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Radio Technology (DMR, TETRA,
ATEX, WLAN & 5G)

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- > Antennas & Antenna Technology
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Motorola & Hytera
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DE279088233**Spreenauten GmbH - Your partner for ATEX radio equipment (DMR / TETRA)**

The implementation of "Mission Critical" communication in explosive environments has been one of our business focuses since 1999. In addition to the sale and rental of ATEX (explosion-proof) TETRA and DMR radios, we naturally also offer the planning & implementation of high-performance radio cells for radio coverage of explosion-hazardous facilities (indoor & outdoor). Our business partners, which in the industrial ATEX sector include the VOLKSWAGEN Group, BASF and also numerous special service providers (e.g. in the field of pipeline construction), appreciate our extensive rental park and our professional expertise.

We also specialise in ATEX radios from Motorola (DMR / TETRA), Hytera (DMR / TETRA) and Sepura (TETRA).

ATEX - a short introduction to the ATEX standard

ATEX is the short form of "ATmosphères EXplosibles" and generally describes a European directive for explosion protection. This directive has been around for a relatively long time (since 1994) and we sold and rented the first ATEX Motorola radios as early as 1999. Previously, explosion-protected radios were usually marked "intrinsically safe" and identified by the abbreviation "Ex". This designation is still used today for some brands. In the field of radio technology, ATEX radios are mostly hand-held radios that fall under Equipment Group II (equipment for use in potentially explosive dust and gas atmospheres) and/or Equipment Group III (equipment for use in potentially explosive dust atmospheres). These ATEX groups are then further subdivided into categories. They either reflect the intensity of use of the explosion-proof radio equipment or specify the environment in which radio equipment, batteries and headsets are to be used.

The ATEX radio equipment group II (radio equipment for use in potentially explosive dust and gas atmospheres) is divided into category 1 (continuous, frequent or for long periods of time), category 2 (occasional) and category 3 (rare and short-term). The requirements for explosion protection move in parallel: Category 1 (very high safety), Category 2 (high safety) and Category 3 (normal safety).

We would be pleased to advise you in detail about ATEX radio technology, protection classes and everything to do with ATEX radio equipment. The ATEX team of Spreenauten GmbH will be happy to assist you at any time. If you would like to read up on the subject beforehand, our ATEX radio technology white papers and the Wikipedia entry on ATEX are highly recommended. The latter can be found at

https://en.wikipedia.org/wiki/ATEX_directive

ATEX radio technology - Our references & scenarios

Started with the automotive industry and here mainly in the field of ATEX radios for the paint shop, we now supply almost worldwide

- Refineries
- Chemical Works
- Pipeline constructor
- Shipping
- Hospitals at work with oxygen
- ... and especially oil platforms

with explosion-proof radio equipment (TETRA and DMR). We develop individual risk scenarios with our customers. The ATEX radio technology is then based on these. If desired, we also establish mandatory processes on site to ensure maximum explosion protection.

In this context, we are also happy to train your employees in the handling (communication, charging process etc.) of ATEX radio equipment.

References and anonymised example scenarios, based on over 20 years of experience in the ATEX area, we will be happy to name on request.



Motorola DP4401 (DMR ATEX radio)

The Motorola DP4401 ATEX radio is one of the most popular explosion-proof digital (in this case hybrid) radios in our range. As the successor to the Motorola GP340 ATEX radio, it has full ATEX certification, excellent voice quality (best in class audio) and many other features that are essential when working in hazardous environments. These include among others:

- Sole proprietor protection
- Most robust design - the Motorola DP4401 ATEX can be operated even with gloves and is absolutely suitable for construction sites
- Automatic transmitter scanning (we would be happy to program the radio for you accordingly)
- IP67 Standardization

Diving ability (you should not overdo it, but puddles, splashes etc. are no problem for the DP4401 ATEX)

We offer the DP4401 ATEX for rent and sale. In our shop and in our rental park you will of course also find useful accessories such as ATEX-certified loudspeaker microphones, ATEX batteries for DMR and TETRA radios and appropriate charging technology. Please note that the standard charging technology is not suitable for use in explosive environments. However, we would be pleased to manufacture individual solutions for you, based on the desired application on site and the desired protection class. Please contact our ATEX team for this.

Motorola DP4801 (DMR ATEX radio)

The Motorola DP4801 ATEX, like its little brother, the DP4401 ATEX, is an explosion-proof radio with greatly expanded functionality. In addition to the features of the DP4401, which of course include full ATEX and IP67 certification and the well-known excellent voice quality, the DP4801 ATEX offers a display and a full keypad.

It is therefore very well suited for use in radio cells and for direct calls, as other radios - assuming a DMR radio cell (e.g. Motorola SLR5500) and the appropriate programming - can be called directly via the keypad. The display also shows the battery charge level, the strength of the radio field and last but not least the name of the channel (e.g. maintenance) on which the Motorola DP4801 is currently located.

Compared to the DP4401, it is less suitable for use with gloves, so we use it mainly in maintenance.

The Motorola DP4801 ATEX can be rented and purchased from us. We are also happy to advise you on accessories and programming and can supply both.

Hytera PD795 Ex (DMR ATEX radio)

Hytera PD715 Ex (DMR ATEX radio)

The PD715 is also an intrinsically safe and digital radio. In terms of construction and design, it is most comparable to the DP4401: Robust, rock-solid and easy to handle with gloves. This explosion-proof digital radio meets the ATEX classifications ATEX gas protection: II 2 G Ex ib IIC T4, ATEX dust protection: II 2 D Ex ib IIC T120°C, ATEX protection for use in mining: I M2 Ex ib as well as the European FM standards and IEC standards.

The manufacturer Hytera is a German company, which is originally at home in the field of TETRA radio and excels there with outstanding solutions and high performance radio cells (market share to our knowledge according to approx. 40%). We use Hytera's DMR radios exclusively for back-to-back communication (i.e. from radio to radio), as Hytera's DMR radio cells cannot be expanded as far as Motorola's at present. For individual facilities or use on the construction site, the ATEX radio PD715 EX is absolutely recommended - not least because of its excellent price-performance ratio. Of course you can rent or buy the Hytera PD715 EX from us.

Motorola MTP8550 (TETRA ATEX radio)

Hytera PT580H UL913 (intrinsically safe TETRA ATEX radio)