Defense & Aerospace

- Rugged Enhanced Mechanics
- High-Speed Backplanes
- Performance in Harsh Environments
- Rapidly Deployable Solutions
- Compliance with Defense Requirements
- VITA 46.11 System Management Solutions
For over five decades, nVent SCHROFF has been a world leader among developers and manufacturers of electronics packaging components and systems. Whatever challenges you have to overcome, together we can find the right solution. Our products and complete solutions combine the know-how of our specialists in the integration of mechanics, electronics and climate control together with many years of experience with the most diverse application requirements.

They are based on globally standardised product platforms that support rapid, futureproof and cost-effective development. nVent SCHROFF can offer design, project management, prototype and model construction, testing, certification, pre-production and series production under one roof. We can provide fully-equipped and verified systems from a single source quickly and tailored to your specific requirements and we will remain a reliable partner throughout the entire lifecycle of your products, worldwide.
“Network-centric warfare” is the challenge for the 21st century. More than ever before, success depends on the capability to rapidly gather and distribute specific information. High-speed data transfer, system availability and mission-critical reliability are crucial in the defense world today. Communications equipment must be capable of rapid deployment and ensure interoperability with the existing platform even in the most extreme environments. Cutting-edge rugged COTS-based technology from nVent SCHROFF ensures the best return for your investment.

SECURE PROTECTION OF YOUR ELECTRONICS, INCLUDING MIL-CERTIFICATION

- Superb mechanics
- High shock and vibration resistance
- Perfect shielding
- Optimized cooling
- Dependable power supplies
- Outstanding system management

OUR TECHNICAL KNOW-HOW - CRUCIAL FOR TODAY’S MILITARY MISSIONS.
DEPENDABLE SOLUTIONS FOR EVERY OPERATING ENVIRONMENT

Communications play a pivotal role in military operations. Whether it be on ships, tanks, ground control stations, combat aircraft or on unmanned air vehicles, our modular product platforms, specific applications expertise and cutting-edge technology allow us to offer individual solutions for every operating environment.
COTS-BASED SYSTEM SOLUTIONS FROM A SINGLE SOURCE
CUTTING-EDGE TECHNOLOGY FOR HIGH-SPEED MILITARY NETWORKING

NVVENT SCHROFF MILITARY SOLUTIONS
While meeting your strict design specifications, you can be assured that the backplane, chassis, cooling, power supply and system management, including all interfaces, will be selected and integrated for optimal performance. This provides our customers with a clear advantage, since a solution can be developed and provided quickly, all under one roof.

• Reinforced mechanics
• High-speed backplane
• Performance across a wide temperature range
• Dependable power supplies
• Chassis or shelf management
• Leading edge system management solutions

UNCOMPROMISING PERFORMANCE
The demands of today’s digital battlefield require the highest standards of performance. Rapidly gathering, distributing and utilizing information, military aerospace communications systems have to perform even in worst-case scenarios. Whether the mission-critical system is C4ISR, ISTAR, FADEC or ELMS, the basic requirements are dependability and high performance at a reasonable cost and in a small form factor.

COMMUNICATIONS TECHNOLOGY EXPERTISE
nVent SCHROFF has a long established record in delivering electronics packaging solutions for communications and high-speed data transfer. Modern connectivity requires serial backplanes, greater signal density, and a larger power budget. Equipped with the latest technology, our systems solutions provide access to real-time information, allowing for highest data throughput for maximum processing power.

COMMITTED TO RUGGED COTS PRODUCTS
nVent SCHROFF brings an uncompromising commitment to performance for rugged applications: With Card-Lok retainers, conduction cooled assemblies, 19" subracks, basic military systems and 901D cabinets, our rugged COTS range delivers the optimum combination of performance, reliability, cost and rapid time-to-market.

