NETNODE RANGE PRODUCTS

NETNode2x5W-5RM
The NETNode 5RM uses two transmit ports to provide up to lOW total RF power output. Ideal for extended outdoor deployment, it comes with built-in GPS and offers composite and SDI video input.

Size: 160mm (H), 160mm (W), 70mm (D)

NETNode2x2W-5RMT
This tri-band product offers increased frequency agility, with support for L-band and C-band. Dual HD video encoders are built in, and MiMo provides our highest ever data capacities and maximum frequency output.

Size: 160mm (H), 160mm (W), 70mm (D)

NETNode2x2W-5PT
This tri-band product offers increased frequency agility, with support for L-band and C-band. Dual HD video encoders are built in, and MiMo provides our highest ever data capacities and maximum frequency output.

Size: 160mm (H), 89mm (W), 35mm (D)

NETNode2x2W-5RM
Interoperable with Phase 3 and Phase 4 products, this unit allows for simple upgrades in the field. Nodes can be integrated into existing infrastructure with ease, reducing costs and making it easy to expand networks.

Size: 160mm (H), 160mm (W), 70mm (D)

NETNode2x2W-5P
This MiMo node is the latest breakthrough in mesh technology from OTC. With multiple transmit and receive antennas, it can send extra data on the same frequency by overlapping two signals into the space of one.

Size: 165mm (H), 160mm (W), 43mm (D)

NETNode2x2W-5R
This robust MiMo node is ideal for direct masthead mounting. It includes Power Over Ethernet (POE) and IP control, enabling units to be powered and configured from a single cable.

Size: 125mm (H), 125mm (W), 205mm (D)

SDR RANGE PRODUCTS

SOL8SDR-C
The world's smallest MiMo mesh radio, making it perfect for point-of-view, body-worn and concealment applications. It can operate as a transmitter, receiver, dual encoder and IP mesh radio node.

Size: 50mm (H), 50mm (W), 18mm (D) (24mm UHF)

SOL8SDR-R
As well as a robust casing, this COFDM digital video transceiver features IP66-rated passive cooling. It is ideal for outdoor and body-worn applications, and like the SOL8SDR-C it works as a transmitter, receiver, dual encoder and IP mesh radio.

Size: 130mm (H), 100mm (W), 18mm (D) (30mm UHF)

SOL8SDR-H2
This handheld unit works as a tactical ad hoc network, IP mesh node, P2P COFDM transmitter or a P2P receiver transmitting video. It offers dual video encoders, GPS, full-duplex audio and SD card storage.

Size: 128mm (H), 67mm (W), 38mm (D)

SOL8SDR-P 2x2W
The SOL8SDR Plain provides a compact higher power solution (2x2W) for increased range and enhanced connectivity with native RJ45 and USB as standard.

Size: 200mm (H), 100mm (W), 27mm (D)

MARITIME CONNECTIVITY

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DMX-2023-06

CODAN COMMUNICATIONS | DTC

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Danimex™
WHEN YOU NEED TO TALK

MARITIME CONNECTIVITY
THE BACKBONE OF MARITIME COMMUNICATIONS

Our connectivity solutions are made with the unique demands of modern maritime operations in mind – from military missions to worldwide trade. In the modern world, data is everything, and the quicker and more securely it's transmitted, the better. DTC's cutting-edge radio technology makes that possible, even in complex maritime situations, where infrastructure is scarce. Used by navies, law enforcement agencies and private companies, our products ensure the fast, reliable transfer of video, voice and data, through a seamless, self-forming network.

HOW AUTONOMY IS SHAPING MARITIME MISSIONS

in the past decade. Autonomous systems have grown in use, and there's been an increasing dependence on sensor data to successfully run maritime operations. Being able to reliably share data has become essential in naval scenarios, including:

- Surveillance and situational intelligence gathering.
- Maritime interdiction and boarding operations.
- Mine counter measures (MCM)
- Border security and aero surveillance
- Oil and gas security.

SUPERIOR CONNECTIVITY FROM DTC

DTC has proven expertise in unmanned systems and robust penetration in traditionally harsh radio frequency (RF) environments. Our mesh radios have proven instrumental in connecting MCM toolkits with multi-static networking.

