

Quantic™ MWD

MICROWAVE DYNAMICS



Product Catalog

quanticmwd.com

Quantic MWD (Microwave Dynamics) 2023 Product Catalog features our complete range of standard RF, Microwave and millimeter wave (mmW) products. In addition to standard products, MWD also designs custom parts and custom sub-assemblies. If there is anything you need that you don't see here, please contact us with your full specifications and our engineers will work with you to find the best solution.

Founded in 1993, Quantic MWD designs and manufactures free running and phase-locked oscillators, amplifiers, frequency converters, and frequency multipliers with a focus on the singular characteristic that matters most: performance. Quantic MWD offers a portfolio of best-in-class solutions that maximize stability and minimize noise under extreme environmental conditions, ensuring optimal precision and reliability for mission-critical and industrial defense applications.

We offer:

- High Performance Solutions for Extreme Environments: With applications on land, sea, air and space, Quantic MWD products are designed to perform under the most extreme environmental conditions, including intense shock vibration and high temperature variance.
- Proven Expertise: We understand the importance and requirements of high reliability solutions. Our track record includes enabling notable customers on high priority platforms, including the F-22 Raptor, International Space Station, AURA Satellite, and Airbus OneWeb Satellites. We are on the Approved Supplier List (ASL) of major aerospace companies and system integration firms, Small Business Certified, AS9100 certified and offer MIL-PRF-38534 Class K screening.
- Dynamic Support: Reliability and precision are our hallmark traits, and we pride ourselves on excellent customer service and rapid shipping of our extensive product catalog – and rapid-turnaround R&D for customized sub-assemblies.

And as a Quantic company, we're part of an extended engineering ecosystem and powerful supply chain, defining a competitive advantage that extends to every Quantic MWD customer. Please visit our website www.quanticismwd.com for additional product information or contact us directly at info@quanticismwd.com.

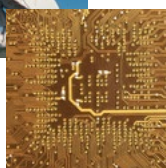




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Markets

Space

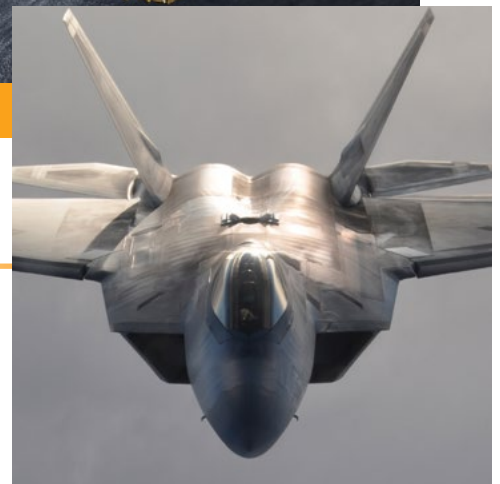
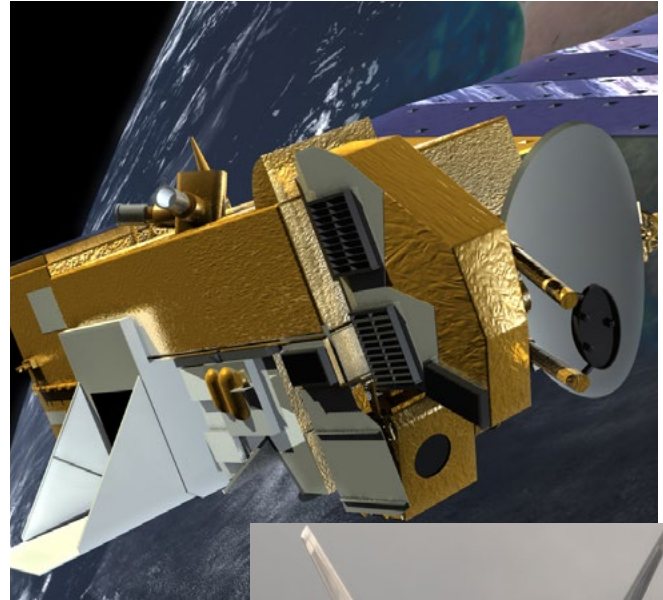
- AURA/MLS Satellite (2004 – now)
- COMSAT
- Uplink / Downlink
- Ku / K / Ka bands
- mmW applications
- Extremely high-reliability parts, assembly processes, and quality tests (acceleration, temperature, shock, etc.)

