



**SIEMENS**

*Ingenuity for life*

## Communication solutions for mission critical networks

FIPS Validated / Common Criteria /  
Risk Management Framework

[usa.siemens.com/ruggedcom-defense](http://usa.siemens.com/ruggedcom-defense)



## RUGGEDCOM'S Operating System Switches are FIPS and Common Criteria certified.

Siemens, a leader in rugged design solutions for IT and OT networks announced that it has achieved **Federal Information Processing Standard (FIPS) 140-2** validation for RUGGEDCOM's Rugged Operating System switches.

**FIPS 140-2** is an officially recognized North American standard that validates proper use of standard methods of encryption. All government agencies and departments in the U.S. and Canada that use commercial encryption are required to use FIPS-certified solutions in their networks.

In addition, **RUGGEDCOM products** have been recognized as having received Common Criteria certificates meeting the Network Device Protection Profile (NDcPP) standard. The evaluation has been conducted in accordance with the provisions of the Common Criteria Evaluation and Validation Scheme (CCEVS), a United States Government program administered by the National Information Assurance Partnership (NIAP) to evaluate security functionality of an information technology with conformance to the Common Criteria international standard.

eMASS is a web-based Government off-the-shelf (GOTS) solution that automates a broad range of services for comprehensive, fully-integrated cybersecurity management, including controls scorecard measurement, dashboard reporting, and the generation of Risk Management Framework (RMF) for Department of Defense (DOD) Information Technology (IT) and DOD Information Assurance Certification and Accreditation Process (DIACAP) Package Reports. eMASS provides an integrated suite of authorization capabilities and prevents cyber-attacks by establishing strict process control mechanisms for obtaining authority to connect information systems to DOD networks.

These validations emphasize our commitment to our US and Canadian customers who demand a higher level of security in systems that are critical to national security and our infrastructure.

### Security functions

FIPS 140-2 - level 2:

- FIPS approved algorithm implementations
- User identification and authentication
  - Strong password application with brute force protection
  - RSA public key based via SSH; the key can be 2048 or 3072 bits in length.
- Key management
  - All key generation, derivation, provisioning, destruction and storage, is FIPS-certified, including the keys that are permanent, ephemeral, agreed upon by protocol, user-provisioned, or automatically generated.
- Cryptographic Self tests are performed automatically during the boot sequence and during runtime as certain conditions exist
- Protected operational environment – only FIPS-validated firmware can be executed
- Physical security with tamper evidence covering

Common Criteria - NDcPP v2.0:

- Secure audit logging
  - Secure audit data generation, storage and logging via trusted channel
- Cryptographic operations and key management with SSH, TLS and RBG support
  - AES data encryption/decryption
  - Signature generation and verification
  - Hash algorithms
- Identification and authentication
  - Password and RSA public-key authentication over SSH
  - Password via TLS
  - Full X509v3 validation of TLS server certificate
- Managed and protected Security Functions
  - Protected security data and administrations
  - Trusted firmware update
- Access control – session locking and termination
- Trusted path /channels

Risk Management Framework

RMF Test and Documentation:

- eMASS

### RUGGEDCOM M969F

#### 10-port managed Ethernet switch with fiber uplinks

MIL-STD and IP66/IP67 rated

- 8 x 10/100BASE-TX + 2 x 1000BASE-X or 2 x 100BASE-FX
- IP66/67 rated

Data Sheet:

[M969F](#)

User Guide:

[M969F](#)

Installation Guide:

[M969F](#)



### RUGGEDCOM M2100F

#### 19-port modular managed Ethernet switch

- 3 x 1000BASE-X + 16 x 10BASE-FL/100BASE-FX/1000BASE-X

Data Sheet:

[M2100F](#)

User Guide:

[M2100F](#)

Installation Guide:

[M2100F](#)



**NOTE:** Hardware already owned cannot achieve FIPS validation via software update. Only new products purchased directly from the factory will achieve FIPS validation.