OUR CUTTING-EDGE ENGINEERING - RELIABLE NO MATTER THE SCENARIO

Titan: modular rugged enhanced technology
RAPID DEPLOYMENT PLATFORM SYSTEMS

Whether stationary or mobile, conduction or forced-air cooled, we can draw from our extensive platform capabilities to offer a COTS-based solution tailored to your specific requirements in a timely manner. No matter what your general specification may encompass - high shock and vibration requirements, EMC shielding, special MIL specification finishes, conformal coatings and even perhaps mountable with telescopic slides, we have a ready-made solution. Our continuing commitment to various architectures - VMEbus, VXS, CompactPCI, AdvancedTCA, MicroTCA and now also OpenVPX - ensures the best possible future-proof solution.

SWaP: HIGH PERFORMANCE IN A SMALL FORM FACTOR

For many applications such as UAVs and indeed for general platform upgrades, space, weight, and power (SWaP) are at a premium. Our investment in a 3U VPX conduction cooled portfolio demonstrates our commitment to providing optimum performance with minimal real estate.

DOUBLE BENEFIT: BANDWIDTH AND LEGACY NEEDS

Our current investment in OpenVPX and VITA 46.11 compliant system management technologies provides for future requirements and is a valuable option for legacy platform upgrades.

RESISTING SHOCK AND VIBRATION

With these harsh environments in mind, our cabinets, cases and subracks are designed to protect the maximum mechanical performance of the electronics and to provide shock and vibration resistance.

WITHSTANDING HARSH ENVIRONMENTS

From individual components to the integrated system, our military networking hardware provides a physical construction capable of withstanding extreme conditions such as low atmospheric pressure, exposure to extreme temperature ranges, high EMC shielding and radiation requirements, and negative impacts from sand and dust, rain, humidity, fungus, salt spray, and salt fog.

VARISTAR MIL 901D cabinet

MORE INFORMATION

Scan Code

BENEFITS AT A GLANCE

Complete: Mechanical, electrical, electronic, and thermal competence from a single source
Rapid: Reduced development time by leveraging high volume board and system de-signs
Robust: Proven track record with nVent SCHROFF for over years
Secure: Shock and vibration resistant to MIL-STD-901D
Protected: Conformal coating as a standard feature
CARD RETAINERS AND CONDUCTION-COOLED ASSEMBLY

RUGGED PRINTED CIRCUIT BOARD RETAINERS
COMPLETE SOLUTIONS AT MODULE LEVEL

nVent SCHROFF’s Birtcher and Calmark product lines are the industry leader in the manufacture of ruggedized components that hold boards in place and transfer heat in demanding defense and aerospace applications. The product lines include card guides, Card Lok retainers, PCB retainers, and metal inserters / extractors.

DESIGN FLEXIBILITY

Different lengths, individual wedge dimensions, the relocation or addition of mounting holes, or even different hardware, materials and finishing - our product range provides a broad variety of configurations allowing us to meet your application needs.

VITA 48.2 RETAINER CONFIGURATIONS

Primary-side placement Retainers
(Card Loks, Wedge-Loks) oriented on the primary side of the PCB. The main thermal interface to the cold-plate slot is through the secondary-side cover flanges.

Secondary-side placement
Retainers oriented on the secondary side of the PCB. The main thermal interface to the cold-plate slot is through the primary side cover flanges. While providing a better thermal path from the PCB components to the cold plate, this implementation reduces the available PCB areas.

INNOVATIVE HIGH PERFORMANCE PRODUCTS FOR THE TOUGHEST APPLICATIONS

High Clamp Force Card Loks
• 3X clamp force over traditional Card Loks
• Family of small profile, high clamp force Card Loks that are drop-in replacements

High Thermal Card Loks
• Achieve 15% increased thermal performance over similarly sized Card Loks
• Drop-in replacements
• Increased clamp force performance

BENEFITS AT A GLANCE

Secure: Maximum clamping force for high shock and vibration resistance
Efficient: Maximum thermal heat transfer for cold-wall applications
Usability and SWaP: Sophisticated design for easy insertion and lighter weight
Flexible: Special lengths, finishes, screw head styles or other design options available

