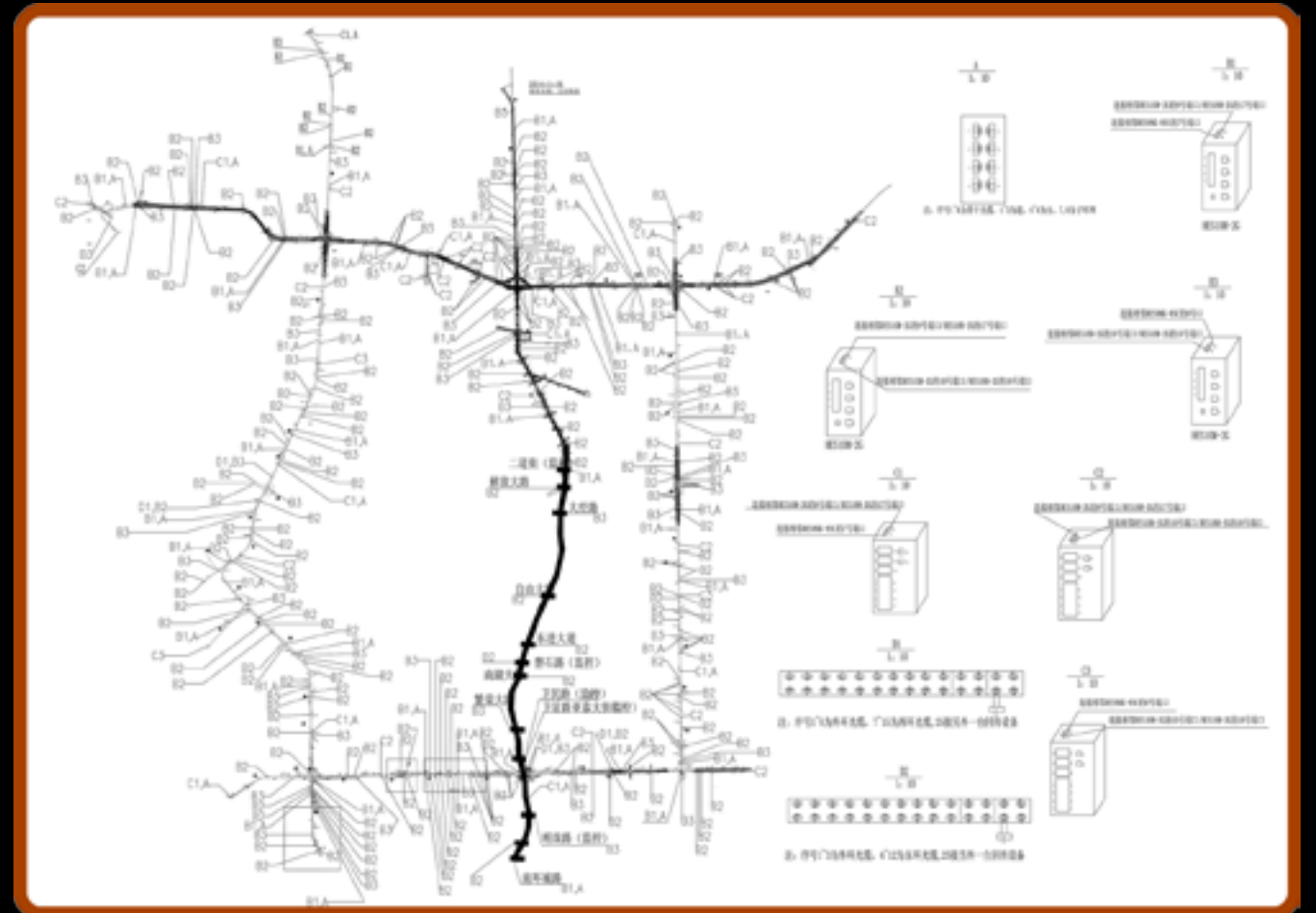
Fault Prevention Case Study

The Fault Prevention Systems for Subway Line 2 and Line 4 in the City of Suzhou, China

