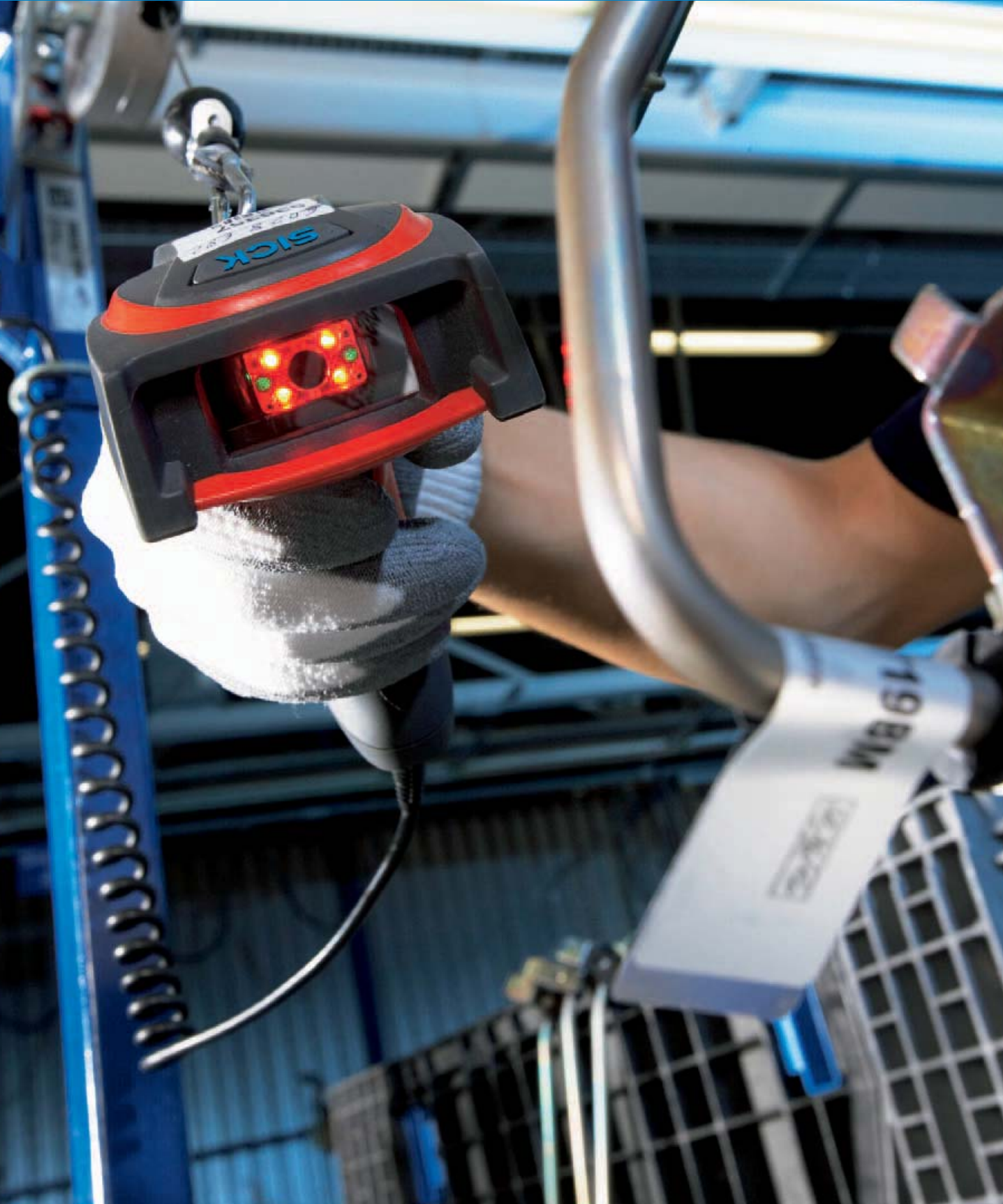


# Mobile hand-held scanners





Data requires rapid and flexible detection in almost all sectors. Hand-held scanners from SICK perform first-class work here, because without automatic scanners everything would have to be read out and manually registered. This takes a long time and is subject to errors. With hand-held scanners as the interface to sophisticated auto-ident solutions, detection is carried out in seconds and reading errors are almost totally ruled out. Employees are relieved of stress, processes accelerated and sources of error eliminated – in all areas of a company.

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| IT4800i/IT4820i  | Page 108 |
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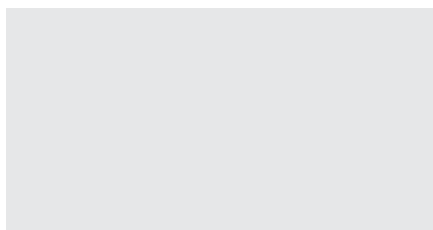
# Mobile hand-held scanners →

## Mobile hand-held scanners



| PRODUCT                  | TR3080  | IT3800  | IT3800g   |
|--------------------------|---|---|---|
| <b>Reading ranges</b>    | <p>Module width (mm)</p> <p>Reading distance (mm)</p> <p>0.15</p> <p>0.5</p>  | <p>Module width (mm)</p> <p>Reading distance (mm)</p> <p>0.2</p> <p>0.35</p> <p>0.4</p> <p>LR – max. 240 mm<br/>VHD – max. 240 mm<br/>ESD – max. 240 mm<br/>PDF – max. 140 mm</p>   | <p>Module width (mm)</p> <p>Reading distance (mm)</p> <p>0.2</p> <p>0.35</p> <p>0.4</p>   |
| <b>Application areas</b> | <ul style="list-style-type: none"> <li>• Document processing</li> <li>• Clinical analysers</li> <li>• Library applications</li> </ul>   | <ul style="list-style-type: none"> <li>• Part picking</li> <li>• Logistics &amp; distribution</li> <li>• Manufacturing</li> </ul>   | <ul style="list-style-type: none"> <li>• Manufacturing</li> <li>• Part picking</li> <li>• Logistics &amp; distribution</li> <li>• Point of sales (POS)</li> </ul>   |
| <b>Technical data</b>    | <p>Scanning frequency: Max. 200 Hz</p> <p>Operating voltage: 5 V DC ± 5 %</p> <p>Data interfaces: RS-232 TTL, USB, keyboard wedge, wand emulation</p> <p>Dimensions (L, W, H): 64/175/89 mm</p> <p>Weight: 225 g</p> <p>Enclosure rating: –</p> <p>Shock test: 6 drops from 1.2 m</p> | <p>Scanning frequency: 270 Hz</p> <p>Operating voltage: 5 V DC ± 10 %</p> <p>Data interfaces: RS-232 TTL, USB, keyboard wedge, wand emulation</p> <p>Dimensions (L, W, H): 135/152/78 mm</p> <p>Weight: 180 g</p> <p>Enclosure rating: –</p> <p>Shock test: 50 drops from 1.5 m</p> | <p>Scanning frequency: 270 Hz</p> <p>Operating voltage: 5 ... 12 V DC</p> <p>Data interfaces: RS-232 TTL, USB, keyboard wedge</p> <p>Dimensions (L, W, H): 110/150/80 mm</p> <p>Weight: 160 g</p> <p>Enclosure rating: IP 41</p> <p>Shock test: 50 drops from 1.5 m</p> |
| <b>Special features</b>  | <ul style="list-style-type: none"> <li>• CCD touchreader</li> <li>• Bar code programming</li> </ul>   | <ul style="list-style-type: none"> <li>• Linear imager</li> <li>• Optical and acoustical Good Read signal</li> <li>○ RS-232 True</li> </ul>   | <ul style="list-style-type: none"> <li>• Linear imager</li> <li>• Optical and acoustical Good Read signal</li> <li>○ RS-232 True</li> </ul>   |
| <b>Accessories</b>       | <ul style="list-style-type: none"> <li>• TR Setup Software</li> <li>○ Mounting bracket</li> </ul>   | <ul style="list-style-type: none"> <li>• Visual Xpress Software</li> <li>○ Mounting brackets</li> <li>○ Stands</li> </ul>   | <ul style="list-style-type: none"> <li>• Visual Xpress Software</li> <li>○ Mounting brackets</li> <li>○ Stands</li> </ul>   |

