The Kronos 4500 Touch ID Terminal

Today, a critical workplace issue is forcing organizations to reconsider their methods for verifying employees' identities as they submit labor data. "Buddy punching" — one employee entering time and attendance data for another — has always had a negative impact on labor costs, payroll accuracy, and overall labor management. Buddy punching can't be completely eliminated with badge-based time and attendance systems alone. This issue is causing today's organizations to look for a reliable, accurate, and affordable alternative for verifying employees' identification.

Now there is a solution: the Kronos 4500 Touch ID terminal. The Kronos 4500 Touch ID terminal provides an easy-to-use method for accurately verifying your employees' identity during the labor data collection process. Implementing the Kronos 4500 Touch ID terminal gives you a fast and reliable way of verifying employees' identities, so you can eliminate buddy punching and the theft of work hours within your organization. Without these concerns, you can focus on more important issues, such as improving labor management and increasing your organization's competitive advantage.

Improving control over labor costs

One of the most significant benefits of the Kronos 4500 Touch ID terminal is the positive impact it can have on payroll accuracy and labor costs. While traditional time and attendance systems have been very effective in minimizing data entry errors from manual timekeeping systems, payroll inaccuracies — and inflated labor costs — persist when employees continue to enter labor data for each other. The Kronos 4500 Touch ID terminal gives you the tool to effectively eliminate buddy punching in your organization.

Every employee's fingerprint is unique, so using fingerprints as a way of verifying employee identity is a foolproof method of preventing employees from entering labor data inappropriately. You can rest assured that the actual employee is present as his/her labor data is collected. No more buddy punching. No more time theft. The Kronos 4500 Touch ID terminal solves these problems, so you can reduce labor expenses and improve control over costs. And having the right employees in the right place at the right time leads to improved efficiencies, increased productivity, and fewer management headaches.

Accurate and private fingerprint data

The Kronos 4500 Touch ID terminal is extremely accurate and reliable, but at the same time, it provides safeguards that ensure your employees' privacy is protected at all times. Here's how the enrollment process works:

- An employee enrolls one or two fingers from either the left or right hand by placing them on a scanning device. Enrolling two fingers gives you the option of using the secondary fingerprint as a backup in case the primary finger is injured or not usable.

- When the finger is scanned, the Kronos 4500 Touch ID Enrollment Software measures finger characteristics, translates the captured data into a 348-byte binary "template," and stores it for later verification purposes. The Kronos 4500 Touch ID terminal even provides you with visual feedback to help achieve successful enrollment. The entire process is extremely fast and easy.

The Kronos 4500 Touch ID terminal accurately and consistently verifies employees' identities, which helps prevent buddy punching.

Kronos 4500 Touch ID Terminal

The Kronos 4500 Touch ID terminal ensures that your employees' privacy is protected because it does not capture and store actual fingerprints. Instead, it saves mathematical representations of the fingerprint using a pattern recognition algorithm engineered by Bioscrypt. This algorithm processes the entire fingerprint using the ridge pattern of the finger, not just a limited number of minutiae points. For any given area of the fingerprint, the ridge pattern provides substantially more data than minutiae alone. Because images of the fingerprint are not saved, the Kronos 4500 Touch ID terminal cannot use any stored information to re-create images of their fingerprints, which goes a long way to reassuring apprehensive employees. Highly accurate and highly private means that everyone's needs are met — managers and employees alike.

Finally, the Kronos 4500 Touch ID terminal retrieves employee information from the host application, so changes made in the host system are automatically reflected in the enrollment software. Employee templates are stored at the terminal for fast validation. These templates are backed up in the enrollment application database in case of terminal failure, so you don't have to worry about losing employees' information.

Fast and reliable fingerprint verification
Once enrolled, employees enter their time and attendance data by keying a pre-assigned PIN number or swiping their badges at the terminal and placing one of the two enrolled fingers on the fingerprint sensor. It's that easy. The verification process occurs

after any transaction that alters the employee's in/out status, pay rule, or other update to the labor data processed by the host application. These transactions can include:
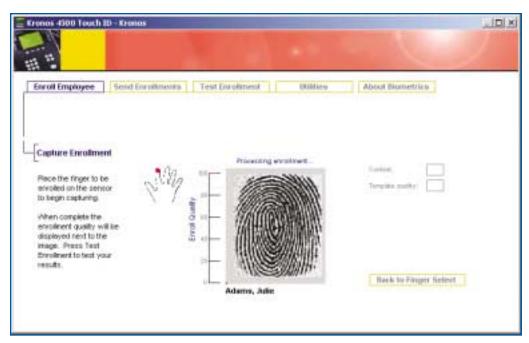
- *Simple punch*

- *Labor transfer*

- *Cancel meal deduction*

- *Enter tips*

Biometric information is instantly captured from the employee's fingerprint and compared against the stored template. If the employee is authorized, the saved template will match the enrolled template and verification is achieved.

All of the features you expect from Kronos are available in the Kronos 4500 Touch ID terminal, such as employee validation.