Project Profile

- The System is The First Fault-Prevention Project, Provided by Scoda, Installed in China for The Subway Systems
- The System is to Send The On-board Fault Monitoring Messages to The Wireless APs Installed along The Tracks in The Tunnel
- The Project Required That The On-board Layer 3 Switches Change Its Routing Functionalities in Order to Accommodate The Unique Communication Requirement among All the On-board and Off-board Equipment
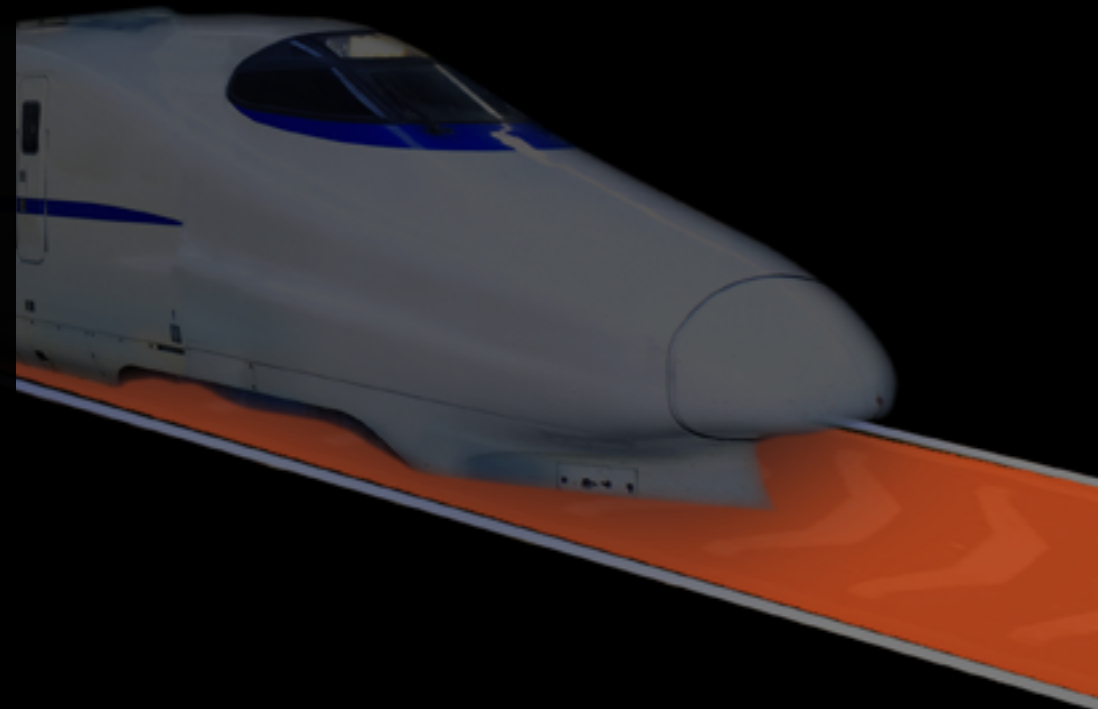
- Henrich Owns 100% Layer 2 and Layer 3 Software Firmware to Be Able to Quickly Develop The Right Features for The Customer
- Henrich Spent Total of 18 Months to Accommodate The Changing Requirements for This Project
- The Project was Satisfactorily Accepted by The Customer
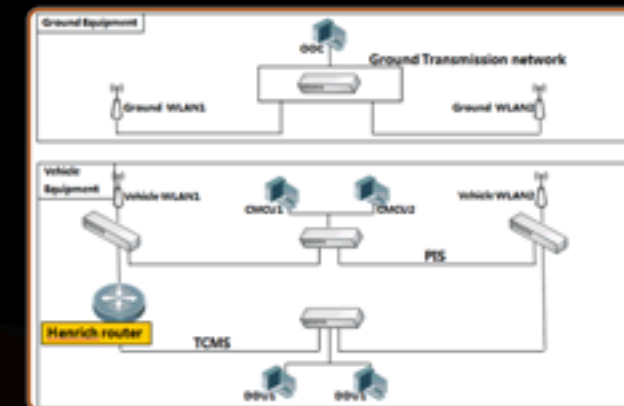
Leading Edge EN50155 Rail Switches

- EN50155 Layer 2 Switches
- EN50155 Layer 3 Switches
- EN50155 Gigabit Switches
- EN50155 PoE/PoE+ Switches
- EN50155 Wireless APs and 4G Routers

Complete Train Communications Product Offering

- Compliant with IEC61375 Standards
- RingOn Redundant Rapid Recovery System < 15 ms, with Full Layer 2 and Layer 3 Management Features
- Dual Power Supplies for Power Redundancy, Voltage 24~160VDC
- Fanless Cooling Design, Support -40~75°C Operating Temperature, IP67 Enclosure
- Alarm with One Relay Output (M12 Connector)
- Support Bypass Function to Allow Continuous Communications throughout the Train
- Up to 18 10/100/1000 BaseT Ethernet Ports (M12 Connector)

