

**Product:**

Wireless equipment.

**Family:**

Industrial &amp; enterprise applications.

# Tech Tip

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## Why we don't obtain the maximum throughput on an 802.11n device when the TKIP or WEP encryption method is used?

If TKIP or WEP is set exclusively in an 802.11n device, it will switch to the 802.11g Standard mode of operation, so the data rate will drop to 54Mbps or even less, so the native high throughput transmission capabilities of the 802.11n Standard will not be used. This is due to fact that during the development of the IEEE 802.11n Standard, it was decided that all 802.11n devices will only support AES (Advanced Encryption Standard), which is the most suitable encryption standard for high throughput data

transmission; but to ensure backward compatibility with older client cards, manufacturers maintain TKIP and WEP in their firmware versions. To overcome this setback, both AES and TKIP methods can be used simultaneously in a "mixed mode," which allows client cards to choose the one they use to protect their frames. LanPro recommends AES as the encryption method in 802.11n devices.



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