# A Specifications

# Physical and Environmental Specifications

### **Physical Dimensions** (excluding overmold)

| | |
|---|---|
| Length: | 16.0 cm (6.3") |
| Width: | 8.1 cm (3.2") |
| Height: | 3.3 cm (1.3") with standard battery<br>2.8 cm (1.1") with extended battery |
| Weight: | Non-WAN units - 14 oz<br>WAN units w/standard battery - 15 to 16 oz<br>WAN units w/extended battery - 16 to 17 oz |

### Hardware

| | |
|---|---|
| Microprocessor: | Intel XScale PXA270 |
| Application Processor: | 520 MHz RAM |
| Memory: | 128 MB RAM |
| Persistent Storage: | 128 MB NAND Flash, provides onboard non-volatile storage of applications and data |
| Removable Storage: | miniSD Card Slot, user-accessible |
| Keypad: | numeric or QWERTY; w/LED backlighting |
| Scanner Options: | EA11, EA11HD scan engine or Color Camera |

### Operating System

Microsoft Windows Mobile 5.0

### Software

| | |
|---|---|
| Development Environments: | Embedded Visual C++ 4.0,<br>.NET Compact Framework (VB. NET, C#) |
| IDL: | Integrates with leading development environments; supports device-specific features and bar code scanning |
| Browser support: | Internet Explorer 6-compatible |

### Bar Code Scanning

Options of Integrated 2D Area Imager or 1D & PDF417 Linear Imager
Supports all popular 1D and 2D symbologies including Australian Post, British Post, Codabar, Codablock A, Codablock F, Code 11, Code 2 of 5, Code 39, Code 93, Code 93i, Code 128, Datamatrix, Dutch Post, ISBT 128, Interleaved 2 of 5, Macro 2 of 5, Matrix 2 of 5, Maxicode, Micro PDF417, MSI, PDF417, Planet, Plessey, Postnet, QR Code, RSS 14, RSS Expanded, RSS Limited, Telepen, TLC39, UCC-EAN Composite Code, UPC/EAN

### Standard Communications

USB host, USB client, Bluetooth, 802.11b/g, GPRS, CDMA, GPS

## Wireless LAN

| | |
|---|---|
| Standards Compliant: | IEEE 802.11g (2.4 GHz - OFDM)<br>IEEE 802.11b (2.4 GHz - DSSS) |
| Data Rates: | Up to 54 Mbps for 802.11g<br>Up to 11 Mbps for 802.11b |
| Radio Power Output: | 100 mW |
| Security: | WEP, WPA, 802.11i, 802.1x<br>(EAP-TLS, TTLS, LEAP, PEAP, EAP-FAST) |
| Certifications: | Wi-Fi, WPA, WPA2, Cisco Compatible Extensions |

## Device Management

| | |
|---|---|
| SmartSystems™ Support: | Centralized remote support capability; configures, updates, and maintains single devices or entire populations; real-time or batch, wired or wireless. Based on Wavelink Avalanche™ with Intermec value added utilities. |

## Power Specifications

| | |
|---|---|
| Operating: | Removable, rechargeable LiIon batteries;<br>AB8 standard pack, 3.7 VDC, 2.2 AHr,<br>(8 W-hr - 4 hr charge time); or<br>AB9 extended pack, 3.7 VDC, 4.0 A Hr,<br>(14 W-hr - 5 hr charge time);<br>battery life is application-dependent;<br>typical recharge cycle time is 4 hours or less |
| Backup: | Super capacitor supplies 5 minutes bridge time while replacing the AB8 or AB9 Battery |

## Electrical Specifications

| | |
|---|---|
| External Charge Power: | 5 V +/-5% @ 3.5 A max. (18 W max.) |

## Environment

| | |
|---|---|
| Operating temperature: | -10° to 50°C (14° to 122°F) |
| Storage temperature: | -20° to 70°C (-13° to 158°F) |
| Humidity: | 5% to 95% noncondensing |
| Electrostatic Discharge: | ±8 kV Contact Discharge; ±15 kV Discharge |
| Rain and Dust Resistance: | IP54 compliant |
| Drop Survival: | Multiple 1.2 m (4 ft) drops to steel or concrete |

