

MeshUltra™ Hardware Platforms

MeshUltra™ is our most advanced Mesh waveform yet and it is supported by the industry’s widest range of Mesh hardware platforms - from tiny modules, perfect for small drones, to the longest range ruggedised nodes, ideal for maritime or industrial applications. With frequency options spanning 320MHz to 5GHz and tri-band capable products, plus options for OEM integration, DTC can offer hardware solution for every application.

MeshUltra™ NETNode Phase 5

DTC’s flagship dedicated Mesh platform, with four antennas and 2x4 MiMo operation for the longest range and highest throughput. Ideal for Ground Control Stations (GCS) and mobile nodes as well as integration on larger UxV platforms, the NETNode Phase 5 is available in robust and desktop form factors, including a dedicated masthead version (NETNode-5R) with Power over Ethernet (PoE) support and a new 2x5W Robust Mobile variant (NETNode2x5W-5RM) for the longest possible range.

NETNode2x2W-5RM

“Robust Mobile” ruggedised enclosure with integrated GPS and comprehensive interface options, ideal for vehicle mounting.



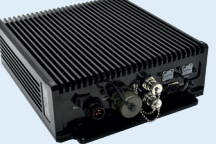
NETNode2x5W-5RM

High power MiMo Mesh for extreme range applications.



NETNode2x15W-5RH

Highest power Mesh product and provides up to 30W total RF power output over two transmit ports for extreme long range applications.



MeshUltra OEM



Original Equipment Manufacturers can offer the benefits of MeshUltra to their customers with OEM solutions based on DTC’s Software Defined Platforms. The D196x, SDR2x1W-U, SDR-M and SDR-C all offer 2x2 MiMo capability, while the larger D1740 platform offers 2x4 MiMo for maximum performance. These products can all be paired with DTC’s own range of high performance, high efficiency and low SWaP amplifiers, available with output powers of 2x1W, 2W and 5W.

MeshUltra™ SDR

The ultimate in flexibility, the SDR Software Defined Radio is able to operate as a 2x2 MiMo Mesh radio, hosting the latest MeshUltra waveform, or alternatively as a unidirectional COFDM Transmitter or Receiver.



D196x SDR 2x100mW PCB

Ultra-miniature COFDM digital video transceiver designed for weight, power and cost sensitive applications.



SDR2x1W-U

Compact single-board Software Defined Radio Transceiver with 2x1W RF output power. Capable of operating as a unidirectional COFDM Transmitter or Receiver.



SDR-M

Based on an innovative single-board construction and rugged clamshell enclosure, the SDR-M is DTC’s smallest, lightest and lowest power Mesh radio.



SDR-C

The SDR-C offers 2 x 100mW output in a low SWAP format including 2 x HD/ SDI Video Encoders, ideally suited for a integration in small drones or other size / weight critical applications.



DR-H2

The SDR-H2 is a Handheld MANET Mesh Transceiver in a rugged “Soldier Radio” form factor. Offering a full 2 watts of output power and employing standard MBITR batteries and accessories, the SDR-H2 is ideal for a variety of Tactical Mesh deployments.

DTC Unmanned Systems

This brochure on DTC’s Unmanned Systems is part of a series of brochures on our core products: Video, Mesh, Broadcast and Audio.

