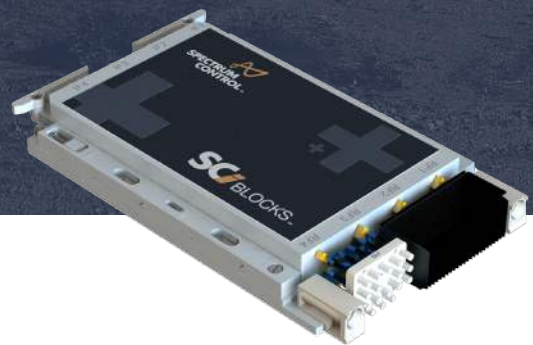


Innovative System Building Blocks

Our industry-leading technology integrates analog plus digital functions and mixed signal miniaturization to deliver solutions with significant SWaP-C advantages



MINIATURE



MODULAR



INTELLIGENT





Innovative, software-definable, building blocks with significant SWaP-C advantages

8-Channel Wideband Tuner

Mission-adaptable, SOSA-aligned modules with VITA-compliant interfaces



- Eight (8) mix-and-match Tx and/or Rx channels in one 3U VPX card
- Wideband: 20 MHz – 18 GHz with 2 GHz IBW
- IF out: 3.75, 4 or 4.25 GHz (center frequency)
- Channel-to-channel phase coherent
- Digital interface for tuning, control & monitoring
- Supports extended mission capabilities in a single slot
- Customization options include:
 - Narrower or wider IBW or different IF output frequency
 - Millimeter wave 0-40 GHz extension
 - Direct to Digital output

RF+Digital™

The SCi Blocks (“sky blocks”) architecture integrates analog plus digital technology with industry leading mixed signal miniaturization to create innovative standard and custom solutions.

Multichannel Transceiver with Direct Sampling

High-speed, low-latency signal conversion with unrivaled channel density



- RF input, digital output, with 16 channels: 8 Rx and 8 Tx
- Spectral coverage: 0.1 - 32 GHz
- Sample rates up to 64 GSPS
- Embedded Altera® Agilex™ 9 FPGA
- SOSA-aligned 3U VPX; VITA 46, VITA 48, VITA 67.3C, VITA 65
- Two, 8 GB banks of DDR4 SDRAM (16 GB total)
- 8 GB DDR4 SDRAM connected to hard processor system
- Fully configurable with various options for alignment with mission needs
- Custom Front End options using Spectrum control SiP (system-in-package)



RF-on-Mezzanine Tx/Rx Sticks

Miniature mezzanines with integrated RF, power, and digital control



- Wideband: 20 MHz – 18 GHz with 2 GHz IBW
- IF out: 3.75, 4 or 4.25 GHz (center frequency)
- Set up as Downconverter (Rx) or Upconverter (Tx)
- On-board controller with GUI interface for software control
- Built on Surface Mount Technology (SMT) for high volume production
- Small form factor enables 8-channel 3U VPX packaging or IMA
- Customization options include:
 - Narrower or wider IBW, form factor and packaging, IF output frequency
 - Millimeter wave 0-40 GHz extension
 - Direct to Digital output options available

RF System-in-Package (SiP)

Highly advanced miniaturization of complex analog and digital functionality



- Industry-leading integration and miniaturization
- Embedded power management and distribution
- Digital tuning, command & control
- Designed for volume production with BGA package (30mm²)

Standard and custom products include:

- Millimeter wave block downconverter (18-40 GHz)
- Millimeter wave block upconverter (18-40 GHz)
- Low jitter, high frequency clock source (32 GHz)
- RF Front Ends (wideband, X-Band, custom)
- Switched filter banks
- Frequency converters
- Power amplifiers

Mission-focused Technology

- EW/ISR, Radar, Air-launched Effects, Smart Munitions, UAVs
- Designed for rapid integration into new and legacy systems
- Architected for volume production and lifecycle cost reduction
- Dramatic SWaP-C reductions
- Low NRE for custom designs
- Modular, standardized interfaces
- Mission-configurable & adaptable
- Reducing time from Data to Effect
- AI/ML-ready



Solutions for Today+Tomorrow

Mission needs are different. The flexible SCi Blocks architecture allows you to address the unique requirements of legacy-, current-, and next-generation systems

4

4th-to-5th Gen

Leverage Modular Open System Architectures to rapidly upgrade legacy systems

5

5th Gen+

Exploit modular COTS solutions to make your 5th-Gen platforms more resilient and future-proof

6

6th Gen

Intersect the future with high performance, small footprint building blocks for the configurable, multi-modal missions of the future

Connect with our experts to find out more about SCi Blocks products and solutions

Visit spectrumcontrol.com/sci-blocks

or email us: sciblocks@am.spectrumcontrol.com

Ask about our virtual demos and evaluation hardware



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