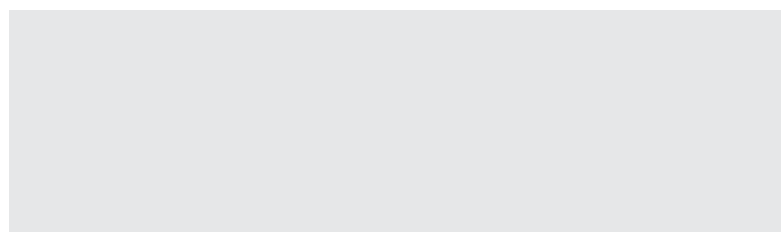
- Standard
- Optional





| PRODUCT                  | IT3820   | IT3800i  | IT4600/IT4820  |
|--------------------------|--|--|--|
| <b>Reading ranges</b>    | <p>Module width (mm)</p> <p>Reading distance (mm)</p>  | <p>Module width (mm)</p> <p>Reading distance (mm)</p>  | <p>Cell size (mm)</p> <p>Reading distance (mm)</p>   |
| <b>Application areas</b> | <ul style="list-style-type: none"> <li>• Part picking</li> <li>• Logistics &amp; distribution</li> <li>• Manufacturing</li> </ul>  | <ul style="list-style-type: none"> <li>• Automotive industry</li> <li>• Parcel identification</li> <li>• Logistics &amp; distribution</li> </ul>   | <ul style="list-style-type: none"> <li>• Electronic manufacturing</li> <li>• Clinical analysers</li> <li>• Document processing</li> </ul>  |
| <b>Technical data</b>    | <p>Scanning frequency: 270 Hz</p> <p>Operating voltage: 9 V DC ± 5 %</p> <p>Data interfaces: RS-232 TTL, USB, keyboard wedge, wand emulation</p> <p>Dimensions (L, W, H): 157/135/81 mm</p> <p>Weight: 260 g (incl. battery)</p> <p>Enclosure rating: IP 41</p> <p>Shock test: 50 drops from 1.8 m</p> | <p>Scanning frequency: 270 Hz</p> <p>Operating voltage: 4.5 ... 14 V DC</p> <p>Data interfaces: RS-232 TTL/True, USB, keyboard wedge, wand emulation</p> <p>Dimensions (L, W, H): 160/135/81 mm</p> <p>Weight: 213 g</p> <p>Enclosure rating: IP 54</p> <p>Shock test: 50 drops from 2 m</p> | <p>Scanning frequency: Max. 270 Hz (bar code)</p> <p>Operating voltage: 4.5 ... 14 V DC</p> <p>Data interfaces: RS-232 TTL/True, USB, keyboard wedge, wand emulation</p> <p>Dimensions (L, W, H): 157/135/81 mm</p> <p>Weight: 185 g (IT4600g), 260 g (IT4820 incl. battery)</p> <p>Enclosure rating: IP 41</p> <p>Shock test: 50 drops from 1.8 m</p> |
| <b>Special features</b>  | <ul style="list-style-type: none"> <li>• Linear imager</li> <li>• Li-ion battery</li> <li>• Cordless Bluetooth data communication V 1.2</li> <li>• Bluetooth range 10 m</li> <li>○ RS-232 True</li> </ul>  | <ul style="list-style-type: none"> <li>• Linear imager</li> <li>• Operating temperature down to -30 °C</li> </ul>  | <ul style="list-style-type: none"> <li>• 2D imager (IT4600g and IT4600r cable version/IT4820 radio version)</li> <li>• Green aiming line</li> <li>• Li-ion battery at IT4820</li> <li>• Cordless Bluetooth data communication V 1.2 at IT4820</li> <li>• Bluetooth range 10 m at IT4820</li> <li>○ RS-232 True (IT4820)</li> </ul>                     |
| <b>Accessories</b>       | <ul style="list-style-type: none"> <li>• Visual Xpress Software</li> <li>• IT2020-5 base and charging station</li> <li>○ IT2020CB charging station</li> </ul>  | <ul style="list-style-type: none"> <li>• Visual Xpress Software</li> <li>○ Mounting brackets</li> <li>○ Stands</li> </ul>  | <ul style="list-style-type: none"> <li>• Visual Xpress Software</li> <li>• IT2020 base and charging station at IT4820</li> <li>○ Mounting brackets</li> <li>○ Stands</li> </ul>  |

- Standard
- Optional



## Mobile hand-held scanners



| PRODUCT                  | IT4800i/IT4820i  | IT6300/IT6320DPM   |
|--------------------------|--|--|
| <b>Reading ranges</b>    | <p>Cell size (mm)</p> <p>Reading distance (mm)</p>   | <p>Cell size (mm)</p> <p>Reading distance (mm)</p>   |
| <b>Application areas</b> | <ul style="list-style-type: none"> <li>• Logistics &amp; distribution</li> <li>• Automotive industry</li> <li>• Parcel identification</li> </ul>   | <ul style="list-style-type: none"> <li>• Automotive industry</li> <li>• Electronic manufacturing</li> <li>• Aircraft industry</li> </ul>   |
| <b>Technical data</b>    | <p>Scanning frequency<br/>270 Hz</p> <p>Operating voltage<br/>4.5 ... 14 V DC</p> <p>Data interfaces<br/>RS-232 TTL/True, USB, keyboard wedge, wand emulation</p> <p>Dimensions (L, W, H)<br/>163/135/81 mm</p> <p>Weight<br/>213 g (IT4800i)<br/>270 g (IT4820i incl. battery)</p> <p>Enclosure rating<br/>IP 54</p> <p>Shock test<br/>50 drops from 2 m</p>              | <p>Depending on application<br/>5 V/9 V DC</p> <p>RS-232 TTL, USB, keyboard wedge</p> <p>134/84/175 mm</p> <p>270 g (IT6300)<br/>330 g (IT6320 incl. battery)</p> <p>IP 54</p> <p>50 drops from 2 m (IT6300)<br/>25 drops from 2 m (IT6320)</p>  |
| <b>Special features</b>  | <ul style="list-style-type: none"> <li>• 2D imager (IT4800i cable version/IT4820i radio version)</li> <li>• Operating temperature down to -10 °C</li> <li>• Green aiming line</li> <li>• Li-ion battery at IT4820i</li> <li>• Cordless Bluetooth data communication V1.2 at IT4820i</li> <li>• Bluetooth range 10 m at IT4820i</li> <li>○ RS-232 True (IT4820i)</li> </ul> | <ul style="list-style-type: none"> <li>• DPM imager (IT6300 cable version/IT6320 radio version)</li> <li>• Flexible illumination</li> <li>• Decoding of codes on direct marked parts (laser, dot peening, printing)</li> <li>• Radio range 10 m at IT6320</li> <li>○ RS-232 True (IT6320)</li> </ul> |
| <b>Accessories</b>       | <ul style="list-style-type: none"> <li>• Visual Xpress Software</li> <li>• IT2020 base and charging station at IT4820i</li> <li>○ Mounting brackets</li> <li>○ Stands</li> </ul>   | <ul style="list-style-type: none"> <li>• DPM Setup Tool</li> <li>• IT2020 base station at IT6320DPM</li> </ul>   |