## Screen Specifications

Transflective TFT; QVGA Color with touch panel; 240x320 pixels; 8.9 cm (3.5 in) diagonal active area; 5-level LED backlight control with settings

## Regulatory Approvals

UL and cUL Listed, UL 60950 and UL 1604 and CSA 22.2 No. 157, FCC Part 15, TUV, CE mark

# Accessories for the Computer

### AC14 Quad Battery Charger (P/N 852-065-001)
Use the quad battery charger to charge up to four CN3 battery packs.

### AD10 Single Dock (P/N 871-025-001)
Use the single dock to hold a CN3 with its battery installed, charge a spare battery pack, charge the main battery, and provide power to the CN3. The dock has USB host and client connectors. Optional modules are available to convert the USB host to Ethernet or to a landline modem.

### AD11 Multidock (P/N 871-026-001)
Use the multidock to hold up to four CN3s with batteries installed. The multidock charges the batteries and provides power and Ethernet connections to each CN3.

### AD12 Charge-Only Multidock (P/N 875-026-002)
Use the charge-only multidock to hold up to four CN3s with batteries installed, charge batteries, and provide power to CN3s.

### AV6 Vehicle Dock (P/N 871-027-001)
Use the vehicle dock to hold and charge the CN3 while using it on a vehicle.

### AR1 Magnetic Card Reader (P/N 850-557-001)
The magnetic card reader provides magnetic stripe reading capability to the CN3.

# Index

**Numerics**
1D area imager reading distances, 8
802.11
  ISpyWiFi utility, 150
  WPA authentication
    Zero Configuration, 179
  WPA authentication with pre-shared key
    Zero Configuration, 179
  WPA2 authentication
    Zero Configuration, 180
  WPA2 authentication with pre-shared key
    Zero Configuration, 180
  zero configuration
    WEP encryption, 178
802.1x authentication
  Funk, 159
802.1x security
  troubleshooting, 104

**A**
AB8 batteries, 9
AB9 batteries, 9
Access points
  scanning for information, 150
Accounts
  via Messaging, 65
ActiveSync
  ActiveSync Help, 45
  adding programs, 42
  adding programs to Start menu, 44
  Folder behavior connected to email server, 64
  installing applications, 77
  Internet Explorer Mobile
    favorite links, 72
    mobile favorites, 72
    Mobile Favorites folder, 72
  URL, 44
  Windows Mobile, 44
Adding programs
  ActiveSync, 42
  to the Start menu, 43
    via ActiveSync, 44
    via File Explorer, 43
  Windows Mobile, 41
Address assigned to CN3, 95
Adjusting settings
  Windows Mobile, 41
Advanced Encryption Standard, 183
AES (Advanced Encryption Standard), 183
AllDay events
  Calendar, 47
    creating, 49
Applets
  backlight, 19
  Bluetooth Audio, 119
  intemec settings
    beeper volume, 185
  Intermec Settings, 94, 95
    area imager, 7
    beeper volume, 23
    Bluetooth, 122
    funk security, 156
    SF51 scanner information, 96
    SmartSystems, 185
    smartsystems, 15
    vibrate, 26
  ISpyWiFi, 150
  phone settings
    GSM radios, 131, 138
  pictures & videos, 92
  power, 11
    battery status, 9
    unattended mode, 20
  sounds & notifications, 12
    vibrate mode, 26
  wireless manager
    bluetooth, 111
    phone, 127, 135
  wireless printing, 116
Appointments
  Calendar
    adding a note, 50
    assigning to a category, 51
    changing, 48
    creating, 48
    deleting, 53
    finding, 53
    making recurring, 51
    setting a reminder, 50
    viewing, 48
  via Calendar, 46
Area Imager, 7
Audio
  camera, 94
audio device icons, 120
Audio device settings
  Bluetooth, 122
Avalanche, 79

