

Empowering Independence in IoT

We develop the independence
in connected living.



www.varta-ag.com/iot



VARTA



VARTA batteries shape the future of IoT

Application areas of VARTA batteries in IoT connected devices and systems

- Smart City / Smart Home / Smart Metering
- Wearables
- IT / Communications
- Industrial / Robotics
- Consumer
- Medical
- Automotive
- Security

Our batteries support the communication of the following network standards

- Sigfox
- NB IoT
- LPWAN
- LTE
- Wireless Mbus

Expert service

- Optimal battery selection
- Battery design-in support
- Advanced battery specification
- Application tests
- Qualification / approvals

Your benefits

- Premium energy
- High-level safe products
- UL recognition
- Top performance with wide temperature range
- Superior shelf life and operational life
- High energy density
- Low self discharge
- Resistance to corrosive environments
- Patented mass production know-how
- Standard and customized solutions
- Wide range of application knowledge

Concentrated energy for many kinds of IoT devices

The Internet of Things can make life easier and reinvent the way people interact with the physical world. With batteries from VARTA all requirements for devices

and systems are created to network and interact in IoT. We provide several battery technologies for IoT connection of a device.

Product overview of batteries for IoT applications

Rechargeable batteries

Lithium-Ion Button Cells (Li-Ion) CoinPower

| TYPE DESIGNATION | TYPE N°. | VOLTAGE (V) | CAPACITY (mAh) | DIAMETER (mm) | HEIGHT (mm) | LENGTH (mm) | WIDTH (mm) | WEIGHT (g) |
|------------------|----------|-------------|----------------|---------------|-------------|-------------|------------|------------|
| A-Version | | | | | | | | |
| CP1654 A4 | 63165 | 3.7 | 155 | 16.1 | 5.4 | | | 3.2 |
| CP1454 A4 | 63145 | 3.7 | 114 | 14.1 | 5.4 | | | 2.4 |
| CP1254 A4 | 63125 | 3.7 | 77 | 12.1 | 5.4 | | | 1.6 |
| CP1250 A4 | 63121 | 3.7 | 62 | 12.1 | 5.0 | | | 1.6 |
| CP1240 A4 | 63124 | 3.7 | 55 | 12.1 | 4.0 | | | 1.2 |
| CP9454 A4 | 63095 | 3.7 | 41 | 9.4 | 5.4 | | | 1.0 |
| C-Version | | | | | | | | |
| CP1254 C1 | 65125 | 3.85 | 78 | 12.1 | 5.4 | | | 1.8 |
| CP1054 C1 | 65125 | 3.85 | 50 | 10.1 | 5.4 | | | 1.2 |
| CP7854 C1 | 65075 | 3.85 | 28 | 7.8 | 5.4 | | | 0.7 |

Further types on request

Nickel-Metal Hydride Button Cells (NiMH)

| TYPE DESIGNATION | TYPE NO. | VOLTAGE (V) | CAPACITY (mAh) | DIAMETER (mm) | HEIGHT (mm) | LENGTH (mm) | WIDTH (mm) | WEIGHT (g) |
|----------------------------|----------|-------------|----------------|---------------|-------------|-------------|------------|------------|
| V...HT robust85C | | | | | | | | |
| V 65 HT | 55707 | 1.2 | 70 | 15.5 | 6.00 | | | 4.00 |
| V 150 HT | 55716 | 1.2 | 150 | | 5.85 | 14.1 | 25.6 | 6.00 |
| V...HRT powerfut85C | | | | | | | | |
| V 18 HRT | 55802 | 1.2 | 19 | 11.5 | 2.30 | | | 0.90 |
| V 600 HRT | 55860 | 1.2 | 600 | 6.80 | 24.1 | 34.1 | | 14.50 |

Not all product types are available at the time of printing. Voltage and Capacity indicated refer to nominal and typical values respectively

9V Battery (NiMH)

| | | | | | | | | |
|-------------|-------|-----|-----|--|------|------|------|------|
| V 7/8 H ECO | 05522 | 8.4 | 150 | | 15.7 | 48.5 | 26.6 | 47.0 |
|-------------|-------|-----|-----|--|------|------|------|------|