- Standard
- Optional





# TR3080

## The entry level CCD-Scanner



The TR3080 completes the product portfolio of hand-held scanners at an attractive entry price level.

The hand-held scanner offers the ideal solution to all bar code applications for contact reading.

Regardless of the attractive price level, both models fulfill the high SICK quality expectations according technology, reliability and comfortable user concept.

While the scanner is designed for contact operation, the reading width is an

important feature in order to select the appropriate device for each application.

The TR3080 with its 80 mm reading width is fine for most applications. The robustness and solidity of this device has been proven within daily operation.

Thousands of units are being used in applications such as point of sale, document handling and industrial pick and place.

### Your benefits:

- Fast and reliable bar code identification
- Connectable to various interfaces
- Easy-to-use due to configurations bar codes
- Setup software for easy and clear programming
- Proven technology at an attractive entry price level

### The TR3080 at a glance:

- Contact distance CCD hand-held scanner
- 80 mm reading width
- Optical and acoustic good read signal
- Manual trigger
- Flash memory for software update
- Rugged ABS plastic housing protects from ESD, shocks and damage
- 2 years warranty

## Technical data

| Type                                    | TR3080  |
|---|---|
| Scanner design                          | CCD touchreader   |
| Light source                            | Visible red light ( $\lambda = 660 \text{ nm}$ )  |
| Scanning frequency                      | Max. 200 Hz   |
| Reading distance                        | Contact up to 51 mm   |
| Reading width                           | 80 mm at contact  |
| Min. resolution                         | 0.1 mm  |
| Code types                              | All popular bar codes   |
| Optical indicators                      | 1 x LED for Good Read   |
| Acoustic indicators                     | Beeper for Good Read  |
| Data interface                          | - Keyboard wedge for PCs and terminals<br>- Keyboard emulation<br>- Wand emulation<br>- RS-232 (TTL-level)<br>- USB                     |
| Operating voltage                       | 5 V DC $\pm 5 \%$   |
| Current consumption                     | - Operating: 100 mA at 5 V DC $\pm 5 \%$<br>- Standby: 50 mA<br>- Low Power Standby < 1 mA (for keyboard wedge and wand emulation only) |
| Housing                                 | ABS plastic   |
| EMC test                                | According to EN 55022 Class A, EN 61000-3, EN 61000-6-1   |
| Mechanical shock                        | 6 drops from 1.2 m  |
| Weight                                  | Approx. 225 g (without cable adapter)   |
| Dimensions                              | 64 mm x 175 mm x 89 mm  |
| Temperature (ambient operating/storage) | 0 °C ... +40 °C / -10 °C ... +55 °C   |
| Rel. humidity                           | 20 ... 85 %, non-condensing   |

## Order information

| Type      | Description  | Order no. |
|-----------|--|-----------|
| TR3080-12 | CCD Scanner with integrated decoder for keyboard wedge, Apple ADB keyboard, RS-232 TTL, wand emulation, USB (without power supply, cable adapter and mounting bracket) | 6028854   |

## Accessories

Accessories can be found on Page 222

# IT3800

## The new class of Imaging Technology



The IT3800 is setting a new standard for hand-held scanners in the bar code identification industry. Badly printed bar codes, low print-contrast or damaged quiet zones? Large reading distance in combination with extraordinary depth of field? All these challenges of identification applications are no problem for the IT3800.

The illumination concept has greatly improved. Therefore the IT3800 is emitting a bright, sharp aiming line with high resolution imaging to deliver exceptional reading performance.

Besides the optical performance there are many outstanding features which are making the IT3800 a bestseller. This hand-held scanner is smoothly contoured to fit all sized hands, and also has a soft grip area to add comfort and to prevent slipping. Its aesthetically pleasing look surrounds a rugged, durable construction, built for demanding work environments. As an option the IT3800 can also be ordered to decode the Code PDF 417.

### Your benefits:

- LR option for the identification of all popular code symbologies
- PDF option guarantees fast, accurate, economical PDF 417 data capture
- Ultra-High-Density option to identify bar codes with very small module width
- ESD option designed for the stringent requirements of clean room assembly of sensitive electronic components

### The IT3800 at a glance:

- Optimum scanning results even with badly printed codes
- Reading distance up to 455 mm
- Scanning frequency up to 270 Hz
- 5 years warranty
- Special options for PDF, HD or ESD applications

## Technical data

|   |   |   |
|---|---|---|
| <b>Type</b>                             | <b>IT3800</b>   |   |
| Scanner design                          | Linear imager hand-held scanner   |   |
| Light source                            | Visible red light ( $\lambda = 630 \text{ nm}$ )/infrared light ( $\lambda = 880 \text{ nm}$ , for IR version only)   |   |
| Ambient light compability               | Max. 70,000 lx  |   |
| Scanning/decoding frequency             | Max. 270 Hz (adjustable)  |   |
| Versions                                | IT3800LR  | Long Range imager   |
|   | IT3800PDF   | PDF-417- and linear bar codes   |
|   | IT3800VHD   | Very High Density imager  |
|   | IT3800ESD   | Meeting additionally the ESD specification for clean room environment |
| Reading distance/resolution 0.33 mm     | IT3800LR  | 25 ... 240 mm   |
|   | IT3800PDF   | 75 ... 120 mm   |
|   | IT3800VHD   | 25 ... 240 mm   |
| Reading width                           | 180 mm at 180 mm reading distance (LR and VHD Version)  |   |
| Min. resolution                         | 0.075 mm (VHD version)  |   |
| Code types                              | All popular bar codes/optional PDF 417  |   |
| Optical indicators                      | 1 x LED for Good Read   |   |
| Acoustic indicators                     | Beeper for Good Read  |   |
| Data interface                          | <ul style="list-style-type: none"> <li>- Keyboard wedge for PCs and Terminals</li> <li>- Keyboard emulation</li> <li>- Wand emulation</li> <li>- RS-232 (TTL-level), optional RS-232 True</li> <li>- Laser Out (HHLC)</li> <li>- USB</li> </ul> |   |
| Operating voltage                       | 5 V DC $\pm$ 10 %   |   |
| Current consumption                     | At 270 Scan/s: 275 mA (standby 125 mA, switch-on 300 mA)<br>At 67 Scans/s: 150 mA (standby 125 mA, switch-on 300 mA)  |   |
| Housing                                 | Polycarbonate/ABS-blend, UL 95V0  |   |
| EMC test                                | According to IEC 60801  |   |
| Mechanical shock                        | 25 drops from 1.5 m to concrete at room temperature   |   |
| Weight                                  | Approx. 180 g   |   |
| Dimensions                              | 135 mm x 152 mm x 78 mm   |   |
| Temperature (ambient operating/storage) | 0 °C ... +50 °C/-20 °C ... +60 °C   |   |
| Max. rel. humidity                      | 95 %, non-condensing  |   |

