

Business  
Critical  
Communications

Entel

# DTE<sub>x</sub> Series

Intrinsically Safe Land Portables



Commercial grade construction



ATEX II 2G Ex ib IIA T4 Gb  
ATEX II 2G Ex ib IIC T4 Gb



Ex ib IIA T4 Gb



DMR Digital & Analogue mode



Submersible IP68



Tough | CRYSTAL  
CLEAR  
AUDIO  
Submersible  
Dependable



# DTE<sub>x</sub> Series

## Intrinsically Safe Land Portables

The ultra durable DTE<sub>x</sub> series is the latest addition to our range of Intrinsically Safe radios. The rugged DTE<sub>x</sub> delivers exceptionally loud audio coupled with outstanding audio clarity, plus the ergonomic controls are specifically designed for gloved hand use.

By combining the latest DMR digital technology and highest ATEX gas group ratings\*, the DTE<sub>x</sub> series delivers best in class range, safety and reliability. Exceeding MIL-STD-810 and a market leading IP68 rating (2-meters 4-hours) the fully submersible DTE<sub>x</sub> can be depended on to withstand the most extreme and hostile of environments.

### Customisable Configuration

The fully featured and versatile DTE<sub>x</sub> radios can be configured for basic push-to-talk (PTT) operation or the more advanced features that you would expect of a high tier two-way radio. The high-contrast OLED screen can be customised to display either simple large-character or more detailed information.

### Superior Audio

Using the latest noise reduction technology, our DTE<sub>x</sub> portables deliver loud and crisp audio no matter what operational environment you are in. The full DTE<sub>x</sub> accessory range incorporates a robust locking plug and high-grade cable, whilst intelligent speech tailoring technology automatically detects the type of accessory connected and optimizes the audio accordingly to deliver the very best performance.

### Safety Features You Can Rely On

DTE<sub>x</sub> radios support optional digital mode Lone-Worker, Man-Down and Emergency Button with call interrupt as dealer programmable features. These three levels of safety ensure an alarm is raised, even if the channel is already busy.

### IP68 2 Metres, 4 Hours Submersible

The DTE<sub>x</sub> Series offers the highest submersibility rating of any manufacturer - IP68. Ensuring protection against corrosion and likely hazards encountered in wet environments, these radios are constructed to withstand total immersion in water to a depth of 2 metres for 4 hours.

### \*Intrinsically Safe

**ATEX Approved IIC** - The DT900 series of ATEX certified portables meet IIC T4 - the most stringent ATEX ratings as per EU Directive 94/9/EC.

**ATEX Approved IIA** - For users not restricted to the IIC 1 watt regulatory classification, the DT800 series of ATEX certified portables meet IIA T4 with 4 watts of transmitter power.

**IECEx Approval** - The DT500 series of Intrinsically Safe certified portables are suitable for users outside Europe who do not need to comply with the European ATEX standard.



Basic screen



Advanced screen



Non display model

Display model





## Migrate to Digital Your Way

DTEEx radios utilise both analogue and DMR digital technologies. Supporting both technologies ensures backwards compatibility with existing analogue radio systems and a simple migration path to the many benefits of digital communications.

## Intelligent Batteries, Audio Accessories & BA Support

Entel's intelligent batteries and accessories are designed to deliver optimum performance and safety. In digital mode the Lithium-ion battery endurance on DT900 radios is more than 18.5 hours from a single charge!

From simple earpiece to bone conductive options for extremely high noise environments, we offer a vast range of Entel-original audio accessories. In addition, third party Breathing Apparatus comms kits are also supported.

Entel's intelligent speech tailoring technology optimises audio to match the connected accessory; ensuring the very best clarity, volume and natural sounding audio.

## Simple End User Programming

With our unique and simple-to-use PC app included free of charge with the purchase of your DTEEx radio, there is no longer any need to return a handset to your dealer to reprogram or update. With the user-friendly app you can simply transfer programming data, future-proofing software updates or add new features to your DTEEx radios.

## High Grade Accessory Interface

The rugged, multi-pin interface and Micro-USB socket are both submersible and gold-plated to minimise any risk of damage and protect against corrosion.

To ensure the integrity of IS protection levels and safeguard against non-compliant accessories being used, any accessory connected to the handset automatically undergoes a validation process.

All DTEEx accessories incorporate a robust locking connector to further safeguard the user.



