

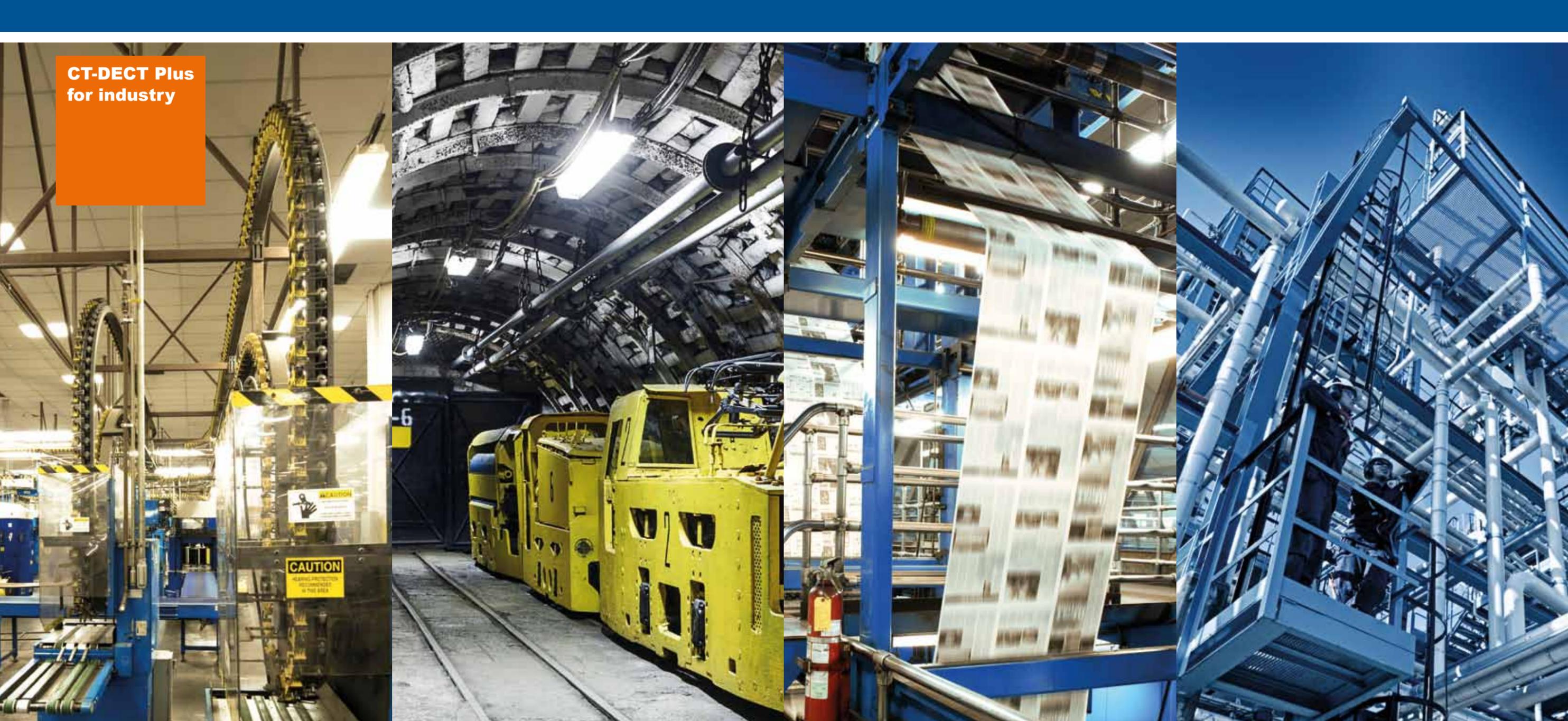


NEW

CT-DECT Plus

- Fully-mobile handover system
- Full-duplex communication
- Bluetooth® interface
- Extensive range
- Connection for radio equipment





**CT-DECT Plus
for industry**

CT-DECT Plus: The world's most advanced DECT communication system.