More Information
Scan Code
CONDUCTION COOLED ASSEMBLIES (CCA'S)
nVent SCHROFF Conduction Cooled Assemblies are designed for circuit boards requiring cooling in severe environments where convection cooling cannot be used. The assembly also provides needed structural support of the plug-in module in high shock and vibration environments.
- Includes peripheral components such as Card Loks and extractors 3U and 6U templates available for Vita 46, Vita 48.2, VME, and CPCI
- Save time and sourcing costs by managing the entire assembly with one part number
- ESD protected packaging available
- Kits can include thermal pads, EMC gaskets, and labeling per customer requirements

IN-HOUSE DESIGN ENGINEERING EXPERTISE
- Collaborate with our experts to perform thermal analysis using software such as 6Sigma and overcome cooling challenges
- Partner with our experienced engineering team to ensure your design is compliant with required standards
- Accelerate your design process with 3D printed CCA's and frames for fit checks

DESIGNED FOR TWO-LEVEL MAINTENANCE
The need to simplify and streamline maintenance has resulted in Two-Level Maintenance requirements. Conduction cooled assemblies can be equipped with Torque Limiting Card Loks and Series 311 Tolerance Compensating Extractors to better meet Two-Level Maintenance Requirements.
Series 311 extractors provide
- Self-compensation for board tolerances
- Positive pressure on connectors during Card Lok actuation
- Compliant with VITA 48.4 & 48.2
- Provides 10:1 mechanical advantage

Torque Limiting Card Loks Eliminate the need for specialized or calibrated tools in the field.
Skylines and heat sinks can be machined per application requirements

BENEFITS AT A GLANCE
Strong: Aluminum for high thermal conductivity and lightweight support
Robust: Machined from a single piece for high heat transfer and structural support
Large selection: Available in black anodize, chemical film, electroless nickel plating and custom silkscreen
Reliable: Locking threaded inserts in extreme vibration environments, and extractors provide ample force to disengage board connectors easily

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BACKPLANE
THE HEART OF HIGH-SPEED SERIAL DATA COMMUNICATION

THE RIGHT PARTNER FOR CUSTOMER-SPECIFIC MODIFICATIONS

The demands of today’s digital battlefield require the highest standards of performance. Rapidly gathering, distributing and utilizing information, military aerospace communications systems have to perform even in worst-case scenarios. Whether the mission-critical system is C4ISR, ISTAR, FADEC or ELMS, the basic requirements are dependability and high performance at a reasonable cost and in a small form factor.

PROTECTED FOR HARSH ENVIRONMENTS

When your equipment is installed in harsh environments, the electronics must be protected against fungus, salt spray and other aggressive substances. We have the in-house capability to provide each backplane with a conformal coating to MIL-STD-810E, DIN 50155 and UL94V-0 specifications.

STEPPING SAFELY INTO THE HIGH-SPEED FUTURE

The defense market embraces new technology. Now, with the VPX specification VITA 46.0 and the draft of the Open VPX specification (VITA 65), the defense market has moved from parallel (VME) to high-speed serial data communication. With more than a decade of experience in high speed AdvancedTCA, MicroTCA, CompactPCI Serial, VPX and VXS backplane design, Schroff is the right partner to assist you in advancing from parallel bus to serial data transfer.

BENEFITS AT A GLANCE

High capacity: Superior signal integrity to provide up to 40 gigabit data transfer per lane
Leading-edge technology: High-speed simulation and measurement capabilities
Complete capability: In-house conformal coating
Superior quality: 100% backplane testing to guarantee superior quality
RUGGEDIZED SUBRACKS
PROTECTION FOR HARSH ENVIRONMENTS

WITHSTANDING EXTREMES OF SHOCK AND VIBRATION

With a modular approach, our subracks are available in three levels of ruggedization. Readily available product platforms are configurable to fulfill your individual needs. From standard industrial to robust transportation, light military use and rugged-level products (1g up to 25g), we have the right solution.