Complete Wireless Product Offering

- Provide Wide Range Indoor and Outdoor Wireless AP and 4G-LTE Products
- Support the Next Generation 802.11ac High Performance Gigabit Wireless Router Applications
- Industrial Grade AP Products Support Wireless Motion Communications for up to 120 Kilometers/Hour (75 Miles/Hour) for Vehicle/Ground Communications
- Wireless AP Products Can Cover up to 5 Kilometers (3.1 Miles) for Applications within the City and up to 10 Kilometers for Applications in the Suburbs
- Support 5GHz (including 5.1GHz and 5.8GHz) Wireless Frequencies Simultaneously as the Redundant Wireless Backups to the Important Wired Connection

Complete Wireless Product Offering

- Multiple Security Strategies Such As Wep, Trip, CCMP, User Isolation, etc
- Green Wireless Designs: Support PPC Technology to Ensure Dynamic Adjustment of AP Routers Bidirectional Power Wattage, to Reduce Energy Usage and Exend the Standby Time
- Support Multiple Channel Cellular Services Including LTE, 3G, 2G
- 4G-LTE as the Upload Connection to Provide the Backup Data Output When the Wired Connection Is Interrupted.
- Up to 150Mbps 4G-LTE Connection Is Supported
- Support GPS Positioning
- Support Text Message Notification

Core Capabilities and Technologies-- #1

Software

- Ethernet Full Layer 2 and Layer 3 Code Ownership and Customization
- Linux OS Customization
- Driver Development
- Protocol Development
- Windows Based Network Management Software
- Full Layer 2 and Layer 3 Management Functions
- High Security: ACL, ARP, Port Speed Limit, Link Aggregation, ID Authentication, Etc
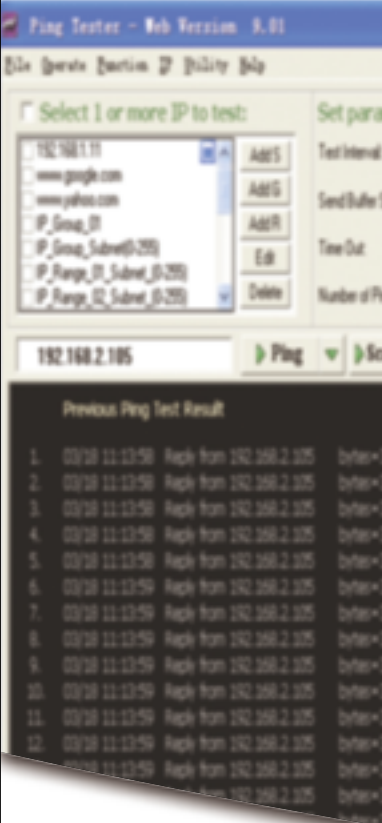
Core Capabilities and Technologies-- #2

Hardware

- Industrial Level 4 designs for Utilities, Train, Mining, Oil/Gas Applications
- IEC61850, IEC61375, ULC1D2, UL864 Vertical Market Certifications
- Unique under 15 ms Redundancy for 3rd Party Devices
- Use of the Highest Quality/ Performing Components including Broadcom and Intel Products
- Hot Swappable Power Supplies and Modular Designs
- Modular Switch Designs for Up to 64 Ports
- Patented Heat Dissipation for High Power Intensity Designs for PoE Plus Switches
- Unique Integrated Industrial Wireless AP and 4G Router Designed in One Product

Core Capabilities and Technologies-- #3

OEM/ODM

- Successfully Designed/ Customized Products for OEM/ ODM Customers Across the Globe for 11Years
- Private Label Options
- Full Layer 3 Customization Capabilities
- Software and Hardware Custom Options
- Full Mechanical Customization including Enclosures and Connectors
- Integrated Design Efficiency for Customization to Produce Most Prototypes in Weeks not Months
- Outstanding Quality, 100% on time Delivery and Highly Competitive Prices

Core Capabilities and Technologies-- #4

Manufacturing

- ISO9001:2008, ISO14001 Certified Faclity
- Manufaturing Processes Fully Automated In MES Systems
- 100% In-house Functional Test
- Full Burn-in Test
- Product Field Failure Rate: Below 0.01%
- Long Term Working Relationship with Local UL Facility
- Sophisticated Lot Control Traceability Down to Each Component
- Most SKUs can be Delivered in Days, Not in Weeks

Your Competitive Advantages with Henrich

- Full Industrial Ethernet Product Offering-Supports Most Industrial Applications
- Over 1000 SKUs to Meet Most Demands with Off-Shelf Products
- Proven Quality: Less Than 0.01% Field Failure Rate. USA Customer Reference Available Upon Request
- Guaranteed Lowest Possible Cost in OEM/ODM Options
- 24x7 Global Operations to Service Our Customers and Partners
- Down to 30 Days Prototyping Can be Achieved
- US Local Sales and Service Teams Are Ready to Serve at Anytime