Other related products

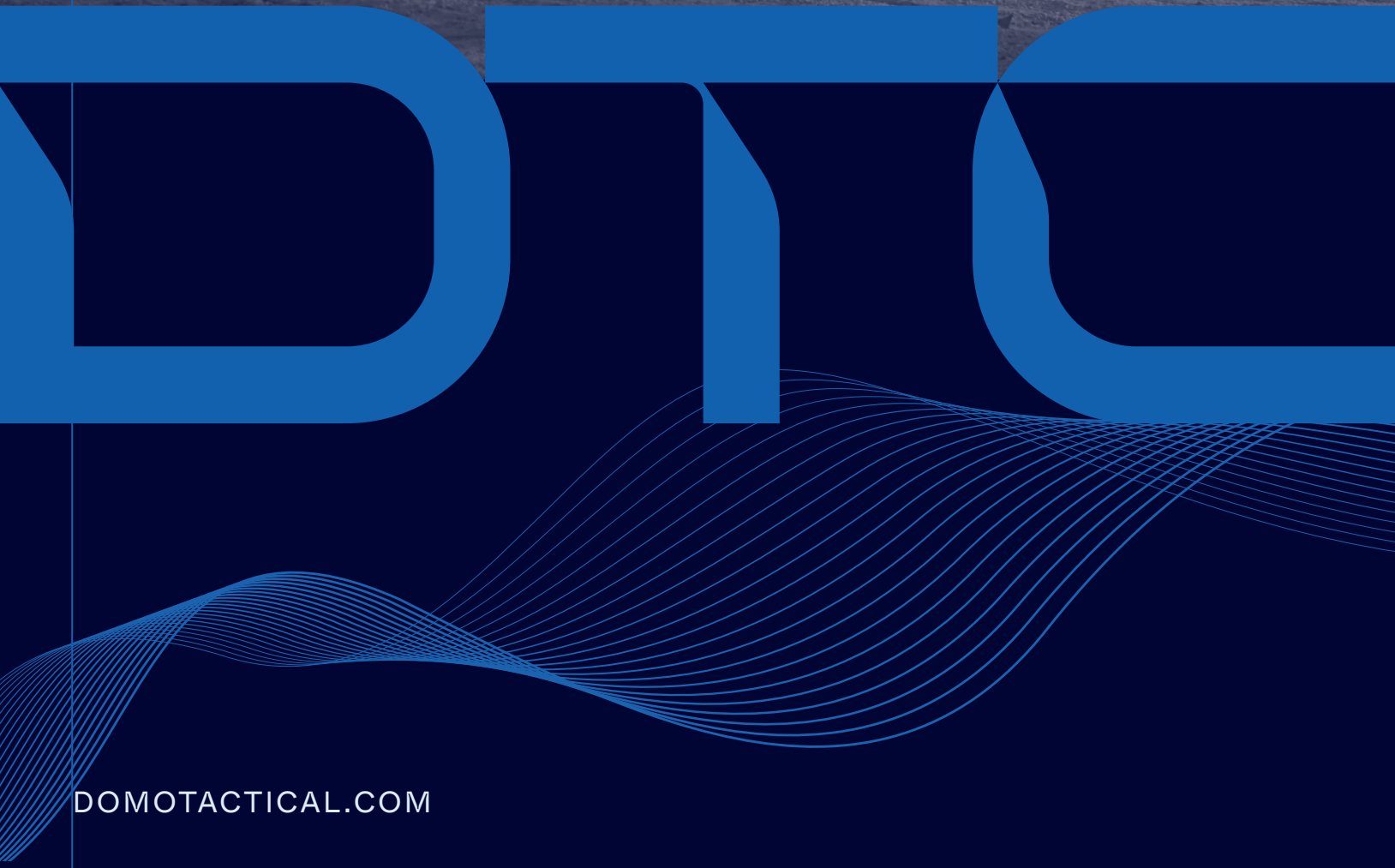


For more information about our Unmanned Systems Solutions or any other DTC solutions, contact your Sales Account Manager or one of our Regional Sales Offices. Or email us at info@domotactical.com

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Communications for
Unmanned Systems



DOMOTACTICAL.COM

Unmanned Sysems - Telemetry Control, Video, Data and IP

Solving the interconnectivity challenge on the move

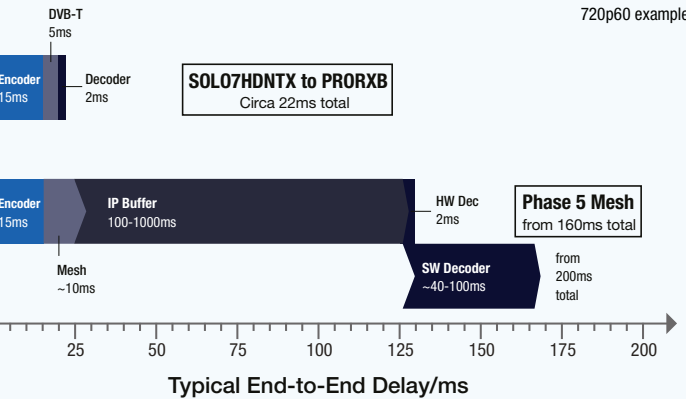
The rise in global demand for Unmanned and seamlessly Connected systems has created a requirement for innovative, robust and secure connectivity solutions. DTC is a pioneer in the creation of wireless RF Unmanned Communication solutions and has the experience, knowledge and capabilities to assist all areas of industry in meeting these challenges.