CT-DECT Plus communication systems from CeoTronics have a wide range of applications and can be deployed in virtually any industry sector. Whatever the industry and application, CT-DECT Plus improves workforce safety while making business processes more efficient. Thanks to the system's modular design and its handover technology, the staff can move about freely within a previously unattainable communication radius. This puts valuable working hours to good use and can drastically reduce deployment time in hazardous areas.

Clear communication, despite noise and spatial separation
CeoTronics send / receive systems are used in working environments subject to extreme or rapidly-fluctuating noise levels, or involving long-range communication. Noise-compensating mi-

crophones ensure high-fidelity transmission of voice traffic – and more in addition to improving spatial orientation, specially-developed electronics such as CT-ASR are used to transmit ambient sounds at a volume safe for the human ear. This functionality is vital for ensuring compliance with the most recent provisions of hearing protection legislation. In addition to perfect acoustic clarity, CeoTronics products also prioritize functional safety and best-possible wearer comfort, and focus on minimizing complexity to ensure intuitive usability. Whichever CT-DECT system variant you opt to deploy, products from CeoTronics create a transparent communications infrastructure that let you focus on your work.

CeoTronics products for explosion hazard areas
CeoTronics was the first communications business in its sector to acquire ISO 9001:2000 (incl. KBA – the German Federal Motor Transport Authority) and ATEX Directive 94/9 certification. This portfolio of highly versatile communication systems for ATEX applications has enjoyed worldwide popularity for many years. By 2003, when the pan-Europe Directive 94/9 for products applicable to explosion hazard areas came into force, CeoTronics had already developed a wide range of ATEX products, with many units in productive use at the customer.

Greater efficiency and work safety for business processes, installation and service
CeoTronics audio, video and data products make business processes more effective, ensure seamless communication and improve levels of work safety in difficult environmental and mission conditions – such as noisy or hazardous areas, scenarios requiring protective clothing or helmets, or situations where it is essential that both hands are left free to work.





- World's first fully-mobile handover system
- Full-duplex communication
- Bluetooth® interface
- Extends range by up to 400%
- Connection for radio equipment

CT-DECT Plus: Handover system for up to 6 participants

The new CT-DECT Plus is the world's only fully-mobile communication systems for personnel working in teams that are looking for the greatest possible flexibility in their communications, coupled with maximum ease of use. This CT-DECT system can integrate up to 6 members, who, thanks to the newly developed „handover mode“, enjoy unrestricted movement within their working environment. Each person is automatically „handed over“ to the next radio network: there is no break in communications and no new teach-in procedure is required. As a further benefit, CT-DECT Plus also makes it possible to connect additional existing components, such as CT-DECT standard systems (after software update), radio equipment and cell phones/tablet PCs (via Bluetooth/Audio).

System expandable for up to 30 participants

CT-DECT Plus also readily handles team scenarios where the mobility of individual workers is not the primary concern, but the focus is instead on communications between as many individuals as possible. Thanks to the system's modular design, up to 30 individuals can be integrated into stand-alone communication channels, all of which are guaranteed to enjoy full-duplex communication.

If you have any questions about a custom configuration of the CT-DECT Plus system, please discuss your needs with one of our knowledgeable field sales staff.



CT-DECT Plus

• Radio network

Made in Germany
Developed and produced in Germany

MIL-Specs
Equal to MIL-STD-810G*
*CT-DECT Plus Case

IP
Equal to protection class IP65/67*
*CT-DECT Plus Case

Range extension

Bluetooth technology

Full-duplex communication

Up to 6 participants



CT-DECT Plus: Range extension

CT-DECT systems from CeoTronics are fully-mobile communications systems that offer maximum flexibility for team planning. They were developed to support a wide variety of local communications applications. All participants communicate wirelessly and in full-duplex with one another, i.e. simultaneous send / receive at all times.

