


Smart Objects Network

Enabling the Internet of Things



Nivis Smart Objects Network (SoN) is an enabling solution for the Internet of Things. It employs the standards-based Routing Protocol for Lossy and Low-Power Networks (RPL) and is an IPv6-compliant implementation that forms a foundation for interconnected embedded systems. From smart meters and lighting to healthcare and environmental monitoring, Nivis SoN allows you to speed through your development cycle, saving your organization time and money. We provide the communications stack, wireless radio modules, edge router hardware, and network management software—a complete solution that allows you to quickly integrate our experience in building reliable wireless communications networks into your products.

Solution Highlights

- » Lowers infrastructure costs, with up to 3,000 devices per edge router
- » Simple integration with global sensing and control platforms that utilize REST/CoAP web protocols
- » Leverages proven standards: 802.15.4g, 802.15.4e, IPv6, ROLL/RPL, SNMP, ICMP, UDP, CoAP, EXI/XML and others
- » Increases reliability of communications through path redundancy and frequency and timing diversity
- » Battery and line power support
- » Class leading dual layer security, including link layer (hop to hop) and end-to-end security
- » API-based serial communication enables product integration in days

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Nivis Smart Objects Network is an application layer agnostic solution built on industry standard protocols.

SMART OBJECTS HIGHLIGHTS

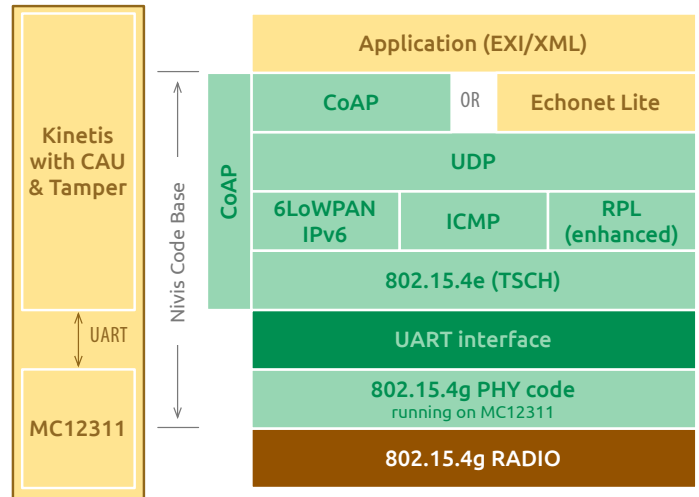
- IEEE 802.15.4g Smart Utility Network (SUN) support (902-928 Mhz)
- IEEE 802.15.4e TSCH MAC compliant
- IPv6 addressing & network services
- RoLL-defined RPL-based routing
- Supports ICMPv6 discovery
- Support for IPv6 extensions and options
- UDP-based transport layer
- Dual layer link security
- Line or battery powered

EDGE ROUTER HIGHLIGHTS

- Supports up to 3,000 smart objects
- IEEE 802.15.4g Smart Utility Network (SUN) Support (902-928 Mhz)
- IEEE 802.15.4e TSCH WPAN coordinator
- RPL DODAG root
- Link-layer security manager
- Ethernet-based backhaul
- EXI/XML translation

NETWORK MANAGEMENT SOFTWARE HIGHLIGHTS

- Allows visualization of network topology
- Collects and displays periodic data
- Allows on-demand command execution
- Allows RPL-graph formation replay for troubleshooting
- Single-click integration with Pachube sensing and control platform



The Nivis Advantage

Nivis is the world leader in building reliable wireless networks for some of the most demanding environments, from industrial automation to utility management. We offer our customers a complete, standards-based solution that is easily integrated into their products. Nivis customers are able to reduce development time and costs while adding standards-based benefits such as interoperability and broad market acceptance. Contact us today to find out how we can enable your next project to take part in the Internet of Things.