

NuWaves

RF Solutions

VEGAS-S MIL STD 1553 Data Diode

P/N: NW-1553-DD-VS01

(U.S. Patent 10,432,730)



The Vegas-S Data Diode was created for the MIL STD 1553 avionics bus.

Vegas-S allows for the isolation of the main MIL-STD-1553 avionics bus from bus monitors or systems under test for enhanced safety of flight. This control of data flow over the MIL-STD-1553 bus provides true risk reduction to the aircraft's avionics bus for early software upgrades to existing bus monitoring systems, along with reducing the risk to the aircraft's avionics bus for early bus monitor integration. Vegas-S supports two independent MIL-STD-1553 channels (ie: one 'A' and one 'B') and comes in a 7 in³ / 0.5 lbs package offering 40 mA at 28VDC.

Protect your vital information by using the Vegas-S MIL STD 1553 Data Diode from NuWaves RF Solutions.

Features

- Simple single chip solution
- No loadable software or firmware
- No microcontrollers or processors that could be maliciously altered
- Very low input to output latency
- Protects avionics bus from malicious traffic
- Protect against an LRU failure or voltage transient
- Subjected to MIL STD 810G, MIL STD 704F, and MIL STD 461 tests

Benefits

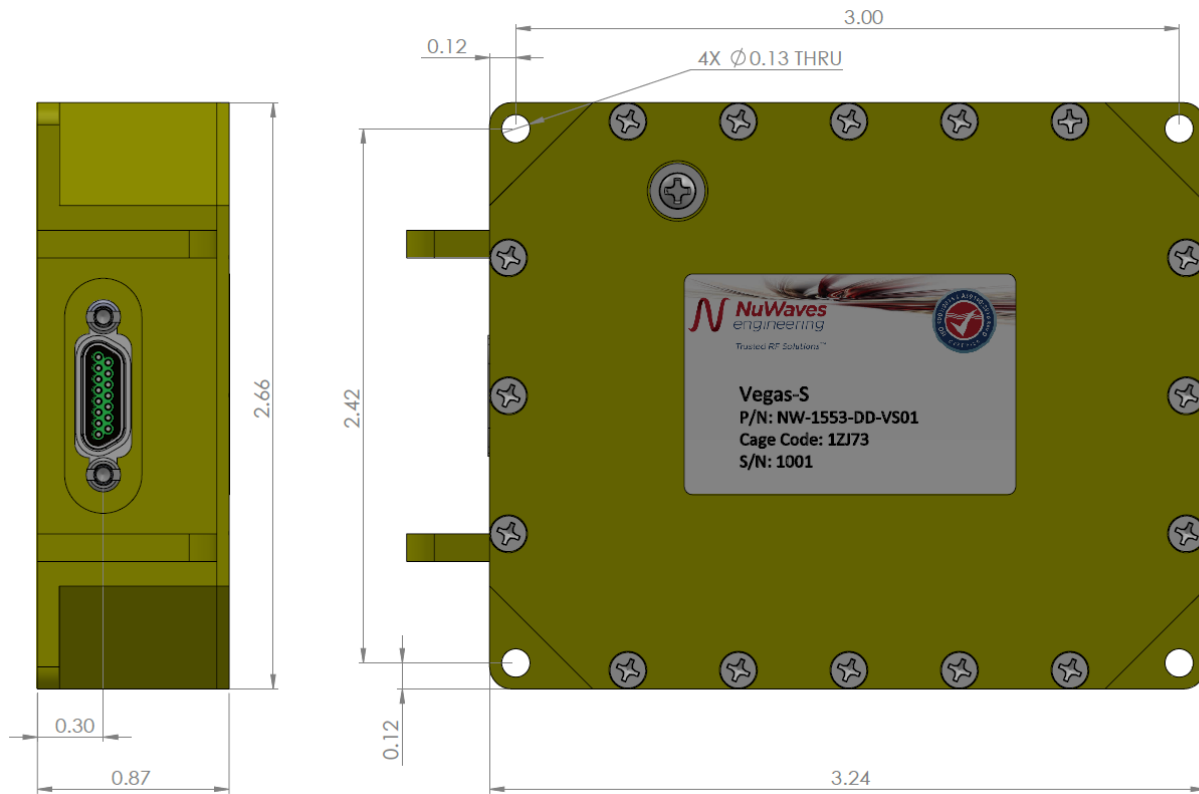
- Acts as a physical firewall
- Cleans up signals on the bus, and protects against signal transients
- Alternative to untrusted monitors
- Reconditions the MIL-STD-1553 signal for driving at least 200 feet of MIL-STD-1553 cable
- Simplifies cyber assessment and authorization

