Business
Critical
Communications

Entel

BEST WALKIE TALKIE

DX400 Series

Commercial Grade Land Portables

- Entry & Advanced models
- DMR Digital & analogue modes
- Submersible IP68
- Loudest In Class Audio

DMR
DIGITAL MOBILE RADIO ASSOCIATION

Tough | CRYSTAL CLEAR AUDIO
Submersible
Dependable

DX400 Series

Commercial Grade Land Portables

Ultra compact, lightweight and dual-mode (Analogue and Digital), the rugged and fully-submersible DX400 Series radios deploy the latest DMR digital technology combined with Entel audio tailoring technology to ensure the best possible range and clarity.

Whether you need a basic entry level radio or advanced digital features, the DX400 Series models deliver smart solutions, helping you to increase productivity and to keep your business connected. Our digital radios are available in licensed and license free variants.

By combining innovative technology unique to Entel, with the globally accepted DMR standard and a robust IP68 submersible enclosure, Entel has produced the most exciting range of digital radios on the market today. Entel's DX400 Series radios deliver a best-in-class performance, range and clarity.

Why digital?

- **Better coverage**
- **Significantly louder and clearer audio**
- **Longer battery life, longer duty cycles**
- **Far superior privacy**

The DX400 Series is available as Tier 1 and Tier 2 in both display and non-display models.

Tier I - For commercial and leisure use with direct mode operation (no repeaters allowed). Fully approved for use within Europe and no license is required.

Tier II - For small to medium size licensed systems. Radios can be used in direct mode or with a repeater if significantly extended range is required. Tier 2 repeaters can be networked to increase the coverage area even further.

Double the Channels

Using two slot simplex, Entel DX400 radios split each channel in two, delivering double the number of digital channels at no extra cost. For example, if you are using a single analogue channel, the same channel in digital mode will yield two channels. Entel's Tier 1 (license free) DMR446 digital radios provide 16 digital and 8 analogue channels.

Informative, high readability, OLED displays:

Basic screen

Advanced screen

Entry Model

Advanced Model

Entry & Advanced

Entry Model

Best for simple push-to-talk communications within small groups, such as calling a handful of individuals or initiating emergency calls.

Tier I & II

Advanced Model

As per the entry model, plus a high contrast white on black OLED display, navigation button, menus and an extensive contact list. This allows a larger number of individual radio users and groups to be called, and even multiple groups at once. The advanced model is also capable of displaying emergency caller ID and free format text messages as well as sending pre-formatted text messages.

Tier I & II

Key Benefits

IP68 Submersible

The DX400 Series can withstand total immersion in water to a depth of 2 meters for 4 hours, more than a match for the hazards likely to be encountered in any field of operation.

High Contrast OLED

Entel's high contrast white on black OLED display provides exceptional readability at all angles both indoors and out.

Powerful Package

Compact, versatile and powerful, Entel's DX400 Series radios offer best-in-class performance, with an impressive 3 watts of natural-sounding digital audio, exceeding the output of radios almost twice their size. In addition, all of the DX400 Series' range of audio accessories benefit from Entel's unique speech optimisation technology.

Loud and Clear Audio

Using the latest noise reduction technology, our DX400 portables deliver best in class, loud and intelligible audio, essential when working in high ambient noise environments.

Migrate Your Way

Entel's DX400 radios offer both analogue and digital modes offering a migration path from existing analogue radio systems.

For advice specific to your needs, please contact your Entel Dealer.

The DX400 Series has been future-proofed with new features supplied as free software upgrades.

Exceptionally Robust

Entel's development team recognise that durability and reliability go hand-in-hand. To meet the requirements of the most demanding users, the DX400 Series is tested to MIL-STD-810 C, D, E, F and G for temperature, thermal shock, pressure, vibration, impact shock, solar radiation and rain and dust ingress. Entel's rigorous life-cycle testing ensures users can expect many years of trouble-free use.

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 or corrosion. All Entel's accessories incorporate a robust locking plug and high-grade cable.

Enhanced Privacy

Entel's digital speech is more difficult to monitor than analogue radio. To further secure your communications system, you can apply the AES 256 secure digital encryption feature (licenced option).

Simple End-User Programmer App

With Entel's unique user-friendly app there is no longer any need for a dealer to visit on site (or have the radios returned) to re-program or update customers' radios. Using Entel's free PC app, anyone can simply transfer programming data, software updates or add new features to their DX400 radios:

Step 1. The dealer emails the app and a 'Fleet File' to his customer.

Step 2. The customer runs the app and then drags and drops the 'Fleet File' into the app.

Step 3. The customer connects the radios to the PC (via a standard Micro-USB lead) and the semi-automated wizard programmer app takes care of everything else.

Please ask your Entel Dealer for a free, no obligation trial.