## Order information

| Type             | Description   | Order no. |
|------------------|---|-----------|
| IT3800LR12E      | Linear imager with integrated decoder for keyboard wedge, RS-232 TTL, wand emulation, HHLC, USB | 6020935   |
| IT3800LR13E      | Linear imager with integrated decoder for RS-232 True   | 6022202   |
| IT3800VHD12E     | Linear imager with integrated decoder for keyboard wedge, RS-232 TTL, wand emulation, HHLC, USB | 6021576   |
| IT3800VHD/ESD12E | Linear imager with integrated decoder for keyboard wedge, RS-232 TTL, wand emulation, HHLC, USB | 6021578   |
| IT3800PDF12E     | Linear imager with integrated decoder for keyboard wedge, RS-232 TTL, wand emulation, HHLC, USB | 6022203   |

Note: For commissioning, an interface cable and a power supply unit are additionally required

## Accessories

Accessories can be found on Page 222

# IT3800g

## The next generation of Imaging Technology



The newest member of the linear imager family IT3800 sticks out because of its unique reading performance.

Reading distances and depth of field have been improved significantly.

Particularly the fast and aggressive identification of even badly printed bar codes has to be mentioned. With the IT3800g bar codes can be captured a four times quicker than before. This helps to identify objects more quickly and allows to scan more parts per time period.

The scan line has been made thinner to realise an easier aiming on codes situated close to each other. At the same time this thinner scanning line is sharper and therefore more visible for the user.

The IT3800g is highly ergonomic as well as robust. The weight of the IT3800g could be reduced. So it perfectly fits into the user's hand and allows a comfortable working even over longer time periods.

The combination of optical and mechanical features makes the IT3800g a reliable, general purpose hand-held scanner.

Warehousing, transportation & logistics or manufacturing, the IT3800g makes the identification of bar codes as easy and as fast as never before.

### Your benefits:

- **Fast and reliable bar code reading**
- **Secure identification of bad quality bar codes**
- **Ergonomic and robust housing for daily use**

### The IT3800g at a glance:

- **270 scans/second**
- **Horizontal motion tolerance of 50 cm/second**
- **50 drops from 1.5 m to concrete**
- **5 years warranty**

## Technical data

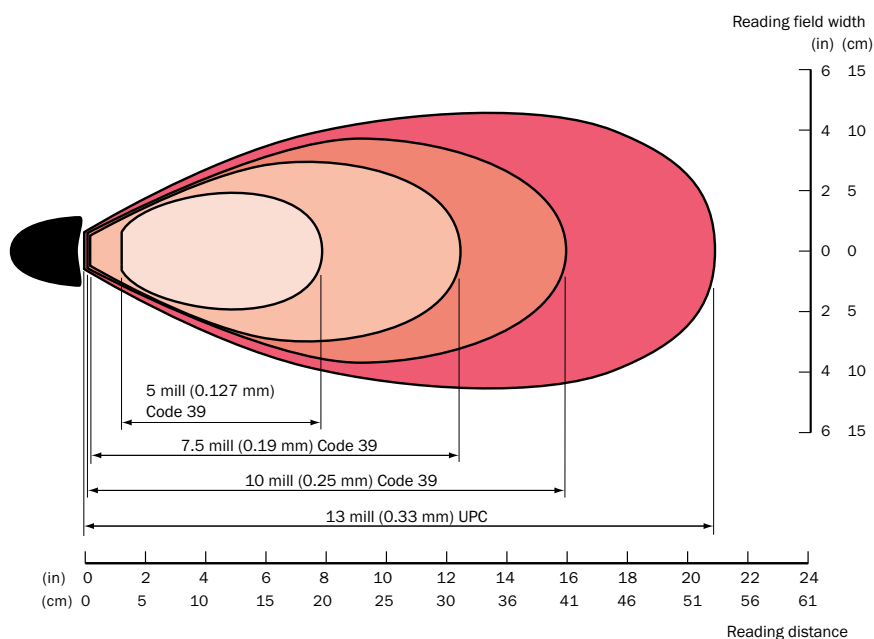
| Type                                    | IT3800g  |
|---|--|
| Scanner design                          | Linear imager hand-held scanner  |
| Light source                            | Visible read light ( $\lambda = 630 \text{ nm}$ )  |
| Ambient light compatibility             | Max. 70,000 lx   |
| Scanning/decoding frequency             | 270 scans/s  |
| Reading range                           | See reading field diagram  |
| Scan contrast                           | Minimum 20 %   |
| Minimum resolution                      | 0.075 mm   |
| Code types                              | Codabar, Code 39 incl. PARAF, Interleaved 2/5, Code 2/5, Matrix 2/5, Code 11, Code 93, Code 128, UPC, EAN/JAN, China Postal Code, RSS. 2005 Sunrise/GTIN compliant |
| Data interfaces                         | USB, USB serial, RS 232 TTL, PS/2 keyboard wedge, IBM46xx, Retail USB  |
| Operating voltage                       | 5 to 12 V DC (3800GX5E)/5 V DC (3800GX4E)  |
| Enclosure rating                        | IP 41  |
| Mechanical shock                        | 50 drops from 1.5 m to concrete  |
| Weight                                  | 160 g  |
| Dimensions                              | 110 mm x 150 mm x 80 mm  |
| Ambient temperature (operating/storage) | 0 ... 50°C/-40 ... 60°C  |

## Order information

| Type               | Description   | Order no. |
|--------------------|---|-----------|
| IT3800G15E         | Linear imager with integrated decoder for USB, keyboard wedge, RS-232 TTL, IBM Retail, Retail USB | 6033410   |
| IT3800G14E         | Linear imager with integrated decoder for USB, keyboard wedge, RS-232 TTL                         | 6034326   |
| IT3800G14-KBWKITE  | Kit incl. IT3800G14E, PS/2 connection cable and manual  | 6034072   |
| IT3800G14-SERKIT2E | Kit incl. IT3800G14E, RS 232 data cable, power supply unit, EU power line cable and manual        | 6034073   |
| IT3800G14E-USBKITE | Kit incl. IT3800G14E, USB cable and manual  | 6034075   |

## Accessories

Accessories can be found on Page 222



# IT3820/2020

## More liberty of action through cordless Bluetooth™ Technology



The most outstanding feature of this hand-held scanner IT3820 is the cordless data transmission via Bluetooth™. After successfully reading a bar code the decoded data is transmitted over a cordless connection to the paired IT2020 base station.

