

CYBERC4:GUARD

Cross Domain Solution

The RT Logic Guard (CyberC4:Guard™) is a cost effective, low-risk, high-assurance, high-performance Cross Domain Solution (CDS) that provides cross domain isolation at the PL3 and PL4 levels for control centers that utilize the Air Force Satellite Control Network (AFSCN) and/or dedicated remote tracking stations. The CyberC4:Guard offers a permanent, plug-compatible Certification and Accreditation (C&A) solution for existing and new satellite programs that use RT Logic Telemetry® systems, such as the T505, T508, T501, T500GT, and T500GT ADCCP.

Application

To support integrated satellite operations using the AFSCN ADCCP control and status messages must cross security boundaries over IP networks. Past approaches of segmented operations, firewalls, optical isolation, and data diodes are no longer viable; therefore, trusted guards are now required.

Traditional guard solutions tend to have high recurring and non-recurring costs, average or substandard throughput performance, manual intervention schemes, or reliance on external sources for trusted filtering, making them a marginal match for satellite ground systems. Conversely, the CyberC4:Guard employs a single proven AFSCN Core Rule Set to exchange formatted message traffic between security domains for either application. High-performance CyberC4:Guard components support multiple concurrent front-end strings, enabling trusted efficient filtering.

Rule sets for other message protocols such as scheduling, switch control, and file transfer can be layered on top of the AFSCN Core Rule Set creating a full system guard solution.

Modular, Flexible Design

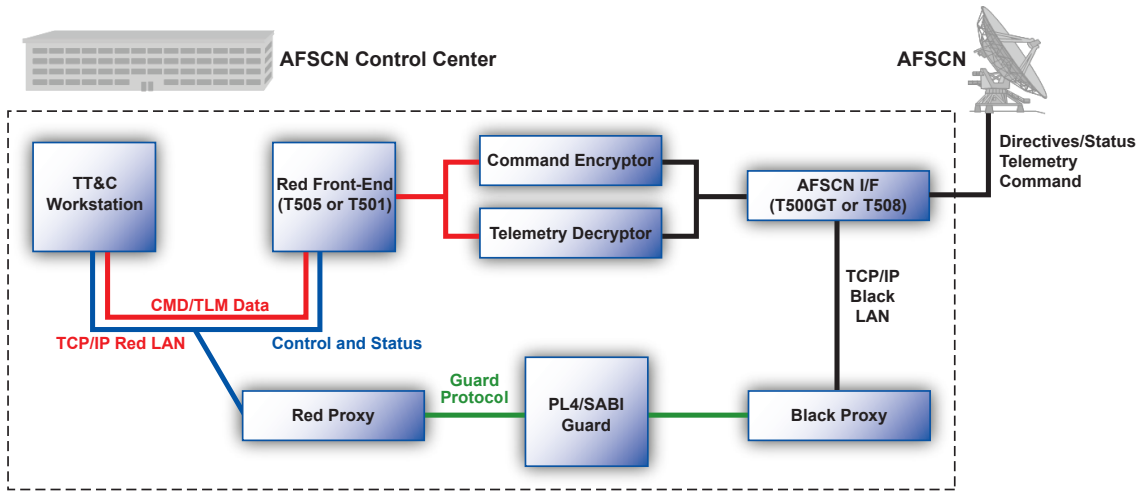
The CyberC4:Guard package seamlessly integrates with existing operational systems and new architectures that utilize T505, T501, T508, T500GT, and T500GT ADCCP systems. No changes to the front-end equipment or to the operational software are required. This capability represents significant savings in regression testing, documentation, operational procedures, training, and logistics.

The CyberC4:Guard includes a Red Proxy Server, a Black Proxy Server, RT Logic Proxy Server software, a third-party guard system, the RT Logic AFSCN Core Rule-Set, and a 1U Monitor/Keyboard/Mouse/8-port KVM switch for monitor and control of the Red/Black Proxy Servers and guard. The third-party guard is a dedicated IBM™ X3550 M3 appliance and second IBM™ X3550 M3 admin server both running minimal software set RedHat Linux 5 (SELinux) OS and using a previously PL4 certified rule base. The Proxy Servers are 1U Dell server systems running RedHat Linux and RT Logic Proxy Software.



Key Features

- ✓ Seamless Retrofit to Operational Programs Using T505/T508s
- ✓ Complete Support for AFSCN ADCCP Messages
- ✓ Same AFSCN Core Rule Set Supports Multiple Programs
- ✓ Guard Component TSABI/SABI DCID 6/3 PL4 Certified by Multiple Agencies
- ✓ High-Speed Filter Processing Rates to 800 Mbps
- ✓ Low Latency
- ✓ Fiber Optic Isolation
- ✓ One Instance Supports Multiple Front-End Strings
- ✓ Plug-and-Play Compatibility with T505, T508, T501, and T500GT
- ✓ Robust Rule Base
- ✓ CyberC4:Guard Proxy Servers Configurable as Boot Hosts for Black Side Devices
- ✓ Well Defined Accreditation Boundary
- ✓ Propagates Guard Alarms/Warning/Events to Network
- ✓ Provides Audit Trails, Logging and Intrusion Alarms
- ✓ 10/100/1000/10Gbps Ethernet Support



Each CyberC4:Guard instance supports up to eight simultaneous equipment strings. A primary and backup CyberC4:Guard provides full hot backup for multiple front-end strings. RT Logic's AFSCN Core Rule Set is fully integrated into the guard. The AFSCN Core Rule Set provides full message verification of both the T508 control and status messages and associated AFSCN messages, such as the once-per-second message and ranging data.

Standard Configurations

The CyberC4:Guard is available in the following configurations:

- RTL-CyberC4:Guard-RPKG: CyberC4:Guard Retrofit system
- RTL-CyberC4:Guard-NPKG: CyberC4:Guard system

Specifications

- Satellite Control Network Compatibility
- AFSCN ADCCP
- Custom
- Performance
- 800 Mbps Throughput Rate
- Low Latency Contribution
- Inputs/Outputs
- 10/100/1000 Gbps Ethernet
- Hardware
- Dell, Sun Servers
- Dual 10/100/1000 Ethernet NICs
- Control/Monitoring
- Dimensions
- 2U, 5U Rack-Mountable Configurations
- Power (Typical)
- 110/220 VAC, 700 Watts
- 60 Hz
- Compatible With U.S. or European Power Req
- Environmental
- 10 °C To 35 °C Relative Humidity
- Regulatory
- FCC
- CE