**B**
Backlight applet
  idle mode, 19
  timeout value, 19
Bar codes
  troubleshooting, 105
Battery
  low battery warnings, 12
  status, 9

Beeper
enabling via Sounds & Notifications applet, 12
volume
turning it on, 22, 25
Block recognizer
Windows Mobile input panel, 35
Bluetooth, 120
Audio applet, 119
audio device settings, 122
connecting to headsets, 121
connecting with remote devices, 123
connection status, 120
default status, 120
enabling for SF51 Scanners, 95
intermec settings, 122
searching for headsets, 119
wireless manager, 111
Wireless Printing applet, 116
Bluetooth applet, 95
address assigned to CN3, 95
Bluetooth Audio applet
Bluetooth, 119
Browsing the Internet
Internet Explorer Mobile, 74

## C

Calendar
all day events, 47
creating, 49
appointments
adding a note, 50
assigning to a category, 51
changing, 48
creating, 48
deleting, 53
finding, 53
making recurring, 51
setting a reminder, 50
viewing, 48
categories, 46
meetings
sending a request, 52
options
changing, 54
Pocket Outlook, 46
recurrence pattern, 48
Start menu icon, 31
synchronizing, 46
Call history
Phone application
CDMA radios, 131
GSM/EDGE radios, 137
Camera
audio, 94
capturing an image, 14
compression, 93
configuring, 92
pixel size, 92
rotating the image, 92
screen saver, 93
slide show, 93
storing images, 93
type of image, 93
using the, 14
video time limit, 94
Capacitor
internal super, 9
Capturing thoughts and ideas
via Notes, 61
Categories
calendar, 46
contacts
assigning to, 57
CDMA
phone application, 127
CDMA radios
phone activation, 128
phone application, 127
Cisco Key Integrity Protocol, 183
Cisco Lightweight EAP, 171
CKIP (Cisco Key Integrity Protocol), 183
Clean boot process, 5
Cleaning the scanner window and screen, 106
CompactFlash cards
installing applications, 78
Compression, camera, 93
Configuration parameters, 97
Configuring location settings
Phone
CDMA radios, 131
Configuring roaming range
Phone
CDMA radios, 134
Configuring security, 156
Configuring service settings
Phone
GSM/EDGE radios, 138
Configuring the Computer
troubleshooting, 103
Connecting to
an ISP, 140
work, 143
Connecting to a mail server
via Messaging, 64
Connection labels
SF51 scanners, 95

Connections
ending, 147
to an ISP, 140
via modem, 140
to work, 143
via VPN server, 145
via modem
to an ISP, 140
via VPN server
to work, 145
via wireless network, 177
Contacts
adding a note, 57
adding a telephone number
GSM/EDGE radios, 137
assigning to a category, 57
changing, 57
changing options, 59
copying, 58
creating, 55, 57
deleting, 59
finding, 58
Pocket Outlook, 54
sending a message, 58
Start menu icon, 31
synchronizing, 55
viewing, 56
Converting writing to text, 37
Converting writing to text on the screen, 37
Copying
contacts, 58
Creating
a modem connection
to an ISP, 140
a VPN server connection
to work, 145
a wireless network connection, 177
contacts via Contacts, 55
document via Word Mobile, 66
drawing via Notes, 38
note via Notes, 61
task via Tasks, 60
workbook via Excel Mobile, 69

**D**

Detect rogue APs, 174

**E**

EAP (Extensible Authentication Protocol), 183
EAP-FAST, 183, 184
profile security information, 172
WEP encryption, 172
EAP-TLS, 167
EAP-Tunneled TLS, 168
EasySet
scan bar code labels, 97
EasySet application, 94
creating Bluetooth connection label, 95
Edition information, 4
Ending a connection, 147
Ethernet
iConnect, 148
Excel Mobile
about, 69
creating a workbook, 69
tips, 69
Extensible Authentication Protocol, 183