Superior range – zero infrastructure
Depending on environmental conditions, normal CT-DECT ranges can vary between approximately 100 meters to 300 meters. With the new CT-DECT Plus system, significantly greater ranges are now possible. Thanks to the systematic improvements made to CT-DECT technology, CeoTronics engineers have managed to develop a fully-mobile handover system that nearly quadruples

the usable range of a CT-DECT system. Whatever the scenario – from food industry maintenance workers to nuclear power plant personnel – up to 6 people can move freely within a radius never before possible while enjoying full-duplex communication.

Practical features
As soon as the fully-mobile CT-DECT Plus case is set down, one glance at the display confirms all personnel are correctly in position – ensuring nothing goes wrong in the heat of the moment. Even in cases where a person accidentally leaves the transmitter radius or the battery starts running down, the system automatically generates a warning signal that can be clearly heard on the individual's headset.



Figure shows maximum possible range of up to 4x native CT-DECT range



CT-DECT Plus

• Case

Made in Germany
Developed and produced in Germany

IP
Equal to protection class IP65/67

CT-DECT Plus

• Conference

Made in Germany
Developed and produced in Germany

USB port

IP
Equal to protection class IP54



CT-DECT Plus: Plug-and-play for unlimited freedom of movement

CT-DECT Plus incorporates the „plug-and-play“ approach to facilitate team planning that is considerably more flexible than permanently installed systems. The handover system ensures a smooth transfer of connectivity at all times between the CT-DECT Plus satellites and the master unit. Participants can move freely within the transmitter radius without loss of connectivity, enjoying unrestricted full-duplex communication. At all times, participants can hear mission critical communications and can use the CT-DECT system to join the conversation.

Even on occasions when radio connectivity inside buildings is not adequate, or communication across greater distances (indoors or outdoors) is required, a range of optional interfaces ensures that the CT-DECT Plus master unit, its satellites or the

table-top unit can all be integrated into wired communication systems.

User-friendly touchscreens

The CT-DECT Plus units (master unit and satellites) are controlled using a modern touchscreen display. This enables the selection and use of all functionality without needing to open the cases. To protect the touchscreen, a tough polycarbonate panel is included, which slides in front of the display.

CT-DECT Plus Conference: Permanent installation

Many sectors of industry have scenarios where the permanent installation of the digital full-duplex CT-DECT Plus radio system is a practical option. Especially in cases where permanent full-duplex communication must be guaranteed for a specific area – e.g. to provide reliable support for complex production workflows. Here, the CT-DECT Plus master unit and satellites are supplied protected in a rugged casing, while still offering all of the advantages of CT-DECT Plus. Installation is even possible in difficult to access areas, since the communications system can be configured with a detachable control unit operating at up to 10 meters away. The integrated USB port can also be used for simple, rapid software updates or other adjustments to the system.

Solution for existing CT-DECT standard systems

The majority of CT-DECT-Multi or CT-DECT-Headset units on the market (note: M6 DECT module required) can be upgraded to the extended CT-DECT Plus system. Retrofitting work and the CT-DECT software update is completed at Rödermark.

Our sales staff will be happy to provide you with further details or answers to your questions.



CT-DECT Plus

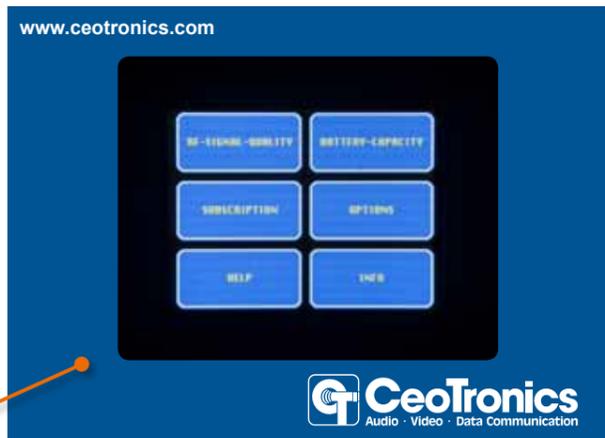
• Functions

Multilingual
The CT-DECT Plus software comes equipped with a bilingual user menu (German and English)