The automatic RF connection allows transmissions of up to 10 m. Beyond this operating range the scanner automatically makes use of a so-called batch function. By using this function it is possible to buffer up to 500, 12-digit bar codes within the scanner. After re-entering the operating range, the stored data is transmitted to the base unit, following the FIFO-method.

The base station IT2020 optionally supports up to 7 cordless scanners IT3820 simultaneously. For RF communication between the IT3820 and the base station IT2020 a very robust data transmission based on frequency hopping at the 2.4 GHz ISM band is used. Interference between WLAN, other Bluetooth™ or 433/908 MHz systems can also be excluded.

The innovative combination of Bluetooth™ RF technology, ergonomic design, robustness, as well as fast and reliable identification of linear bar codes makes the IT3820 the ideal choice for daily applications in offices, warehouses and logistics or for light industrial environments.

### Your benefits:

- Increased mobility of the operator
- License-free RF system delivers fast and reliable communication
- Lithium-ion battery pack without memory effect
- Optionally up to 7 scanners communicate with one base station
- Setup software for easy programming

### The IT3820/2020 at a glance:

- 10 m RF operating radius
- Buffering of bar codes beyond operating range
- 2.4 GHz radio frequency with frequency hopping according to Bluetooth™ V1.2
- Robust, compact housing
- 3 years warranty

## Technical data

| Type                            | IT3820   | IT2020  |
|---------------------------------|--|---|
| Product                         | Linear hand-held imager  | Base and charging station   |
| Light source                    | Visible red light ( $\lambda = 630 \text{ nm}$ )   |   |
| Ambient light compatibility     | Max. 70,000 lx   |   |
| Scanning/decoding frequency     | 270 Hz   |   |
| Reading distance/resolution     | 25 ... 910 mm/0.51 mm; 64 ... 1,110 mm/1.4 mm  |   |
| Reading width                   | 254 mm at 419 mm reading distance  |   |
| Minimum resolution              | 0.127 mm   |   |
| Code types                      | All popular bar codes  |   |
| Batch function                  | 500 codes (UPC) with 12 digits   |   |
| Optical indicators              | LED for Good read, low battery power and RF communication status   | LED for data transmission, system and battery power status  |
| Acoustical indicators           | Beeper for Good read and RF communication status   | Beeper for state of readiness   |
| RF- and data interface          | <ul style="list-style-type: none"> <li>- Bluetooth™ V1.2, class 2</li> <li>- 2.4 ... 2.4835 GHz (ISM band)</li> <li>- Frequency hopping</li> <li>- Data transfer rate 720 kbps</li> <li>- 10 m RF operating radius</li> <li>- Batch function to expand operating radius</li> </ul> | <ul style="list-style-type: none"> <li>- Bluetooth™ V1.2, class 2</li> <li>- Keyboard wedge for PCs and terminals</li> <li>- Wand emulation</li> <li>- RS-232 (TTL-level), optional RS-232 True via converter</li> <li>- USB</li> </ul> |
| Operating voltage               | 3.6 V DC (Li-ion battery pack)   | 4.5 ... 12 V DC   |
| Current consumption             |  | at 9 V DC: 750 mA (max. charging)   |
| Housing                         | Polycarbonate UL 94V0  |   |
| Enclosure rating                | IP 41  |   |
| EMC test                        | EN 55022 Class B, EN 55024:1998, EN 61000-3-2, EN 61000-3-3, EN 60950  |   |
| Mechanical shock                | 50 drops from 1.8 m to concrete  | 50 drops from 1.2 m to concrete   |
| Vibration                       | Withstands 5 g peak from 22 ... 300 Hz   |   |
| MTBF                            | > 80,000 h (Ground-Benign acc. to MIL-HDBK-217F)   |   |
| Weight                          | 260 g (incl. battery pack)   | 205 g (without cable)   |
| Dimensions                      | 157 mm x 135 mm x 81 mm  | 79 mm x 142 mm x 109 mm   |
| Temperature (operating/storage) | 0 ... +50 °C / -40 ... +60 °C  |   |
| Max. rel. humidity              | 95 %, non-condensing   |   |
| Exchangeable battery pack       | 1,600 mAh capacity<br>Max. 20,000 scans<br>Max. 20 h (stand by)<br>Max. 12 h (heavy usage)<br>Max. 4 h charge time   |   |

## Order information

| Type               | Description  | Order no. |
|--------------------|--|-----------|
| IT3820SR0C0B-0GB0E | Kit of IT3820SR0C0BE, IT2020-5BE, power supply unit with EU power line cable and manual; additional cable necessary! | 6033971   |
| IT3820SR0C0B-0GC0E | Kit of IT3820SR0C0BE, IT2020-5BE, power supply unit with UK power line cable and manual; additional cable necessary! | 6033972   |
| IT3820SR0C0BE      | Linear radio imager incl. Li-Ion battery pack, IP 41   | 6029311   |
| IT2020-5BE         | Radio basis station for keyboard wedge, USB, RS-232 TTL or wand emulation  | 6029312   |

## Accessories

Accessories can be found on Page 222

# IT3800i

## Reliable identification in harsh environments



The IT3800i is setting a new standard in industrial identification of linear bar codes. The newest and high performance Linear Imaging Technology reads up to 2.1 m.

As a result of a high scanning and decoding frequency the IT3800i has a great performance for multiple reads or poor quality bar codes.

The IT3800i has no moving parts, the housing is mounted with steel screws and is protected against impact by rubber bumpers. These measures result in an extremely high degree of robustness and durability.

Aside from this the IT3800i is sealed against dust and water with an enclo-

sure rating IP 54. The hand-held scanner is designed for cold industrial applications or outdoor using at all times due to a min. operating temperature of  $-30\text{ }^{\circ}\text{C}$ .

The universally designed data transmission interface enables any connection of the IT3800i to the most common PCs or terminals.

Its optical and reading performance, ergonomic design, robustness, low temperature resistance and sealed housing leads to a world class and SUV performance in Imaging Technology. The IT3800i is an ideal choice for almost all industrial applications in material handling.

