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Pen Lab Review

Motorola Forte

Mighty pen computer with tightly integrated wireless capabilities.

When Motorola decides to enter a market, they don't mess around. After years of listening to customers and eighteen months of product development, Motorola is ready to release the Forté CommPad, a rugged 486-based pen computer with tightly integrated wireless communications capabilities. Designed to satisfy the highly demanding requirements of public safety officials, field service technicians, and public utility workers, the four-pound Forté is one of the most outstanding examples of intelligent, functional design we've seen.

Under the hood

The Forté CommPad is based on a 3.3v Intel SL Enhanced 486SX-25 processor running Microsoft Windows for Pen Computing. The unit has 8MB of RAM and 8MB of Flash RAM storage on the motherboard. The Flash RAM is addressed as drive C: and serves as the main storage for the unit, though storage is expandable via the unit's two stacked PCMCIA Type II slots or single Type III slot. The Forté uses a 7.4" transfective LCD monochrome screen with VGA resolution, with very bright CCFL backlighting. The excellent screen is coupled with an electromagnetic digitizer with a resolution of 1200 dpi utilizing a battery powered spring-tipped pen. The Forté's display quality and pen performance is as good as it gets: brightly readable in any lighting conditions, quick to respond, and easy to write on with a nice paper-like feel. A nice feature for busy workers is the light sensor that automatically adjusts the contrast as needed for optimum readability. The built-in speaker and microphone opens the door for mixed voice and data communications capabilities to come.

The unit uses standard Duracell DR-30 NiMH cells instead of a proprietary design, giving between 3 and 8 hours of life depending on radio usage. The batteries can be hot-swapped without shutting down the unit. The integrated three watt wireless data modem uses

Motorola's well established MDC-4800 protocol or the more interesting RD-LAP protocol to connect to the Motorola's dedicated data networks at 9.6 or 19.2kbps. Future plans include support for public networks such as Motorola's ARDIS, CDPD, and RAM as well as Motorola's new digital platforms in development for integrated data and voice communications. There is also an optical port in the back of the unit which will initially sport an IrDA-compliant infrared transceiver. Future units will use this space for an optional laser barcode scanner for use in reading vehicle ID numbers, driver's licenses, part numbers, etc.

Go ahead-p;drop it

Housed in a stout and attractive 9.75" x 7.91" x 2" plastic casing with thick rubber overmolding on the corners, the Forté is designed to operate in the harshest field environments. In addition to meeting the usual MIL standards for ruggedness, the unit also meets Factory Mutual intrinsic safety standards. Intrinsic safety refers to a device's resistance to sparking if crushed or accidentally opened, and is usually required in environments where flammable or explosive gases are present. For example, all FM division 2 devices must have locking doors and panels that can be opened only with a tool of some kind. The Forté conforms to this requirement; even the PC Card slots are kept closed with a lock screw. The Forté can operate without data loss after the requisite four foot drop to concrete. Motorola's product manager casually invited me to hurl the unit across the room into a stone fireplace if I wanted to, convincing me that they mean business!

Power saving features are particularly well implemented in the Forté. The unit has several power saving modes optimized for users who need constant wireless radio receive capability. The Forté can be suspended of all computing operation while the radio stays on. An incoming message wakes the unit instantly, as will a simple tap on the screen with the pen. The CPU cycles down to a lower speed the instant the pen is lifted from the screen, and reactivates in a millisecond. A handy, collapsible floating control panel for power features is always available at a tap, and can be used to control other aspects of operation as well. The control panel was designed for Motorola by ART, who also provided the handwriting recognition engine. (Motorola is still evaluating the Lexicus cursive recognizer, and may offer it as an option on the shipping units.)

Bright, curvaceous, and nice to hold

Motorola's design department has done a superb job on the Forté. Though the unit is certainly a handful, it is balanced and quite comfortable to hold in either hand using the straps on the back panel. Also available is a nifty carrying harness that flips open for easy use, with the strap cleverly designed to allow the Forté to rest securely on the user's hip. The soft blue-green case color along with the organic, curvaceous design makes the Forté very attractive, even inviting. This is industrial design of the first order. As to performance, the bright and responsive display, 486 processor, and Flash RAM storage combined to give the Forté a very snappy feel in all computing operations.

Options

In keeping with its intended mission, a vehicle docking station is available for the Forté to provide battery charging for two batteries, a mounted keyboard, and a connection to the

vehicle's higher gain antenna for greater range. The same docking connector pins on the back of the Forté can be used to attach the pocket-size battery charger/port expander. Thus connected, an external PS/2 compatible keyboard may be used, along with an external serial device through a DB-9 connector.

The Forté CommPad is a unique combination of computing power and superior wireless communications in a lightweight, rugged, handheld package. Sure to be a welcome partner for any field worker requiring a lot of wireless performance in a tough case, the Forté CommPad is a winner in every category. The Forté will be sold through Motorola's direct sales force.

/For more information:

***Motorola 800-247-
2346; outside the US
708-576-3107.***