## Model List

| Model | Approval  | Channels | EU/Non EU | Screen | RFPower | Frequency  | Tier |
|-------|-----------|----------|-----------|--------|---------|------------|------|
| DT522 | IECEX IIA | 16       | Non EU    | None   | 4W      | VHF        | II   |
| DT525 | IECEX IIA | 256      | Non EU    | OLED   | 4W      | VHF        | II   |
| DT582 | IECEX IIA | 16       | Non EU    | None   | 4W      | UHF        | II   |
| DT585 | IECEX IIA | 256      | Non EU    | OLED   | 4W      | UHF        | II   |
| DT822 | ATEX IIA  | 16       | EU        | None   | 4W      | VHF        | II   |
| DT825 | ATEX IIA  | 256      | EU        | OLED   | 4W      | VHF        | II   |
| DT882 | ATEX IIA  | 16       | EU        | None   | 4W      | UHF        | II   |
| DT885 | ATEX IIA  | 256      | EU        | OLED   | 4W      | UHF        | II   |
| DT922 | ATEX IIC  | 16       | EU        | None   | 1W      | VHF        | II   |
| DT925 | ATEX IIC  | 256      | EU        | OLED   | 1W      | VHF        | II   |
| DT982 | ATEX IIC  | 16       | EU        | None   | 1W      | UHF        | II   |
| DT985 | ATEX IIC  | 256      | EU        | OLED   | 1W      | UHF        | II   |
| DT952 | ATEX IIC  | 16       | EU        | None   | 0.5W    | PMR/DMR446 | I    |
| DT953 | ATEX IIC  | 256      | EU        | OLED   | 0.5W    | PMR/DMR446 | I    |

## Key Features

- ✓ Commercial grade construction
- ✓ IP68 submersible
- ✓ Digital and analogue modes
- ✓ Outstanding range and performance
- ✓ Crystal clear audio
- ✓ High contrast white on black OLED
- ✓ Simple end user programming app
- ✓ Extensive range of approved accessories
- ✓ Supports 3rd party BA kit
- ✓ Audio accessory optimisation



# Technical Specification

| General                                       |                                                                                       |
|-----------------------------------------------|---------------------------------------------------------------------------------------|
| Vocoder                                       | AMBE+2™                                                                               |
| Battery                                       | DT800/DT900 CNB950EV2 1800mAh Lithium-Ion<br>DT500 CNB550EV2 1800mAh Lithium-Ion      |
| Weight                                        | 435g                                                                                  |
| Overall Dimensions (HxWxD)                    | 138mm x 60mm x 38mm (with CNB950EV2)                                                  |
| Frequency Stability                           | ± 1.5ppm                                                                              |
| Frequency Range                               | VHF 136-174 MHz<br>UHF 400-470 MHz<br>UHF UP-BAND 450-520 MHz<br>PMR446 446-446.2 MHz |
| Number of Channels                            | 16 (non-display) / 256 (display)                                                      |
| Number of Zones                               | 8 (display)                                                                           |
| Analogue Channel Spacing                      | 12.5/20/25KHz                                                                         |
| Digital Channel Spacing                       | 12.5KHz                                                                               |
| Operating Voltage                             | 7.4v                                                                                  |
| Programmable Buttons                          | 3 (non-display) / 5 (display)                                                         |
| Battery Endurance<br>(5/5/90 Duty Cycle @ 1W) | Analogue 14.5 hours<br>Digital 18.5 hours                                             |
| Transmitter                                   |                                                                                       |
| Output Power                                  | ATEX IIC 1 Watt<br>ATEX/IECEx IIA 4 Watts (high) / 1 Watt (low)                       |
| Modulation Limiting                           | ±2.5kHz @ 12.5kHz<br>±4.0kHz @ 20kHz<br>±5.0kHz @ 25kHz                               |
| Conducted / Radiated<br>Spurious Emissions    | Better than -36dBm                                                                    |
| Adjacent Channel Power                        | Better than 60dB                                                                      |
| Audio Distortion (Typical)                    | 3%                                                                                    |