### Your benefits:

- Fast and reliable bar code identification
- Standard-Range option for the identification of all popular code symbologies
- Connection to various interfaces
- Easy-to-use due to configuration via bar codes
- Setup software for easy and clear programming

### The IT3800i at a glance:

- Reading distance up to 2.1 m
- Optical and acoustical good read signal
- Flash memory for software update
- Robust, compact housing
- Ergonomic design
- IP 54 enclosure rating
- Cold resistant operating  $-30\text{ }^{\circ}\text{C}$
- 3 years warranty

## Technical data

|   |  |
|---|--|
| <b>Type</b>                             | <b>IT3800i</b>   |
| Scanner design                          | Linear hand-held imager  |
| Light source                            | Visible red light ( $\lambda = 630$ nm), laser class 1   |
| Aiming beam (optional)                  | Visible red light ( $\lambda = 650$ nm), laser class 2   |
| Ambient light compatibility             | Max. 70,000 lx   |
| Scanning/decoding frequency             | 270 Hz   |
| Versions                                | IT 3800i SR Standard Range imager  |
| Reading distance/Resolution             | 38 ... 1,067 mm/0.51 mm; 102 ... 2,083 mm/1.40 mm  |
| Reading width                           | 254 mm at 381 mm reading distance  |
| Min. resolution                         | 0.19 mm  |
| Code types                              | All popular bar codes  |
| Optical indicators                      | 1 x LED for Good Read  |
| Acoustic indicators                     | Beeper for Good Read   |
| Data interface                          | - Keyboard wedge for PCs and Terminals<br>- Keyboard emulation<br>- Wand emulation, optional Laser-Out (HHLC)<br>- RS-232 (TTL-level), optional RS-232 True<br>- USB |
| Operating voltage                       | 4.5 V ... 14 V DC  |
| Current consumption                     | - At 5 V DC: 235 mA (standby 68 mA, Switch-on 350 mA)<br>- At 12 V DC: 142 mA (standby 49 mA)  |
| Housing                                 | Polycarbonate/UL 94V0  |
| Enclosure rating                        | IP 54  |
| EMC test                                | EN 55022 Class B, EN 55024:1998, EN 61000-3-2, EN 61000-3-3, EN 60950  |
| Mechanical shock                        | 50 drops from 2 m to concrete at $-30$ °C  |
| Vibration                               | Withstands 5 g peak from 22 up to 300 Hz   |
| MTBF                                    | > 100,000 h (Ground-Benign acc. to MIL-HDBK-217F)  |
| Weight (without/with aiming beam)       | Approx. 213 g/239 g (without cable)  |
| Dimensions                              | 163 mm (165 mm with aiming beam) x 135 mm x 81 mm  |
| Temperature (ambient operating/storage) | $-30$ °C ... $+50$ °C/ $-40$ °C ... $+60$ °C   |
| Max. rel. humidity                      | 95 %, non-condensing   |

## Order information

| Type          | Description   | Order no. |
|---------------|---|-----------|
| IT3800ISR030E | Linear Imager, IP 54, with integrated decoder for RS-232 True                                     | 6028179   |
| IT3800ISR050E | Linear-Imager, IP 54, with integrated decoder for USB, keyboard wedge, RS-232 TTL, wand emulation | 6028181   |

## Accessories

Accessories can be found on Page 222

# IT4600/IT4820

## 2D code identification in any orientation



SICK has positioned the IT4600 as a solution for the future market of 2D code identification.

The hand-held scanner IT4600 identifies reliably two-dimensional (2D) symbologies (e.g. Data Matrix) and even all popular linear bar codes or stacked bar codes (e.g. Code 128 or PDF 417). In addition this unit is also able of automatically capturing OCR fonts, signatures and standard text.

A new innovative, minimised matrix camera technology combined with extremely improved decode algorithms facilitates high performance code and font identification. This video technology is also building the basis for omnidirectional scanning for any code symbology. The IT4600 has no moving parts, the

housing is mounted with steel screws and is protected against impact by rubber bumpers. These measures result in a high degree of robustness and stability. The universally designed data transmission interface enables any connection of the IT4600 to the most common PCs or terminals.

The hand-held scanner transmits the decoded information to a terminal or host over keyboard wedge/emulation, RS-232, USB or wand emulation for further processing. Its ergonomic design, robustness, fast and reliable identification of 1D/2D codes make the IT4600 the ideal choice for daily applications in offices, warehouses, logistics and for light industrial environment.

### Your benefits:

- Fast and reliable identification of poor quality matrix codes
- Identification of all popular bar codes
- OCR font identification
- Clear visualisation of the image detection area
- Reading possible in any orientation

### The IT4600/IT4820 at a glance:

- Reading distance up to 330 mm
- Flash memory for software update
- Robust, compact housing
- Ergonomic design
- 3 years warranty

## Technical data

| Type                            | IT4600g  | IT4600r          | IT4820  | IT2020   |
|---------------------------------|--|------------------|---|--|
| Product                         | 2D Code Hand-Held Scanner  |                  |   | Base and charging station                                      |
| Light source                    | Illumination LED: Visible red light ( $\lambda = 630$ nm), Aiming LED: Visible green light ( $\lambda = 530$ nm)   |                  |   |  |
| Ambient light compatibility     | Max. 100,000 lx  |                  |   |  |
| Versions                        | IT46xxSR Standard Range imager<br>IT46xxSF Smart Focus imager  |                  | IT4820SR Standard Range imager<br>IT4820SF Smart Focus imager     |  |
| Reading distance                | 5 ... 224 mm (SF version), 5 ... 330 mm (SR version), (depending of code resolution)   |                  |   |  |
| Reading width                   | 110 x 70 mm <sup>2</sup> at 228 mm reading distance  |                  |   |  |
| Min. resolution                 | 0.20 mm/0.19 mm (SR/SF) with linear bar code, 0.38 mm/0.25 mm (SR/SF) with Data Matrix code  |                  |   |  |
| Code types                      | Matrixcodes: Maxicode, Data Matrix, QR-Code, Atztec, OCR Fonts: OCR-A, OCR-B, stacked bar codes: PDF 417, Micro PDF, Code 49, linear bar codes: all popular symbologies, Postnet   |                  |   |  |
| Horizontal motion tolerance     | Up to 10 cm/sec.   | Up to 50 cm/sec. | Up to 10 cm/sec.  | Up to 10 cm/sec.   |
| Batch function                  |  |                  | 500 codes (UPC) with 12 digits                                    |  |
| Optical indicators              | 1 x LED for Good read  |                  | 1 x LED for Good read, low battery and RF communication status    | 2 x LED for data transmission, system and battery power status |
| Acoustical indicators           | Beeper for Good read   |                  | Beeper for Good read and RF communication status                  | Beeper for system status and RF communication status           |
| RF and data interface           | IT4600 and IT2020: Keyboard wedge for PCs and terminals, USB, RS-232 (TTL-level), wand emulation, optional (IT4600 only) Laser-Out (HHLC) and RS-232 True<br>Only IT4820 and IT2020: Bluetooth™ V1.2, Class 2/10 m RF operating radius/Batch function to expand operating radius |                  |   |  |
| Operating voltage               | 4.5 V ... 14 V DC  |                  | 3.6 V DC (Li-ion battery pack)                                    | 4.5 V ... 12 V DC  |
| Current consumption             | At 5 V DC: 375 mA (standby 46 mA)  |                  |   | At 9 V DC: 750 mA (max. charging)                              |
| Enclosure rating                | IP 41  |                  |   |  |
| EMC Test                        | EN 55022 Class B, EN 55024:1998, EN 61000-3-2, EN 61000-3-3,   |                  | EN 55022 Class B, EN301 489-1, 17, EN 300 328-1, 2                |  |
| Mechanical shock                | 50 drops from 1.8 m to concrete  |                  |   | 50 drops from 1.2 m to concrete                                |
| Vibration                       | Withstands 5 g peak from 22 up to 300 Hz   |                  |   |  |
| MTBF                            | > 80,000 h (Ground-Benign acc. to MIL-HDBK-217F)   |                  |   |  |
| Weight                          | Approx. 185 g (without cable)  |                  | Approx. 260 g (incl. battery pack)                                | Approx. 205 g (without cable)                                  |
| Dimensions                      | 157 mm x 135 mm x 81 mm  |                  |   | 79 mm x 142 mm x 109 mm  |
| Temperature (operating/storage) | 0 °C ... +50 °C/-40 °C ... +60 °C  |                  | 0 °C ... +50 °C/-20 °C ... +35 °C                                 | 0 °C ... +50 °C/-40 °C ... +60 °C                              |
| Max. rel. humidity              | 95 %, non-condensing   |                  |   |  |
| Exchangeable Li-Ion battery     |  |                  | 1,600 mAh capacity<br>Max. 20,000 scans<br>Max. 4 h charging time |  |