Leading technology for consistent verification
The Kronos 4500 Touch ID Fingerprint Verification Device is a silicon-based sensor that uses AuthenTec's patented TruePrint Technology — a sub-surface technology that images below the surface layer of the skin to the *live* layer where the true print resides. Unlike other technologies, such as optical or DC capacitive, skin surface conditions do not limit the ability of the sensor to capture fingerprint data. Calluses, dryness, dirt,

The Kronos 4500 Touch ID terminal retrieves employee information from your host application.

moisture, the effects of aging, or even contaminants, like ink, paint, or glue, have little or no effect because the technology captures the employee's live fingerprint from beneath the surface.

Sensor presentation

The most important consideration when integrating fingerprint technology into terminals is the presentation of the sensor to the user. Because consistent finger placement is critical to optimal performance, the Kronos 4500 Touch ID Fingerprint Verification Device has a feature that dramatically improves user finger placement consistency — the Bioscrypt Finger Mask with Ridge Lock. This feature helps users consistently place their finger in the proper location with respect to the fingerprint sensor. This easy-to-use ergonomic finger guide causes employees no discomfort, aggravation, or safety concerns.
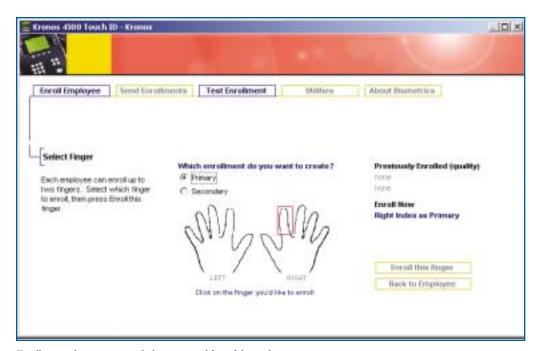
Reliable and durable

The Kronos 4500 Touch ID terminal is an exceptionally reliable and durable biometric solution. This allows the Kronos 4500 Touch ID Fingerprint Verification Device to read a wide range of finger types, including users with dry or difficult-to-read fingers. In addition, the Kronos 4500 Touch ID terminal will prove to be highly durable for a long life. Because it isolates the image sensor from the finger, it is very tolerant to contaminants, scratching, puncture, and electrostatic discharges while improving durability and performance.

The Kronos 4500 Touch ID terminal gives you the solution you need to accurately and consistently verify your employees' identities, eliminate buddy punching, save labor costs, and reduce management frustrations. For more information on how the Kronos 4500 Touch ID terminal can help your organization, contact your Kronos sales representative today.

Benefits of the Kronos 4500 Touch ID terminal

- *Eliminates buddy punching by positively verifying the identity of employees*

- *Provides a highly accurate and reliable method for verifying employees' identity*

- *Offers a fast and easy enrollment process for collecting employees' biometric information*

- *Protects employees' privacy by converting fingerprint images into mathematical representations*

- *Leverages leading technology during the imaging and verification process*

- *Offers the Finger Mask with Ridge Lock to improve finger placement consistency*

- *Gives your organization a highly reliable and durable fingerprint verification solution*

Enrolling employees is extremely fast, easy, and free of discomfort.

Kronos 4500 Touch ID terminal specifications

Memory size:	8MB RAM, 8MB Flash
Host communications:	Ethernet
Keypad:	Silicon Elastomer numeric keypad plus 8 programmable softkeys
Screen display:	3" x 4" FSTN LCD display
CPU type:	Motorola MPC 860DT
Power requirements:	100–240V, 1.5A max
Environment:	Operating temperature: 0–40 C; Humidity: 10–95% non-condensing
Enclosure:	Black, Advanced Polycarbonate/ABS resin
Dimensions:	10.75" wide x 11.75" high x 4" deep (terminal dimensions do not include biometric device)
Shipping weight:	5 lbs.
Options:	Internal AC outlet, backup battery, proximity reader, magnetic reader

System specifications

DSP board:	Bioscrypt MV1200
Resolution:	250 dpi
Active pixels:	128 x 128
Image capture area:	13 mm x 13 mm
Image sensor:	AuthenTec FingerLoc AF-S2
Output:	RS232
Power:	5 volts regulated at 1 amp
Temperature range:	0°C to 40° celsius, up to 60% non-condensing humidity
Static discharge:	Protected up to 15 kV (IEC 61000-4-2 Lvl 4)
Dimensions (H x L x W):	OEM fingermask: 39 mm x 39 mm Vendor portal: 35 mm x 35 mm DSP board: 63 mm x 43 mm x ~10 mm
Storage capacity:	2,000 fingerprint templates (non-volatile flash memory)
Security levels:	Variable from none to normal
Finger rotation:	+/– 18 degrees maximum
Finger displacement:	+/– 7 mm maximum
False acceptance rate:	1:1,000, based on normal security
False rejection rate:	1:1,000, based on normal security
Enrollment time:	Approximately one minute
Verification time:	Less than three seconds
Equal error rate (ERR):	0.1% at medium security
Template size:	348 bytes

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Improving the Performance of People and Business™

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