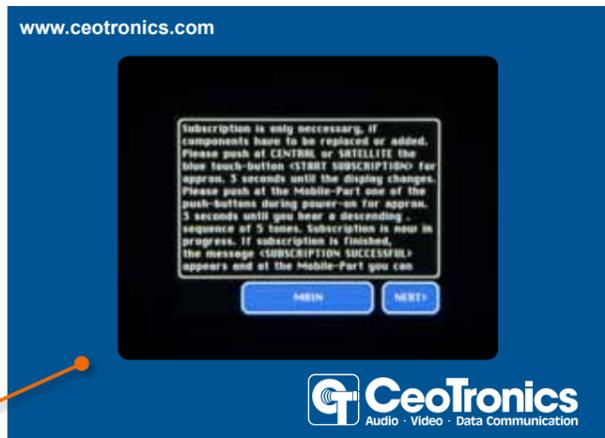
Always connected
DECT reception quality between the master unit and the satellites can be checked at any time with the help of the bar graph display

Usability first
A streamlined, intuitive user interface guides users through all of the settings offered by the menu



Bluetooth®
Cell phones or tablet PCs can join the DECT network at any time with the help of an optional Bluetooth module

User-friendly
Extensive help is available for every menu option, greatly simplifying the configuration of the DECT-Plus system



Automatic
Phone features – such as automatic call accept or re-dialing – can also be configured from the user menu

One-of-a-kind
DECT teach-in: to ensure system synchronization, satellite (Case/Conference) teach-in to the master unit needs to be performed just once



Power supply
For stationary operation, the DECT system can be connected to a 9/12 V or 220 V power supply



CT-DECT Plus Case

- User controls



IP Equal to protection class IP65/67



Touch screen with impact protection



On/Off

Power supply



Connection for radio equipment / intercom

Battery compartment

CT-WireCom Digital connection

User-friendly controls

The possibilities offered by the CT-DECT Plus system are varied. So varied that, when developing the system, the engineers at CeoTronics AG placed great importance on user-oriented application options and a clear and unmistakable arrangement of the user controls. All of the connections and the touch screen, which is protected by a robust polycarbonate panel, are easy to use from outside while also being perfectly protected against external influences. The CT-DECT Plus Case is specified in line with protection class IP65/67, according to which absolutely no dust can penetrate, even during a negative pressure test, and the case is both subjected to a jet of water and submerged.

Depending on the area of application and external conditions, the CT-DECT Plus system can be supplemented with sensible connection options. Thanks to the modular construction, every user receives a communication system that is precisely tailored to his needs. Besides integrating an additional radio circuit, the option of connecting to an existing wired system is also provided. The user is not reliant on just one energy source to power the system during use. Standard AA batteries can be used for mobile operation without an infrastructure. If there is the option of connecting to the power network, this can take place conveniently over the long term by connecting to the network.

CT-DECT Plus

- Carry & Storage



CT-DECT Plus: Systematic transportation

Configuration options for the CT-DECT Plus system are as flexible as its potential range of applications. To ensure that the valuable communications systems also arrive safely at the place they are needed, CeoTronics offers a range of tailor-made, high-quality carriage solutions. Depending on the scope of your personal system, you have the option of choosing a matching Peli-Case™ with laser-cut foam inlays for protection in transit and safe storage.



CT-DECT Plus

• Personnel kit

CT-DECT Plus

• Personnel kit



Fig. CT-DECT Plus Headset



Ambient Sound Reception



Fig. CT-ClipCom



Soft silicone ear adapters
Shore hardness: 40



Certified hearing protection to EN 352

Fig. CT-Neckband Headset



Weight: 22g incl. cable without connector

Fig. CT-HD Headset

Fig. CT-DECT Plus Multi

Fig. CT-CombiCom

Professional headsets for CT-DECT Plus

Users of the CT-DECT Plus system can choose from a wide range of professional CeoTronics headsets and in-ear solutions. Depending on the hearing protection selected, the system can be used in noisy environments to a max. of 110 dB (A).