**F**

FAST (Flexible Authentication via Secure Tunneling), 183, 184
Favorite links
Internet Explorer Mobile, 72
File Explorer
adding programs to Start menu, 43
removing programs, 44
Windows Mobile, 40
Flash File Store
packaging an application, 77
Flexible Authentication via Secure Tunneling (FAST), 183, 184
Folder behavior connected to email server
ActiveSync, 64
IMAP4, 64
POP3, 64
SMS, 64
Funk security, 156
802.1x, 159
selecting a profile, 156
static WEP, 161
WPA, 157

**G**

Getting connected
ISP, 139
to an ISP, 140
creating a modem connection, 140
to work, 143
creating a VPN server connection, 145
creating a wireless network connection, 177
Windows Mobile, 139
GPS
described, 27
GSM/EDGE
phone application, 135

GSM/EDGE radios
phone activation, 136
phone application, 135
using the phone, 130, 137

**H**

Headsets
connecting, 121
discovering, 119
setting to default, 121

**I**

iConnect, 148
disabling network communications, 148
network support, 148
ping test, 149
Idle mode, 19
IDLs
Bluetooth, 110, 116
device resource kit, 92
smartsystems, 102
URL, 21
Imager
beeper volume
turning it on, 25
configuration parameters, 97
Images
capturing via camera, 14
IMAP4
Folder behavior connected to email server, 64
Input panel
block recognizer, 35
keyboard, 34
letter recognizer, 35
selecting typed text, 36
transcriber, 35
Windows Mobile, 32
Word Mobile, 67
word suggestions, 34
Installing applications
Avalanche, 79
SmartSystems, 79
using a storage card, 78
using Secure Digital cards, 78
with ActiveSync, 77
with InstallSelect, 80
InstallSelect
installing applications, 80
Intermec settings
beeper volume, 185
Intermec Settings applet
area imager, 7
Bluetooth, 122
enable speaker, 23
Funk security, 156
imager settings, 94
set vibrator, 26
SmartSystems, 185
viewing SF51 information, 96
Intermec settings applet
smartsystems, 15
Internal scanners
reading distances
EA11, 8
Internet Explorer Mobile
about, 72
browsing the Internet, 74
favorite links, 72
getting connected, 139
mobile favorites, 72
Mobile Favorites folder, 72
viewing mobile favorites and channels, 74
ISP
connecting to via Windows Mobile, 140
creating
a modem connection, 140
Internet Explorer Mobile, 72
Windows Mobile, 139
ISpyWiFi utility, 150
NIC, configuration, AP, RFID, 151
pinging hosts, 154
scanning for access point information, 152
scoping the network, 152
shortcut in Start Menu, 150
starting the utility, 150
supplicant, 153
supplicant logging, 155

**K**

Keeping a todo list
via Tasks, 59
Key remapper functions, 92
Keyboard
Windows Mobile input panel, 34
Keypads
capitalizing characters, 17
Caps Lock, 17
numeric, 16
numeric characters, 18
power switch, 19
QWERTY, 16
QWERTY characters, 17
using color-coded keys, 17
Keypads, remapping, 92

**L**
LEAP security
fast roaming (CCKM), 174
Microsoft, 171
LED status, 17, 18
Letter recognizer
Windows Mobile input panel, 35
Loading certificates, 182
Microsoft, 170

**M**
Managing email messages and folders
via Messaging, 63
Meetings
Calendar
sending a request, 52
via Calendar, 46
Messages
sending to
contacts, 58
via Messaging
composing/sending, 65
Messaging
accounts, 65
composing/sending messages, 65
connecting to a mail server, 64
getting connected, 139
managing email messages and folders, 63
Pocket Outlook, 62
Start menu icon, 31
synchronizing email messages, 63
using My Text, 40
Microsoft security, 156
allow fast roaming (CCKM), 174
detect rogue APs, 174
enable mixed cell, 174
LEAP, 171
PEAP, 165
TLS, 167
TTLS, 168
Mixed cell
enable via Microsoft security, 174
Mobile Favorites
Internet Explorer Mobile, 72
Mobile Favorites folder
Internet Explorer Mobile, 72
Modems
creating a connection
to an ISP, 140
MP3 files
Windows Media Player, 71

