DTC P4 Standard Mesh

Critical communications capability
Award winning overt and covert COFDM surveillance solutions

DTC’s video business was established in 2001 and is widely recognised as the global leader, selling into over 110 countries. With Domo COFDM technology at its core, DTC continues to build on this, combining innovation and ingenuity with reliability and performance.

Versatile technology
DTC’s overt and covert COFDM surveillance systems enable the monitoring and recording of critical video and data through non-line of sight (NLOS) and line of sight (LOS) transmission systems. The quality offered by these solutions means that very high evidential standards can be reached in situations such as:
- Infrastructure protection
- Identifying and monitoring of terrorist threats
- Monitoring of serious crime
- Public order policing
- Intelligence gathering.

Security and flexibility
Over the last decade, DTC’s digital wireless products have been the ‘go to’ products for discerning customers with video and data requirements.

DTC IP Mesh systems are not reliant on public or commercially available networks, for either wireless video transmission or onward distribution of data. This makes them more secure and flexible for law enforcement, military and intelligence agency organisations across the globe.

How this technology works
Multiple nodes can be combined into a ground-breaking wireless ad-hoc IP centric network – DTC’s fluid, self-forming, self-healing mesh. With genuine non-line of sight coverage, superb penetration and wide bandwidth in difficult environments, the system is truly mobile. It supplies a network with extended range – one which will deliver in environments too tough for other radio solutions to cope with.

Unlike other wireless options the IP Mesh constantly readjusts itself as nodes move, working out which are in range and finding the best route to send data between them. When one node can no longer operate, the rest of the nodes can communicate with each other – directly or through one or more intermediate nodes.

Extra flexibility
The highly flexible mesh topology means that data can be exchanged between moving nodes in a point-to-point or point-to-multipoint fashion. Range can be extended by using nodes as repeaters. DTC IP Mesh systems can be fully integrated with ‘beyond line of sight’ technologies, delivering the ‘difficult front end’ that other technologies cannot offer.

Integrated SD and HD video encoders across the range offer greater user flexibility. The introduction of MIMO technology has resulted in a step change in data throughput necessary to support the delivery of the highest image quality.

Types of network
With an IP Mesh system, any shape of mesh network can be built:
- A chain network: ideal for range extension. Each node is placed at the outer range limit of the prior node, thus maximising the range of the network. This network can be operated and maintained whilst mobile.
- A star network: good for urban coverage. A central node is situated at a high point to act as a relay and all other nodes feed information back via that one, enabling bi-directional communications.
- A random network: evolves organically to any shape.
- Larger networks: any of the above shapes can be combined into a ground-breaking wireless ad-hoc IP centric network – DTC’s fluid, self-forming, self-healing mesh. With genuine non-line of sight coverage, superb penetration and wide bandwidth in difficult environments, the system is truly mobile. It supplies a network with extended range – one which will deliver in environments too tough for other radio solutions to cope with.

Tests have proven DTC Mesh provides the best penetration in urban NLOS applications.

typical system diagram

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DTC P4 Standard Mesh family

Mesh Range
Unique Selling Points

<table>
<thead>
<tr>
<th>Mesh Range</th>
<th>Unique Selling Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>DHCP</td>
<td>VoIP</td>
</tr>
<tr>
<td>VoIP</td>
<td>End to end encryption</td>
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<tr>
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<td>DAS (Interlink)</td>
</tr>
<tr>
<td>DAS (Interlink)</td>
<td>Relay/Repeater</td>
</tr>
<tr>
<td>Relay/Repeater</td>
<td>NLOS multipath</td>
</tr>
<tr>
<td>NLOS multipath</td>
<td>Ad-hoc IP Centric</td>
</tr>
<tr>
<td>Ad-hoc IP Centric</td>
<td>Self healing</td>
</tr>
<tr>
<td>Self healing</td>
<td>Streaming UDP/TCP</td>
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<tr>
<td>Streaming UDP/TCP</td>
<td>Built-in recording</td>
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NETNode Mesh products

Unique Selling Points

<table>
<thead>
<tr>
<th>NETNode Mesh products</th>
<th>2W Robust</th>
<th>5W Robust</th>
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</thead>
<tbody>
<tr>
<td>Applications</td>
<td>RIB/BOAT INSTALLATION</td>
<td>TOWING VESSEL</td>
</tr>
<tr>
<td>Overview</td>
<td>LONG RANGE</td>
<td>VIDEO ENCODER OPTION</td>
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<tr>
<td>Body worn</td>
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<td>✔</td>
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<tr>
<td>Aircraft</td>
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<td>✔</td>
</tr>
<tr>
<td>Vehicle</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Ship</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>RIB/Boat</td>
<td>✔</td>
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<tr>
<td>UAV/UGV</td>
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<td>Infrastructure deployment</td>
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<tr>
<td>Tactical deployment</td>
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<tr>
<td>Weatherproof</td>
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<tr>
<td>Concealments</td>
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Applications

Specifications/Options

<table>
<thead>
<tr>
<th>Specifications/Options</th>
<th>Transmit power</th>
<th>Maximum Bandwidth</th>
<th>Consumption</th>
<th>Antenna SMA</th>
<th>Antenna N-type</th>
<th>Antenna TNC</th>
<th>Cat 5</th>
<th>Lens</th>
<th>WR, Amphenol, Fischer, Binder</th>
<th>RES 128/256</th>
<th>INV (Video In)</th>
<th>Mission Commander Tactical</th>
<th>Mission Commander Strategic</th>
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<tbody>
<tr>
<td>2W</td>
<td>8.8Mbps</td>
<td>8.8Mbps</td>
<td>1W</td>
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<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>5W</td>
<td>8.8Mbps</td>
<td>8.8Mbps</td>
<td>25W</td>
<td>✔</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
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Why P4?

Our P4 is the fourth iteration of DTC Mesh designed for use on a range of dedicated radio platforms available with 2 Watt and 5 Watt power options.

P4 (Standard Mesh) is designed for medium bandwidth applications (up to 8.8Mbps) with the benefit of low power consumption and excellent penetration into difficult non-line-of-sight (NLOS) environments. The P4 range covers a wide variety of frequency and is particularly suited to support surveillance, UGV, UAV and OEM integrators where simple antenna configurations are preferred.

P4 is available with a range of encryption standards (subject to export control). P4 is also compliant with requirements of the National Institute of Standards and Technology FIPS 140-2 Cryptographic Module.

domotactical.com
This brochure on DTC’s innovative Mesh technology is part of a series of brochures of our core products: Video, Mesh, Broadcast, Audio, Tracking, Search and Rescue, City Wide Infrastructures.

**Mission Commander Strategic**

**Types of Ad-hoc Mesh Networks**

**Wide Area Networks**

For further information on DTC Mesh or any other of our range of surveillance solutions contact your Sales Account Manager or one of our Regional Sales Offices, or email solent.info@domotactical.com