Key Features

- ✓IP68 submersible
- ✓Digital and analogue modes
- ✓3 watts of audio, loudest in class
- ✓Audio accessory optimisation
- ✓Transmit text messaging
- ✓Simple end-user programmer app
- ✓Outstanding range performance
- ✓High contrast white on black OLED display
- ✓Two-slot simplex operation
- ✓Software upgradable for extra features / updates
- ✓AES256 bit encryption (licenced option)
- ✓IP Multisite Roaming (licenced option)
- ✓Lone worker & Man down (option)
- ✓Personal attact button
- ✓Locking accessory connector

Technical Specification

Specification			
Channel Capacity	DX4x2/DX446E – 16 channels DX4x5/DX446L – 99 channels / 8 zones DX325 SSRS – 40 channels / 8 zones		
Channel Spacing	12.5KHz & 25KHz		
Vocoder	AMBE+2		
Operating Voltage	7.6V		
Battery	CNB450E 2200mAh Lithium-ion		
Weight	Display model 267g Non display model 257g		
Overall Dimensions (HxWxD)	97mm x 59.5mm x 37mm (with CNB450E)		
Battery Endurance (5/5/90)	**Model** DX4x2/DX4x5	**Analogue mode** 14 hours	**Digital mode** 21 hours
Frequency Stability	±0.5ppm		
Antenna Impedance	50 ohm		
Operating Temperature	-20 to +55°C		
Dust and Liquid Intrusion	IP68 2 metres for 4 hours		
Drop Test	Compliant MIL-STD810 C/D/E/F/G		
Packing Test			
Vibration and Shock			
Approvals	EN 300 086 v2.1.2 EN 300 113 v2.2.1 EN 301 489-1 v2.2.3 & EN 301 489-5 v2.2.1 EN 62368-1:2020 + A11:2020 EN 50566:2017, EN 62311:2008 & EN 62209 – 2:2010 EN 300 296 v2.1.1 47 CFR Part 15, Subparts A+B ANSI C63.4-2014 47 CFR Part 90 and 2 ANSI C63.26-2015		
Air Interface DMR	Compliant with ETSI TS 102 361-1-2-3		

Frequency Band	Entry	Advanced
136-174MHz	DX422	DX425
400-470MHz	DX482	DX485
450-520MHz	DX482U	DX485U
PMR446/DMR446	DX446E	DX446L
350-400 MHz	DX472	DX475
325 MHz SSRS	DX325E	DX325L

Transmitter	
Power Output VHF (HI/LOW)	5W/1W
Power Output UHF (HI/LOW)	4W/1W
Power Output PMR446/DMR446	0.5W
Power Output DX325 SSRS (HI/LOW)	3W/1W
Audio Distortion	<5%
Unwanted Emission	-57dBm up to 1GHz, -47dBm from 1GHz to 4GHz
Adjacent Channel Power	-60dBc

Receiver	
Digital Sensitivity	Typically -121dBm (0.2uV) for 5% BER
Analogue Sensitivity	Typically -121dBm (0.2uV) for 12dB Sinad
Rated Audio Output	3 watts
Intermodulation Response	>65dB
Adjacent Channel Selectivity	>70dB / >60dB
Spurious Rejection	>70dB
Audio Response	300Hz to 3KHz -6dB/Octave
Audio Distortion	<5%
Conducted Spurious Emissions	-57dBm up to 1GHz, -47dBm from 1GHz to 4GHz

Accessories

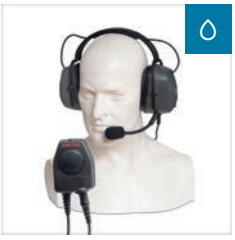
Supplied package includes: Li-ion battery pack, drop-in charger, belt clip, high-efficiency antenna and quick-start user guide.

CSBHX
Intelligent six-pod rapid charger

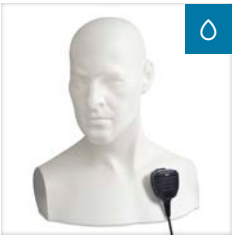
EA12/DX
Earpiece microphone

EA15/DX
Covert earpiece microphone

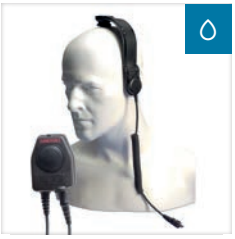
CHP450HS/DX*
Single-sided ear defender headset for hard hat use



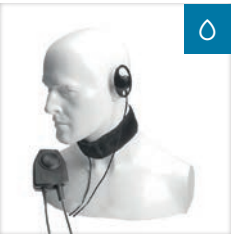
CHP450D/DX*
Double-sided ear defender headset with headband



CMP/DXS
– simple version
CMP/DXE
– with earpiece socket
Heavy duty speaker microphone



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



CXR16/DX*
Throat mic/headset with heavy-duty PTT

CLCDX2 – non display
CLCDX5 – display
A heavy duty leather carry case with swivel belt loop and strap

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

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Contact

Designed in the United Kingdom

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