

**INTERPRETATION IC 135-2020-2 OF
ANSI/ASHRAE STANDARD 135-2020 BACnet® -
A Data Communication Protocol for Building
Automation and Control Networks**

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Reference: This request for interpretation refers to the requirements presented in ANSI/ASHRAE Standard 135-2020, Clauses 12.56.16, 12.11.18, 20.1.2.5 and Table 6.1 regarding APDU size properties and processing expectations based on these properties.

Background: Clause 12.56.16 describes the property APDU_Length should indicate the maximum APDU that can be sent or received on that port. Issue would be which restrictions need to be observed for configuration of that property. Table 6.1 does list available NPDU sizes per datalayer. But it is not obvious how to calculate the maximum APDU size for a given datalayer because the NPCI can have variable size. It seems a calculation for a "typical" max APDU size is max NPDU minus 21. But the minimum NPCI seems to be 2 octets so a calculation of max NPDU size minus 2 might also be reasonable. But even NPCI sizes higher than 21 are possible. So questions are:

- is it correct for a device to have APDU_Length as high as NPDU minus 2 even if that leads to such APDU size is only possible with minimum NPCI size?
- if an APDU_Length property is smaller due to configuration or due to calculation based on higher NPCI (such as 21) would it be a violation of the standard if the device still successfully receives and executes or sends APDU with bigger length?

Interpretation No.1: It is allowed for a device to have APDU_Length property in a network port object as high as max NPDU length minus 2.

Question No.1: Is this Interpretation correct?

Answer No.1: No

Interpretation No.2: It is allowed for a device to successfully receive and process APDU with size higher than the property of the network port where the APDU is received.

Question No.2: Is this Interpretation correct?

Answer No.2: No

Comments: Max_APDU_Length_Accepted is the true maximum APDU length accepted by the device.

The maximum APDU length that can be accepted by a network port is the maximum NPDU size for the data link minus 21 octets.

Clause 20.1.2.5 clarifies the difference between the APCI field max-apdu-length-accepted which

is not exact and the property which is and implies how to convert from maximum NPDU size to maximum APDU size.