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Long Messages - Alternate Header Formats

Some protocols support messages with as many as 255 bytes of data. Messages of this length cannot be accommodated by the lower nibble - byte count format defined for most of our products. Therefore, the header byte format has been modified to support really long messages.

For messages between an AVT interface and a host computer three formats are available. The three formats are described here, along with examples.

If the message is 15 bytes or less in length (total) then the 'normal' format may be used.

Normal Format: 0x aa bb cc ...
 x - count of bytes to follow
 aa bb cc ... message bytes.

Example: 05 81 F1 C1 48 9B

If the message is more than 15 bytes but less than 255 bytes in length, alternate format #1 is available using a header byte of \$11. Where the 11 indicates that a single byte of length immediately follows.

Alternate format #1: 11 xx aa bb cc ...
 11 - header byte
 xx - count of bytes to follow
 aa bb cc ... message bytes.

If the message is more than 255 bytes in length, alternate format #2 is available using a header byte of \$12. Where the 12 indicates that two bytes of length immediately follow.

Alternate format #2: 12 xx yy aa bb cc ...
 12 - header byte
 xx - count of bytes to follow, most significant byte
 yy - count of bytes to follow, least significant byte
 aa bb cc ... message bytes.

These formats are backward compatible and may be used as desired.

For example, the host wants to transmit the following message onto the bus:

A1 B2 C3 D4 E5 F6 A7 B8 C9 DA EB FC AD BE

The following messages from the host to the interface unit are all equivalent.

The header byte(s) have been bolded and underlined for clarity.

0E A1 B2 C3 D4 E5 F6 A7 B8 C9 DA EB FC AD BE

11 0E A1 B2 C3 D4 E5 F6 A7 B8 C9 DA EB FC AD BE

12 00 0E A1 B2 C3 D4 E5 F6 A7 B8 C9 DA EB FC AD BE