

#### Section

#### **Cards, Tokens and Credentials**

**Biometric Tokens.** The access control system shall employ Biometric Tokens that provide on-device biometric verification of the user's identity before allowing the credential (i.e., card number and card format) to be passed to the card reader.

**Communications.** The Biometric Token shall be support the following Communication Formats to provide compatibility with industry standard readers:

##### **Communication Interfaces and Card Formats**

- 125 kHz proximity technology to support communication with HID, Indala, and CASI readers as a minimum
- 13.56 MHz read/write contactless smart card technology that meets ISO 14443A, 14443B, 15693, and NFC standards for contactless communications, and supports HID iCLASS

##### **Logical Access**

- In order to support logical access to computers, networks and applications with a single device, the Biometric Token shall additionally support Bluetooth™ 2.45 GHz. (V1.1 certified), and USB 2.0 (full-speed) and provide a Smart Card interface (See Software Interface section below)

**User Authentication.** The Biometric Token shall employ a semiconductor-based fingerprint reader for user authentication. Optical fingerprint readers shall not be acceptable.

**Physical.** The Biometric Token shall be a small, key chain-attachable device not exceeding the following dimensions:

Length: 6.7 cm (2.6 in)  
Width: 3.6 cm (1.4 in)  
Depth: 1.2 cm (0.5 in)  
Weight: 24.1 g (0.85 oz)

**Environmental.** The Biometric Token shall have the following environmental specifications:

Operating Temperature: -20 deg C to +60 deg C; (-4 deg F to +140 deg F)  
Storage Temperature: 0 deg C to +40 deg C; (+32 deg F to +104 deg F)  
Operating Humidity: 90% non-condensing

**Power.** The Biometric Token shall include an on-board power source and be rechargeable via a USB connection.

**Software Interface.** Biometric Tokens shall be Smart Card compatible, supporting the 7816 Smart Card standard for communications with Smart Card readers and related software applications. The aforementioned Smart Card communications capability shall be provided over the Bluetooth™ and USB channels as a minimum.