**N**
Network adapters, 148
Network settings
phone application
GSM/EDGE radios, 139
Notes
adding to
appointments, 50
contacts, 57
creating a note, 61
drawing on the screen, 38
creating a drawing, 38
selecting a drawing, 38
Pocket Outlook, 61
recording a message, 39
synchronizing notes, 62
writing on the screen, 36
alternate writing, 37
converting writing to text, 37
selecting the writing, 36
tips for good recognition, 37

**O**
Object store
packaging an application, 76
Operating the Computer
troubleshooting, 103
Outlook Mobile, 45

**P**
Packaging an application
Flash File Store, 77
object store (user store), 76
Secure Digital storage cards, 76
SmartSystems Platform Bundles, 76
Passcodes, 119
PEAP security
Microsoft, 165
Phone
activation, 128, 136
CDMA radios
call history, 131
location settings, 131
version information, 134
GSM/EDGE radios
adding contact to speed dial, 137
call history, 137
finding, setting, selecting networks, 139
service settings, 138
using the application, 130, 137
wireless manager, 127, 135

Phone application
CDMA radios, 127
roaming range, 134
GSM radios
customizing phone settings, 131, 138
GSM/EDGE radios, 135
Phone Settings applet
CDMA roaming range, 134
customizing via Phone application
GSM radios, 131, 138
GSM radios, 131, 138
network settings
GSM/EDGE radios, 139
Pictures & Videos applet
audio, 94
compression, 93
configuring the camera, 92
pixel size, 92
rotating the image, 92
screensaver, 93
slide show, 93
storing images, 93
type of image, 93
video time limit, 94
Ping test
iConnect, 149
Pixels, camera, 92
Pocket Internet Explorer
Start menu icon, 31
Pocket Outlook
Calendar, 46
POP3
Folder behavior connected to email server, 64
Power
applet
battery status, 9
Power applet
battery status, 11
timeout value, 20
unattended mode, 20
Power switch, 19, 20
PowerPoint Mobile
starting a slide show presentation, 70
Windows Mobile, 70
Profile Wizard
Advanced
supplicant logging for ISpyWiFi, 155
Programs, adding or removing
Windows Mobile, 41
Protected EAP, 165

**R**

Reader commands, 97
Reading distances
EA11, 8
Record button
recording a message, 39
Recording
via Notes, 39
Recurrence pattern
Calendar, 48
Remapping the keypad, 92
Removing programs
Windows Mobile, 41, 44
Reset methods
clean boot, 5
preferred, 5
secondary, 5
Resource kits
Bluetooth, 110, 116
smartsystems, 102
URL, 21
Roaming
Microsoft security, 174
Rotating the image, 92

**S**

Scanning bar codes
troubleshooting, 105
Scheduling appointments and meetings
via Calendar, 46
Screen saver, 93
Secure Digital cards
installing applications, 78
packaging an application, 76
Security
choosing between Funk and Microsoft, 156
configuring, 156
loading certificates, 182
wireless network, 182
Selecting
drawing via Notes, 38
Selecting the writing on the screen, 36
Sending and receiving messages
via Messaging, 62
Services
phone application
CDMA radios, 131
GSM/EDGE radios, 138
Setting image type, 93
Settings applets
Intermec Settings
Bluetooth, 122
funk security, 156
SF51 scanner information, 96
wireless printing, 116

SF51 Scanner
configuring, 94
creating connection label, 95
enabling Bluetooth, 95
SF51 scanner
viewing information from CN3, 96
Slide show, camera, 93
SmartSystems, 15, 79, 185
SMS
Folder behavior connected to email server, 64
Sounds & Notifications applet
enable beeper, 12
set vibrate mode, 26
Speakers, 21
beeper volume
turning it on, 22
enabling via Intermec Settings applet, 23
Speed dial
phone application
GSM/EDGE radios, 137
SSPB
packaging an application, 76
Start Menu
adding programs, 43
via ActiveSync, 44
via File Explorer, 43
Static WEP security
Funk, 161
Status icons
Windows Mobile, 31
Storing images, camera, 93
Synchronize system time, 89
Synchronizing
Calendar, 46
contacts, 55
email messages, 63
favorite links, 72
mobile favorites, 72
notes, 62
Tasks, 60
Word Mobile, 68
System software updates, 100
System time, 89