Defense / Military

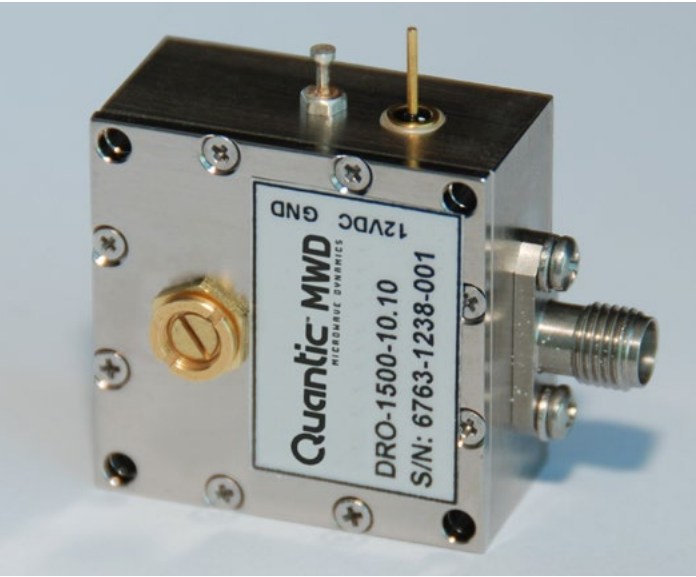
- Sole-source supplier for F-22 Raptor
- U-2 Planes
- UAVs
- Radars
- Missile Guidance
- Rockets
- Navy Communications
- Air Force Simulations
- Target Deterrent Simulators
- Frequency Jammers
- Frequency Converters
- Point to Point Relays
- Satellites

Commercial

- Satellite Communications
- Cable TV Links
- Local Area Networks
- Global Positioning Systems (GPS)
- Test Equipment
- Point to Point Links
- Up/Down Converters
- Transmitter & Receivers
- Low Power Radar Test Transmitters
- Digital Radios
- Fiber Optics
- X-Band & K-Band Radiometer
- Test Beacons & Doppler Transceivers
- Transceiver



Oscillators



Datasheets

[DRO-1000](#)

Free Running DRO

[TCXO-100](#)

Temp Comp Crystal

[DRO-1500](#)

Mini DRO

[TCXO-200](#)

Temp Comp Crystal

[PLO-2000](#)

Ext Ref 100 MHz

[TCDRO-1060](#)

Temp Comp Oscillator

[PLO-3000](#)

Int Reference

[PLO-5000](#)

Int/Ext Ref Oscillator

[PLO-4000](#)

Ext Ref 10 MHz

[Synthesizer](#)

Synthesizer

[PLO-4200](#)

Dual Loop Ext Ref 10 MHz

[MLO-1000](#)

Pulse Modulated Oscillator

[OCXO-300](#)

Ovenized Crystal

Product features

Oscillators

MWD dielectric resonator oscillators are available from 1-50 GHz with up to +25 dBm output power. Optional operating temperature range from -55 to +105 deg C is available. Features include: internal voltage regulator, low phase noise, MIC fabrication, 150 MHz bandwidth, low microphonics and low power consumption.

Models:

DRO-1000, DRO-1500, DRO-1070, PLO-2000, PLO-2070, PLO-3000, PLO-3070, PLO-4000, PLO-4070, PLO-4200, PLO-4270, OCXO-200, OCXO-300, TCXO-100, TCXO-200, PLO-5000, TCDRO-1060, MDS [Synthesizer], MLO-1000, MLO-1070



Datasheets

[Low Noise Amplifiers](#)

[Medium Power Amplifiers](#)

[High Power Amplifiers](#)

[High Power Amplifiers 20W](#)

[Military Amplifiers](#)

[Benchtop Power Amplifier](#)

Product features

Amplifiers

MWD offers high power, medium power and low noise amplifiers from 2 to 46 GHz, including a new compact benchtop power amplifier design [MDPA].

Models:

ALXXXX, APXXXX, MPXXXX, MDPXXXX

Up / Down Converters



Datasheets

[Upconverter](#)

[Downconverter](#)

[LO-MIX](#)

Mixer with LO inside

Product features

Up and Down Converters

MWD offers upconverters, downconverters, and our new product line, the LO-MIX series, which is an up or down converter with an LO inside one compact package.