RUGGED SUBRACKS

• Reinforced side panels, 19” brackets and top/bottom covers with additional mounting positions to horizontal rails
• Aluminum horizontal rails with 3 fastening points for harsh environments
• Aluminum guide rails (one piece)

SPECIFICATIONS

• Standard passivated surface treatment
• Individual surface treatments such as yellow chromate or to customer’s specification
• MIL-C-5541 Class 1A, Gold
• EMC shielded standard solution available
• Aluminum guide rails can be screwed to horizontal rails
• Available with nVent SCHROFF Calmark and Bircher retainers

RUGGEDIZATION & COOLING EFFICIENCY

Rugged metallic card guides

BENEFITS AT A GLANCE

From a single source: All competencies under one roof
Modular toolbox: Multiple ruggedization levels
Adaptable: Retainer options enabling upgrade to increasingly higher levels performance according to shock and vibration requirements
Modification: Service for prototypes to production

Optional rugged card guides with enhanced clamping function

Rugged subrack

Plug-In Module

More Information
Scan Code

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RUGGED 19” SYSTEMS
MECHANICS AND ELECTRONICS FROM A SINGLE SOURCE

RUGGED 19” SYSTEMS
Based on our standard rugged subrack and system program, we offer a wide range of solutions. With our broad experience we can easily adapt to your specific requirements for wide temperature ranges, high shock and vibration levels, and extremely harsh environmental conditions.

TYPICAL CUSTOMER REQUIREMENTS

- Reinforced side panels, horizontal rails and covers; screws and other fasteners in stainless steel; prepared for telescopic slides
- High-speed VXS or VPX backplane
- Controlled air cooling concept from front to rear side
- Dependable 19” power supplies with 1000 W total output power
- Chassis monitoring module for monitoring voltages, temperatures and digital inputs
- Communication and remote monitoring via RS 232 or Ethernet interface (10BaseT)
- Redundant system architecture
- EMC shielded subrack
- Electronic components such as backplane, adapter panels, control modules and power supplies are conformal coated

Electronic components including backplane, adapter panels, control modules and power supplies are typically conformal coated

Typical specifications:

<table>
<thead>
<tr>
<th>Specification</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>MIL-HDBK-217F</td>
<td>Reliability Prediction of Electronic Equipment</td>
</tr>
<tr>
<td>MIL-C-38999 Series</td>
<td>Connectors</td>
</tr>
<tr>
<td>MIL-STD-810D</td>
<td>Environmental Test Method and Engineering Guidelines</td>
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<tr>
<td>MIL-STD-461D</td>
<td>EMC Compatibility</td>
</tr>
<tr>
<td>MIL-STD-2036</td>
<td>General Requirements for Electronics Equipment Specification</td>
</tr>
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BENEFITS AT A GLANCE

<table>
<thead>
<tr>
<th>Benefit</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flexible</td>
<td>Meeting specific design requirements thanks to modular product platforms that form the basis for individual solutions</td>
</tr>
<tr>
<td>Fast</td>
<td>All design, manufacturing and testing resources under one roof to ensure rapid time-to-market</td>
</tr>
<tr>
<td>Secure</td>
<td>Backplanes and electronic components’ simulation, development, production and testing – complete in-house capabilities</td>
</tr>
<tr>
<td>Reliable</td>
<td>Efficient cooling optimized by air measurements and heat simulations in a climate controlled laboratory</td>
</tr>
</tbody>
</table>
**THE NEXT LEVEL: TITAN**

**EXCEL IN EXTREME ENVIRONMENTS**

**RUGGED ENHANCED SYSTEMS**

Working from REDI (rugged enhanced design implementation) VITA 48.2 as a basis, we have developed a modular conduction cooled chassis. This enclosure utilizes high-grade machined aluminum alloys and protective chemical finishes combined with the latest technology in design and machining to achieve a tightly tolerated system.

**QUICKLY DEPLOYABLE HIGHLY SECURE**

Controlled assembly processes provide a complete, highly rugged, cost effective, and environmentally sealed enclosure. To ensure rapid time-to-market deployment and quick development, these systems can easily be configured with a custom front I/O panel to support your unique system configuration. nVent SCHROFF can also engineer a modified backplane interconnect and customize power requirements as needed.