CT-DECT Plus Headset – fully wireless

The digital radio in the CT-DECT Plus Headset is integrated directly into the ear protector shell and transmits voice wirelessly via a special-purpose noise-compensating microphone. Worker safety can be significantly improved by choosing the CT-ASR (Ambient Sound Reception) option for CT-DECT Plus Headsets. Ambient sound reception lets personnel hear warnings or noises in their vicinity even while wearing a headset.

To avoid damage to hearing, these environmental noises are reduced automatically to 85 dB (A).

CT-ClipCom for CT-DECT Plus Multi – in-ear model

Thanks to personal ear adapters (molded earpieces) made from soft silicone, the CT-ClipCom in-ear headset can also easily be worn under work helmets or masks. This model meets the EN 352 standard and is certified for use as personal hearing protection equipment. The system simply clips on, thus making CT-ClipCom personnel-independent. When shifts change, only the earplug or ear adapter needs to be swapped out (also relevant in terms of good hygiene). This means that it is not necessary to purchase a complete personal system for each team member.

CT-Neckband Headset for CT-DECT Plus Multi – just 22 g

The neckband headset from CeoTronics is a sound choice for demanding working environments, since it features an ultra-low profile design and minimal unit weight. At just 22 grams, it offers superb wearer comfort and a special adjustable wire means it can be molded to the individual's head shape. The headset is equipped with a sound-conducting tube that routes loudspeaker signals directly into the ear aperture. The tube can also be combined with impulse noise hearing protection (ISGS/ISL filter). The use of an „earbud“ guarantees perfect sound reception – even in noisy environments. In areas with high levels of ambient noise, voice input is achieved via a noise-compensating swan-neck microphone.

CT-HD Headset for CT-DECT Plus Multi

The alternative to the CT-DECT Headset with a digital radio built into the ear protector shell is a wired CT-HD Headset with CT-DECT Plus Multi, which is attached to work clothing using a practical belt pack. While relieving weight on the head, it offers virtually the same equipment features as the CT-DECT Plus Headset.

The CT-DECT Plus Multi is also compatible for use with the CT-Neckband Headset, the CT-ClipCom and the CT-CombiCom.

Our sales team will be happy to provide you with professional advice on the right communications equipment to meet your personal requirements.



CT-DECT (Digital Enhanced Cordless Telecommunication)

Transmitting frequency:	1880 MHz - 1900 MHz
Access mode:	TDMA 24 time slices/channel, duplex (semi-duplex possible)
Channel spacing:	1,728 MHz
Channels:	120 – system selects channels automatically
Transmitting power (average):	10 mW
Transmitting power:	240 mW (peak)
Voice modulation:	32 kbps ADPCM
Data transfer rate:	max. 1,152 Mbit/s
RF modulation method:	GFSK
Receiver sensitivity:	- 91 dBm
Range:	approx. 300 m (line-of-sight)

CT-DECT Plus Conference

Physical	
Weight:	approx. 1,500 g (Display approx. 500 g)
Dimensions (L/W/H):	approx. 310 x 230 x 90 mm
Electronics	
DSP Features optional:	DNR (Digital Noise Reduction), AGC (Automatic Gain Control), Echo Cancelling
Power supply:	9-12 V external power supply (Binder 720/3 pole connector)
Connections (Options)	
Radio:	Binder 720/12 pole connector (200mV/200mV, Imp. 600 Ohm)
CT-WireCom Digital:	Binder 720/5 pole connector
Bluetooth:	Bluetooth 2.1/air-interface
Display:	Bulgin 12 pole connector
Surroundings	
Operating temperature:	approx. - 30 °C to + 63 °C
Max. storage temperature:	approx. - 40 °C / + 80 °C
IP rating:	IP54
EN standards: EN 301 406 – DECT	
EN 301 489 - 1 – Electromagnetic Compatibility (EMC)	
EN 301 489 - 6 – Electromagnetic Compatibility (EMC)	
EN 301 489 - 9 – Electromagnetic Compatibility (EMC)	
EN 60950 – Electrical Safety	