As autonomy and sensor systems have become more prevalent, there's been a corresponding rise in connectivity requirements. This is only set to continue, as new technologies emerge and gain a foothold.
Connectivity is particularly challenging in maritime environments, dueto limited infrastructure and problems like reflection on the water and Fresnel zone. These can significantly impede connectivity.

KEY FEATURES

- Coded orthogonal frequency division multiplexing (COFDM): This uses multiple carrier waves and forward error correction (FEC) to make sure complete signals are received. Based around high performance Low Density Parity Check (LDPC) coding and combined with low noise RF design, it significantly boosts penetration and range in harsh enviroments.
- TDMA Token-based managed channel access mechanism removes contention and allows for more efficient networking and data transfer.
- MeshUltra MiMo multiple-in, multiple-out waveform: This enables high data rate transmission, with bandwidth selection ranging from 1.25MHz to 20MHz.
- Supported by a range of amplifiers with output powers of 2x1W, 2W and 5W.
- Nodes also available at 2x15W.
- Interlink mode: This enables the network to backhaul onto other communication bearers to extend the range of communication.
- Self-forming network. The network will adapt its settings to ensure maximum range. This reduces the risk of signal and capability loss.
- Security as standard: As well as boasting end-to-end encryption, our products are based on our own intellectual property.
- Interference avoidance: DTC radios have built-in interference avoidance systems. These use the radiosas sensors and switch frequency when too much noise is detected on a frequency.

APPLICATIONS

MISSION COMMANDER STRATEGIC

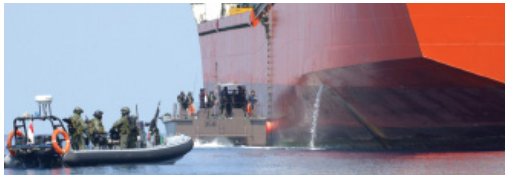
DTC's Mission Commander Strategic (MCS) software is used in both short- and longterm surveillance, offering secure access and control in a complex network. Compatible with several leading video management systems, MCS enables users to share networks without compromising their security. The distributed architecture of the MCS system offers automatic failover, with no single point of failure.

SITUATIONAL AWARENESS

In military and law enforcement environments, warships use a variety of unmanned platforms. These include unmanned aerial vehicles (UAVs), unmanned surface vehicles (USVs) and remote operated vehicles (ROVs). They enhance the range of situational intelligence, aiding the decision-making process, defensive plans and reconnaissance operations. DTC offers a range of lightweight solutions for units of every kind. For example, the lW board weighs 95g, and the l00mW comes in at just 25g.

BOARDING OPERATIONS

Ship superstructures can cause RF reflection, leading to harsh RF conditions. DTC's technology gets around this problem. COFDM-based Mesh Ultra Waveform in soldiers' radios combine with drop-bag nodes to create the ideal solution for transmitting, voice, video and sensor data back to the mothership or internal team. Signals can also go via a UAV or rigid hulled inflatable boat (RHIB).



OIL AND GAS MARKET

The oil and gas industries are complex, with numerous different issues surrounding them. One of the biggest issues is oil-spill response, and DTC radios have helped by providing reliable real-time updates on the flow of oil spills. This enables immediate and appropriate action to be taken.
Security is another major challenge in the oil and gas market. Using ATEX-accredited boxes, DTC has helped to connect security RHIBs with oil rig platforms, allowing security forces to relay video and voice back to the rig. Based on this data, preparations can be made in urgent situations like security breaches, oil spills or piracy.

BORDER AND SHIP SECURITY

Crimes like drug smuggling, human trafficking and illegal imports are growing problems for port authorities and border agencies. Unmanned surveillance solutions can help to detect, as well as deter, criminal activity. In life and death situations, they can be vital in securing a positive outcome. This is made possible by DTC systems, which connect land control points with UAVs and USVs patrolling the coast line.

MINE COUNTER MEASURES

Due to the technology and risks involved, mine hunting is one of the greatest expenses navies face around the world. Advancements in autonomy have transformed the way MCM works. Unmanned toolkits can be deployed from warships at distance, reducing vessel and manpower costs, as well as being more efficient and safer.
DTC technology is at the heart of many of these operations. Providing data networks between unmanned units and primary vessels, DTC's solutions have been chosen for their robust connectivity, high data rate and adaptability.

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