



The Most Reliable Portable Printers.®

## microFlash® 4t Serial & Wireless Portable Thermal Printer

The flagship of the microFlash Family is the 4t serial and wireless portable thermal printer. This workhorse offers the most reliable performance available, printing outstanding quality 4" receipts, proofs of delivery, labels and invoices. Small and lightweight, the 4t is simply the finest choice worldwide for route accounting, direct store delivery, field service, logistics, home delivery and pre-sales systems. The 4t prints direct thermal receipts and invoices, as well as lined 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 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. The 4t's rock solid print mechanism is proven to provide years of service where other printers fail. The full one 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.

Our 802.11b wireless local area network (WLAN) solutions incorporate a user-installable Cisco® or factory installed Symbol PCMCIA card connecting the 4t 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.** The 4t's Lithium-Ion batteries offer maximum power capacity for a full 8-hour shift or longer, even under the toughest conditions. It 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 4-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 4t with a one-time 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

### ► Wireless Bluetooth® or 802.11b

Our WLAN solution incorporates a user installable Cisco PC card or factory installed Symbol Spectrum 24 PC card (PCMCIA), which connects the microFlash 4t printer to a wireless network in ad hoc peer-to-peer mode or in infrastructure mode and complies with the IEEE 802.11b interoperability standards for direct sequence wireless LANs. When the printer is configured with the integrated Bluetooth module, users can realize all of the convenience, power efficiencies and cost benefits of the WPAN.



### ► Magnetic Stripe Card Reader

The optional insertion magnetic stripe card reader provides route professionals the advantage of collecting payments and generating receipts while at the customer site. The insertion-style card reader provides outstanding reliability and is known for its ease-of-use.

# Standard Features at a Glance

- Optional wireless local area network (WLAN) or wireless personal area network (WPAN) networking technologies.
- 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, 1D and 2D bar codes and signature capture.
- Intelligent power management and programmable sleep mode for extended battery life.
- Charging options include a low cost AC adapter or 12V vehicle cigarette lighter adapter.
- Optional Magnetic Stripe and Smart Card Reader.



## Specification Highlights microFlash® 4t Serial & Wireless Portable Thermal Printer

Physical Characteristics		microFlash® 4t	microFlash® 4t Bluetooth®	microFlash® 4t 802.11b
Dimensions:		6.825" x 6.57" x 2.60" (17.3 x 16.7 x 6.6 cm)	6.825" x 6.57" x 2.675" (17.3 x 16.7 x 6.8 cm)	6.825" x 7.375" x 2.675" (18.7 x 17.3 x 6.8 cm)
Weight (printer only)		17.05 oz (0.483 kg)	19.6 oz (0.556 kg)	21.6 oz (0.612 kg)
Weight (with batteries & paper roll)		32.95 oz (0.934 kg)	35.3 oz (1.001 kg)	37.3 oz (1.057 kg)
Drop Specification		6 ft (1.8 m)	6 ft (1.8 m)	6 ft (1.8 m)
User Environment				
Operating Temperature	-4° F to 131° F (-20° C to 55° 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	8 kV Air, 4 kV Contact			
Communications				
Serial	RS-232, up to 38.4k baud (available on all models)			
IrDA (4t only – not available in radio models)	IrDA compliant infrared data communications, up to 115.2k baud			
Wireless LAN	Cisco® Aironet® 350 Series PC Card (PCMCIA) Symbol® Spectrum24® LA 4121 (PCMCIA)			
Frequency Band	2.4 to 2.4897 GHz			
Data Rates	1, 2, 5.5 and 11 Mbps			
Network Standard	IEEE 802.11b			
Network Architecture Types	Infrastructure and ad hoc			
Wireless Medium	Direct Sequence Spread Spectrum (DSSS)			
Authentication	Open or Shared key			
Encryption	None, 40 bit, 128 bit WEP			
DHCP	Supported			
DNS	Supported			
Wireless PAN	Integrated Bluetooth module			
Network Environment	Ad hoc or piconet network environments			
Protocol	Supports version 1.1 and 1.2 of the Bluetooth standard (SIG certified)			
Print Technology				
Printhead	Direct thermal, 832 dots across, 203 dpi (8 dots / mm)			
Printhead Life	400,000,000 dot lines @ 25%			
Print Speed	Up to 2" per second			
Media				
Type	Direct thermal paper, labels, linerless labels (optional)			
Capacity	2.25" maximum roll diameter			
Width	4.41" (11.2 cm)			
Power Source				
Battery	7.2V Lithium-Ion (Li-Ion), 2200 mAh (two batteries for a total of 4400 mAh)			
DC Input 1	(AC Adapter) 12-15V, built-in spike and surge protection			
DC Input 2	(Cigarette Lighter Adapter) 12-15V, built-in spike and surge protection			

Battery Characteristics	
Type	7.2V Lithium-Ion (Li-Ion), 2200 mAh (two batteries for a total of 4400 mAh)
Endurance	Prints approx. 13,440" or 2,240 – 6" receipts on a single battery charge
Serial/IrDA	Prints approx. 9,102" or 1,517 – 6" receipts on a single battery charge
Bluetooth	Prints approx. 5,256" or 876 – 6" receipts on a single battery charge
802.11b	Prints approx. 5,256" or 876 – 6" receipts on a single battery charge
Spectrum24	Prints approx. 5,622" or 937 – 6" receipts on a single battery charge
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, Serial/IrDA: 4/1 Mbit Flash/RAM Memory 4t Bluetooth, 802.11b: 8/4 Mbit
Standard Fonts	5.5CPI, 7.2CPI, 10.2 CPI, 10.7CPI, 15.6CPI, 18.5CPI 20.4CPI, 22.6CPI & 34.0CPI (additional fonts available)
International Characters	Arab-T, Arab-S, Arab-E, Asian-A, Asian-B, shiftJIS, Greek, OCRA, OCRB, Unicode subset including Latin & Thai (additional international characters available)
Bar Codes	Prints 1D and 2D bar codes
Graphics	Supports storage of graphics/logos in Flash memory and transient "print once" graphics
Agency Approvals	
4t Serial/IrDA	FCC B, CE, C-Tick
4t Bluetooth, 802.11b	FCC B, CE, C-Tick, E-Mark
Warranty	
2 years (including printer case and printhead*)	
Options / Accessories	
• 3" Paper Adapter • AC Adapter • Battery • Battery Eliminator • Cigarette Lighter Adapter • Cleaning Cards • Cleaning Kit • Data Cables for Hand-Held Devices • DB9 Download Cable	• DC Power Extension • Depot Charger Kit • Dual External Battery Charger • Magnetic Stripe/Smart Card Reader • Paper/Labels • Swivel Belt Loop • Swivel-Mount Bracket • Swivel-Mount Shoulder Strap

\*When used with approved media grades.

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