



# Broadband Modem and Residential Gateway

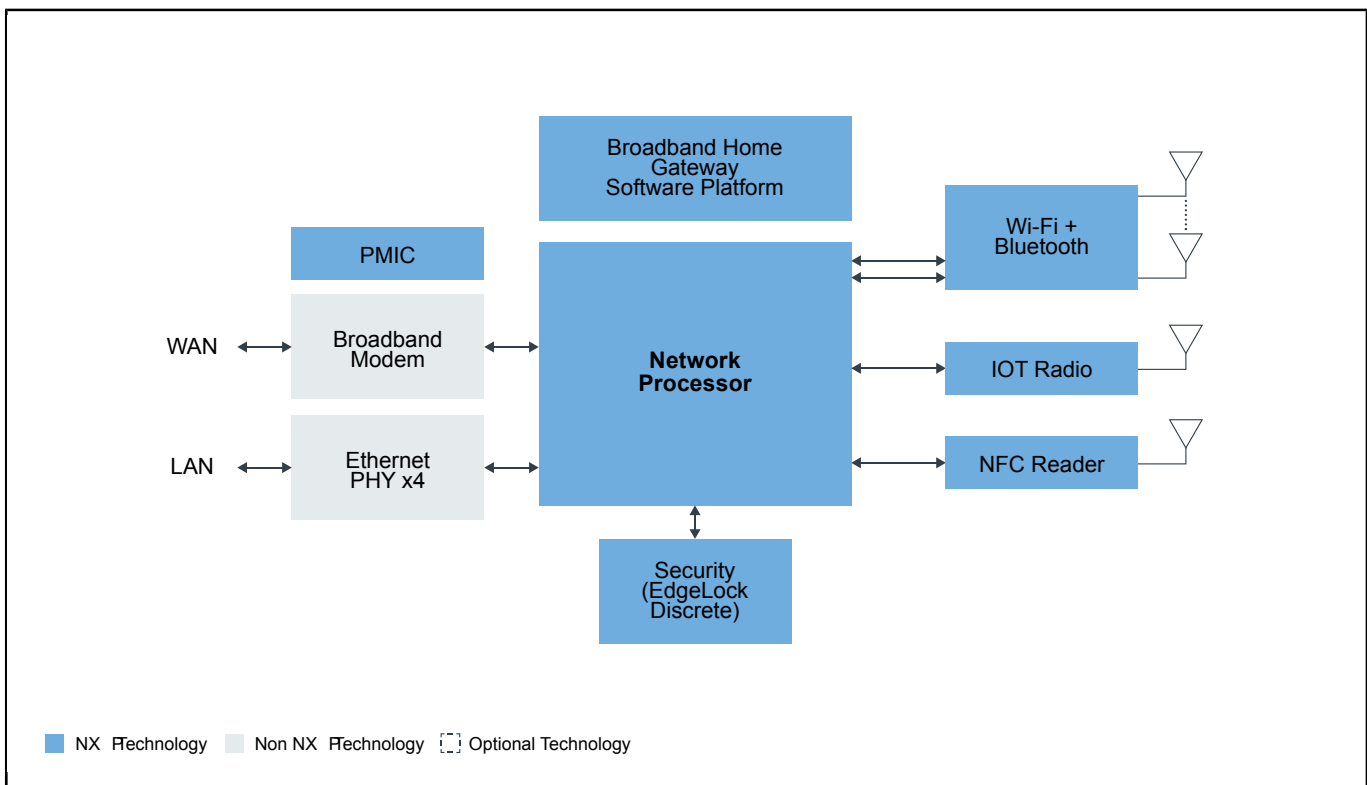
Last Updated: Dec 15, 2021

A broadband (smart home) gateway is an appliance that delivers broadband data, voice, and video services to a home or customer premises. It is the point of entry for Internet services to the home and its performance is key to the quality of experience provided to the end user.

These days most end users equate Wi-Fi performance in the home with the overall service provided by the broadband operator. More and more people also rely on their broadband data service for TV and video, and increasingly expect to manage all of those services with voice-controlled applications. As a result, the residential gateway is moving out of the closet and becoming a central hub for wireless voice, data, and video service delivery across the home.

