APPLIED WIRELESS ID

Applied Wireless Identifications Group, Inc.

18300 Sutter Blvd. – Morgan Hill, CA95037 • Voice 1-408-825-1100 • Fax 1-408-782-7402 www.awid.com

Technical Reference

Data Formats

A. Readers

An AWID reader (either 125 kHz proximity or 915 MHz long-range) is "transparent" to the code that it is reading in the credential that is presented to the reader. That is, if the credential (card, tag or wafer) is an AWID product that has been programmed with a valid AWID code, the credential and the reader will talk with each other to establish authorization, and the reader will transmit the credential's particular identification code through the reader's electrical interface to the controller panel or the reader interface module of the host access control system.

AWID's readers do not need any programming or set-up.. The readers have this code-format-transmission capability built into their design. The readers are "plug and play". When you present a credential, the reader tests the quality and consistency of the data that the credential transmits to the reader. If the data meet this test, the reader passes the code to the host system. The reader itself does not limit the number of bits that it transmits to the host system.

B. Credentials

AWID's code formats are divided into four categories –

1. 26-bit Wiegand industry-standard format, with facility code, ID number, and error-checking bits.
2. "Open formats" with other numbers of bits besides 26, available by special arrangement.
3. 34-bit high-security format (HSF), where the customer controls all ID numbers in an assigned facility code.
4. Proprietary formats, with special bit layouts reserved by AWID for individual customers.

Categories 1 and 2 are "open formats", that is, they are available on a non-reserved basis.

C. Custom Formats

Category 4 formats are reserved by AWID for particular system-manufacturer and system-integrator customers. In designing a proprietary format, AWID needs this information from the customer –

1. The total number of bits in the format?
2. The number of data fields?
3. Assignments of the data fields, for example, facility code, issue number, ID number?
4. Number of bits in each data field?
5. Sequence of the data fields in the format?
6. Most-significant-bit (MSB) first, or least-significant-bit (LSB) first?
7. Number of parity bits for error detection?
8. Location of parity bits in the format?
9. Bit numbers in the format on which each parity bit is calculated?
10. Each parity bit to be calculated on an even or odd number of bits?
11. What company manufacturers the system with which this custom format will be used?