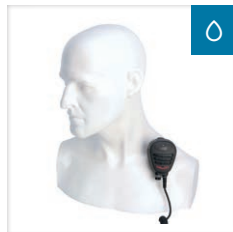
| Receiver                                  |                                                                                                                                                                                                                                                                             |
|-------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Sensitivity (Typical)                     | Analogue<br>-121dBm (0.2uV) for 12dB SINAD<br>Digital<br>-121dBm (0.2uV) for 5% BER                                                                                                                                                                                         |
| Intermodulation Response Rejection (ETSI) | > 70dB                                                                                                                                                                                                                                                                      |
| Adjacent Channel Selectivity (ETSI)       | > 70dB(12.5KHz) 60dB(25KHz)                                                                                                                                                                                                                                                 |
| Spurious Response Rejection (ETSI)        | > 70dB                                                                                                                                                                                                                                                                      |
| Audio Output Power                        | 2-Watts                                                                                                                                                                                                                                                                     |
| Audio Distortion (Typical)                | 3%                                                                                                                                                                                                                                                                          |
| Conducted Spurious Emission (ETSI)        | > -57dBm                                                                                                                                                                                                                                                                    |
| Environmental                             |                                                                                                                                                                                                                                                                             |
| Operating Temperature                     | -20°C to +55°C                                                                                                                                                                                                                                                              |
| Storage Temperature                       | -40°C to +85°C                                                                                                                                                                                                                                                              |
| Thermal Shock                             | MIL-STD-810 C/D/E/F/G                                                                                                                                                                                                                                                       |
| Humidity                                  |                                                                                                                                                                                                                                                                             |
| Shock & Vibration                         |                                                                                                                                                                                                                                                                             |
| Packing Test                              |                                                                                                                                                                                                                                                                             |
| Drop Test                                 | IP68 (2m 4h Submersible)                                                                                                                                                                                                                                                    |
| Dust & Liquid Ingress                     |                                                                                                                                                                                                                                                                             |
| Approvals                                 | Analogue mode RF EN 300 086 v2.1.2<br>Digital mode RF EN 300 113 v2.2.1<br>EMC EN 301 489-1 v2.2.0 & EN 301 489-5 v2.2.0<br>Safety (LVD) EN 60950-1:2006/<br>A11:2009/A1:2010/A12:2011/A2:2013<br>SAR EN 50566:2017, EN62311:2008 &<br>EN 62209-2:2010<br>EN 300 296 v2.1.1 |
| Ex Protection                             | ATEX II 2G Ex ib IIA T4 Gb<br>ATEX II 2G Ex ib IIC T4 Gb<br>Ex ib IIA T4 Gb                                                                                                                                                                                                 |

## Accessories

Supplied package includes: Li-Ion battery pack, rapid drop-in charger, belt clip, high-efficiency antenna and quick-start user guide.



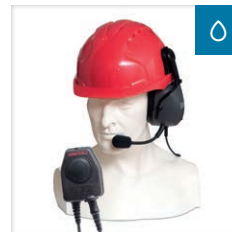
**CSBHT**  
Intelligent six-pod rapid  
charger



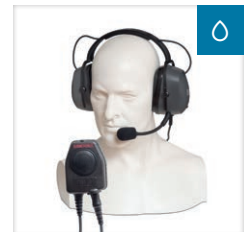
**CMP/DT9** Heavy duty  
speaker microphone for  
DT900 and DT800 series  
**CMP/DT5** for DT500  
series



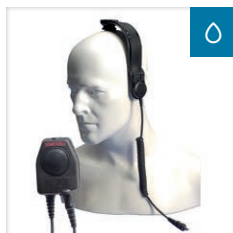
**CLCDT5**  
A heavy duty leather  
carry case with swivel  
belt loop and strap



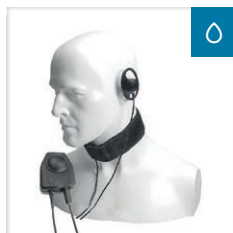
**CHP950HS/DT9\***  
Single sided ear defender  
headset for hard hat use



**CHP950D/DT9\***  
Double sided ear defender  
headset with headband



**CXR5/DT9**  
Bone conductive skull  
mic with in-line PTT



**CXR16/DT9**  
Throat mic / headset with  
heavy duty PTT



**3rd Party BA**  
Supports 3rd party BA  
comms kits



Submersible products are represented  
with a water droplet.

For the complete range of accessories  
please visit our website. All specifications  
are subject to change without notice.

\* Submersible - PTT only

Full list of accessories available online.

V2.0 All Rights Reserved. Copyright Entel UK Ltd.

## Contact

For more information about our products, please contact us:

Entel UK, 320 Centennial Avenue Centennial Park, Elstree, Borehamwood, Hertfordshire WD6 3TJ, United Kingdom

+44 (0)20 8236 0032

info@entel.co.uk

entel.co.uk

# Entel