Applications

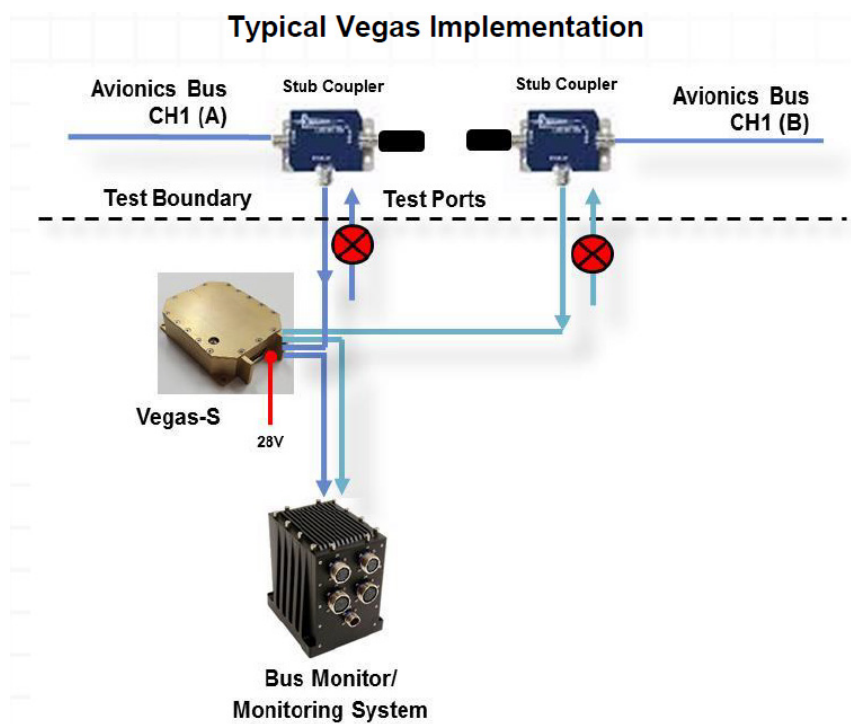
- Protects avionics bus from untrusted commercial-off-the-shelf (COTS) bus monitors
- Protects avionics bus from roll on/off equipment
- Protects the avionics bus from traffic insertion at open test ports on aircraft
- Acts as a repeater to extend the length of the avionics bus

VEGAS-S MIL STD 1553 Data Diode

Mechanical Outline



Vegas Implementation



VEGAS-S MIL STD 1553 Data Diode

MIL STD Test Compliance

MIL-STD-810G.

500.5 – Low Pressure (Altitude) report

501.5 – High Temperature report

502.5 – Low Temperature report

507.5 – Humidity report

514.6 – Vibration report

516.6 Procedure 1 – Functional Shock report

516.6 Procedure 5 – Crash Hazard Shock report

MIL-STD-461G.

CE101 – Conducted emissions report

CE102 – Conducted emissions report

CS101 – Conducted susceptibility report

CS114 curve 5 – Conducted susceptibility report

CS115 – Bulk Cable Injection, Impulse Excitation report

CS116 - Conducted Susceptibility, Damped Sinusoidal Transients report

CS118 – Personnel Borne Electrostatic Discharge (ESD) report

RE101 – Radiated emissions report

RE102 – Radiated emissions report

MIL-STD-704F.

LDC101 - Load Measurement report

LDC102 - Steady State Limits for Voltage report

LDC103 - Voltage Distortion Spectrum report

LDC105 - Normal Voltage Transients report

LDC201 - Power Interrupt report

LDC301 - Abnormal Steady State Limits for Voltage report

LDC302 - Abnormal Voltage Transients (Over/Under voltage) report

LDC401 - Emergency Limits for Voltage report

LDC501 - Starting Voltage Transients report

LDC601 - Power Failure report

* Module has tested compliant to each test identified. Certified test results can be acquired per request based on unique implementation requirements.

For information on product disposal (end-of-life), please refer to this document:
<https://nuwaves.com/wp-content/uploads/Product-Disposal-End-of-Life.pdf>

Contact NuWaves



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