

S4000T Series

Lightweight 4" (111mm) Portable Receipt Printer with Loads of Options

✓ Designed for multiple applications

- Lightweight – weighs 1.3 lbs (with paper and battery)
- Compact, contemporary design
- Durable and reliable design
- Easy to wear all day long
- In-vehicle option*
- Desktop use option*

✓ Trouble-free operation

- Ready to use - portable version comes complete with paper, adaptor, and battery
- Highly Integrated Arm-7 32 bit Microcontroller:
 - Flash Memory – Add logos, Bar Codes, and other Graphic elements
 - Faster Printing – Reduces Print Time per Receipt
- High capacity Lithium-Ion battery – More Receipts per Charge
- In-field programming – Update Firmware, Download Fonts and Logos
- Drop in Paper Loading System
- 12 month warranty (including printhead)
 - Optional extended warranty programs available

✓ Multiple communications options

- RS232
- Field tried, robust IrDA communication systems included as standard
- Optional integrated Bluetooth™
- Optional WLAN 802.11b/g
- Optional 3-Track Magnetic Card Reader
- Optional Smart Card Reader

✓ Typical applications include

- Field Service: Invoicing
- Route Accounting: Presales and Direct Store Delivery
- Ticketing: Transportation
- Ticketing: Public Safety



S4000T Design Details:

Power:

- Powered by extra capacity Lithium-Ion battery cartridge (7.4V; 2200 mAh)
- Battery charges internally or externally

Highly Integrated Arm-7 32 bit Microcontroller by ST-Electronics

- Flash based integrated CPU contains firmware, resident fonts, rotated fonts, downloadable fonts, graphics, logos, and bar codes
- Manages all the features supported by the printer

Low Power Precision Regulator Circuits

- 8 bit 2 channel A/D circuit to measure system and printer mechanism voltage levels, battery and thermal print head temperature
- Fail safe and CPU watchdog circuits

Seiko Thermal Print Head (rated up to 2" per second at 7.2V)

- Easy load clamshell style paper load system with press button release for paper door
- Automatic thermal print contrast control (voltage and temperature dependent)
- High speed, high resolution print
- Built-in detectors to monitor voltage and paper-out.

Easy to Intergrate:

- Multiple communication interfaces including Serial, IrDA and Bluetooth™ and WLAN 802.11b/g
- MS-DOS and Windows compatible with full-speed handshake
- Print drivers available for Windows 95, 98, 2000, XP
- Print utilities available for most Mobile Operating Systems (including Windows CE, Pocket PC, .NET, WM5 and Palm)

Special Features:

- Resident fonts to enable printing from 10 to 26 characters per inch
- Printer is in-field programmable for firmware, font and logo setup
- Optional integrated Magnetic Card Reader and/or Smart Card Reader
- Two-bay battery charger



S4000T in environmental case



S4000T with Magnetic Card Reader

*See separate specification sheet for details of vehicle and desktop printer versions

Print Mechanism:

Printing Method:	Direct Thermal
Print Resolution:	203 dpi/ 8 dots mm
Dots per Line:	832
Printing Width:	4.1" (104mm)
Paper Feed Pitch:	0.125mm
Printer Speed:	Up to 2" per second (50mm/sec) @ 7.2 Volts (actual print speed is dependent on state of battery, temperature and nature of application)
Number of Heat Elements:	1 heater/dot, 170 ohms/dot
Head Temperature Detection:	By thermistor with hardware protection against overheating
Paper-out/Q-Mark/(TOF) Detection:	By photo interrupter
Operating Voltage:	5V
Current Consumption:	2.4A @ 64 dots
Reliability:	100 million MCTF (mean characters until fail) @ 25% density

Operating Characteristics:

Character set:	ASCII International, PC Line Draw
Additional Character Sets:	Simplified/Traditional Chinese, Hebrew, Arabic, Polish, Korean, Vietnamese, Turkish
Optional Character Sets:	Downloadable fixed-width fonts
Graphic print:	Supports 8-bit graphic printing, page printing, custom fonts and logo downloading
Bar code Symbolologies:	
Linear:	Codes 39, Code128, UCC/EAN-128, Interleaved2 of 5, UPC-A, UPC-E, EAN/JAN-8, EAN/Jan-13, Codabar, PDF417
2 Dimensional:	PDF417
Supervisory commands:	Commands available to read battery voltage, buffer status, firmware and hardware version
Memory:	
RAM:	256KB + 1MB
Flash:	1MB (internal) 1MB (external)
Characters per line:	40, 52, 69, 80, 92, 104 (s/w command)
Print contrast:	Auto and user selectable
Print Character Attributes:	Double high, double wide bold print, underline printer and reverse print

Communication:

