SPECTRUM CONTROL™

Product Selection Guide

High-performance solutions for mission-critical systems
From components to highly integrated subsystems

Mission-ready solutions from components to subsystems

As a mission-focused technology company, Spectrum Control helps control the spectrum and the systems that depend on it. Across RF, optical, power, digital, and EMI protection, our solutions integrate, adapt, and scale to strengthen performance, enhance survivability, and support mission success in contested environments.

RF Filters

Ultra-low loss designs feature cavity, lumped, ceramic, SAW, and newly developed ultraminiature glass topologies

- High performance filter solutions including diplexers, triplexers, multiplexers, and filter banks
- High power SAW filters: 30 dBm up to 1.5 GHz
- Ultraminiature glass filters: excellent selectivity and very low insertion loss

RF Amplifiers

Leading edge performance in multiple categories

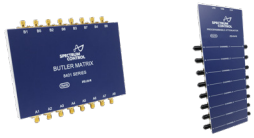
- Guaranteed low phase noise as low as -182 dBc/Hz
- Ultra-high linearity performance, IP2 up to +95 dBm
- Low noise to 0.8 dB
- Hundreds of space qualifiable online models available

RF Signal Conditioning Components

Proven Inmet and Weinschel brand components with surface mount and coax form factors

- Fixed attenuators, terminations, and resistors, DC to 50 GHz
- DC blocks, bias tees, and power dividers
- Gain equalizers – fixed or tunable, negative & positive slope
- Flexible integration and accurate signal management across defense and test applications

RF Signal Conditioning Subsystems



Advanced device validation in challenging spectrum conditions

- Programmable attenuators for bench test and subsystem applications
- Customizable multichannel attenuator systems
- Butler matrix beamforming networks
- Multipath emulators

Optical Transceivers

Pluggable micro-optical transceivers for harsh environments; hermetic, MIL-qualified, SWaP-optimized

- 4-channel TX/RX; 20 Mbps to >10 Gbps
- BGA-mount to PCB, pluggable cable interface

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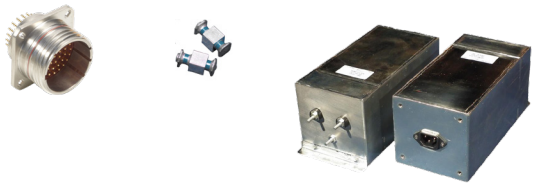
Inmet & Weinschel™ | OptoXtreme | PulseShield™ HEMP PROTECTION SOLUTIONS | SCi BLOCKS™ | Powerfilm

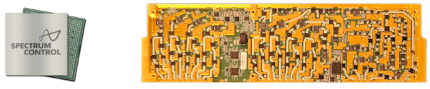
EMI Protection



EMI/EMC solutions that protect and ensure compliance in mission-critical systems

- Board-level, panel-mount, and chassis-mount filters for comprehensive protection
- Designed to meet stringent military standards and harsh environment requirements
- Solutions for conducted EMI, transient suppression, and mobile HEMP protection
- Filtered connectors and interconnects for full-system EMI integrity

IMAs, Hybrids, MCMs & SiPs



Integrated, high-performance assemblies for complex, high-reliability applications

- RF, digital, power, and control integration
- SWaP-optimized designs from L-band to millimeter wave
- Rugged packaging and thermal management
- Scalable, high-reliability design and manufacturing

Composable RF+Digital Blocks

SOSA-aligned modules for sensor-to-data conversion/processing with standard interfaces

- High channel density wideband transceivers (8 Tx and/or Rx channels)
- Wideband 8x8 direct sampling and processing with high fidelity RF front end (64 Gsps)
- VITA-aligned, chassis-ready solutions

RF Distribution & Antenna Interfaces

Highly integrated, custom distribution systems tailored to mission requirements

- Integrated solutions for signal routing, combining, amplification, and interface control
- Built using high-performance switches, combiners, amplifiers, directional couplers, and similar elements

Power Distribution

Managed AC and DC PDUs for asset protection and reliable uptime in fixed and mobile platforms

- Sequencing and output control manage inrush and startup demands
- Overcurrent containment and fast recovery reduce outages
- Secure remote status monitoring and control via SNMPv3

SPECTRUM CONTROL™

Spectrum Control is a mission-focused technology company

We go beyond specifications to help customers meet the full demands of modern defense and aerospace programs. By combining innovation, mission-specific adaptation, and production readiness, we deliver solutions that meet or exceed requirements and support both system performance and program success.

Applications

Leading companies and governments trust Spectrum Control to help them design, engineer, and build the devices and solutions that connect and protect our world.

Learn More

To learn more about these products or Spectrum Control visit us online or email us.

SpectrumControl.com

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