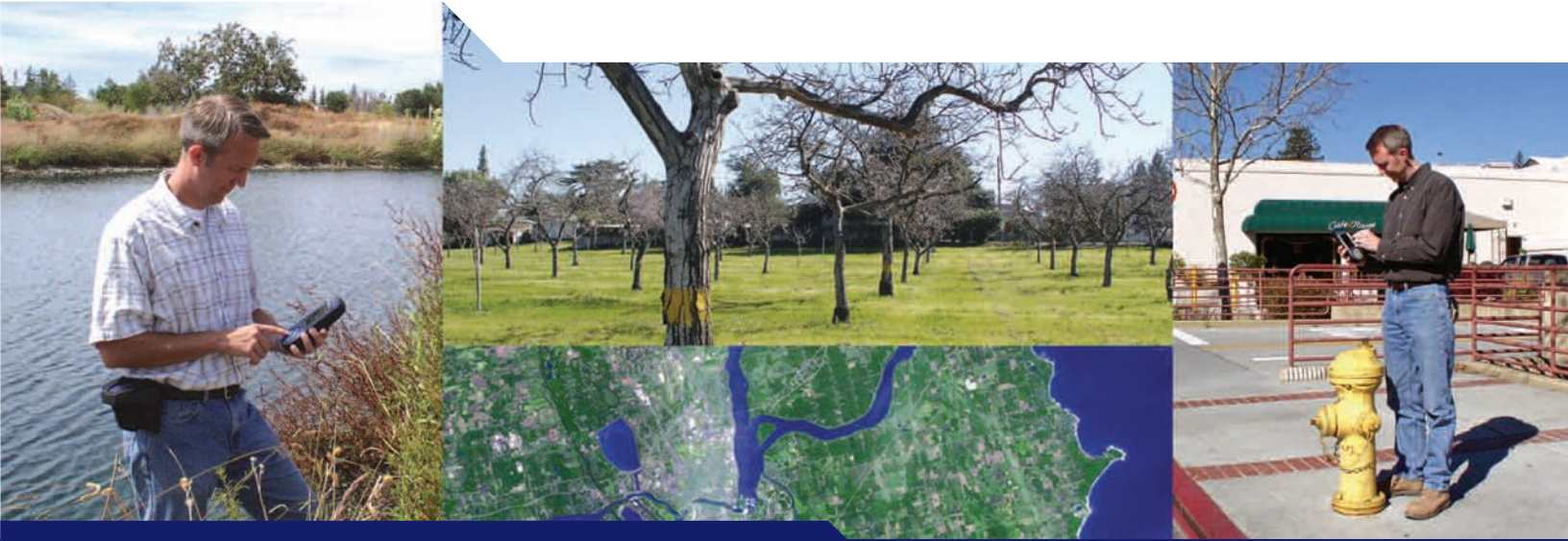# THALES

MobileMapper™ CE
NETWORK GENERATION

>> MAP YOUR SUCCESS!

MobileMapper CE

The Ultimate Mobile Mapping Platform

MobileMapper CE is the most cost effective handheld GPS for high-accuracy mobile mapping. Easy-to-use, it features an open platform design with embedded Microsoft® Windows® CE for maximum flexibility, supporting off-the-shelf Windows CE software for GIS and mobile mapping applications.

Rugged and affordable, MobileMapper CE enables you to double the number of GPS / GIS users and accelerate your success with superior GPS accuracy and performance.

State-of-the-art, user-friendly features make the MobileMapper CE the right choice for all your demanding GIS needs.

Best Price-To-Performance Ratio On The Market

MobileMapper CE, is the standard for performance and affordability in handheld GPS / GIS receivers.

It offers an impressive array of high-performance features, including:

- Real-time sub-meter and sub-foot post-processed GPS accuracy
- Bluetooth® wireless technology
- Field replaceable all-day battery
- Removable SD card memory
- Easy touch screen and built-in alphanumeric keypad

Robust features and free firmware upgrades mean there's no need to compromise performance for cost. You get it all at an affordable price.

High Performance GPS

Embedded GPS capability provides accurate data processing and superior data reliability.

The fully integrated 14-channel GPS receiver offers sub-meter accurate data positioning in real-time. Achieve sub-foot accuracy in post-processing with the embedded GPSDifferential™ Module.

Precisely navigate to a point of interest, create line functions or calculate area surface with capabilities far beyond PDAs and other non-GPS devices which simply cannot perform these operations.

MobileMapper CE GPS technology maintains high-precision in challenging environments with multipath mitigation, optimized to perform in urban canyons and dense foliage.

Maximum Flexibility In The Field

MobileMapper CE is the most flexible GPS / GIS system available, offering multiple operating modes and configurations.

MobileMapper CE delivers real-time sub-meter accurate GPS positioning using SBAS or Beacon corrections. It offers the added flexibility of NTRIP and Direct IP network communication for RTCM real-time corrections.