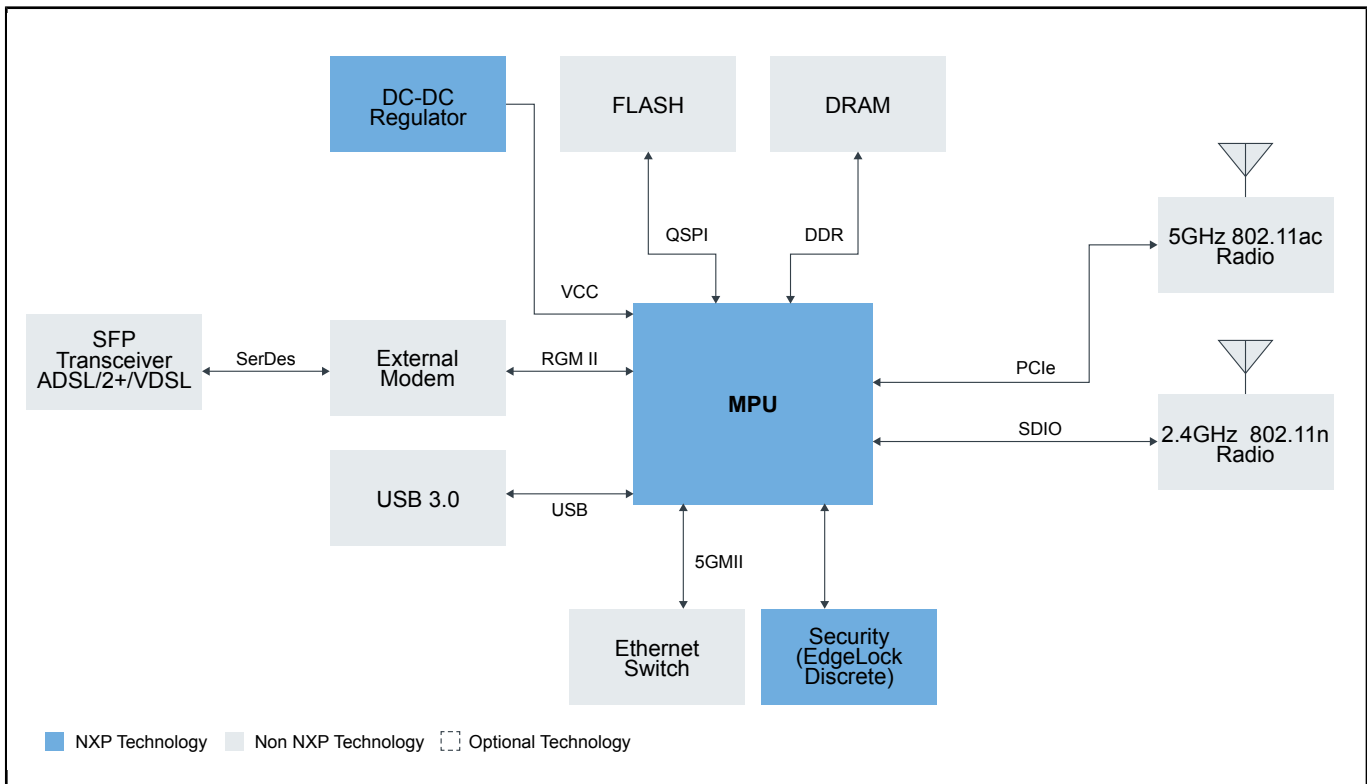
NXP can offer a complete portfolio of solutions for modern residential gateways including gigabit-class network processors with hardware packet processing and QoS, leading-edge Wi-Fi, IOT radios and other supporting devices such as power management ICs.

