

Falcon 4400 Series

Data Sheet

Windows® Based Mobile Computer



Features

- Industry leading ergonomics combine superb balance, light weight and arched grip for ease of use
- Flexible configurations provide choice of two operating systems, six bar code scan engines and seven keypads
- Rugged construction survives industrial environments and multiple drops to concrete

Accessories

- Powered Vehicle Dock
- Single-Slot Dock and Four-Slot Dock
- Four-Slot Battery Charger
- Handle/Handstrap Conversion Kit
- Holsters/Softcases
- USB Data Cable
- Serial Charging Cable
- Serial Printer Adapter



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Mechanical

Dimensions

Length: 22.6 cm / 9.0" Width at display: 8.6 cm / 3.5"
Width at grip: 6.4 cm / 2.5" Height at grip: 4.1 cm / 1.6"

Weight: 724 g / 23.3 oz (Will vary depending upon the configuration selected. Falcon 4400 model shown with radio, scanner, and battery pack.)

Display: 3.5" active matrix TFT QVGA display; 320x240, pixels; 64K colors, up to 400 NIT, anti-reflective

Indicators: Good read LED; scan LED

Keypads: 26-key Standard Alphanumeric; 48-key (handed version only) full alphanumeric and 5250 support; 52-key full alphanumeric and 5250 support; 52 key numbers up and 5250

Construction: Industrial, polycarbonate/ABS-blend plastic shell with thermoplastic urethane overmold

Environmental

Temperature Rating

Operating: -10° to 50° C / 14° to 122° F
Storage: -25° to 70° C / -13° to 158° F

Humidity: 5 to 95% NC

Shock: Up to multiple 1.5 M / 5.0' drops to concrete

Water & Dust: CIE IEC 60529, Rating IP54

Optical	Laser Scan Engine		Linear Imager
	SR*	LR*/ALR*	
Light Source	650 nm	650 nm	645 nm
Scan Rate	35 ± 5 scans/sec.	35 ± 5 scans/sec.	36 ± 5 scans/sec.
Ambient Light Immunity			
Artificial Light	4,844 Lux	4,844 Lux	100,000 Lux
Sunlight	86,112 Lux	86,112 Lux	100,000 Lux

* Key: SR = Standard Range, LR = Long Range, ALR = Advanced Long Range.

DEPTH OF FIELD TABLE Typical Range Comparisons						
Label Density	Standard Range	Long Range	Advanced Long Range	Linear Imager	2D SR Imager	2D HD Imager
5 mil	8-13 cm / 3-5"	—	—	8-13 cm / 3.0-5.0"	—	—
6.6 mil	—	—	—	—	11-16 cm / 4.0-6.5"	4-13 cm / 1.8 - 5.0"
PDF-417	—	—	—	—	—	—
7.5 mil	6-23 cm / 2.5-9"	—	—	—	—	4-13 cm / 1.5-5.0"
8 mil	—	—	—	—	8-20 cm / 3.3-8.0"	—
10 mil	6-33 cm / 2.5-13"	37-42 cm / 14.5-16.5"	—	4-23 cm / 1.5-9"	8-23 cm / 3.2-9.2"	3-17 cm / 1.2-6.6"
8.3 mil Data Matrix	—	—	—	—	—	6-12 cm / 2.4-4.7"
8.3 mil QR Code	—	—	—	—	—	6-11 cm / 2.4-4.4"
13 mil / 100% UPC	—	—	23-56 cm / 9-22"	4-27 cm / 1.5-10.5"	6-32 cm / 2.5-12.5"	3-20 cm / 1.0-7.9"
15 mil	6-48 cm / 2.5-19"	23-84 cm / 9-33"	51-127 cm / 20-50"	—	5-33 cm / 2.1-12.8"	—
15 mil Data Matrix	—	—	—	—	—	9-17 cm / 3.7-6.5"
20 mil	*6-53 cm / 2.5-21"	20-101 cm / 8-40"	—	4-30 cm / 1.5-12"	—	—
30 mil	—	—	84-226 cm / 33-89"	—	—	—
35 mil MaxiCode	—	—	—	—	5-33 cm / 2.0-13.0"	—
40 mil	*6-76 cm / 2.5-30"	33-211 cm / 13-83"	—	4-43 cm / 1.5-17"	—	—
55 mil	*6-91 cm / 2.5-36"	48-236 cm / 19-93"	97-305 cm / 38-120"	—	—	—
70 mil (reflective)	—	119-376 cm / 43-148"	215-660 cm / 85-260"	—	—	—
100 mil (reflective)	—	127-533 cm / 50-210"	241-813 cm / 125-320"	—	—	—