**RUGGED CONSTRUCTION**

- Various Mil-aero grade materials available (EN AW6062, 6082, 7075, etc.)
- Full IP/EMC gasketing options available
- Variety of finishes available such as anodize, alodine 1200, electroless nickel, Sur-Tec or powder coating for external surfaces

**MODULAR DESIGN. FULLY CUSTOMIZABLE**

- Allows Type 1 or Type 2 plug-in units
- Accepts plug-in units with optional connector protection
- Available with 0.8", 0.85", and 1" pitch
- Allows a variety of external heat dissipation options such as heat sinks, forced air and liquid cooling

**NEW TITAN SERIES**

Titan is designed in accordance with the VITA 48.2 mechanical specification for microcomputers using REDI conduction cooling applied to VITA 46. This allows a variety of open-standard bus architectures that Schroff already provides including VPX, VME, CompactPCI, CompactPCI Serial, CompactPCI Plus IO, and VME64 extensions that conform to the IEEE standard for mechanical core specifications for conduction-cooled Euroboards.

**COOLING**

- Basic
- Heatsinks
- Forced Air

**BENEFITS AT A GLANCE**

| Complete: | With Schroff VPX backplane, fully modular design for maximum flexibility |
| Robust: | Machined aluminum construction with IP/EMC gasketing options for severe environments |
| Powerful: | Optimized heat transfer and dissipation, extreme shock and vibration protection |

7 slot 3U VPX Titan chassis, available with Birtcher 3U VPX clamshell, vertical and horizontal mounting options; various modular design options available
VITA 46.11 SYSTEM MANAGEMENT SOLUTIONS
MECHANICS AND ELECTRONICS FROM A SINGLE SOURCE

www.pigeonpoint.com/products_vita.html

VPX CHASSIS MANAGER & BOARD MANAGEMENT REFERENCE

• Bench Top Hardware
  - Immediate hands-on familiarization and “known-good” reference as you bring up your chassis or module

• Reference Schematics
  - ChMM carrier or BMR schematics as starting point for your custom carrier design or board design; optionally, schematics of the ChMM itself can be licensed

• Firmware Modifications
  - Adjustments to the Chassis Adaptation Layer in the Pigeon Point Chassis Manager for your chassis

• Comprehensive Documentation
  - Covers hardware and firmware; targets both the chassis / board developer and chassis / board user

• One Year Of Technical Support
  - Both hardware and firmware; includes schematic review of your design after you have integrated the PPS-supplied schematic

COMPLETE CHASSIS MANAGER MODULE WITH CARRIER

• Complete VITA 46.11 Chassis Manager
• 3U VPX form factor carrier module
• System ready solution
• Available integrated with chassis solutions
WHEN MISSION CRITICAL COMMUNICATIONS AND ELECTRONIC EQUIPMENT REQUIRE SUPERIOR PROTECTION, YOU CAN RELY ON NVENT SCHROFF ELECTRONICS CABINETS FROM NVENT. WE OFFER SOLUTIONS LIKE ELECTRONIC CABINET, SERVER CABINET, ETC.
MIL-CERTIFIED CABINETS

VARISTAR - AS A VERSATILE CABINET PLATFORM FOR EXTREME CONDITIONS
NOVASTAR - LIGHTWEIGHT AND WITH FLEXIBLE DIMENSIONS

UNCOMPROMISINGLY SECURE AND ECONOMICAL

Cost control is a requirement for most projects. COTS solutions are a useful tool to achieve this for military applications. nVent SCHROFF is committed to providing a COTS solution and to providing uncompromising security. Varistar in steel and Novastar in aluminum are designed to provide 100% reliability for robustness under shock and vibration, shielding against high frequency interference, and ensuring long-term durability. Attention to detail and total reliability down to the smallest detail make the fulfillment of complex security tasks possible - and also economically viable.

SHOCK AND VIBRATION RESISTANCE

In general, cabinets installed on ships are equipped with shock absorbers. Four absorbers are fitted under the cabinet, and two are used for wall mounting on the top. The design requires a calculation that takes the cabinet dimensions and payload into consideration. Shock absorber selection and dimensioning is performed by our specialist partner Socitec. Documentation of standard versions with detailed descriptions and test reports are available at: www.schroff.co.uk/testreports

The Heavy-Duty version offers a maximum static load-carrying capacity of 800 kg and withstands dynamic loads up to DL6.

