

Contents

1. Application	13
2. Safety precautions	13
3. Faults and damage	13
4. Safety regulations	14
5. Ex-Data	15
6. Technical specifications	15
7. Button functions	16
8. Rechargeable battery and commissioning	17
8.1. Changing the battery	17
8.2 Commissioning/changing the SIM	17
8.3 Safety precautions for the battery	18
9. Repair	19
10. Cleaning, maintenance and storage	20
11. Disposal	20
12. Warranty and liability	21
13. EC Declaration of Conformity	22
14. Certificate of conformity	22

Note:

The current safety precautions, operating instructions, EC Declaration of Conformity and the Certificate of Conformity can be downloaded from the relevant product page at www.ecom-ex.com, or alternatively they can be requested directly from the manufacturer.

1. Application

The X.com 21x –Ex is an explosion-shielded, water-, dust- and impact-resistant mobile phone for industrial application in areas with an increased risk of explosion in zone 2 in accordance with directive 1999/92/EC (ATEX 137) and 94/9/EC (ATEX 95).

2. Safety precautions

These operating instructions contain information and safety regulations which are to be observed without fail for safe operation in the described conditions. Non-observance of this information and these instructions can have serious consequences or it may violate regulations.

Please read these operating instructions carefully before starting to use the unit! In the event of conflicting information the details specified in the safety precautions shall apply.

In case of any doubt (in the form of translation or printing errors) the German version shall apply.

3. Faults and damage

If there is any reason to suspect that the safety of the unit has been impaired, it must be withdrawn from use and removed immediately from the Ex-area. Measures must be taken to prevent it from being restarted accidentally.

The safety of the unit may be compromised, if, for example:

- there is visible damage to the housing.
- the unit has been subjected to excessive loads.
- the unit has been improperly stored.
- the unit has been damaged in transit.
- unit markings or inscriptions are illegible.
- malfunctions occur.
- permitted limit values have been exceeded.

4. Safety regulations

Use of the X.com 21x –Ex explosion-shielded mobile phone assumes that the operator observes the conventional safety regulations and has read the certificate of conformity in order to eliminate faulty operation of the unit.

The following points are to be observed:

- The unit is to be protected from increased impact.
- The unit should not be used in close proximity to processes generating high charges.
- Friction of the housing should be avoided as far as possible for electrostatic reasons.
- The unit should not be opened inside the Ex-area.
- The charging socket cover must be firmly engaged in the unit.
- Only the original battery module **BPX 21x** should be used.
- The battery module may not be changed inside the Ex-area.
- When changing the battery outside the Ex-area the unit and the battery terminals are to be checked for cleanliness and cleaned if necessary.
- The screws of the battery compartment cover should always be tightened firmly by hand in order to ensure the tightness of the unit.

- The battery module may only be charged outside the Ex-area and only then using the following appropriate chargers:

Battery charger **TCX 21x, ALX 20**

Charging and data synchronisation via a USB data cable that has been connected to a device tested according to EN 60950.

The USB signals are specified at $U_m = 6 \text{ V}$.

- The battery module may only be charged in a temperature range of $0 \text{ }^\circ\text{C} - 45 \text{ }^\circ\text{C}$.
- Only accessories approved by ecom instruments GmbH may be used.
- The stereo headset (optional accessory) that is required for using the radio function should only be connected outside the Ex-area.

- It must be ensured that the unit is not taken into zones 0, 1, 20, 21 or 22 .
- Observe the corresponding laws that are in force in the respective country regarding the use of mobile phones while operating a vehicle.
- Use of the mobile phone in an aeroplane is not permitted.
- Switch off the mobile phone when in close proximity to medical instruments and if you are requested to do so by corresponding regulations.
- Manufacturers of cardiac pacemakers recommend a minimum distance of 15.3 cm (6“) is maintained between a mobile phone and a pacemaker.
- Do not switch on the mobile phone when the use of such devices is prohibited, as it may cause interference or result in danger.

5. Ex-Data

Certificate of conformity:	ecom-10-501 X
Ex-Designation:	Ⓔ II 3G Ex nA nL IIC T4 Gc
Ambient temperature range:	-20 °C ... +55 °C

Approved for zone 2, device group II, explosion group IIC (explosive gases, vapours or mist), temperature class T4.

