microFlash® 4t /4t^e — Serial & Wireless Portable Thermal Printers

The flagship of the O'Neil Family is the microFlash 4" series of serial and wireless portable thermal printers. For wireless applications, the new 4te *enhanced* version comes with Bluetooth and 802.11b/g connectivity options. It also boasts lighting fast processing, external LED status indicators, an external charging port and quick release battery clamps. The original 4t is available in serial and IrDA configurations only.

The 4t/4te series offers the most reliable performance available, printing outstanding quality 4" receipts, proofs of delivery, labels and invoices. Small and lightweight, the 4t/4te is simply the finest choice worldwide for route accounting, direct store delivery, field service, logistics, home delivery and pre-sales systems. The 4t/4te prints direct thermal receipts and invoices, as well as linered and linerless labels. It can also print a condensed 80-column font receipt, providing a lightweight portable alternative to larger or vehicle-bound 80-column printers. Its reliable print mechanism offers outstanding print clarity, allowing the printing of graphics, bar codes and logos.

Rugged and Reliable. With uncompromising standards, the 4t/4te is engineered throughout to withstand even the most punishing portable applications, and is the only portable 4" printer that provides the durability required in the demanding field mobile environment. Designed to take multiple 6' drops to concrete, the unbreakable double-walled polyethylene case protects your investment; taking all the bumps and knocks inherent in the mobile workplace. Its rock solid print mechanism is proven to provide years of service where other printers fail. The full two year warranty, even on the printhead, offers peace of mind with our promise to stand behind every product we sell.

Wireless Printing. When wireless is a necessity, count on O'Neil to offer the most reliable solution. All wireless 4te configurations feature advanced 32-bit architecture RISC processor for light-speed processing. Our wireless local area network (WLAN) solution incorporates an integrated 802.11b/g module connecting the printer to your wireless network. Our Bluetooth® module offers the convenience of a wireless personal area network (WPAN), eliminating the need for mobile workers to return to their vehicle to print receipts or tickets. O'Neil was the first portable printer manufacturer to incorporate the Bluetooth protocol in Flash memory, eliminating the need for costly software and hardware upgrades whenever the wireless specification changes.

Power to Spare. Two Lithium-Ion batteries offer maximum power capacity for a full 8-hour shift or longer, even under the toughest conditions. The 4t/4te can print as many as 13,440", that's almost 2,240 – 6" receipts, on a single battery charge. Its automatic "sleep" mode saves power and the fast four hour recharging time, along with optional vehicle charger, provides an ideal solution for long and intense printing applications.

Flash Memory. As business changes, so might your printer needs. We pioneered the use of Flash memory many years ago allowing you to change fonts and functions simply by connecting the printer to a computer. No need to return the printer for an upgrade.

We Speak Your Language – Any Language. O'Neil has eliminated the font and character limitations found in other printers. In cooperation with Bitstream® fonts, any international character set can be added to the printer with a minimal setup fee.

> "*By upgrading the hand-held computers and printers we use for billing, we've taken another step in our effort to lighten the load on our delivery team to make it more efficient and better able to serve our 20,000 customers.*"
>
> Jacques Boivin
> *Vice President of Logistics*
> *La Brasserie Labatt*
> *Frontline Solutions Magazine*
> *May 2003*

▶ 4t Mobile Printer

The legendary 4t portable thermal printer boasts the highest reliability rating in the industry with 9 out of 10 units having never experienced a single problem after 6 years in the field.

Features include:
- Serial and IrDA connectivity
- Card reader option

▶ New! 4t^e Enhanced Mobile Printer

The 4te comes with the same reliability you've come to expect from the 4t but with enhanced capabilities and wireless connectivity.

Enhanced features include:
- Bluetooth or 802.11b/g connectivity
- Advanced 32-bit architecture RISC processor for light-speed processing
- LED lights to indicate Bluetooth, charging and power status
- External charging port
- Quick release battery clamps

Standard Features at a Glance

- 4t*e* exclusive features: wireless local area network (WLAN) or wireless personal area network (WPAN) networking technologies, advanced 32-bit architecture RISC processor, LED lights to indicate Bluetooth, charging and power status, an external DC jack for easy charging, and quick release battery clamps.
- Supports a wide variety of hand-held computers from leading manufacturers.
- Exceptional print quality (203 dpi resolution).
- Stores fonts, graphics and operating system in Flash memory.
- Supports international character sets and any Bitstream® bitmap font.
- 80-Column font for invoice printing.
- Increased label capacity using linerless label stock (optional).
- Supports the printing of graphics, linear barcodes, 2D symbologies, and signature capture.
- Intelligent power management and programmable sleep mode for extended battery life.
- Charging options include external charge contacts, a low cost AC adapter, or 12V vehicle cigarette lighter adapter.
- Optional magnetic stripe card reader.