Our radio products are developed by a 60-strong engineering team based in the US and Europe, with combined expertise in RF and, video encoding, mesh and algorithms equipment packaging and certification. We are renowned for developing a ‘technical partnership’ between the Unmanned platform design team and the radio supplier.

Depending on the specific use case, our customers can utilize our field-proven Point-to-Point (P2P) COFDM technology for extreme low latency applications or our market-leading high-capacity wireless IP Mesh technology. The DTC Mesh offering is a true game changer in RF communications, offering IP connectivity with secure, seamless exchange of data for low Latency Telemetry Control and Full Motion Video (FMV) including streaming live HD video. This is achieved by using COFDM RF technology to create a self-healing, self-forming IP network which can operate anywhere in the world, independent of existing communications infrastructure over significant ranges. Both P2P and Mesh are available in the DTC SDR, Software Defined Radio, where software applications allow remote changes from one single platform.

How? ‘Game-Changing’ Mesh Technology

- High Data Throughput
 - Outstanding NLOS performance
 - Excellent performance in challenging and Harsh RF and Topographical environments
 - Long-Range and High Data Throughput; proven BVLOS capabilities
 - Low SWAP-C OEM radio modules
- 144 radios on same frequency for swarming applications
 - Radios from 320 MHz to 5Ghz in various frequency bands
 - Open APIs for developer integration with existing GUI
 - Encryption up to AES 256 including with US FIPS 140-2 accreditation
 - One waveform for all our hardware



Low latency when it matters

The diagram to the left shows the typical latencies in both our COFDM Point to Point and IP Mesh systems. These demonstrate why DTC are a market leader for UAV applications.

Unmanned Aerial Systems (UAS)

The requirement of the UAS is for low latency, secure and robust Telemetry Control and real-time Full Motion Video (FMV) has led DTC to create a suite of products to meet these challenges.

UAV Communication Applications

- Law Enforcement
- Search & Rescue
- Disaster Management
- SIGINT/EW
- Intelligence, Surveillance, Reconnaissance (ISR)
- Humanitarian Aid & Disaster Recovery (HADR)
- First Responders
- Battlefield Management Systems
- Military
- Border & Maritime Security
- Airborne Rebro / Range Extension
- Broadcast

UAV Platforms

- High Altitude Pseudo Satellites (HAPS)
- HALE UAVs
- MALE UAVs
- Tactical UAVs
- Tethered UAVs
- Loitering Munitions and Missiles
- Drones and Nano UAS
- Swarming Drones



Unmanned Ground Vehicles (UGV)

We are proven in service, with over 5,000 DTC radios on unmanned Ground Vehicles (UGVs) in Defense, Law Enforcement and Public Safety applications.

UGV Communication Applications

- Search & Rescue
 - Hazardous Area Inspection
 - Reducing Soldier Burden
 - IED Detection
 - Autonomous Last Mile Resupply
 - C-IED and Bomb Disposal
- Autonomous Haulage Systems (AHS) and Mining
 - Robotic Combat / Fighting Vehicles
 - Force Protection
 - CBRN
 - Remote Weapon Stations (RWS)



Unmanned Surface Vehicles (USV)

USV Communication Applications

- Intelligence, Surveillance, Reconnaissance (ISR)
 - Survey Operations
 - Security
 - Surveillance
 - Military
- Border Protection
 - Force Protection
 - Maritime Security and Protection of Territorial Waters and EEZs

Revolutionising communications between vessels at sea, DTC’s Maritime Mesh offers wireless IP mesh connectivity which can be used for shore (GCS) to sea (USV) duplex data links for Telemetry control, FMV and for IP Data transfer for ship to ship for seamless exchange of data, audio and general network traffic.