CT-DECT Plus Case

Physical	
Weight:	approx. 215 g/300 g (without/with batteries)
Dimensions (L/W/H):	approx. 115 x 80 x 50 mm
Electronics	
DSP Features optional:	DNR (Digital Noise Reduction), AGC (Automatic Gain Control), Echo Cancelling
Power supply:	4 x AA (rechargeable) batteries (NiMH 2850 mAh) or 9-12 V external power supply (Option)
Batt. Power-on time:	approx. 8 hours – depending on ambient temperature and battery capacity
Connections (Options)	
Radio:	CT-9 pole connector (200mV/200mV, Imp. 600 Ohm)
CT-WireCom Digital:	Lemo 5 pole
Bluetooth:	Bluetooth 2.1/air-interface
Surroundings	
Operating temperature:	approx. - 30 °C to + 63 °C
Storage temperature:	approx. - 40 °C / + 80 °C
Air humidity:	95 %/60 °C 8 hours; 95 %/30 °C 20 hours
Vibration, shock, temperature, humidity:	CT-DECT Case conforms to MIL-STD-810-G
IP rating:	IP65/67
EN standards: EN 301 406 – DECT	
EN 301 489 - 1 – Electromagnetic Compatibility (EMC)	
EN 301 489 - 6 – Electromagnetic Compatibility (EMC)	
EN 301 489 - 9 – Electromagnetic Compatibility (EMC)	
EN 60950 – Electrical Safety	

CT-DECT Plus Multi

Physical	
Weight:	approx. 215 g/300 g (without/with batteries)
Dimensions (L/W/H):	approx. 115 x 80 x 50 mm
Electronics	
DSP Features:	DNR (Digital noise reduction for mic. and speaker)
Power supply:	3 x AA (rechargeable) batteries (NiMH 2850 mAh)
Power-on time:	approx. 24 hours – depending on ambient temperature and battery capacity
Power consumption:	approx. 100 mA
Surroundings	
Operating temperature:	approx. - 30 °C to + 63 °C
Storage temperature:	approx. - 40 °C / + 80 °C
Air humidity:	95%/60 °C 8 hours; 95%/30 °C 20 hours
Vibration, shock, temperature, humidity:	CT-DECT Multi conforms to MIL-STD-810-G
IP rating:	IP54
	EN standards: EN 301 406 – DECT
	EN 301 489 - 1 – Electromagnetic Compatibility (EMC)
	EN 301 489 - 6 – Electromagnetic Compatibility (EMC)
	EN 301 489 - 9 – Electromagnetic Compatibility (EMC)
	EN 60950 – Electrical Safety
	EN 50360 – Specific Absorption Rate (SAR)
	EN 50361 – Specific Absorption Rate (SAR)
	EN 50371 – Specific Absorption Rate (SAR)

CT-DECT Plus Headset

Physical	
Weight:	approx. 530 g
Electronics	
DSP Features:	CT-ASR (Ambient Sound Reception, Option)
Power supply:	NiMH 3,6 V/2300mAh
Power-on time:	approx. 20 hours – depending on ambient temperature and battery capacity
Battery charge time:	approx. 3 - 4 hours
Microphone	
Microphone type:	noise-compensating electret microphone
Sensitivity:	- 40 dB (± 3dB) re. 1 V/Pa at 1 kHz
Loudspeaker	
Impedance:	16 Ω (32 Ω parallel)
Rated output:	0,3 W
Distortion:	less than 5% at 1 kHz 0.3 W
Surroundings	
Operating temperature:	approx. - 32 °C to + 69 °C
Storage temperature:	approx. - 40 °C (min. storage temperature), + 80 °C (max. storage temperature)
	EN standards: EN 301 406 – DECT
	EN 301 489-1 – EMC
	EN 301 489-6 – EMC
	EN 301 489-9 – EMC
	EN 50360 – Specific Absorption Rate (SAR)
	EN 50361 – Specific Absorption Rate (SAR)
	EN 50371 – Specific Absorption Rate (SAR)



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