

Technical Reference

Credentials -- Code Format Options for Customers

AWID offers four types of code options to our customers. These choices apply to all of our credentials – the cards and tags for all low-frequency (proximity) and ultra-high-frequency technologies.

26-Bit Format: The majority of cards and tags that are used in access control and automated vehicle identification (AVI) applications are encoded with this format, which AWID calls “**26BIT-STD**”. This is the standard format in the security industry, worldwide. It is called a “Wiegand-type” format because it has two data fields – the site code or facility code, and the individual ID number – and two error-checking bits. This standard assures universal compatibility* and interchangeability of code inputs with virtually every access control system.

The data fields in the 26-bit format support 255 site codes and 65,535 ID numbers for each site code – a total of 16.7 million codes.

This format is called “open code” because it is available without question to all of AWID’s authorized customers. There are no reservations or restrictions in our customers’ ordering and distribution of these codes. Almost every access control system is shipped with the 26-bit standard format provided and easily selectable by the installer.

AWID's 37-Bit Open-Code Format: AWID offers its customers another open-code format. In designing a format with 37 bits, the “**37BIT-AWI**” format contains more than 2,000 times as many individual codes. Like 26BIT-STD, this format has no reservations or restrictions on its use. However, because of the large number of available site codes, AWID’s direct customers may order credentials with a site code not previously used, and then have full control of the use of the ID numbers for that site code.

When an installer sets up this format in an end user’s system, AWID provides the bit-map for 37BIT-AWI to be entered into the system as a custom format.

AWID's "High-Security Format": Formats “**34BIT-HSF**” and “**34BIT-HS2**” are classified as “reserved-format code”. AWID assigns to each applying direct customer a particular site code, which is then reserved for orders only from that customer. The customer then controls the ordering and distribution of ID numbers inside that site code. The installer enters the bit-map for the format into the system.

Proprietary Format: AWID offers to highly qualified direct customers a reserved-code format, which is designed jointly by the customer and AWID. This format may have a number of bits different from the three format types that are described above, and may have a number of data fields, number of bits in each field, and a pattern of error-checking bits that is different from the usual “Wiegand-type” format. AWID accepts orders for credentials with the proprietary format only from that authorized customer.

The installer enters the bit-map for the format into the system.

* **Compatibility:** As a general rule, the credentials and the readers for reading the codes in those credentials are products of the same company. (There are exceptions to this rule, which AWID can discuss with its customers.) Beyond this need for product matching, the products from different companies may be combined in a particular access control system because of the common use of the 26-bit standard format, and of the Wiegand data interface standard for wiring the reader into the system’s controller panel. The clue for presence of the Wiegand interface is separate data lines for “Data-0” and “Data-1”, and a third wire for data-common, usually labeled “Ground”.