Specification Highlights

Physical Characteristics	4t	4t*e*
Dimensions:	6.82" x 6.57" x 2.60" (173.2 x 166.9 x 66 mm)	6.71" x 6.70" x 2.70" (170.4 x 170.2 x 68.6 mm)
Weight (printer only)	17.05 oz (0.48 kg)	19.6 oz (0.55 kg)
Weight (w/ batteries & paper)	32.95 oz (0.93 kg)	35.6 oz (1.01 kg)
Drop Specification	6 ft (1.8 m)	6 ft (1.8 m)

User Environment	
Operating Temperature	-4° F to 122° F (-20° C to 50° C)
Storage Temperature	-40° F to 158° F (-40° C to 70° C)
Charging Temperature	41° F to 104° F (5° C to 40° C)
Relative Humidity	10% to 90% non-condensing
ESD Protection	15 kV Air, 8 kV Contact

Communications	
Serial	RS-232; 460.8 kbps (4t*e*) / 38.4k kbps (4t)
IrDA (4t only)	115.2 kbps
802.11b/g (4t*e* only)	
Frequency Band	2.4 to 2.4897 GHz
Data Rates	Standard 802.11b/g rates
Network Standard	IEEE 802.11b/g
Wireless Access Modes	Infrastructure and ad hoc
Wireless Medium	Direct Sequence Spread Spectrum (DSSS)
Authentication	Open or Shared key
Security Protocols	40 bit WEP, 128 bit WEP, WPA, LEAP, EAP-FAST, plus others available
Network Support	DHCP
Remote Management Support	Compatible with the O'Neil Printer Management Console and other remote management systems
Bluetooth® (4t*e* only)	
Network Environment	Ad hoc network environments
Supported Versions	v1.2 (compatible with v1.1 devices)

Print Technology	
Printhead	Direct thermal, 203 dots per inch (8 dots per mm), 4.10" (104 mm) print width
Printhead Life	Unlimited media, 2 years*
Print Mechanism Speed	2" per second (51 mm per second)

Media	
Type	Direct thermal receipt paper (standard, premium, heavy duty, long-life, image protect, hi-temp, and all weather), synthetic media, UV coated media, labels, linerless labels (optional). For optimum print quality and printer performance, use Certified O'Neil supplies.
Capacity	2.25" (57 mm) maximum roll diameter
Width	4.41" (112 mm)

Options / Accessories

- 3" Paper Adapter
- AC Adapter
- Spare Batteries
- Cigarette Lighter Adapter
- Cleaning Cards & Kits
- Data Cables for Hand-Held Devices
- DB9 Download Cable
- DC Power Extension
- 5-Bay Depot Charger Kit
- Dual External Battery Charger
- Magnetic Stripe/Smart Card Reader
- Paper/Labels
- Swivel Belt Loop
- Swivel-Mount Bracket (optional w/ charge contacts)
- Swivel-Mount Shoulder Strap

Power Source		
Battery		7.2V Lithium-Ion (Li-Ion), 2200 mAh (two batteries for a total of 4400 mAh)
DC Inputs		External DC jacks (4t*e* only), 12-15V, built-in spike and surge protection
		Optional external charge contacts, 12-15V, built-in spike and surge protection
Endurance	**4t**	Prints approx. 13,440" or 2,240 – 6" receipts on a single battery charge
	4t*e* Bluetooth	Prints approx. 6,900" or 1,150 – 6" receipts on a single battery charge (19 hours)
	4t*e* 802.11b/g	Prints approx. 5,028" or 838 – 6" receipts on a single battery charge (13.9 hours)
Battery Life		56% of original capacity after 500 cycles
Recharging		4-5 hours from AC adapter or cigarette adapter

Fonts & Languages	
Memory Capacity	Flash/RAM Memory **4t**: 512kB/128kB Flash/RAM Memory **4t*e***: 4 MBytes/2 MBytes
Standard Fonts	5.5CPI, 7.2CPI, 10.2 CPI, 10.7CPI, 15.6CPI,18.5CPI 20.4CPI, 22.6CPI & 34.0CPI (additional fonts available)
Optional Int'l Characters	Arabic, Greek, Hebrew, OCRA, OCRB, Unicode subset including Latin & Thai (additional international characters available
(available on 4t*e* only)	Asian (including Big 5, Simplified Chinese, and Shift JIS)
Bar Codes	Linear Barcodes (Code 39, UCC/EAN-128, Code 128, UPC-A, UPC-E, EAN-8, EAN-13, MSI/Plessey, Interleaved 2 of 5, Codabar 2D symbologies (PDF417, QR, AZTEC)
Graphics	Supports storage of graphics/logos in Flash memory and transient "print once" graphics

Software	
Native Easy Print®	Line Printer Mode
Device Management	O'Neil Printer Management Console (OPMC)
Drivers	Windows CE and Desktop
Label Designers	NiceLabel, Seagull Scientific, DP Designer
Software Development Kit	BlackBerry

Agency Approvals
FCC B, CE, UL/cUL

Warranty
2 years (including printer case and printhead*)

*When used with approved media grades.

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❽ Bluetooth®