Interface:	
Standard:	RS232C (up to 115.2KB depending on computer capability) IrDA (up to 115.2KB depending on computer capability)
Optional:	Bluetooth™ v. 1.2 (optional) WLAN 802.11b/g (optional)
Dip Switch Selectable	
Baud Rate:	2400 – 115.2KB
Handshaking:	Hardware (CTS/RTS) and/or Software (XON/XOFF)

Print Media:

Media Type:	Direct Thermal Paper and Tag Stock, Limited Label Support
Paper Width:	4.375" (111mm)
Max Roll Size:	105' @ OD: 2.0" (Standard paper is Kansaki P390)
Roll Core ID:	0.4"
Lines of Print/Roll:	4400 (2.0" diameter roll, 0.4" core, approx. 105 feet long)
Paper Rolls per Charge:	~ 4
Lines per Charge:	~ 17,500 (4" receipt followed by 60 second delay then repeat)

(For optimum print quality and printer performance, use Extech supplied paper)

Power:

Battery:	Internal rechargeable 2 cell Lithium-Ion (7.4V; 2200 mAh)
Battery Life:	80% of original capacity after 300 cycles
Recharging:	3 hours@ fast rate charge (at empty)
External Charging Options:	
DC Power Pack:	100-240V output, 10V/1.4 A DC/AC UL listed adaptor standard (in-printer charging)
In-Vehicle Charger:	12V/24V Cigarette Lighter adaptor
Power ON/OFF:	Power ON/OFF switch, or by raising RTS input; or sending a single character through serial input. Auto power down timer, can be set or disabled through user application.

Software:

Extech Logo downloading utility
Extech Bluetooth™ configuration utility
Extech Form Fiesta page printing utility

User Interface:

Status indicators:	Status indicators: 3 LEDs (2 are multi functioning) - Power/Communication Mode, Battery Status/Charging, Ready/Fault
User switches:	2 switches – On/Off, Feed
Connection:	RJ type (6 pin) for Data I/O Infra-Red (IrDA) with Ambient Light Filter Bluetooth™ v 1.2 (optional) WLAN 802.11b/g (optional) Magnetic Card Reader (optional) Smart Card Reader (optional)

Mechanical:

Construction:	Cyclocac KJW Enclosure
Dimensions:	7.5"W x 6.25"L x 2.5"H (190W x 158.7L x 63.5H mm)
Weight:	
Printer Only:	11lb 4oz (567g)
Printer with paper & battery:	11lb 14oz (850g)
Warranty:	
Standard:	One year standard
Optional:	Up to 5 years available at extra charge
OEM Products:	Design services available

Environmental Specifications:

Operating Temperature:	14° to 122°F (-10° to 50°C)
Storage Temperature:	-4° to 140°F (-20° to 60°C)
Charging Temperature:	32° to 122°F (0° to 50°C)
Humidity:	10 - 90% RH (non-condensing)
Drop:	Exceeds industry standard for drop

Agency Approvals:

FCC: Part 15 Subpart B, Class B	Conforms to ANSI/UL STD 60950 and Certified to CAN/CSA STD C22.2 No. 60950-00
CE: EN60950	
CE: EN55022 Class B;	60950-00
CE: EN61000-3-2;	CB Certified, No. 60950-00
CE: EN61000-3-3;	GS Certified, #04US00384-1
CE: EN50024	ETL Listed, control # 3046813
AS/NZ: 3548 Class B	IEC 68 certified
Complies with EMC Directive 89/336/EEC and Low Voltage Directive 73/23/EEC	IP54 Rated (with Environmental Case)

Ordering Information:

The S4000T series comes standard with IrDA, RS-232, battery, 1 roll of paper, Universal AC Adaptor (180-minute Fast Charge) and a 1 year warranty that includes the print head.

7861811	S4000T with RS-232 and IrDA Interface (Universal Adaptor)
[]	add "R" for 3-Track Magnetic Card Reader (e.g. 7862811R)
[]	add "S" for Smart Card Reader
[] []	add "RS" for Magnetic Card Reader and Smart Card Reader
- []	add "-1" for Bluetooth option (e.g. 7861811R-1)
- []	add "-2" for WLAN 802.11b/g option

Accessories:	
756998-2	Belt Loop System
756984	IP54 Certified Environmental Case
757351	Shoulder Strap with Quick Clip
157260	Universal AC Adaptor (US, UK, EURO, and Australian)
757064	Spare paper, pkg. of 5 rolls
757064-CASE	Spare paper (Case of 50 rolls)
7A100014	Spare battery (2200 mAh)
767400-1	2-bay battery charger (US plug)
767400-2	2-bay battery charger (EURO plug)
767400-4	2-bay battery charger (UK plug)
5892RJD9	Coiled Cable (RJ to D9)
151133	12V/24V In-Vehicle Adaptor (with battery in printer)

*Specifications subject to change without notice
Copyright © 2007 Extech Instruments Corporation.*

All rights reserved including the right of reproduction in whole or in part in any form.