## Smart Home Gateway Block Diagram



Recommended Products for Smart Home Gateway	
Software	<ul style="list-style-type: none"> <li>Layerscape 1046A Processor Broadband Home Router Application Solutions Kit</li> <li>Layerscape 1043A Processor Broadband Home Router Application Solutions Kit</li> <li>Layerscape 1012A Broadband Home Router Application Solutions Kit</li> </ul>
IoT Radio	<ul style="list-style-type: none"> <li>JN5189/88 (T): High-Performance and Ultra-Low-Power MCUs for Zigbee® and Thread with Built-In NFC Option</li> </ul>
NFC Reader	<ul style="list-style-type: none"> <li>PN7160: NFC Plug and Play Controller with Integrated Firmware and NCI Interface</li> </ul>
PMIC	<ul style="list-style-type: none"> <li>FS5600: Automotive Dual Buck Regulator and Controller with Voltage Monitors and Watchdog Timer</li> <li>PF8100-PF8200: 12-Channel Power Management Integrated Circuit (PMIC) for High-Performance Processing Applications</li> <li>VR5100: Multi-Output DC-DC Regulator for Low Power LS1 Communication Processors</li> </ul>
Security (EdgeLock Discrete)	<ul style="list-style-type: none"> <li>EdgeLock® SE050: Plug &amp; Trust Secure Element Family – Enhanced IoT security with high flexibility</li> <li>EdgeLock® SE051: Proven, Easy-to-Use IoT Security Solution with Support for Updatability and Custom Applets</li> <li>EdgeLock® A5000 Plug &amp; Trust Secure Authenticator: Authentication Made Secure, Scalable and Easy</li> </ul>

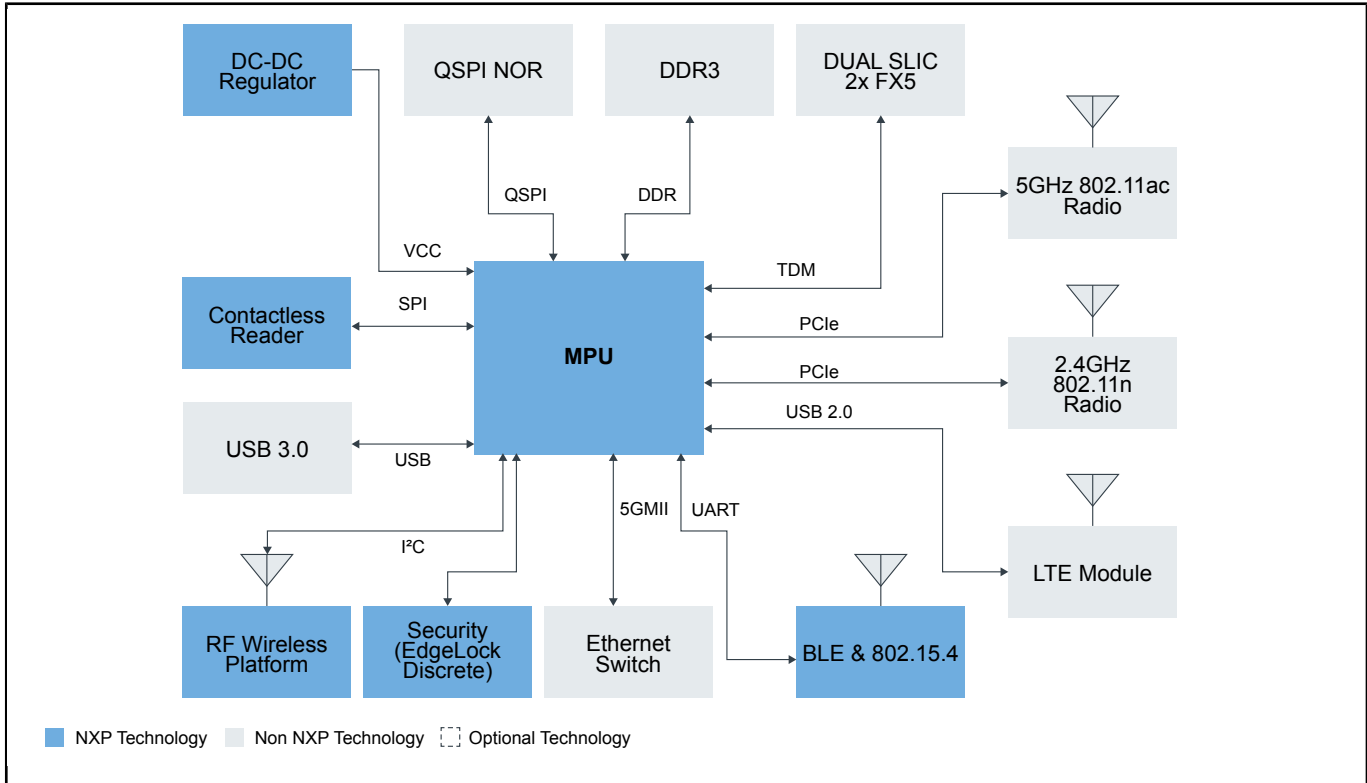
## Residential Gateway LS1012A Block Diagram