LONG-TERM SERVICE

Varistar and eurorack remain unfazed even in dusty and high humidity conditions. Zinc plating and additional powder coating provide double protection against corrosion.

BEST-IN-CLASS HF SHIELDING. IP PROTECTION INCLUDED

The Varistar shielding principle protects sensitive data from interference radiation. Best of all, even in the most diverse cabinet configuration, Varistar performs with the highest shielding effectiveness. Tested to IEC 61587-3, the HF gasket simultaneously forms a barrier against dust and water to IP 55.

VARISTAR EMC TEST RESULTS (TO IEC 61587-3): VARISTAR WITH

- Solid steel door: 60 dB at 1 GHz
- Perforated door: 40 dB at 1 GHz
- Fan top cover: 55 dB at 1 GHz
- Cable entry in base plate: 45 dB at 1 GHz
- Solid steel door: 40 dB at 3 GHz
- Perforated door: 30 dB at 3 GHz
- Standard dimensions of tested object 2000 x 600 x 600 mm

![Graph showing EMC test results]

1 Cabinet with solid steel door
2 Cabinet with perforated door
MIL-CERTIFIED CABINETS

Externally isolated at both base and rear, our VARISTAR and eurorack cabinet platforms have been successful aboard key naval programs. Defense agencies rely on our flexibility and ability to modify our COTS platform to the most demanding environments on the high seas. With our partner Socitec we offer 19” ruggedized cabinets, validated to MIL-S-901D.

The cabinet is derived from our standard COTS platform solutions and combines today’s requirements for integration:

• High performance elastomer or cable elastic mountings for COTS equipment
• 19” standard
• Large selection of dimensions (height and depth)
• Great variety of accessories available
• Reduced engineering and fabrication costs
• EMC or HF adaptable
• ROHS compliant

Designed to MIL-STD-901D for shock and MIL-STD-167F for vibration. For specific customer requirements nVent SCHROFF is developing and testing rugged cabinet solutions to further MIL standards such as MIL-STD-810F for environmental conditions.

BENEFITS AT A GLANCE

Certified: With Schroff VPX backplane, fully modular design for maximum flexibility
Flexible: Highly flexible construction for tight spaces
Reliable: Shielded against high-frequency interference: 60dB at 1 GHz, 40dB at 3GHz
Protected: Against dust and water (IP 55)
Durable: Dual protection against corrosion with zinc-plated and powder-coated frame
TESTING & SIMULATION
WIDE RANGE OF IN-HOUSE PROCESS CAPABILITIES

DEVELOPMENT AND DESIGN TO MIL STANDARDS
Our team of experienced development, design and application engineers, modern design tools and high quality project management are the guarantee of our high quality standard. To ensure this remains the case in the future, our engineers are constantly researching many areas including signal integrity, EMC, cooling, shock and vibration resistance, and surface treatment.

FOR THE OPTIMAL DESIGN WITH MAXIMUM PERFORMANCE
- Latest CAD software, simulation tools, and measuring equipment
- Experienced developers
- Up-to-date layout tools, e.g. Mentor Graphics Board Station and PADS
- 3D files of the layout tools are used in the mechanical design

MODELING, SIMULATION, AND MEASUREMENT: 100% QUALITY
One thing remains top priority at every stage of development: the continuous assurance of 100% quality. Our engineers therefore always use the most up-to-date modeling and simulation tools, measuring instruments and in-house-designed, high-performance test adapters.

In this way we can optimize the development process and ensure, from as early as the layout stage, that we are offering our customer the best and highest-performance products. For more advanced tests we work in cooperation with certified testing and examining institutes.

