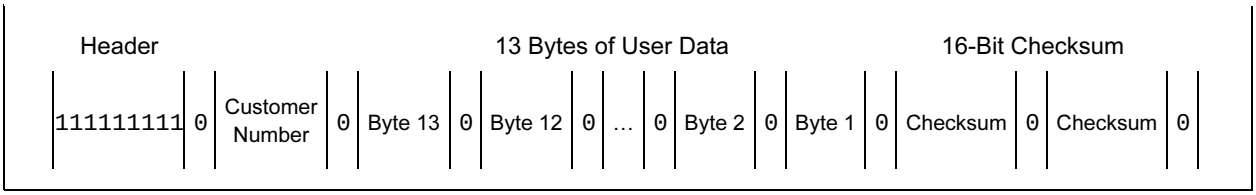
Microchip Development Kit Sample Format for the MCRF355/360 Devices



9	-bit header
8	-bit customer number
104	bits (13 x 8) of user data
17	bits of zeros between each byte, header, and checksum
16	bits of checksum
Total:	154 bits

Notes:

- Users can program all 154 bits of the MCRF355/360. The array can be programmed in any custom format and with any combination of bits.
- The format presented here is used for Microchip microID™ Development Systems (DV103003 and DV103006) and can be ordered as production material with a unique customer number.
- See TB032 for information on ordering custom programmed production material.
- The Microchip Development System (DV103003) uses nine 1's (`111111111`) as header.
- The preprogrammed tag samples in the development kit have hex 11(= `0001 0001`) as the customer number.
- For the development system, users can program the customer number (1 byte) plus the 13 bytes of user data or they can deselect the "Microchip Format" option in the microID™ rfLAB™ and program all 154 bits in any format.
- When users program the samples using the microID rfLAB, the rfLAB calculates the checksum (2 bytes) automatically by adding up all 14 bytes (customer number + 13 bytes of user data), and put into the checksum field in the device memory. See Example 1 for details.
- When the programmed tag is energized by the reader field, the tag outputs all 154 bits of data.
- When the demo reader detects data from the tag, it reports the 14 bytes of the data (customer number plus 13 bytes of user data) to the host computer if the header and checksum are correct. The reader does not send the header and checksum to the host computer.
- The "microID rfLAB" or a simple terminal program such as "terminal.exe" can be used to read the reader's output (28 hex digits) on the host computer.
- When the demo reader is used in the Terminal mode ("terminal.exe), the tag's data appear after the first two dummy ASCII characters (GG). See Example 2 for details.

EXAMPLE 1: CHECKSUM

Checksum (XXXXXXXX XXXXXXXX) = Byte 1 + Byte 2 + ...+ Byte 13 + Customer Number (1 byte)

EXAMPLE 2: READER'S OUTPUT IN TERMINAL MODE ("TERMINAL.EXE")

The demo reader outputs GG+28 hex digits (i.e., GG 12345678901234567890ABCDEFGF).

The first two ASCII characters (GG) are dummy characters.

The tag's data are the next 28 hex digits (112 bits) after the first two ASCII characters (GG).

NOTES:

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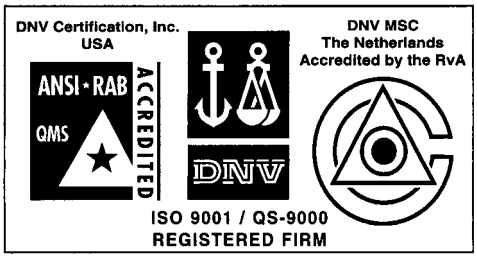

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