### **RUGGEDCOM M2200F**

#### **9-port managed Gigabit Ethernet switch**

- 1000BASE-X and/or 10/100/1000BASE-T

Data Sheet:

[M2200F](#)

User Guide:

[M2200F](#)

Installation Guide:

[M2200F](#)



### **RUGGEDCOM RSG2200F**

#### **9-port managed Gigabit Ethernet switch**

- 1000BASE-X and/or 10/100/1000BASE-T
- Hazardous location certification: Class 1 Division 2

Data Sheet:

[RSG2200F](#)

User Guide:

[RSG2200F](#)

Installation Guide:

[RSG2200F](#)



### **RUGGEDCOM RS900F**

#### **9-port managed Ethernet switch with fiber uplinks**

- 6 x 10/100BASE-TX + 3 x 100BASE-FX
- Hazardous location certification:  
Class 1 Division 2 Integrated power supply

Data Sheet:

[RS900F](#)

User Guide:

[RS900F](#)

Installation Guide:

[RS900F](#)



### **RUGGEDCOM RS900GF**

#### **10-port managed Ethernet switch with Gigabit uplinks**

- 8 x 10/100BASE-TX + 2 x 1000BASE-X
- Railway application certification: EN50121-4
- Hazardous location certification: Class 1 Division 2

Data Sheet:

[RS900GF](#)

User Guide:

[RS900GF](#)

Installation Guide:

[RS900GF](#)



### **RUGGEDCOM RS940GF**

#### **8-port managed Gigabit Ethernet switch**

- 6 x 10/100/1000BASE-T + optional 2 x 1000BASE-X
- Hazardous location certification: Class 1 Division 2

Data Sheet:

[RS940GF](#)

User Guide:

[RS940GF](#)

Installation Guide:

[RS940GF](#)



### **RUGGEDCOM RS416F**

#### **16-port serial device server with integrated 4-port managed Ethernet switch and IEEE 1588 v2 to IRIG-B conversion**

- Up to 16 serial ports: RS485/RS422/RS232 via DB9/RJ45 or fiber serial interface via ST + 4 x 10/100BASE-TX
- Optional dual redundant power supplies

Data Sheet:

[RS416F](#)

User Guide:

[RS416F](#)

Installation Guide:

[RS416F](#)



### **RUGGEDCOM RSG2488F**

#### **28-port advanced utility-grade, high density managed IEEE 1588 Gigabit Ethernet switch**

- Field replaceable Ethernet and time synchronization media modules
- Hot-swappable power supplies
- 28 x 1000BASE-X non-blocking architecture
- IEEE 1588 v2 hardware time stamping

Data Sheet:

[RSG2488F](#)

User Guide:

[RSG2488F](#)

Installation Guide:

[RSG2488F](#)



### **RUGGEDCOM RSG2100F**

#### **19-port modular managed Ethernet switch with Gigabit uplinks**

- 3 x 1000BASE-X + 16 x 10/100BASE-X
- Hazardous location certification: Class 1 Division 2
- Power-over-Ethernet (PoE) version available

Data Sheet:

[RSG2100F](#)

User Guide:

[RSG2100F](#)

Installation Guide:

[RSG2100F](#)



## Certification Matrix

Product Name	Root MLFB	FIPS certificate	CC certificate
M2100F	6GK60210MS3	✓	✓
M2200F	6GK60220MS3	✓	✓
RSG2100F	6GK60210AS3	✓	✓
RSG2200F	6GK60220AS3	✓	✓
RS416F	6GK60416AT3	✓	✓
RS900F	6GK60900AS3	✓	✓
RS900GF	6GK60900GS3	✓	✓
RS940GF	6GK60940GS3	✓	✓
M969F	6GK60968MS3	✓	✓
RSG2488F	6GK60248GS3	✓	✓
RSG2100PF	6GK60210PS3		✓
RSG2300F	6GK60230AS3		✓
RSG2300PF	6GK60230PS3		✓
RS400F	6GK60400AT3		✓
RS416PF	6GK60416PT3		✓
RS900GPF	6GK60900PS3		✓

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