Models:

AUCXXXX, ADCXXXX, LO-MIX100, LO-MIX101, LO-MIX200, LO-MIX201, LO-MIX300, LO-MIX301, LO-MIX400, LO-MIX401

Multipliers



Datasheets

[Millimeter Wave Multiplier](#)

[High Isolation Multiplier](#)

Product features

Multipliers

MWD offers X2, X3 and X4 multipliers with power output up to +20 dBm and high harmonic isolation (50 dBc minimum; 60-65 typical). MWD multipliers offer low VSWR (2.5:1 max), with connector options 2.92 mm, 2.4 mm or 1.85 mm.

Models:

A2X, A3X, A4X

Sub-Assemblies



Datasheets

[Sub-Assembly](#)

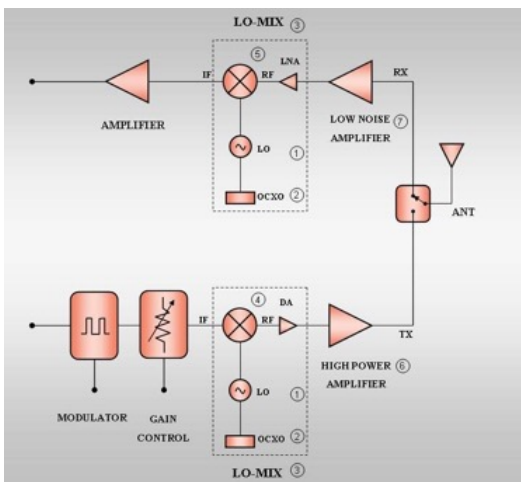
Product features

Sub-Assemblies / Integrated MW Assemblies

MWD offers rapid turnaround R & D for customized products designed to meet unique customer requirements for microwave components and subsystems. MWD excels in customization with our innovative designs, high-precision engineering, and hands-on technical support throughout the life of the project. A typical transceiver using all MWD products, packaged to meet customer requirements, is available.

Models:

ASSY-XXXX-XX or Custom



Space Qualified Parts



Product features

Space Qualified / Hi-Reliability Parts

Capabilities

Models:

Oscillators, Amplifiers, Up/Downconverters, Custom Sub-assemblies

Screening / Testing:

Full element of evaluation and device-level environmental screening to MIL-PRF-38534 Class H & K, NASA, and ESA standards.

- Part Selection: Complies with NPLS, ESA, JAXA and EEE QML & OML regulations
- Hi-Rel: High-Rel parts, assembly processes, and quality tests [Group A, B, C, and D testing]
- Extreme Environmental Tolerance: All space products are available in hermetically sealed Kovar packaging and radiation hardening up to 100k

Program Management

AS9100 Rev D Qualified Quality System:

MWD conforms with Quality Management System standard ISO 9001:2015 and AS9100D [Technically Equivalent to EN 9100:2016 and JISQ 9100:2016] and has been audited in accordance with the requirements of AS9104/1:2012.

Space Heritage

- Space qualified PLDRD for AURA (EOS CH-1) Satellite with NASA [2003]
- H-II/B Rocket with JAXA and Mitsubishi [2009]
- Dual redundant space qualified DRD with Orbital Sciences
- MetOp-SG Study Program with ESA [2015]
- Space qualified up/down converters with John Hopkins University
- MARS 2020 Study Program with JPL
- Mini DRD-1500 for GEMS Low-orbit Radiometer Satellite for Orbital Micro Systems [2019]
- Northrop Grumman ASL/QML Fully Class K DRD

Datasheets

[Space Hardware](#)

[DRD-1087 Space Qualified DRD](#)

About Us

- Incorporated in 1993
- 100% U.S. Made
- SBA Small Business Certified
- ITAR Compliant
- Hybrid/discrete assembly
- Full test & measurement systems
- 10,000 ft² facility
- 10k & 100k lab
- Solo Source Military and Space Supplier
- Full Documentation Control & Quality Assurance Systems
- AS9100D Certified
- Rapid turnaround R&D and excellent customer service on customized products
- Design, engineering & manufacturing in a non-segregated U.S. facility

Datasheets

Please inquire for any further information on our products and/or if your requirements are not met by those set forth in the datasheets. Engineering will review your specs and let you know if we can provide a solution. For high quality copies of our datasheets, please download each individually from our website at <http://quanticmwd.com/product/>.



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