6. Technical specifications

Networks:	EDGE Tri-Band 900, 1800 and 1900 MHz
Bluetooth:	2.0 (DUN, OPP, SPP, HSP, HFP)
Display:	176 x 220 pixels, 65536 colours
Power supply:	ecom BPX 21x, Li-Ion 3,7 V, 1750 mAh
Dimensions:	119 x 56 x 26 mm
Weight:	approx. 170 g incl. battery
CE-designation:	CE
Protection class:	IP 67
SAR:	The highest SAR value for the X.com 21x -Ex which has been tested for use without a headset is 0.582 W/kg (10 g).

7. Button functions



8. Rechargeable battery and commissioning

8.1. Changing the battery

The **BPX 21x** battery module used in the X.com 21x –Ex unit should only be changed outside the Ex-area. Only those battery modules which are approved by the manufacturer for your unit type (see safety regulations, point 4) may be used. Other battery modules should not be taken into the Ex-area.

8.2 Commissioning/changing the SIM

1. Unscrew the cover:

Switch off the phone. To open the battery compartment turn the screws in the cover anti-clockwise.

2. Lift the cover:

Remove the battery compartment cover.

3. Insert the SIM:

Remove the battery from the unit by lifting it up. Insert the SIM card underneath the metal holder on the right-hand side.

4. Insert the Micro SD card (optional):

Slide the left-hand metal tab to the top and fold it upwards. Then insert the Micro SD card into the slot, fold down the metal tab and slide it downwards until it engages in place.

5. Insert the battery:

Insert the battery. Close the cover for the battery compartment. Tighten the screws of the battery compartment clockwise.

6. Charge the mobile phone:

The battery supplied with the phone is not fully charged. It is recommended to charge the phone for eight hours before using it for the first time. The full capacity of the battery is reached after 4-6 complete charge/discharge cycles.

Note:

- There is a risk of explosion if the battery is not exchanged properly or if it is exposed to a flame.
- Do not short-circuit the battery.
- The battery does not contain any parts that can be exchanged.
- The casing of the battery should not be opened under any circumstances.
- Only use ecom charging accessories (see point 4).
- The use of other chargers or batteries is not permitted. Ex-protection cannot be guaranteed in this case.
- Used batteries are to be disposed of properly.
- If the phone is not going to be used for a prolonged period, the battery should be removed.
- The battery module should only be stored within a range of $-20\text{ }^{\circ}\text{C}$ to $+35\text{ }^{\circ}\text{C}$ (for up to 6 months) or within a range of $-20\text{ }^{\circ}\text{C}$ to $+45\text{ }^{\circ}\text{C}$ (for up to 1 month).
- The charge level of the battery module should be checked after 6 months at the latest in order to prevent deep discharge.
- The phone should not be connected to the charger if the battery is not inserted.
- If the battery is completely discharged, the phone will not switch on and the display will not show a charging process. Connect the phone to the charger. After charging for a few minutes the display will appear again and you can then switch on the phone.

8.3 Safety precautions for the battery

Damaged batteries and chargers should be removed from use and sent to ecom instruments GmbH for inspection.

Note:

- Extreme temperatures can have an adverse effect on charging the battery module.
- Do not dispose of the battery module in a fire.
- Do not short-circuit the battery module.

- Dispose of the battery module in accordance with local regulations.
- Do not dispose of the battery module with normal household waste.

High quality lithium-ion batteries are used in your X.com 21x –Ex. These batteries have numerous advantages in everyday use, such as a low weight and high capacity in a nevertheless compact construction. In addition these batteries also exhibit practically no memory effect.

However, these batteries are susceptible to a natural ageing process which impairs their functionality. Modern batteries today have a lifespan of around 500 charge cycles, which, when used daily, corresponds to a service life of approximately 2 years. The ageing process increases rapidly after this period, which means that the batteries are deemed technically defective after 500 charge cycles. Moreover, the batteries could blow up and cause irreparable damage to your device in a worst case scenario.

For this reason rechargeable batteries with lithium cells should be replaced after 2 years at the latest or after reaching a battery capacity that is 50% of its initial value.

Note:

The battery used in this unit poses a fire hazard and can cause chemical injuries if it is used improperly. Neither the battery nor the battery cells should be opened or disassembled and they should not be burned or exposed to temperatures exceeding 100 °C.