Primary batteries

Lithium Cylindrical Cells (Li-MnO₂)

| TYPE DESIGNATION | TYPE NO. | VOLTAGE (V) | CAPACITY (mAh) | DIAMETER (mm) | HEIGHT (mm) | LENGTH (mm) | WIDTH (mm) | WEIGHT (g) |
|------------------------------|----------|-------------|----------------|---------------|-------------|-------------|------------|------------|
| CR mass/bobbin series | | | | | | | | |
| CR 1/2 AA | 6127 | 3.0 | 950 | 14.75 | 25.1 | | | 11.5 |
| CP 2/3 AA | 6237 | 3.0 | 1350 | 14.75 | 33.5 | | | 15.0 |
| CR AA | 6117 | 3.0 | 2000 | 14.75 | 50.5 | | | 21.5 |
| CR coiled series | | | | | | | | |
| CR 2/3 AH | 6215 | 3.0 | 1500 | 17.00 | 33.5 | | | 17.0 |
| CR 123 A | 6205 | 3.0 | 1550 | 17.00 | 34.5 | | | 17.0 |
| CR 2 | 6206 | 3.0 | 850 | 15.60 | 27.0 | | | 11.0 |
| CR 2/3 AH-R | 6214 | 3.0 | 1600 | 17.00 | 33.5 | | | 17.0 |
| CR AH-R | 6217 | 3.0 | 2400 | 17.00 | 45.0 | | | 23.0 |
| CR 1/2 AAH-R | 6213 | 3.0 | 850 | 14.22 | 25.0 | | | 9.0 |

Lithium Button Cells (Li-MnO₂)

| TYPE DESIGNATION | TYPE NO. | VOLTAGE (V) | CAPACITY (mAh) | DIAMETER (mm) | HEIGHT (mm) | LENGTH (mm) | WIDTH (mm) | WEIGHT (g) |
|-----------------------|----------|-------------|----------------|---------------|-------------|-------------|------------|------------|
| CR coin series | | | | | | | | |
| CR 1216 | 6216 | 3.0 | 27 | 12.5 | 1.6 | | | 0.7 |
| CR 1220 | 6220 | 3.0 | 35 | 12.5 | 2.0 | | | 0.8 |
| CR 1616 | 6616 | 3.0 | 55 | 16.0 | 1.6 | | | 1.2 |
| CR 1620 | 6220 | 3.0 | 70 | 16.0 | 2.0 | | | 1.2 |
| CR 2016 | 6016 | 3.0 | 90 | 20.0 | 1.6 | | | 1.8 |
| CR 2025 | 6025 | 3.0 | 165 | 20.0 | 2.5 | | | 2.5 |
| CR 2032 | 6032 | 3.0 | 230 | 20.0 | 3.2 | | | 3.0 |
| CR 2430 | 6217 | 3.0 | 300 | 24.5 | 3.0 | | | 4.0 |
| CR 2450 | 6450 | 3.0 | 620 | 24.5 | 5.0 | | | 6.2 |
| CR 1/3 N | 6131 | 3.0 | 170 | 11.6 | 10.8 | | | 3.0 |

VARTA Industrial Pro Alkaline Cylindrical Cells

| | | | | | | | | |
|----------------|-------|-----|-------|------|------|------|------|-----|
| LR 3 | | | | | | | | |
| Micro/AAA/AM 4 | 04003 | 1.5 | 1270 | 10.5 | 44.5 | | | 11 |
| LR 6 | | | | | | | | |
| Mignon/AA/AM 3 | 04006 | 1.5 | 2970 | 14.5 | 50.5 | | | 23 |
| LR 14 | | | | | | | | |
| Baby/C/AM 2 | 04014 | 1.5 | 7800 | 26.0 | 50.0 | | | 69 |
| LR 20 | | | | | | | | |
| Mono/D/AM 1 | 04020 | 1.5 | 17000 | 34.0 | 61.0 | | | 141 |
| 6 LR 61 | | | | | | | | |
| E-Block/6 AM 6 | 04022 | 9.0 | 640 | | 17.5 | 48.5 | 26.5 | 46 |

Empowered by VARTA



Source: Disruptive Technologies

WIRELESS SENSORS

They are designed to make our everyday lives easier and more convenient by connecting several components with each other, thus ensuring an intelligent exchange of data between the devices.

Example of use:

Smart buildings, facility management, smart workplaces, smart manufacturing, warehousing etc.



Window Sensors

Window sensors monitor exactly which windows (and/or doors) are opened and closed and can give immediate notification to any device wanted.

Application fields:

Security, smart homes etc.



Security Systems

Security systems protect us by either securing entry points like doors and windows, tracking our valuables or detecting environmental danger.

Application examples:

Smoke alarm devices, wireless alarm systems, motion detectors, security systems for cash transport and installations, electronic bracelets etc.



SMART GLASSES

Smart glasses and virtual reality systems communicate unobtrusively with the user and allow new approaches e.g. in the areas of gaming, entertainment, industrial and even medical.

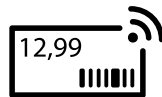
Example of use:

Product design, repair and maintenance, entertainment, surgical operations etc.



Smart Watches

The extension of our smart-phones: A digital watch that communicates directly with the phone, has a touchscreen display and also several apps included.



Digital Price Tags

Mostly used by retailers and industry, digital price tags are a self-updating, environment scanning and interactive technology to create an overall better information and customer experience.



Smart Keys

The next generation of smart key fobs communicates with other systems and provides advanced functionalities.

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Please see webpage.



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