The IBM TouchMobile System is a rugged, touch-screen computer combining a bar-code scanner with on-screen signature and data capture. TouchMobile Solutions provide mobile workers with a flexible, picture driven tool that helps them to work more effectively while improving the use of assets and customer service.

IBM Product Information
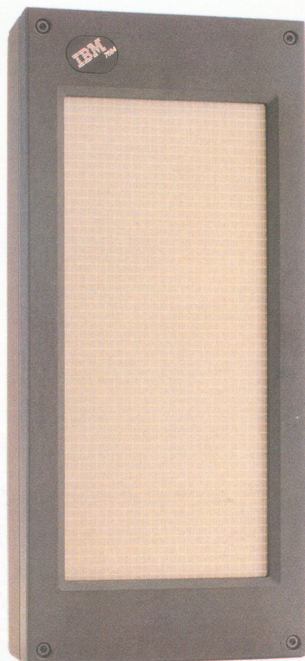
TouchMobile System

IBM

A rugged, end-to-end solution for data capture and communication

Control information and resources for competitive advantage

In today's business environment, your ability to control information and deploy resources effectively is key to survival and success. Now, with the IBM TouchMobile* System, your mobile workers can capture information at source – your customer's doorstep, the loading dock, the warehouse, or out in the field.

You can distribute data quickly and accurately to where it's needed, and gain near-real-time access to information critical for advance planning and end-to-end tracking of shipments and jobs. This means you can respond quickly to customers, reduce operating costs, provide higher levels of customer service, and maximise the efficiency of your mobile personnel and resources.

The 25-line x 80-column touch-screen display lets you combine text, graphics and one-touch function "buttons" for exceptional ease of use.

A new era in data collection

A rugged, hand-held touch-screen computer and integrated scanner designed for use by mobile workers, the IBM TouchMobile System provides a comprehensive solution for integrating computer-based data collection with your operations and business systems.

TouchMobile System components include:

- IBM 7684 TouchMobile Portable Data Collection Terminal and stylus.
- IBM 7685 TouchMobile Stationary Docking Station, supported by an IBM Personal System/2* (PS/2*) host
- IBM 7686 TouchMobile Vehicle Docking Station
- Supporting software for creating applications, managing the system and transferring programs and data to and from multiple TouchMobile terminals.

Together, these give you significant advantages.

User-friendly implementation. With the TouchMobile Terminal's fully addressable touch screen, you can take advantage of intuitive graphic screen presentations, icons, text and one-touch function "buttons" to direct workers through a series of tasks. In this way TouchMobile solutions are easily learnt and accepted.

Advanced function for data capture. The TouchMobile Terminal gives you three options:

- Electronic signature capture, using an untethered stylus
- Bar-code scanning, using the integrated non-contact laser scanner
- Touching the screen with a finger or stylus.

2

Mobility. Compact and lightweight, the Touch-Mobile Terminal fits comfortably in one hand and can be easily mounted and removed from the Vehicle Docking Station. An advanced power-management system allows the unit's battery to work a full eight- to 12-hour day without recharging. The system extends battery life by invoking "sleep" modes to power-down the display screen and non-active devices.

Wireless communication capability. By adding appropriate communication devices to the Vehicle Docking Station, you can have two-way data communications and messaging between individual TouchMobile Terminals and base, thereby ensuring more accurate reception of new information and avoiding the temptation to talk, write and drive.

Rugged construction. The TouchMobile Terminal is designed to survive tough use in tough environments, including vehicles, loading docks and warehouses, shop floors and out-of-doors. With sealed ports and durable construction, the terminal can withstand normal shock, vibration, the impact of accidental drops and exposure to spills, chemicals, rain and humidity.

IBM 7684 TouchMobile Portable Data Collection Terminal Specification

Physical	
Size	W100.8 mm x H214.2 mm x D50.4 mm (4 x 8.5 x 2 inches).
Weight	1.1 kg (2.4 lbs).
Display type	Liquid crystal — black on green — with software-adjustable contrast.
Backlight	Cold cathode fluorescent.
Pixel area	70 mm x 160 mm (2.7 x 6.3 inches) with a dot pitch of .35 mm by .25 mm.
Mode	Character or CGA graphics (640 x 200 addressability).
Format	Portrait — 80 lines, 25 characters per line. Landscape — 25 lines, 80 characters.
Communication	Serial infrared communication port, half duplex, 19,200 bps.