## Order information

| Type                   | Description   | Order no.             |
|------------------------|---|-----------------------|
| IT4600GSR031CE         | 2D Code hand-held scanner, RS-232 True  | 6028680 <sup>*)</sup> |
| IT4600GSF031CE         | 2D Code hand-held scanner, RS-232 True  | 6028636 <sup>*)</sup> |
| IT4600GSR051CE         | 2D Code hand-held scanner, RS-232 TTL, wand emulation, keyboard wedge, USB  | 6028681 <sup>*)</sup> |
| IT4600GSF051CE         | 2D Code hand-held scanner, RS-232 TTL, wand emulation, keyboard wedge, USB  | 6028637 <sup>*)</sup> |
| IT4600RSR051CE         | 2D Code hand-held scanner, RS-232 TTL, wand emulation, keyboard wedge, USB  | 6034907 <sup>*)</sup> |
| IT4800RSF051CE         | 2D Code hand-held scanner, RS-232 TTL, wand emulation, keyboard wedge, USB  | 6034908 <sup>*)</sup> |
| IT4820SROC1CB-OGBOEKIT | Kit consisting of IT4820SR, IT2020-5BE power supply unit with EU power line cable and manual; additional cable necessary! | 6034038               |
| IT4820SFOC1CB-OGBOEKIT | Kit consisting of IT4820SF, IT2020-5BE power supply unit with EU power line cable and manual; additional cable necessary! | 6034040               |
| IT4820SROC1CBE         | 2D radio imager IT4820SR, incl. Li-ion battery pack, IP 41  | 6029310               |
| IT4820SFOC1CBE         | 2D radio imager IT4820SF, incl. Li-ion battery pack, IP 41  | 6029309               |
| IT2020-5BE             | Base- and charging station for keyboard wedge, USB, RS-232 TTL or wand emulation  | 6029312               |

<sup>\*)</sup> For commissioning an interface cable and if necessary a power supply unit are additionally required.

Accessories can be found on Page 222

# IT4800i/IT4820i

## Industrial identification of 2D codes



The hand-held scanner IT4800i reliably identifies two-dimensional (2D) symbologies and even all popular linear bar codes and stacked bar codes (e.g. Data Matrix, PDF 417, Code 128, RSS limited & expanded). The IT4800i has no moving parts, the housing is mounted with steel screws and is protected against impact

by rubber bumpers. These measures result in a high degree of robustness and stability. The IT4800i is also available as cordless version IT4820i. Moreover codes which are scanned out of the radio range can be stored inside the scanner. Another highlight is the possibility of fast, tool-free battery change.

### Your benefits:

- Fast and reliable identification of poor quality matrix codes and linear bar codes
- Bar/2D code and OCR-A/-B identification in one device
- Image acquisition optionally
- Omnidirectional scanning

### The IT4800i/IT4820i at a glance:

- Reading distance up to 330 mm
- RS-232, PS/2 and USB interfaces
- IP 54 enclosure rating
- Robust, compact housing
- Ergonomic design
- Cordless version IT4820i
- Cold resistant operating up to -10 °C

## Technical data

| Type                                       | IT4800i  | IT4820i  | IT2020   |
|--|--|--|--|
| Scanner design                             | 2D code hand-held scanner  |  | Base and charging station  |
| Light source                               | Visible red light ( $\lambda = 630$ nm), LED class I device  |  |  |
| Ambient light compatibility                | Max. 100,000 lx  |  |  |
| Rotational sensitivity                     | Omnidirectional  |  |  |
| Versions                                   | IT4800i SR Standard Range 2D imager<br>IT4800i SF Smart Focus 2D imager  | IT4820i SR<br>IT4820i SF   |  |
| Reading distance/<br>resolution            | 76 ... 180 mm/0.21 mm with linear bar code (SR Version)<br>46 ... 246 mm/0.38 mm with Data Matrix code (SR Version)  |  |  |
| Reading width                              | 110 x 170 mm <sup>2</sup> at 228 mm reading distance   |  |  |
| Min. resolution                            | 0.19 mm with linear bar code (SF Version)<br>0.25 mm with Data Matrix code (SF Version)  |  |  |
| Code types                                 | <ul style="list-style-type: none"> <li>- Matrix codes: Maxicode, Data Matrix, QR Code, Atztec</li> <li>- OCR fonts: OCR-A, OCR-B</li> <li>- Stacked bar codes: PDF 417, Micro PDF, Code 49</li> <li>- Linear bar codes: all popular symbologies, Postnet</li> <li>- RSS 14, RSS limited, RSS expanded</li> </ul> |  |  |
| Optical indicators                         | 1 x LED for Good Read  | 1 x LED for Good Read,<br>low battery power and RF<br>communication status | 2 x LEDs for data transmission,<br>system and battery power status |
| Acoustical indicators                      | Beeper for Good Read   | Beeper for Good Read/RF<br>communication status                            | Beeper for state of readiness/RF<br>communication status           |
| Data interface                             | <ul style="list-style-type: none"> <li>- IT4800i: PS/2, USB, RS-232 TTL + True</li> <li>- IT4820i/IT2020: PS/2, USB, RS-232 TTL, optional RS-232 True via converter</li> </ul>   |  |  |
| Operating voltage                          | 4.5 ... 14 V DC  | 3.6 V DC (Li-ion battery<br>pack)  | 4.5 ... 9 V DC (max. 12 V DC via host port)                        |
| Current consumption                        | <ul style="list-style-type: none"> <li>- At 5 V DC: 375 mA (standby 46 mA)</li> <li>- At 12 V DC: 165 mA (standby 37 mA, switch-on 225 mA)</li> </ul>  |  | At 9 V DC: max. 750 mA (when charging)                             |
| Housing                                    | Polycarbonate/UL 94V0  |  |  |
| Enclosure rating                           | IP 54  |  | IP 41  |
| EMC test                                   | EN 55022 Class B, EN 55024:1998, EN 61000-3-2, EN 61000-3-3, EN 60950  |  |  |
| Mechanical shock                           | 50 drops from 2 m to concrete  |  | 50 drops from 1.2 m  |
| Vibration                                  | Withstands 5 g peak from 22 up to 300 Hz   |  |  |
| MTBF                                       | > 82,000 h (Ground-Benign acc. to MIL-HDBK-217F)   |  |  |
| Weight                                     | Approx. 213 g (without cable)  | Approx. 272 g (incl.<br>battery pack)                                      | Approx. 205 g (without cable)                                      |
| Dimensions                                 | 163 mm x 135 mm x 81 mm  |  | 79 mm x 142 mm x 109 mm  |
| Ambient temperature<br>(operating/storage) | -10 °C ... +50 °C / -40 °C ... +60 °C  |  | 0 °C ... +50 °C /<br>-40 °C ... +60 °C                             |
| Max. rel. humidity                         | 95 %, non-condensing   |  |  |