**T**

Tasks
creating a task, 60
Pocket Outlook, 59
Start menu icon, 31
synchronizing, 60
Temporal Key Integrity Protocol, 183
Text messages
Windows Mobile, 40
Time server, 89
Tips for working
Excel Mobile, 69
TKIP (Temporal Key Integrity Protocol), 183
TLS security
Microsoft, 167
Today screen
Windows Mobile, 30
Tools CD
CAB files, 78
Tracking people
via Contacts, 54
Transcriber
Windows Mobile input panel, 35
Troubleshooting, 103
802.1x security, 104
bar code scanning, 105
CN3 configuration, 103
CN3 operation, 103
wireless connectivity, 104
TTLS security
Microsoft, 168
Typing mode
Word Mobile, 67
Typing on the screen
Word Mobile, 67

**U**

Unattended mode
changing timeout value, 20
Updating
bootloader, 77
Updating the system software, 100
Upgrading the operating system, 100
URLs
ActiveSync, 44
Microsoft support, 30
Windows Mobile, 30
Windows Mobile support, 30
User store
packaging an application, 76

**V**

Version information
Phone
CDMA radios, 134
Vibrate mode
enabling via sounds & notifications applet, 26
enabling via Intermec Settings applet, 26
Video time limit, camera, 94
Viewing mobile favorites and channels
Internet Explorer Mobile, 74
VPN server
creating a connection
to work, 145

**W**

WAP pages
  connecting to an ISP, 140
Wavelink Avalanche, 79
Web pages, 72
  connecting to an ISP, 140
WEP (Wired Equivalent Privacy) encryption, 183
WEP encryption
  EAP-FAST security method, 172
  zero configuration, 178
Wi-Fi Protected Access, 157, 183
Windows Media files
  Windows Media Player, 71
Windows Media Player Mobile
  Start menu icon, 32
Windows Mobile
  ActiveSync, 44
  basic usage, 30
  Calendar, 46
  command bar, 32
  Contacts, 54
  Excel Mobile, 69
  getting connected, 139
  Messaging, 62
  navigation bar, 32
  Notes, 61
  notifications, 32
  popup menus, 32
  PowerPoint Mobile, 70
  programs, 31
  status icons, 31
  support URLs, 30
  Tasks, 59
  Today screen, 30
  where to find information, 30
  Word Mobile, 66
  writing on the screen, 36
Wired Equivalent Privacy, 161, 183
Wireless 802.11b/g
  iConnect, 148
Wireless connectivity
  troublshooting, 104
Wireless Manager applet
  bluetooth, 111
  phone, 127, 135
Wireless network
  creating a connection, 177
  security, 182
Wireless Printing applet, 116
Word Mobile
  about, 66
  creating a document, 66
  synchronizing, 68
  typing mode, 67
  writing mode, 68
Work
  creating
    a VPN server connection, 145
  getting connected, 143
WPA (Wi-Fi Protected Access), 183
WPA authentication
  802.11 radio module
    Zero Configuration, 179
  with pre-shared key
    Zero Configuration, 179
WPA security
  Funk, 157
WPA2 (Wi-Fi Protected Access), 183
WPA2 authentication
  802.11 radio module
    Zero Configuration, 180
  with pre-shared key
    Zero Configuration, 180
Writing mode
  Word Mobile, 68
Writing on the screen
  Word Mobile, 68
www.intermec.com/idl/, 28

Intermec

**Corporate Headquarters**
6001 36th Avenue West
Everett, Washington 98203
U.S.A.

**tel** 425.348.2600

**fax** 425.355.9551

www.intermec.com

CN3 Mobile Computer User's Manual

P/N 935-003-003