

IzoT Technology Overview

Echelon's IzoT Platform is an IP-enabled, multi-protocol, multi-media control and communications platform specifically architected for the Industrial Internet of Things (IIoT). The IzoT Platform includes a family of chips, stacks, interfaces and management software that enable the development of devices, peer-to-peer device communities, and applications for the IIoT. Unlike consumer-grade platforms, the IzoT Platform comprehensively addresses the unique requirements of the IIoT: autonomous control, industrial-strength reliability, multi-media support, scalability, and legacy co-existence and evolution.

Echelon provides three types of products for the IzoT Platform:

1. Chips, software stacks, and modules for developing IzoT-enabled devices that communicate with the LonTalk/IP protocol. Options are provided for both wired and wireless connectivity, providing the flexibility for each application to choose the best media or combination of media.
2. Routers for interconnecting different IP links, and for serving Web pages and interfacing to Web applications.
3. Software for providing management, monitoring, and control of IzoT-enabled devices for complex networks.

The chips, stacks, modules, routers, and management software all implement a common set of services called the LonTalk/IP Control Services. These services enable devices to communicate with datapoints. These datapoints are organized into blocks, and the datapoints and blocks are defined by a rich set of data types and profiles. Datapoints on different devices can be bound into connections. Devices can be organized into communities, and datapoints can be connected, using the Interoperable Self-Installation services built-into the IzoT Device Stack EX. You can also use an IzoT-compatible network installation tool such as the IzoT Commissioning Tool to create networks and connections.

The following topics describe the LonTalk/IP Protocol and a few of the key services provided by the LonTalk/IP Control Services:

- [LonTalk/IP Protocol](#)
- [LonTalk/IP Network Addresses](#)
- [Datapoints and Connections](#)
- [Blocks](#)
- [Data Types](#)
- [Profiles](#)
- [Interoperable Self Installation \(ISI\)](#)
- [ISI Connections and Assemblies](#)