## Order information

| Type             | Description  | Order no.             |
|------------------|--|-----------------------|
| IT4800iSR031CE   | 2D imager, IP 54, omnidirectional reading with integrated decoder for RS-232 True  | 6028682 <sup>*)</sup> |
| IT4800iSF031CE   | 2D imager, IP 54, omnidirectional reading with integrated decoder for RS-232 True  | 6028634 <sup>*)</sup> |
| IT4800iSR051CE   | 2D imager, IP 54, omnidirectional reading with integrated decoder for USB,<br>keyboard wedge, RS-232 TTL, wand emulation | 6028683 <sup>*)</sup> |
| IT4800iSF051CE   | 2D imager, IP 54, omnidirectional reading with integrated decoder for USB,<br>keyboard wedge, RS-232 TTL, wand emulation | 6028635 <sup>*)</sup> |
| IT4820iSRUSB Kit | Kit consisting of IT4820iSRE, IT2020, USB cable, EU power supply unit and manual   | 6034076               |
| IT4820iSFUSB Kit | Kit consisting of IT4820iSFE, IT2020, USB cable, EU power supply unit and manual   | 6034078               |
| IT4820iSRE       | 2D radio imager, omnidirectional reading with integrated Li-ion battery pack, IP 54                                      | 6034079               |
| IT4820iSFE       | 2D radio imager, omnidirectional reading with integrated Li-ion battery pack, IP 54                                      | 6034080               |
| IT2020-5BE       | Base station for keyboard wedge, USB, RS-232 TTL or wand emulation   | 6029312 <sup>*)</sup> |

<sup>\*)</sup> For commissioning an interface cable and a power supply unit are additionally required.

Accessories can be found on Page 223

# IT6300DPM and IT6320DPM

## Identification of direct part marked codes



The IT6300DPM series is redefining the identification of direct part marked codes.

Whether the task is production control, component identification, complete traceability, protection against illegal copying, etc. – direct part marking of codes is becoming an increasingly popular tool.

The devices use a special illumination concept which can be configured specifically to each application. It is possible, for example, to enable, disable or combine four illumination segments. Dark field illumination for instance, often needed when reading laser etched or dot-peened codes, is now possible.

An additional unique feature is the additional diffusor, a diffuse light source,

ideal for reducing reflections when reading codes on highly reflective surfaces.

The decoding algorithms within the scanner are designed especially for dealing with the challenges of direct part marking. It is therefore now possible to find and decode even low contrast or bad quality codes.

The DPM hand-held scanners are available in tethered as well as in cordless versions.

By combining innovative optics, specialised software and high robustness the IT6300DMP series is the ideal solution for discerning users wishing to take advantage of the benefits offered by direct part marking.

### Your benefits:

- One device capable of reading various marking technologies
- Low contrast or highly reflective codes are identified reliably
- Robustness and ergonomics ensuring reliability under harsh conditions
- Cordless version for more freedom of movement

### The IT6300DPM at a glance:

- Illumination adjustable to application
- Decoding algorithms specialised for DPM codes
- USB, RS-232, PS2 interfaces
- Cordless Bluetooth™ class 2 version
- Robust IP 54 housing

## Technical data

| Type                            | IT6300DPM  | IT6320DPM  | Basisstation IT2020  |
|---------------------------------|--|--|--|
| Illumination                    | Integrated diffuser, configurable LED segments   |  |  |
| Aiming                          | Horizontal, green aiming line  |  |  |
| Sensor                          | 1,280 x 960 Pixel  |  |  |
| Reading area                    | Standard version: Contact up to approx. 5 cm (depending on code size and quality)<br>Long range version (LR): like standard version plus additional up to approx. 15 cm with 1D codes on standard labels |  |  |
| Code types                      | 2D: Data Matrix, QR-Code, MicroQR-Code<br>1D: EAN13, UPC-A, EAN8, UPC-E, 2/5 Interleaved, Code 39, Code 128, Code 93   |  |  |
| Min. resolution                 | Standard version: 0.13 mm<br>Long Range version: 0.19 mm   |  |  |
| Optical indicators              | LED for Good Read  | LED for Good Read, low battery and radio connection status             | LED for data transfer, system and battery status                             |
| Acoustical indicators           | Beeper for Good Read   | LED for Good Read, low battery and radio connection status             | Beeper for system status   |
| Interfaces                      | PS2, USB, RS-232 (TTL-level)   | Bluetooth™ class 2   | Bluetooth™ class 2, PS2, USB, RS-232 (TTL-level), RS-232 TRUE-level optional |
| Operating voltage               | 5 V DC   | 5 V DC   | 9 V DC   |
| Battery                         |  | Lithium-ion, 8 h capacity within normal use and fully charged at 25 °C |  |
| Housing                         | Polycarbonate with shock-absorbing rubber bumpers  |  |  |
| Enclosure rating                | IP 54  | IP 54  | IP 41  |
| Mechanical shock                | 50 drops from 2 m height on concrete   | 25 drops from 2 m height on concrete                                   | 50 drops from 1 m height on concrete   |
| Temperature (operation/storage) | -10 ... +50 °C/-40 ... +70 °C  | 0 ... +50 °C/-40 ... +60 °C  | 0 ... +50 °C/-40 ... +60 °C  |
| Max. rel. humidity              | 95 %, non condensing   |  |  |
| Dimensions                      | 134 mm x 84 mm x 175 mm  | 134 mm x 84 mm x 175 mm  | 79 mm x 142 mm x 109 mm  |
| Weight                          | 270 g (without cable)  | 330 g (incl. battery)  | 205 g (without cable)  |

## Order information

| Type                | Description   | Order no. |
|---------------------|---|-----------|
| IT6300DPM           | DPM imager with integrating decoder for USB, keyboard wedge, RS-232 TTL   | 6032812   |
| IT6300DPM-LR        | DPM imager with integrating decoder for USB, keyboard wedge, RS-232 TTL (Long Range version)  | 6035059   |
| IT6320DPM Kit EU    | Kit consisting of cordless DPM imager IT6320DPM, base station IT2020, USB cable, european power supply, quick start manual and configuration software       | 6032813   |
| IT6320DPM-LR Kit EU | Kit consisting of cordless DPM imager IT6320DPM, base station IT2020, USB cable, european power supply, quick start manual and configuration software       | 6035060   |
| IT6320DPM Kit UK    | Kit consisting of cordless DPM imager IT6320DPM, base station IT2020, USB cable, United Kingdom power supply, quick start manual and configuration software | 6032883   |
| IT6320DPM           | Cordless DPM imager IT6320DPM   | 6032814   |
| IT6320DPM-LR        | Cordless DPM imager IT6320DPM-LR  | 6035061   |

## Accessories

Accessories can be found on Page 223