

RF / mmWave Solutions



- ◆ Analog, mixed-signal silicon ASICs & RFICs and advanced GaAs and GaN MMICs and modules
- ◆ Over 50 Catalog MMIC Products—Die, SMT & Modules
- ◆ High Performance MMIC Filters
- ◆ UWB RFICs, WiFi7 & X-Band FEMs
- ◆ LIDAR AFEs, TIAs, Laser Drivers, CDRs, PFDs
- ◆ OTA Test Subsystems for Radar/Comms



- ◆ 25 year+ legacy US small business in designing and manufacturing application specific / custom build to spec for defense systems globally
- ◆ Pallet/Modules to Rack/Bench Unit assemblies and combined Rack Units into extremely high output power solutions
- ◆ Low Noise/High Dynamic Range, Driver and Medium Power, High Power HPA's and Signal Conditioning solutions
- ◆ 20 MHz to 18 GHz, up to 12 kW



- ◆ Ultra-Low Phase Noise, Low-G Sensitivity, High Stability
- ◆ Precision Crystal Oscillators, OXO, TCXO, VCXO, XO
- ◆ Frequency Modules and Custom Designs
- ◆ Crystal Filters and Precision Quartz Crystals



- ◆ Filter Technologies covering 10 MHz thru 40 GHz
- ◆ Lumped element, ceramic resonator, cavity
- ◆ Distributed element (microstrip, stripline, SIW)
- ◆ Suspended substrate



- ◆ High Frequency Low Loss UtiFlex Cable with Superior Stability Performance—Space Grade options with Space Heritage
- ◆ Ultra-flexible stable RF cables—withstanding up to 20 Million Cycles
- ◆ ARACON® Lightweight Braid Material with Superior strength and Shielding Performance
- ◆ High Performance RF Test Cables to 110 GHz
- ◆ NEW AccuPhase Test cables for premium phase stability over flex-ure



- ◆ Waveguide Assemblies—Flexible and Rigid for Military, Aerospace and commercial applications
- ◆ Couplers, Rotary Joints, Terminations, and Components



- ◆ Advanced metallized ceramic circuits, substrates, components & packaging
- ◆ Al₂O₃, AlN, BeO, Si₃N₄, & other materials using Active Metal Braze, Direct Bond Copper, Thick Film
- ◆ Ideal for thermal challenges of HPSP, optoelectronics, semiconductor manufacturing systems, others
- ◆ Design-built, build-to-print, USA-based



- ◆ High quality RF and MW filters—1 MHz to 50 GHz Military and Commercial Comms, Radar, ECM, and Cellular
- ◆ Filters with wide passbands and stopbands (1-4 GHz passband, stopband to 20 GHz, 1KW operation)
- ◆ Unique products: In-line bandpass filters with finite transmission zeroes, reduced size & wide band high power filters



- ◆ PhaseTrack Flexible and semi-rigid cable—Phase critical -TF4 dielectric
- ◆ SiO₂ assemblies for phase stability and extreme temperature environments
- ◆ Miltech assemblies – rugged, low-loss 40 GHz, vapor-sealed, braided Nomex outer jacket with high density interconnect options
- ◆ Radiation Resistant, Light-weight low out-gassing assemblies to 40 GHz for Spaceflight and Ground test
- ◆ Levitate ultra-lightweight assemblies for UAV, airframe & manpack Applications

Optical Solutions

MOOG

COTSWORKS www.cotsworks.com

- ◆ High-speed optical transceivers up to 40 Gbps, supporting parallel QSFP-based & SFF architectures
- ◆ Rugged optical interconnect assemblies, including expanded beam termini and MIL-style connectors
- ◆ Avionics-focused test equipment and custom rugged optical subassemblies (BOSAs, TOSAs, ROSAs) for embedded and packaged optoelectronic applications

- ◆ Microwave Transmitters, Receivers, Lasers and Photodiodes
- ◆ Fiber Optic Delay Lines and RF Fiber Optic Links up to 60 GHz
- ◆ Micro Erbium Doped Fiber Amplifiers (EDFAs)

ORTEL[®]
A Photonics Foundries Enterprise

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Test & Measurement Solutions

CORELIS

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- ◆ Boundary scan software tools using 1149.1 (JTAG) for PCB functional testing, debugging, and in-system programming of Flash memory, CPLDs, and FPGAs
- ◆ Device Anti-counterfeiting software
- ◆ Serial bus analyzer and exerciser products (SPI, I2C, etc)

 **FORMFACTOR**

www.formfactor.com

- ◆ 150, 200, 300mm Wafer-level Probe Stations for R&D, test
- ◆ Engineering probes and WinCal™ calibration software
- ◆ DC to RF/mmWave/THz testing, including on-wafer load-pull
- ◆ Vacuum, Cryogenic and wide-temperature probing
- ◆ Silicon Photonics and co-packaged optics (CPO) wafer testing
- ◆ Precision DC, low noise I-V and parametric characterization

Electromechanical / System Solutions



www.actpower.com

- ◆ AC-DC and DC-DC Power Supplies
- ◆ Military-grade designs qualified to MIL-STD-704 (aircraft), 1399 (shipboard) and 1275 (ground vehicles)
- ◆ Power to 20 kW, Voltage to 35 kV



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- ◆ Leader in Flat Cable Technology, custom manufacturer of extruded FlexxSil™ cables for ultra-high flex & extreme environments & temperature
- ◆ Flexible flat cables and assemblies for high performance motion, aerospace, military, medical and semiconductor manufacturing applications.
- ◆ Capable of millions of flex cycles.

- ◆ FPGA processing, SDR, and RF signal-processing platforms
- ◆ VPX/PCle/FMC/XMC/AMC open architecture
- ◆ Xilinx Zynq UltraScale+ and Intel Arria FPGA-based systems
- ◆ Multi-channel SDR platforms with ADRV9009 RF transceivers
- ◆ Technology building blocks for EW, wireless, phased-array, AI/vision, and payload processing



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- ◆ Rackmount & rugged systems for defense & aerospace
- ◆ OpenVPX, 3U & 6U chassis, backplanes and accessories
- ◆ High-performance MOSA backplanes based on VITA standards, including OpenVPX, VNX+, VITA 100 & SOSA-aligned configs
- ◆ Air, conduction and liquid cooled designs for harsh environments
- ◆ Enclosure solutions compatible with NI USRP™ SDRs (X, E, N, B series) with custom configurations available upon request

Cheryl Celebi Partner / Sales Engineer

DC, Maryland, Virginia and West Virginia

443-493-1823

CherylC@eoxsales.com