*Minimum distance determined by symbol length and scan angle. Dependent upon printing resolution, contrast, and ambient light.

System

Operating System: Windows® CE v5.0, Windows Mobile® v5.0

Microprocessor: Intel® XScale® PXA255, 400 MHz

Memory:

64 MB RAM / 64 MB FLASH
128 MB RAM / 128 MB FLASH

Dock Communications: USB 1.1 (ActiveSync) & RS-232 (ActiveSync and other RS-232 protocols)

PC Card: Internal card slot

Beep Tone: 86dBA (at 61 cm / 24") / 100dBA (at 10 cm) (typical)
Programmable for pitch and duration

Power Options

Rechargeable Lithium Ion Battery Pack

Falcon Single and Four-Slot Dock with power supply

Advanced Power Management (without PC Card & backlight):

Sleep/off mode with programmable timeout: 5 mA; Idle mode: 60 mA (typical); Operating mode: 155 mA (typical). Rechargeable lithium backup battery; Low battery indicator (display icon)

Radio Support

WLAN: IEEE 802.11 b/g

WLAN Security: Cisco CCX; Windows Zero Configuration

Bluetooth® wireless technology: Class 2 Version 1.2

System Support: VT100/220, HP700/92, IBM 3270/5250 terminal emulators; Browser support via Microsoft® Internet Explorer; TCP/IP Communications

Management Tools: Falcon® Desktop Utility (FDU) for security & configuration; Falcon Management Utility (FMU) or Wavelink® Avalanche for remote device management & software distribution.

Development Environments:

Embedded Visual C++, Visual C#.NET, Visual Basic .NET, Personal Java 1.1, Java Virtual Machine (JVM), Falcon® CE Developers Toolkit, Visual Studio 2005 and Wavelink® Studio.

Decoding Capability (auto-discrimination)†

1D Codes

- Code 32, 39, 93
- Codabar
- Code 128
- Code 128 ext.
- EAN/JAN 8, 13
- EAN 128
- UPC A, E
- Interleaved 2/5
- Matrix 2/5
- MSI / Plessey
- Standard 2/5
- Code 39 Full ASCII
- EAN/UPC 2 digit ext.
- EAN/UPC 5 digit ext.
- EAN/UCC Composite
- RSS-14/RSS Limited

2D Codes

- PDF-417
- Micro PDF-417
- U.S. Currency Serial Number
- RSS Expanded
- Aztec Code
- MICR E 13 B
- Data Matrix
- Maxi Code
- QR Code
- OCR-A/B
- Postal Codes

† Please refer to the appropriate Product Reference Guide (PRG) for specific symbology support for the laser scan engine or imaging scan engine options.

Safety and Regulatory

Electrical: EN60950, UL60950, CSA60950

Battery: IATA/UN

Emissions: FCC Part 15C, EN55022, VCCI, ICES-003, CNS 13438, AS/NZS 3548

Radio: FCC Part 15:247, EN 300 328

Laser Classification: CDRH Class II;

(CAUTION: Laser Radiation—do not stare into beam);

IEC 60825-1, Class 2; Class 3R for ALR devices

Restriction of Hazardous Substances: RoHS version