Seamlessly add the power of post processing to virtually any mobile GIS software application with the GPSDifferential Module software. Sub-meter and sub-foot mapping is easy to achieve, even where real-time corrections are not available or in difficult environments such as forestry and urban development.

MobileMapper CE easily adapts to your task and any mapping conditions, consistently delivering high accuracy and enhanced performance for all your GIS needs.

Extremely Rugged And Waterproof

The rugged design of MobileMapper CE defeats harsh environments where consumer-grade pocket computing devices such as PDAs and other GPS receivers are easily damaged.

Built to withstand a drop to concrete and remain waterproof even when immersed, the MobileMapper CE is perfect for use in public safety, civilian and federal agencies, utilities, environmental monitoring, natural resources and a host of other industries where management and mapping of field assets is critical and otherwise difficult.

Become a Software Business Partner

Thales Navigation is actively building Business Partnerships for software development and is focused on customers' need for complete GPS / GIS solutions.

Business Partner Software Libraries provide third-party developers with complete control over all GPS functions and allow them to quickly and cost-effectively integrate post-processing differential corrections into their own GIS software. Developers can easily expand their offerings with the power of real-time and post-processed GPS.

These GPS / GIS applications, integrated into the MobileMapper CE platform, provide customers with simple all-in-one GIS solutions, allowing them to focus on the task at hand rather than device configuration.

Become a Software Business Partner and expand your business through joint marketing, demand generation and close collaboration with Thales Navigation.

Business Partner Contacts

In North, Central and South America:
businesspartners@thalesnavigation.com

In Europe, Middle East and Africa:
businesspartnersemea@thalesnavigation.com

In Asia Pacific:
businesspartnersapac@thalesnavigation.com

THALES

MobileMapper CE

TECHNICAL SPECIFICATIONS

GPS Characteristics
- 14 parallel channels
- Integrated SBAS (WAAS, EGNOS, MSAS)
- L1 C/A code and carrier
- Update rate: 1 Hz
- Protocol: NMEA 0183 v 3.0
- RTCM SC-104 version 2.3 (9.2 & 1.2)

Accuracy Specifications
Real-Time Performance (RMS)
- Sub-meter accuracy (3ft) with SBAS[1], Beacon, NTRIP, Direct IP or other RTCM corrections

Post-processing Performance (RMS)
- Sub-foot accuracy (30 cm)[2]

Business Partner Software Libraries
- GPSDifferential Module and MobileMapper Office for post-processing[3]
- Software Development Kit (SDK) and GPS Application Programming Interface (API)[4]

Software
- Microsoft Windows CE .NET 4.2
- ARM920T based processor
- GPS Utilities - provides GPS initialization, reset, settings and status, mission planning, port configuration and DGPS configuration (SBAS, Beacon, NTRIP, Direct IP, other)
- Bluetooth Manager – full-featured Bluetooth connectivity configuration utility
- Microsoft WordPad, Internet Explorer®, Windows Explorer, Terminal, ActiveSync®, Windows Media Player and Inbox
- Microsoft File Viewers: Excel, Word and Image Viewers
- EZ Recorder – sound record and playback program

Physical Characteristics
Size and Weight
- Size: 19.5 cm x 9 cm x 4.6 cm (7.7 in x 3.5 in x 7.7 in x 1.8 in)
- Weight: 0.48 kg (1.05 lb) with battery

User Interface
- Full color, daylight readable, advanced TFT liquid crystal display (LCD) with backlight
- 320 x 240 pixels resolution with 262,144 colors
- Resistive touch panel
- Alphanumeric keyboard with backlight: 18 buttons
- Audio: built-in microphone and speaker

Memory
- 128 MB SDRAM, 128 NAND Flash memory
- Removable SD Card: up to 1 GB

Interface
- Integrated Bluetooth wireless technology
  - Specification 1.2 compliant
  - Point-to-point and point-to-multipoint
  - Profiles: serial port, OBEX, FTP, dial-up networking
- Lemo coaxial external antenna connector
- USB: host and slave
- RS232

Environmental Characteristics
- Operating Temp: -10°C to 60°C (14°F to 140°F)
- Storage Temp: -20°C to 70°C (-4°F to 158°F)
- Weather: IEC-529 IPX7 Standard (withstands water immersion for < 30 min. at depth of 1 m)[5]
- Shock: 1.5 m (4.9 ft) drop to concrete

Power Characteristics
- Battery type: 3.7 V lithium-ion, 3900 mAh
- Battery life: up to 12 hours run-time with GPS[6]
- Removable, rechargeable battery
- External power port for extended operation time

Language Support
- Microsoft Windows CE operating system language support such as English, French, German, Spanish, Portuguese, Dutch, Swedish, simplified Chinese and Japanese