Data input	
Touch screen	Fully addressable touch-sensitive overlay mounted above the display surface, sensitive to finger or stylus touch.
Stylus	Untethered, battery-powered pen-shaped device which broadcasts to and receives signals from the terminal unit.
Bar-code scanner	Visible laser diode light source (665 to 685 nanometres); 36 scans per second; optical resolution .005 inches; working distance 0 to 12 inches; maximum field width 20 inches.
Bar codes supported	Code 39, UPC A and E, EAN 8 and 13, interleaved 2 of 5, Codabar, and Code 128.

Environmental	
Power	Main battery 7.2-volt DC at 1.7A, rechargeable nickel-cadmium; backup battery 3.6-volt DC, 90 mA, rechargeable nickel-cadmium.
Memory backup	Rechargeable nickel-cadmium battery provides up to 14 days of backup support.
Operating temperature	0 to 50 degrees C.
Humidity range	5 to 95 percent relative humidity.
Moisture	Enclosure sealed against water intrusion from rain or falling into standing water.
Shock	Tested to survive a one-meter drop onto a solid floor.
Vibration	Tested for random vibration of 1.04 G's RMS, from 2 to 200 Hz, 15 minutes on each axis, without loss of function.
Chemical	Enclosure will resist structural degradation and discoloration from occasional exposure to automotive chemicals (petrol, diesel fuel, antifreeze, glycols, brake fluids and transmission fluids).

| Configuration	
Processor	4.77/8 MHz 80C88 processor, with processor support logic on 82C100 and 82C606 chips.
I/O processor	7.2 MHz 80C196 processor for the touch system and laser scanner.
Storage system	1.5MB of main system storage, of which 640KB is conventional and 896KB is expanded memory; 64KB of ROM BIOS.

Fast and efficient application development.
IBM has developed sophisticated tools to make
the design of TouchMobile applications meet
the specific needs of your business. You have
the choice to take 'standard' programs and screen
design as a basis for your system, or, if appro-
priate, to develop entirely new ones. Either
way, the tools exist to make this simple, quick
and effective.

***Computer-controlled data transfer and sys-***
tem management. The Stationary Docking Sta-
tion, the PS/2 host and the supporting IBM
software together deliver an efficient solution
for transferring data between the TouchMobile
Terminals and your existing applications.

Data collected during the day can be trans-
ferred to the host PS/2, ready for use by your
existing business and operations applications.
In addition, application changes, database up-
dates or information for the next day's work
can be transferred individually to each unit.

As many as eight Docking Stations can be
linked in sequence for data transfer and
management.
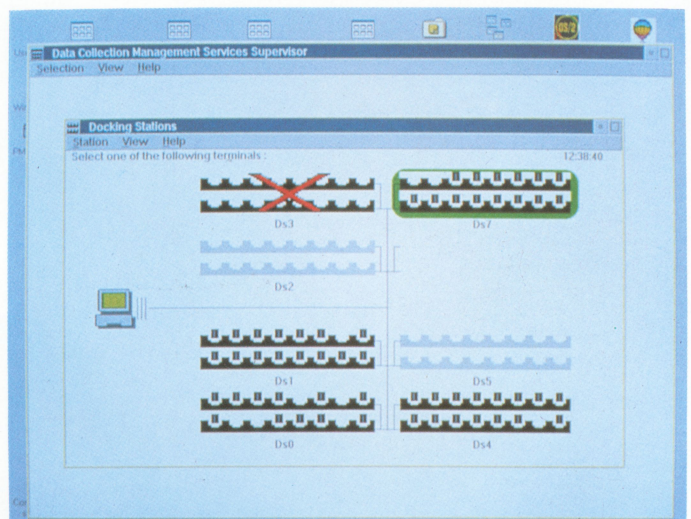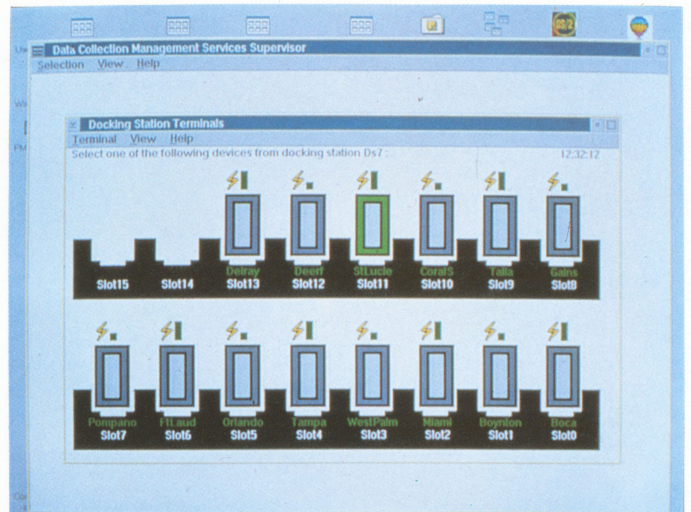
A single Stationary Docking
Station can store and recharge up
to 16 terminals overnight.
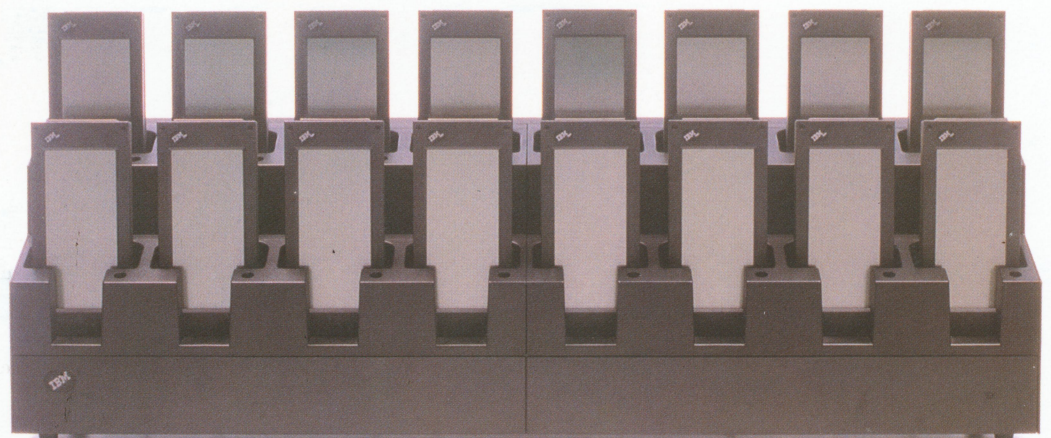
With the IBM TouchMobile
System mobile workers can
capture information at source
– the customer's doorstep, the
loading dock, the warehouse
or out in the field.