FOR A RAPID DEVELOPMENT PROCESS AND HIGH RELIABILITY
- For interference emission and interference immunity: EMC/CE test location
- Circuit simulator: P-Spice
- For signal integrity measurements: backplane board simulation using Ansoft Designer
- Speed simulation
- For thermal simulations: Flotherm
- For thermal tests: wind tunnel and climate cabinet
- Shock and vibration test
- IP test
MODERN MANUFACTURING FACILITIES
Innovative production methods, modern machinery and a high degree of automation guarantee that our product offering assures the consistent high quality and performance characteristics demanded in military and aerospace applications. Optimized for prototypes to production, our customers benefit from further advantages such as time and cost savings.

MANUFACTURE OF MECHANICAL COMPONENTS
The best processes, assuring flexibility and high quality:
- Cutting
- Power-press punching
- CNC punching
- Routing
- Bending
- Laser processing
- Joining techniques
- Steel and aluminum welding
- Galvanic surfaces for steel and aluminum parts
- Screen or digital printing

Machines developed in-house for still higher production efficiency:
- Fully-automated production lines for horizontal rails
- Production facility for threaded inserts
- Highly flexible punching facility for custom front panel manufacture

MANUFACTURE OF ELECTRONIC COMPONENTS
Economic solutions with the highest precision:
- Solder paste printing
- Automatic SMD placement
- Vapor-phase soldering
- Wave soldering
- Automated press-in operations
- Conformal coating
QUALITY ASSURANCE
STRIVING FOR 100% LIABILITY

MORE THAN A POLICY: A CORE VALUE
nVent SCHROFF is committed to the highest possible standards in military and aerospace. With our high-quality product offering, quality control is a core value. This means that our quality management continuously examines and improves procedures and processes, at every stage of design and manufacturing.

QUALITY CONTROL

FMEA
• Looks for potential weaknesses in product or production processes during the design and development phases

AUTOMATIC OPTICAL INSPECTION
Testing of electronic sub-assemblies for manufacturing defects such as:
• Poorly soldered joints
• Wrongly-placed or missing components

IN-CIRCUIT TEST
Economic solutions with the highest precision:
• Detects faults in the conductive path such as short circuits or discontinuities
• Isolates soldering errors and component faults
• Circuit block tests

FUNCTION AND SAFETY TESTING
• System functions
• Earthing test
• Insulation test (high-voltage test)

FATIGUE/BURN-IN TEST
• Fatigue testing of power supply units under operating conditions
• Early-failure detection

nVent SCHROFF is certified to AS9100 and ISO9001 certifications for the Calmark and Birtcher lines of Retainers.

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COMPLIANCE & DOCUMENTATION

COMPLIANCE FOR LARGE GOVERNMENT PROGRAMS

OUR BENCHMARK: COMPLETE CUSTOMER CONFIDENCE
Our comprehensive quality promise guarantees prime contractors and their customers compliance with military requirements. As a result of our decades of experience and cutting-edge technology, customers can rest assured that the products they receive fully meet their expectations. What is more, our customers benefit from the highest quality and reliability – simply from a single source.

WE GUARANTEE PRODUCT PERFORMANCE
Our extensive in-house product testing is unmatched in the industry with UL approved test labs, EMC, CSA/TUV, water and salt spray, UV, and static load testing facilities. During the design phase, we perform extensive DVT (design verification testing) protocols to validate product performance. Through a highly integrated electronic database, we provide complete serial number traceability on all systems, FRUs, key components, and software updates. When you take delivery of your components, you have our guarantee that they meet or exceed all applicable industry performance standards for repeatable and calibrated results.

COMPLIANCE AND DOCUMENTATION
We can provide procured part certification and traceability for U.S. Government programs. As a result of our broad experience in the market, we know and understand Defense Federal Acquisition Regulation Supplement (DFARS) compliance requirements.

nVent SCHROFF has completed the implementation of policies and procedures at its San Diego and Rhode Island facilities to meet the requirements of the Directorate of Defense Trade Controls (DDTC) compliance program for registered manufacturers and exporters of defense articles and services as defined in the United States Munitions List (USML).

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GLOBAL REACH
WE SERVE LOCAL AND MULTI-NATIONAL COMPANIES WITH SALES OFFICES AND MANUFACTURING LOCATIONS AROUND THE WORLD