**IoT Compliance Standards and How to Comply**

IoT is an innovative technology with many applications, but it also comes with many challenges. IT professionals look for ways to enhance their organization with the help of IoT, but they should also be looking forward to solving its associated risks.

One of the ways to mitigate risks is by establishing a compliance process by using apt standards, benchmarks, and regulations. Organizations should also know about existing standards of IoT compliance standards to work on how their organization can comply with them.

## Compliance Basics

There are different internet standards like the Internet Protocol (IP) that includes IPv6 as well. Any device that links to the internet comply with these standards. Usually, IT professionals are not worried about compliance with such standards because mostly inventories incorporate IP properly.

The concerns for Cybersecurity are growing every day, so security protocols and standards should be factored in a way to use the internet.

## Compliance Standards Applicable to IoT Technology

There are several standards for IoT connectivity. Few of these standards are made for the connecting low power devices to the internet. Low power devices include home security systems or devices enabled with WiFi. Let’s take a look at some of these standards.

### Bluetooth Low Energy

The Bluetooth Special Interest Group developed this wireless technology. It was intended to support various applications in fitness, security, healthcare, home entertainment, and management systems.

### IEEE 802.11ah

It is another low energy wireless network protocol. It adds to the previous IEEE 802.11 wireless protocol as it increases the connectivity range of Wi-Fi for networks.

### Thread

It is developed by a conglomerate of leading technology organizations that are called Thread Group. Thread is yet again a low power network protocol that is specifically designed particularly for IoT products.

### Zigbee

After Bluetooth low energy, Zigbee is another low power device that operates well for home, healthcare, and personal network. It is based on the IEEE 802.15.4 wireless protocol and is for devices with low bandwidth.

### Z-wave

The last low power network protocol that we are going to discuss was developed in the year 1999. Its developer, Zensys, the aim was to create it for a home automation system. At present, it is run by Sigma Designs.

## IEEE P2413 Draft Standards

IEEE P2413 is close to the IoT compliance standards and can be used as its framework. Its architecture helps identify and describe the common areas in various IoT domains.

Several networking protocols are applicable to IoT applications. It includes IEEE 802.16, 802.3, 802.15, 802.1, and 802.22. You can effectively use the specific IEEE standards as presented in the P2413 draft to ensure a unified IoT infrastructure.

## Establishing IoT Compliance

Usually, compliance with IoT protocols and standards is automatic. However, that is not all; it also depends on the standards built within the device. More IT audit controls like IT general controls addressing security, data integrity, access, other issues are also applicable to IoT situations. You can apply control metrics to IoT system compliance auditing because mostly IoT devices exhibit the exact control requirements like the rest of the IT systems. You can also use [smart cards](http://www.cardzgroup.com/PvcCard.html) to authenticate IoT devices.

When you audit an IoT device and network, it is best to use the similar IT audit controls to develop and later confirm compliance. It is a good IT practice. Once your compliance with IEEE P2413 standards is approved, auditors can get many added controls for their work.

## Conclusion

The greatest challenge of complying with IoT standards is selecting the right suit of system or technology. The conventional IT audit controls are still applicable to IoT compliance. Furthermore, the new draft standard by IEEE provides a guideline for future compliance requirements.