IT 3870/ST 5770/2070
Bar Code Hand-Held Scanner
Hand-Held Line

Cordless Hand-Held Bar Code Scanner IT 3870/ST 5770/2070

The outstanding feature of this product family is the online data transmission of bar code information via radio frequency. This means, that after successfully reading a bar code the data is transmitted cordless to the associated base station. The base station is then responsible for the communication with a terminal or PC. Cordless scanning brings a new level of flexibility and productivity to all applications using automatic data collection. Additionally it improves the safety conditions by avoiding accidents and injury as a result of cables becoming entangled in equipment and machinery.

The IT 3870 is based upon innovative linear imaging technology to identify bar codes in a maximum reading distance of 350 mm. As an alternative the ST 5770 is offering all the benefits of laser based technology combined with RF data transmission. The maximum reading distance of this device for low density bar codes is as far as 2.5 m with a remarkable depth of field.

Both cordless scanners are designed to communicate with the ST 2070 base station.

This device supports up to 9 scanners simultaneously – each could be programmed to solve various application tasks. For the RF communication between the hand-held scanner and the base station a very resistant data transmission is used, which is based on frequenzy hopping at the 2.4 GHz ISM band. The ST 2070 transmits the decoded bar code data via cable and standard interfaces to the higher control unit, personal computer or terminal.

Another unique feature is the concept of the power-supply for the cordless hand-held scanners. Each unit is equipped with a removable battery including the charging electronic. These are rechargeable by plugging into the public main. Therefore using a second battery allows the non stop use of the scanners and will increase the productivity during the manufacturing process and the economic use of advanced RF hand-held bar code scanners.

Benefits:

- Elimination of cables
- Increased mobility of the operator
- Robust license-free system delivers reliable, online, and error-free communication
- Each base station supports multiple scanners simultaneously
- Removable and rechargeable batteries making non stop operation possible

The IT 3870/ST 5770/2070 at a glance:

- Broad range coverage up to 730 m^2
- 2.4 GHz radio frequency to transmit data
- Sealed housing which is water and dust resistent according to IP 54/IP 53 rating

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Technical Data

Type	IT 3870/ST 5770/2070
Scanner design	IT 3870: Linear Imager Hand-Held Scanner
	ST 5770: Hand-Held Laser Scanner
	ST 2070: Base Station
Light source	IT 3870: visible red light (λ = 630 nm), Laser Class II
	ST 5770: visible red light (λ = 650 nm), Laser Class II (USA)/Laser class IIIa (Europe)
Ambient light compability	Max. 100.000 lux
Scanning/decoding frequency	270 Hz (IT 3870), 36 Hz (ST 5770)
Reading distance/resolution	IT 3870 LX : 75 ... 250 mm: 0.19 mm
	IT 3870 HD : 137 ... 167 mm: 0.19 mm
	IT 3870 PDF : 25 ... 160 mm: 0.19 mm
	ST 5770 STD : 0 ... 355 mm: 0.33 mm
	ST 5770 ALR : 560 ... 1090 mm: 0.38 mm
Minimum resolution	0.076 mm (IT 3870 HD)/0.127 mm (IT 3870 PDF, ST 5770 STD)/0.17 mm (IT 3870 LX)/0.33 mm (ST 5770 ALR)
Code types	All popular bar codes
Optical/acoustical indicators	1 x LED for Good Read/beeper for Good Read
Data interfaces	ST 2070: Keyboard wedge for PCs and Terminals/Keyboard emulation/Wand emulation/RS 232 True
Radio frequency	2.4 ... 2.4835 GHz (ISM band), Frequenzy Hopping Spread Spectrum
Radio data rates	1 MBit/s
Operating voltage	ST 2070: 4 ... 14 V DC
Current consumption	Operating/Standby: 425 mA/30 mA (IT 3870); 210 mA/max. 400 mA at 4.8 V DC (ST 5770)
	Operating: 325 mA at 5 V DC (ST 2070)
Housing	Polycarbonate/ABS-plastic
Enclosure rating	IP 54 (IT 3870/ST 5770)/IP 53 (ST 2070)
Mechanical shock	26 drops from 1.2 m (ST 2070)/1.8 m (IT 3870/5770) to concrete at room temperature
Dimensions	IT 3870: 147 mm x 216 mm x 81 mm; ST 5770: 152 mm x 210 mm x 78 mm
	ST 2070: 115 mm x 102 mm x 36 mm
Weight	IT 3870/ST 5770: 450 g including charge pack; ST 2070: 210 g without cable
Temperature (ambient operating/storage)	IT 3870: 0 °C ... + 50 °C/– 30 °C ... + 60 °C; ST 5770: – 20 °C ... + 50 °C/– 30 °C ... + 70 °C
	ST 2070: – 20 °C ... + 50 °C/– 40 °C ... + 70 °C
Rel. Humidity	0 ... 95 %, non-condensing
Removable NiMH-battery charge pack	Capacity: 4.8 V DC/min. 1000 mAh (Capacity)
	Number of scans: 18,000
	Expected hours of operation: 25 h (1 scan every 5 seconds), Charge time: 6 h

Order No.	Product
6 022 231 [2]	IT 3870 LX-B2, including NiMH charge pack (Long Range)
6 022 232 [2]	IT 3870 HD-B2, including NiMH charge pack (High Density)
6 022 233 [2]	IT 3870 PDF-B2, including NiMH charge pack (PDF 417 and linear barcode)
6 020 922 [2]	ST 5770 STD- B2, including NiMH charge pack (Standard Range)
6 022 223 [2]	ST 5770 ALR-B2, including NiMH charge pack (Long Range)
6 020 923 [1] [2]	ST 2070-1B (base station), RS 232 True or keyboard wedge
On request	Additional products like interface cables for the connection of ST 2070 to various terminals and keyboards or power supply unit and other accessories

[1] Note: For setting-up operation, an interface cable and a power supply unit are additionally required

[2] Radio Software version B for Belgium, Denmark, Finland, Germany, Greece, Iceland, Irland, Italy, Luxembourg, Netherland, Portugal, Slovenia, South Africa, Sweden, Switzerland, Turkey and United Kingdom. On request other countries are available.

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