Recommended Products for Residential Gateway LS1012A	
MCU	<ul style="list-style-type: none"> <li>Layerscape® 1012A Low Power Processor</li> </ul>
Power Management	<ul style="list-style-type: none"> <li>FS5600: Automotive Dual Buck Regulator and Controller with Voltage Monitors and Watchdog Timer</li> </ul>

	<ul style="list-style-type: none"> <li>• <a href="#">VR5100</a>: Multi-Output DC-DC Regulator for Low Power LS1 Communication Processors</li> </ul>
Security (EdgeLock Discrete)	<ul style="list-style-type: none"> <li>• <a href="#">EdgeLock® SE050</a>: Plug &amp; Trust Secure Element Family – Enhanced IoT security with high flexibility</li> <li>• <a href="#">EdgeLock® SE051</a>: Proven, Easy-to-Use IoT Security Solution with Support for Updatability and Custom Applets</li> <li>• <a href="#">EdgeLock® A5000</a> Plug &amp; Trust Secure Authenticator: Authentication Made Secure, Scalable and Easy</li> </ul>

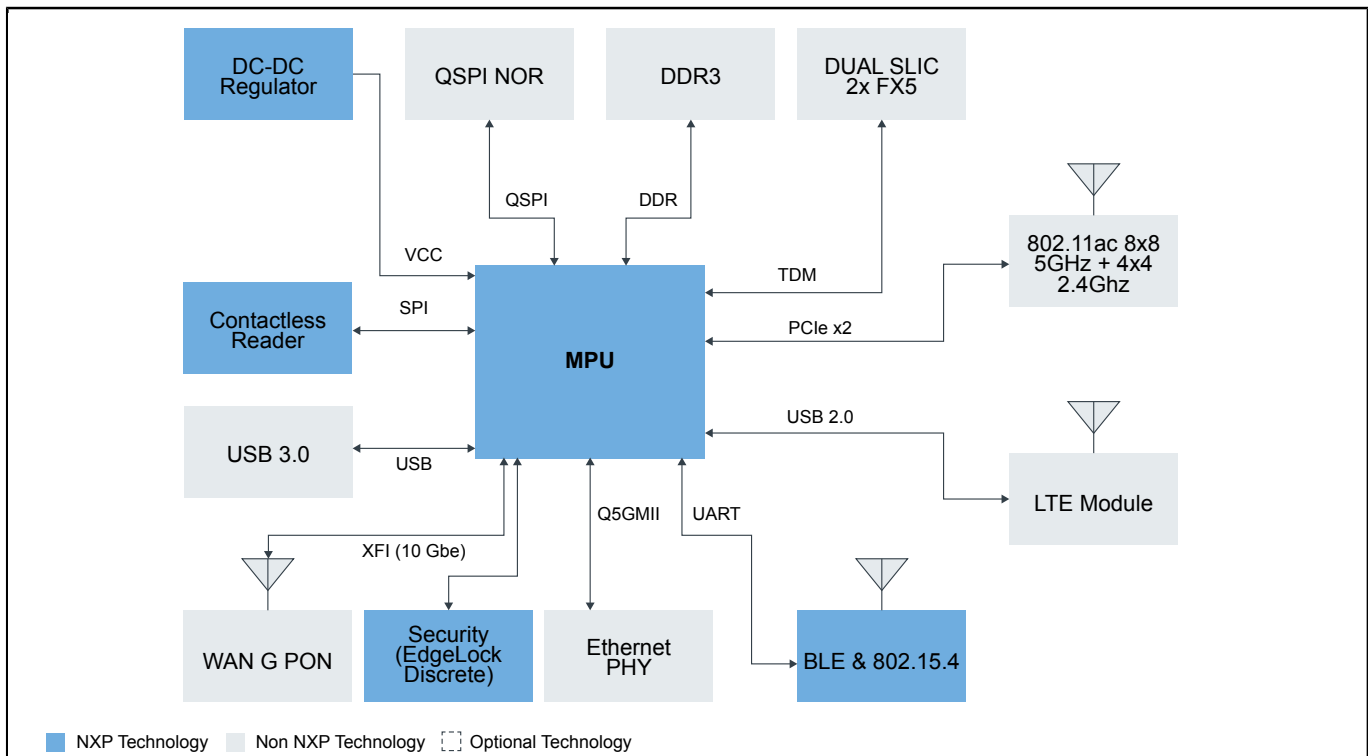
## Residential Gateway LS1024A Block Diagram