IBM 7685 TouchMobile Stationary Docking Station Specification

Size	W1.008 mm x H226.8 mm x D300 mm (40 x 9 x 12 inches).
Weight	12.3 kg (27 lbs).
Processor	Circuit card with microprocessor and related support circuits and infrared (IR) transceiver.
Communication	RS-485 serial port..
Docking slots	16 slots for the IBM 7684 TouchMobile Portable. Data Collection Terminal, each with power contacts, selection contact and window for Infra-Red communication transceiver.
Power input	115- and 230-volt AC, +/- 10 percent..
Power output	9.6-volt DC, 18 amps maximum continuous.
Charger rates	Each charger circuit (16 total) is independent, with the charge rate switch-toggled to fast or slow charge, depending on individual battery requirements. The switch may be activated by either the IBM 7685 TouchMobile Stationary Docking Station or the IBM 7684 TouchMobile Portable Data Collection Terminal.
Operating temperature	0 to 50 degrees C. (32 to 122 degrees F).
Humidity range	8 to 80 percent relative humidity.

IBM 7686 TouchMobile Vehicle Docking Station Specification

Size	W175 mm x H300.8 mm x D145 mm (6.7 x 11.8 x 5.7 inches).
Weight	2.3 kg (5 lbs) (without TouchMobile Terminal).
Processor	8031 microprocessor with 32K RAM.
Communication	Serial infrared (IR) port and RS-232 serial port.:
Operating controls	Backlit power on/off switch.
Indicators	Hex LED display for operating and error conditions; bleeper activated by the TouchMobile Terminal.
Power supply	Power source can be either 12-volt DC from the vehicle or 110/220 volt AC using the IBM PS/2 L40 Quick Charger AC adapter. Voltage range is +6-volt DC to +18-volt DC. Power supply meets the requirements outlined in SAE J1455, including +24-volt DC internal fuse on the circuit board.
Operating temperature	-40 to 85 degrees C. (-40 to 185 degrees F).
Humidity	98 percent relative humidity at 38 degrees C. (100 degrees F).
Chemical	Conforms to SAE J1455 standard.
Salt spray	Conforms to SAE J1455 standard, Section 4.3.3.
Dust	Conforms to SAE J1455 standard, Section 4.7.3.
Vibration	Random vibration 1.04G's RMS, and from 2 to 200 Hz.
Security	Enclosure is a Valox 360 cover fastened to a metal frame. A latch with a key lock holds the terminal and stylus securely in place.

IBM