EXTECH INSTRUMENTS

S4500THS/S4000T Series

Lightweight 4" (112mm) Receipt Printers with Three Wireless Options

Advantages

- Designed to withstand rigors of mobile computing
- Contemporary, lightweight, robust printer
- Over-molding on S4500THS for additional protection in rugged environments
- Easy "drop-in" paper loading
- Easy to wear all day long with belt loop system or shoulder strap
- New high speed communication system for IrDA, Bluetooth and Serial modes
- A field tried, robust IrDA communication system included as standard
- More receipts per charge with high capacity Lithium Ion battery
- Faster printing to reduce the time to print each receipt
- State-of-the art integrated ARM-7 micro-processor
- Flash memory—add logos, bar codes and other graphic elements
- Optional built-in ISO standard 3-track micro magnetic-card-readers and/or smart card reader
- Optional integrated Bluetooth™ or 802.11b module for state-of-the-art wireless communication
- Full 12 month warranty including print head

4500THS

4000T

New S4500THS/S4000T Design Details

Highly Integrated Arm-7 32 bit Microcontroller by ST-Microelectronics:

- Flash based Integrated CPU contains firmware, resident fonts, rotated fonts, downloadable fonts, graphics, logos, and bar codes
- Incorporates Flash and SRAM memory
- 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 circuit

SEIKO thermal print head (rated at 2" per second at 7.2V):

- Easy Load Clamshell style paper load system with push 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.

Fast charge circuit with auto switch to top-off charge:

- Power adapter option, auto switch to AC power when charging adapter is used
- Hardware and software power management
- New extra capacity Lithium Ion battery cartridge (2200 mA/h)

Easy to Integrate:

- Multiple Communication Interfaces including IrDA, Bluetooth and 801.11b
- MS-DOS and Windows compatible with full-speed handshake
- Print Drivers available for Windows 95, 98, 2000, XP
- Print Utilities available for CE (including Windows CE; Pocket PC, .NET) and Palm-based operating systems

Special Features:

- Resident fonts to enable printing from 10 to 26 characters per inch
- Protective elastomer bumpers on S4500THS
- Printer is in-field programmable for firmware, font and logo setup
- Optional integrated magnetic card reader and/or smart card reader
- Two-bay battery re-charger

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EXCELLENCE IN TECHNOLOGY

EXTECH 1 Year Warranty

Print Mechanism:

Printing Method:	Thermal dot line printing
Dot Per Line:	832
Number of heat elements:	1 heater/dot, 170 ohms/dot
Printing Width:	104mm
Resolution:	8 dots/mm
Paper feed pitch:	0.125mm
Printing speed:	50mm/sec linear @ 7.2 Volts 25% print density
Head Temperature detection:	By thermistor with hardware protection against overheating
Paper-out/TOF detection:	By photo interrupter
Operating Voltage:	5V
Current Consumption:	2.4A @ 64 dots
Reliability:	electrical - 100 million pulses mechanical - 50km

Standard Operating Features:

Character set:	ASCII International and IBM Graphic set plus downloadable option. All font tables are in-field downloadable.
Graphic print:	Bit addressable graphic command set graphic logo store and print. Black or Q-Mark Sensing
Bar codes:	Codes 39,128, 2 of 5, UPC-A, UPC-E, UPC/EAN-8 UPC/EAN-13, Codabar, and 2-D barcode (PDF 417)
Supervised operation:	Supervisory command set to read battery voltage, Print head temperature, buffer status, power management and Firmware version
Line Buffering:	32K standard
Characters per line:	40 or 80 (s/w command)
Character Size:	@40 ch/line 23h x 20x (mm) @80 ch/line 23h x 10w (mm)
Print contrast:	Auto and user selectable
Print Output:	Double high, double wide bold print, underline print and reverse print
Optional:	Downloadable fonts, logos, forms

Communication:

Interface:	RS232C and IrDA standard; Bluetooth option: 802.11b option
Baud Rate:	2400, 9600, 19200, 38400, 57600, 115200 baud, dip switch select
Fast IrDA Transfer Speed:	Up to 115K depending on computer capability
Std.IrDA Transfer Speed:	9600 connect and transfer
Handshaking:	CTS/RTS and/or XON/XOFF

Print Media:

Paper Width:	112mm (4.125 inches)
Lines of Print/roll:	4400 (2.0" diameter roll, 0.4" core, approx. 100 feet long)
Paper Rolls per Charge:	~ 4
Lines per Charge:	~ 17,500 (4" receipt followed by 60 second delay then repeat)

Power:

Power supply:	Internal rechargeable battery with wall mount DC charging adapter
Battery:	2 cell Lithium Ion, 2200 mAh
DC Power Pack:	10V/1.4 A DC UL listed adapter standard
Battery Recharge:	Internal Fast 180 min fast charge with auto switch to top off charge; Over-voltage, Overcurrent and over-heat protection
Power ON/OFF:	Power ON/OFF switch, or by raising RTS input; or sending characters through serial input. Auto power down timer, can be set or disabled through user application.

User Interfaces/Mechanical:

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; DC input Power Jack for wall mount adapter; Infra-Red (IrDA) with Ambient Light Filter; Integrated Bluetooth radio module (optional); Integrated magnetic card reader (optional); Integrated 802.11b radio (optional); Integrated smart card reader (optional)
Dimensions:	165x190x70mm (6.5x7.5x2.75") including bumpers
Weight:	850g (30oz) with paper and battery pack
Warranty:	One year standard (3 years available at extra charge)
OEM Products:	Design services available

Environmental Specifications (Preliminary):

Operating Temperature:	-10° to 50°C
Storage Temperature:	-20° to 60°C
Humidity:	Up to 90% RH (non-condensing)
Agency Approvals:	Product Emissions and Immunity Certification

- FCC: Part 15 Subpart B, Class B CE: EN60950
- CE: EN55022 Class B;
- CE: EN61000-3-2;
- CE: EN61000-3-3;
- CE: EN50024.
- AS/NZ: 3548 Class B
- Complies with EMC Directive 89/336/EEC Product Safety Certification
- Complies with Low Voltage Directive 73/23/EEC and 93/68/EEC
- Conforms to ANSI/UL STD 60950 & Certified to CAN/CSA STD C22.2
- No. 60950-00 CB Certified
- ETL Listed, control # 3046813
- GS certified, certificate #04USO0384-1

Ordering Information:

Printer:

78628I1	S4500THS with 115K IrDA Interface (US Style Adapter) change last digit to 2 for Euro style 220V Adapter change last digit to 4 for UK style 240V Adapter
[ ]	add "R" for 3-track MCR
[ ]	add "S" for Smart Card
[ ]	add "RS" for MCR and Smart Card√ [ ] add "-1" for Bluetooth option (eg 78328I2R-1) [ ] add "-2" for 802.11b
78618I1	S4000T with RS-232 and 115K IrDA Interface (US Style Adapter) change last digit to 2 for Euro style 220V change last digit to 4 for 240V UK style
[ ]	add "R" for 3-track MCR
[ ]	add "S" for Smart Card
[ ]	add "RS" for MCR and Smart Card [ ] add "-1" for Bluetooth option (eg 78618I2R-1) [ ] add "-2" for 802.11

Accessories:

151131	Power Adapter, 12-16 VDC input vehicle adapter
756998	Belt Loop System (included as standard)
757351	Shoulder Strap
757062	Spare paper, pkg. of 5 rolls
7A100014	Spare battery
5892RJD9	Coiled Cable (RJ to D9)