### Recommended Products for Residential Gateway LS1024A

MCU	<ul style="list-style-type: none"> <li>• <a href="#">Layerscape® 1024A Dual-Core Processor</a></li> </ul>
Wireless	<ul style="list-style-type: none"> <li>• <a href="#">OL2385AHN</a>: Low-Power Multi-Channel UHF RF Wireless Platform</li> <li>• <a href="#">KW41Z</a>: Kinetis® KW41Z-2.4 GHz Dual Mode: Bluetooth® Low Energy and 802.15.4 Wireless Radio Microcontroller (MCU) based on Arm® Cortex®-M0+ Core</li> </ul>
Wireless	<ul style="list-style-type: none"> <li>• <a href="#">KW41Z</a>: Kinetis® KW41Z-2.4 GHz Dual Mode: Bluetooth® Low Energy and 802.15.4 Wireless Radio Microcontroller (MCU) based on Arm® Cortex®-M0+ Core</li> <li>• <a href="#">OL2385AHN</a>: Low-Power Multi-Channel UHF RF Wireless Platform</li> </ul>
NFC	<ul style="list-style-type: none"> <li>• <a href="#">PN7160</a>: NFC Plug and Play Controller with Integrated Firmware and NCI Interface</li> </ul>
Power Management	<ul style="list-style-type: none"> <li>• <a href="#">FS5600</a>: Automotive Dual Buck Regulator and Controller with Voltage Monitors and Watchdog Timer</li> <li>• <a href="#">VR5100</a>: Multi-Output DC-DC Regulator for Low Power LS1 Communication Processors</li> </ul>
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## Residential Gateway LS1043A Block Diagram



### Recommended Products for Residential Gateway LS1043A

MCU	<ul style="list-style-type: none"> <li>• <a href="#">Layerscape® 1043A and 1023A Processors</a></li> </ul>
NFC	<ul style="list-style-type: none"> <li>• <a href="#">PN7160</a>: NFC Plug and Play Controller with Integrated Firmware and NCI Interface</li> </ul>
Wireless	<ul style="list-style-type: none"> <li>• <a href="#">KW41Z</a>: Kinetis® KW41Z-2.4 GHz Dual Mode: Bluetooth® Low Energy and 802.15.4 Wireless Radio Microcontroller (MCU) based on Arm® Cortex®-M0+ Core</li> </ul>
Wireless	<ul style="list-style-type: none"> <li>• <a href="#">OL2385AHN</a>: Low-Power Multi-Channel UHF RF Wireless Platform</li> <li>• <a href="#">KW41Z</a>: Kinetis® KW41Z-2.4 GHz Dual Mode: Bluetooth® Low Energy and 802.15.4 Wireless Radio Microcontroller (MCU) based on Arm® Cortex®-M0+ Core</li> </ul>

View our complete solution for [Broadband Modem and Residential Gateway](#).

**Note:** The information on this document is subject to change without notice.

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