



Accu-Time Systems, Inc. 420 Somers Rd., Ellington, CT 06029

FAQ: ATS Fingerscan Offerings

Q: What are the ATS biometric fingerscan offerings?

A: ATS offers two biometric fingerscan reader options for use in various ATS biometric fingerscan terminals. The two options are the E-Field Sensor and the Capacitive Sensor.

Q: Are the readers the same?

A: The readers use similar technologies (E-Field & Capacitive) and both utilize a silicon platen. The primary differences between these two readers include: template size, storage capacity, and enrollment procedure.

Q: How do the response times compare?

A: The E-Field Sensor in 1:n mode can efficiently scan (under 1 second) 150 templates.

The Capacitive Sensor reader can scan 500 templates per second. So if you have 1000 templates in the Capacitive Sensor reader you can expect an average response time of ~2 seconds. However if you have 500 or less the average response time is <1 second.

Q: What are the template sizes?

A: The E-Field Sensor (1:1) template is 384 bytes. The E-Field Sensor (1:n) template is 2352 bytes.

The Capacitive Sensor uses a single template for both 1:1 and 1:n matching that is 784 bytes.



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Q: Why is Capacitive Sensor's 1:1 template so much bigger than E-Field Sensor's?

A: During enrollment the Capacitive Sensor reader actually takes 3 images of the finger and converts all three into one template. In use, the user's fingerscan is then verified/ID'ed against the template (which contains the 3 stored templates created at enrolment).

Q: What is the template storage capacity of each?

A: The E-Field Sensor reader can locally store up to 4,000 1:1 templates or up to 200 1:n templates.

The Capacitive Sensor reader with 2MB storage can locally store up to 1200 templates.

The Capacitive Sensor reader with 8MB storage can locally store up to 9,000 templates.

Q: How does enrollment differ?

A: The E-Field Sensor's enrollment process is more interactive. It returns enrollment quality and content scores, which a user's application can evaluate to determine if the enrollment is adequate for acceptance.

The Capacitive Sensor's enrollment process is more automated. The sensor evaluates the finger scans taken for enrollment and takes multiple scans as necessary until reliable scans are obtained.

Q: Can a user enroll with two fingers?

A: Yes. Both readers provide a means for multiple finger enrollment. This provides a fallback should one finger become damaged.



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Q: Are both readers easy to clean?

A: Both reader options can be easily cleaned using any mild cleaning method. Mild liquid cleansers are appropriate provided that the sensor is not exposed to excessive amounts of liquid.

Q: Are environmental requirements similar?

A: Both readers have similar environmental requirements. For example:

The E-Field Sensor is rated for 0 to 60 degrees C.

The Capacitive Sensor is rated for 0 to 55 degrees C.

Q: Does cold weather affect the read rate?

A: The read rate for each reader will essentially independent of temperature provided that the operating temperature specification (above) is not violated.

Q: Does dry skin affect the readers?

A: If there is excessive dryness to the finger it is possible that the reader may have difficulty achieving an adequate scan. In these rare cases some customers have stationed a moistening agent at the terminal location.

Q: Can 100% enrollment and utilization success be guaranteed?

A: While there is constant improvement in biometric technologies, such as fingerscan readers, there will always be a very small percentage of the population that cannot be read for one reason or another.



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Q: How do the false acceptance rate (FAR) and false rejection rate (FRR) compare?

A: The E-Field Sensor has a FAR of 0.1% for 1 finger, and a FRR of 0.1%.

The Capacitive Sensor has a FAR of 0.01% to 0.0001%, and a FRR of 0.1% to 0.001%.

Q: Which is more durable?

A: Both readers are extremely durable. The ESD resistance levels for both are shown below:

The Capacitive Sensor is certified to IEC 61000-4-2 level 4 (+/- 15KV).

The E-Field Sensor reader is certified to IEC 61000-4- 2 level 3 (+/- 8KV).