9. Repair

Repairs are to be conducted by ecom instruments GmbH or by personnel or service centres authorised by ecom instruments GmbH, because the safety of the unit needs to be tested after repairs are implemented.

10. Cleaning, maintenance and storage

- Only use a suitable cloth or sponge to clean the phone. Do not use any solvents or abrasive cleaning agents when cleaning.
- It is recommended that you have the functionality and accuracy of the phone inspected by the manufacturer every two years.
- If the unit is going to be stored for a prolonged period, remove the battery module from the unit and check its charge condition at regular intervals.
- Do not exceed the permissible storage temperature range of $-20\text{ }^{\circ}\text{C}$... $+55\text{ }^{\circ}\text{C}$!
- The battery module should only be stored within a range of $-20\text{ }^{\circ}\text{C}$ to $+35\text{ }^{\circ}\text{C}$ (for up to 6 months) or within a range of $-20\text{ }^{\circ}\text{C}$ to $+45\text{ }^{\circ}\text{C}$ (for up to 1 month).

11. Disposal

Old electrical devices as well as „historical“ old electrical devices from ecom instruments GmbH are supplied for disposal at our expense and disposed of free of charge in accordance with European Directive 2002/96/EC and the German electrical law of 16/03/2005. The costs associated with returning devices to ecom instruments GmbH are to be borne by the sender.


In accordance with Article 1, Section 18 and Article 2 of the Act revising the law of Waste-Related Product Responsibility for Batteries and Accumulators (Gesetz zur Neuregelung der abfallrechtlichen Produktverantwortung für Batterien und Akkumulatoren) dated 25 June 2009, we are obligated to provide the following information.

Your device contains a rechargeable lithium battery.

Depleted batteries or rechargeable batteries that can no longer be recharged should never be disposed of along with normal or household waste. Old batteries can contain harmful substances that are hazardous to health and damaging to the environment. Please return the batteries/rechargeable batteries. Return is free of charge and required by law. Please only dispose of discharged batteries in the designated containers and tape the terminals of lithium batteries.

Note: The battery used in this unit poses a fire hazard and can cause chemical injuries if it is used improperly. Neither the battery nor the battery cells should be opened or disassembled and they should not be burned or exposed to temperatures exceeding 100 °C. If the battery needs to be disposed of, it can be removed as described under point (8.1). The disposal regulations specified above are also applicable for old devices. All batteries and rechargeable batteries can be recycled. Precious raw materials such as iron, zinc and nickel can therefore be reused.



The symbol  has the following meaning: Batteries and rechargeable batteries should not be disposed of along with normal or household waste.

12. Warranty and liability

In accordance with our general terms and conditions ecom instruments GmbH provides a warranty for this product for a period of two years regarding its function and material under the specified and permitted operating and maintenance conditions. This excludes all parts that are subject to wear and tear (e.g. batteries). We provide a 6-month manufacturer's warranty especially for the supplied Ex-battery.

This warranty does not extend to products that are used improperly, have been modified, neglected, damaged in accidents or exposed to abnormal operating conditions and inappropriate handling.

Any claims under the warranty can be invoked by returning the defective equipment to the manufacturer. We reserve the right to repair, adjust or exchange the device.

The aforementioned warranty conditions are the sole and only right of the purchaser to compensation, are exclusively valid and replace all other contract or legal warranty obligations. ecom instruments GmbH assumes no liability for special, direct, indirect, accompanying or consequential damage as well as losses including the loss of data, independent of whether it was

caused by violation of the warranty obligation, lawful or unlawful action, action in good faith or any other action.

If the limitation of a legal warranty as well as the exclusion or limitation of accompanying or consequential damage is not permissible in certain countries, it may be that the aforementioned limitations and exclusions are not valid for every purchaser. Should any such clause of these warranty conditions be declared ineffective or unenforceable by a competent court, then the effectiveness or enforceability of any of the other conditions of these warranty conditions shall remain unaffected by such a judgment.

13. EC Declaration of Conformity

The EC declaration of conformity is enclosed with the sales packaging as a separate document.

Please also observe the information provided underneath the table of contents.

14. Certificate of conformity

The certificate of conformity is enclosed with the sales packaging as a separate document.

Please also observe the information provided underneath the table of contents.