Accessories
Standard Accessories
Standard Accessories
- Clip-on I/O module with external power, USB and serial ports
- Universal A/C adapter
- Removable, rechargeable lithium-ion battery
- 128 MB Secure Digital memory card (expandable)
- USB data cable
- Carrying case
- Hand strap
- Stylus pens (2)
- MobileMapper CE companion CD includes supported international language fonts and ActiveSync 3.7.1., Getting Started Guide

Optional Accessories
- MobileMapper Beacon – Bluetooth enabled beacon differential correction receiver
- External antenna
- Power cable with cigarette lighter adapter
- 3.7 V lithium-ion rechargeable battery
- External battery charger
- Stylus pens
- Carrying case
- USB data cable
- Clip-on I/O module with external power, USB and serial ports

Emissions Certification
- Immunity (EN 55022 Class B)
- Susceptibility (EN 50082-1)
- FCC and CE certified

(1) Accuracy assumes open sky environment, #SVs > 5 and PDOP < 4
(2) Assuming GPSDifferential Module and GPS precision antenna are used for raw data collection
(3) For SW Integrators only
(4) When a Business Partner Agreement has been approved
(5) Except for the battery compartment
(6) Depending on the backlight level and use

THALES

MobileMapper Beacon

DIFFERENTIAL CORRECTION RECEIVER WITH BLUETOOTH WIRELESS TECHNOLOGY

MobileMapper™ Beacon compliments the Thales mobile mapping family of products by improving real-time positioning accuracy with broadcast DGPS corrections. This differential receiver with Bluetooth® wireless technology provides access to standard RTCM SC-104 DGPS corrections broadcast by beacon networks around the world.

Advanced signal processing allows the MobileMapper Beacon to deliver reliable DGPS data from beacon broadcasts, even in noisy environments. MobileMapper Beacon works with any GPS receivers that supports RTCM. Used together with MobileMapper CE, MobileMapper Beacon may be configured through a simple Windows® CE application, which enables automatic or manual tuning of the receiver and monitoring of operational and performance status. A free MobileMapper Beacon control utility is also available as a standalone application for Windows Mobile 2003 or Windows XP/2000 environment.

MobileMapper Beacon is compatible with any GPS receiver that supports input of RTCM SC-104 DGPS corrections. To use with the MobileMapper Pro, simply connect the MobileMapper Beacon with the optional serial cable for a real-time DGPS solution.

Powered by four AA batteries, MobileMapper Beacon is compact and conveniently fits into a belt-mounted holster for easy, hands-free portability. MobileMapper Beacon employs an internal H-field antenna to provide superior signal reception in challenging environments, and integrated Bluetooth wireless technology to offer users cable-free connectivity to MobileMapper CE and other devices featuring Bluetooth wireless technology.

Compact, rugged and affordable, MobileMapper Beacon offers the most demanding GPS users cable-free convenience and reliability in the field.

MOBILEMAPPER BEACON

TECHNICAL SPECIFICATIONS

Receiver Characteristics

- Channels: 2 independent channels
- Frequency input: 283.5 to 325.0 kHz
- Channel spacing: 500 Hz
- Modulation: Minimum shift keying (MSK)
- MSK data rates: 100 and 200 bps
- Dynamic range: 100 dB
- Selectivity: > 60 dB at 400 Hz offset
- Operation modes: manual and automatic
- Internal antenna: H-field

Communication Characteristics

- Data output: RTCM SC-104
- Serial RS232 support
- Port settings: 4800 baud, 8 data bits, 1 stop bit, no parity
- Bluetooth wireless technology
  - Bluetooth specification: 1.1
  - Bluetooth power class: 1
  - Profile: Standard serial port

Physical Characteristics

- Size: 4.75" W x 4.95" L x 4.95" H (12.07 cm W x 12.57 cm L x 12.57 cm H)
- Weight: 0.58 kg (1.27 lbs) including 4 AA alkaline batteries, no pouch

User Interface

- Power Button - On/Off push-button
- LED indication: Power - red, beacon lock - green, Bluetooth connection - Blue
- Advanced configuration setup and diagnostics via DGPS Configuration (MobileMapper CE software utility)
- Automatic tuning feature

Power Characteristics

- Input Voltage: 4.0 to 6.0 VDC
- Batteries: 4 AA batteries, alkaline or NiMH
- Battery life: 8 hours continuous at 0º C
- Nominal current: 130 mA
- RF Connector: SMA socket
- Antenna Impedance: 50 ohms

Environmental Characteristics

- Environmental Protection: IEC-529 IPX5
- Operating Temperature: -30º C to +70º C operating, excluding battery effects
- Storage Temperature: -40º C to +80º C, excluding batteries
- Humidity: 100% condensing, ingress protection to IPX5

Standard Accessories

- 2 battery clips
- Pouch
- 4 AA batteries
- PC interface cable
- Printed manual

Optional Accessories

- External H-field loop DGPS beacon antenna 3.3 VDC
- External RF cable (SMA to TNC)
- MobileMapper Pro serial cable