

Application Note

Doc No.: TN20-19
Version: 1.0
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Subject: READPACKET Command

ReadPacket (nPort, nStartVar, nVarCount [, nFormat])

Where: nPort {x: 0 <= x <= 1}
nStartVar {x: 0 <= x <= 250}
nVarCount {x: 0 <= x <= 250 - nStartVar}
nFormat {x: 0 <= x <= 4}

All the data is stored in the VR variable structure:
VR(nStartVar+x)=Value(x) ; 0 <= x <= nVarCount
VR(nStartVar+nVarCount) = 0 if the CRC check is correct, otherwise it is non-zero.

Packet Structure:

All the formats share the same packet structure, as follows:

Byte0	Byte1	Byte2	Byte3	...	Byte(nVarCount-1)	CRC0	CRC1
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CRC is a 16 bit CRC. The generator polynomial = $X^{16} + X^{15} + X^2 + X^0$

nFormat set 0 to 2:

nFormat =	0 Standard character	1 Standard integer	2 Standard long
Value(0) =	Byte 0	256 * Byte1 + Byte0	((Byte3 * 256 + Byte2) * 256 + Byte1) * 256 + Byte0
Value(1) =	Byte 1	256 * Byte3 + Byte2	((Byte7 * 256 + Byte6) * 256 + Byte5) * 256 + Byte4
Value(2) =	Byte 2	256 * Byte5 + Byte4	((Byte11 * 256 + Byte10) * 256 + Byte9) * 256 + Byte8

nFormat = 4: 7-bit Long

The packet has an absolute structure. Byte0 has the most significant bit set, no other character (including the CRC) may have bit 7 set. The values sent are only 24 bits in length, as the most significant bit is not available due to its' being used as a Start Of Packet flag.

Value(0) = (((Byte3 * 128 + Byte2) * 128 + Byte1) * 128 + Byte0
Value(1) = (((Byte7 * 128 + Byte6) * 128 + Byte5) * 128 + Byte4
...
CRC = CRC1 * 256 + CRC0

Bit 15 and Bit 7 of the CRC check are not sent, due to the encapsulation, and so are ignored in the check.