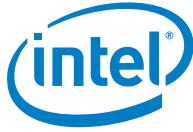


IPSO 6LoWPAN IoT Software for Yocto Project*

Release Notes

Gold Release

July 2017



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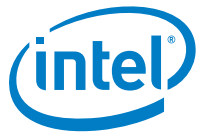
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Revision History

Date	Revision	Description
July 2017	2.0	Add new platform (APL-I) for 6LoWPAN through WiFi and Ethernet
August 2016	1.0	Initial Release (Gold Release)

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1.0 Introduction

IPSO 6LoWPAN Software Stack is developed to enable 6LoWPAN connectivity on Intel Architecture platform. It is developed to be compliant with the IPSO Smart Object model.

It is a derivative work of the open source Contiki project and Wakaama LWM2M (Light-Weight Machine-to-Machine). The Contiki is extended to take advantage of more advance IA (Intel Architecture) and the Linux OS (Operating System).

1.1 Customer Support

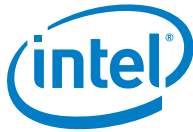
For technical support, contact your Intel Representative or visit <https://premier.intel.com> for issue submissions.

1.2 Terminology

Term	Description
6LoWPAN	IPv6 over Low power Wireless Personal Area Networks
CoAP	Constrained Application Protocol
DTLS	Datagram Transport Layer Security
LWM2M	Light-Weight Machine-to-Machine

1.3 Related Documents

Description	Document No
IPSO 6LoWPAN IoT Software for Yocto Project* for Intel® Atom™ Processor E3800 Product Family User Guide	334856
Intel Atom® E3900 Processor Intel Resource Design Center Technical Library	https://www.intel.com/content/www/us/en/embedded/products/apollo-lake/technical-library.html
Intel Atom® Processor E3800 Product Family and Intel® Celeron® Processor N2807/N2930/J1900 Software and Drivers	https://www.intel.com/content/www/us/en/embedded/products/bay-trail/software-and-drivers.html



2.0 Release Content

Software release package name: **6LoWPAN-3.0_Software_Stack_0.8.3-2017-06-06.tar.bz2**

Inside this software package there will be one folder named **6LoWPAN_3.0_Software_Stack**.

This **6LoWPAN_3.0_Software_Stack** is comprised of:

A. **apl-6LoWPAN-setup.sh**

This setup script helps build a Yocto* image for Intel Atom® Processor E3900 Series or Intel® Celeron® Processor N3350 or Intel® Pentium® Processor N4200 which includes: Network Border Router, IoT WebDemo Server, Over-the-Air firmware upgrade tool, LWM2M bootstrap and LWM2M server. This setup script is also a setup and clone repo from Sparrow project for compiling and building firmware for serial radio and end nodes.

B. **byt-6LoWPAN-setup.sh**

This setup script helps build a Yocto* for Intel Atom Processor E3800 Product Family image which includes: Network Border Router, IoT WebDemo Server, Over-the-Air firmware upgrade tool, LWM2M bootstrap and LWM2M server.

This setup script is also a setup and clone repo from Sparrow project for compiling and building firmware for serial radio and end nodes.

C. **Meta-Wakaama**

This is the Yocto recipe for LWM2M bootstrap and LWM2M server.

D. **Meta-Netcontiki**

Meta-Netcontiki is a Yocto recipe which provides 6LoWPAN Network Border Router (NBR).

E. **README**

This is a quick user guide.

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3.0 New in This Release

3.1 Product Features

- 6LoWPAN support on Intel Architecture
- User-space 6LoWPAN RPL implementation in network border router
- TI CC2538EM and Yanzi* IoT-U10 device support
- LWM2M server and bootstrap-server
- LWM2M DTLS support
- IPSO Smart Object support
- CoAP protocol support
- Automatic dual operation mode support for TI CC2538EM running as serial radio or wireless node
- Beacon request / response for network selection

3.2 New Features

- Added new platform (Intel Atom® E3900 SoC Series)
- Support both Ethernet and WiFi connection between gateway and host for Intel Atom® E3900 SoC Series.

3.3 Changes to Existing Features

None

3.4 Unsupported or Discontinued Features

- Radvd daemon will be discontinued. Static IPv6 will be used as replacement.



4.0 ***Known Issues***

None.

4.1 **Limitations**

The NBR daemon has to be stopped before disconnecting SPI or UART or the NBR daemon will be hang.

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5.0 Fixed Issues

Issue ID	Description	Status
1504149661	6LoWPAN: 6LP.Interop.Net.1 device running Contiki connection not stable.	Completed
1504185706	IP address missing after reboot.	Will Not Be Fixed
1604190479	Inconsistent segmentation fault of DTLS-LWM2M server encountered.	Will Not Be Fixed
1604190487	Inconsistent floating point exception of DTLS-LWM2M server.	Will Not Be Fixed
1504284524	DTLS-LWM2M SERVER: Time taken for node registration is inconsistent.	Rejected
1504308005	NBR input validation failure.	Will Not Be Fixed
1604190528	6LoWPAN Channel Change: Inconsistent time taken for node connect to NBR due to different channel.	Rejected



6.0 Hardware and Software Compatibility

Platform	<ul style="list-style-type: none">• Intel Atom® Processor E3800 Product Family• Intel Atom® Processor E3900 Series
Supported Operating Systems	<ul style="list-style-type: none">• Yocto project - Linux kernel 3.14, both 32 and 64-bits (Intel Atom Processor E3800 Series)• Yocto Project – Linux kernel 4.1, 64-bits (Intel Atom E3900 Series)

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7.0 *Where to Find the Release*

A copy of the release is available at
<https://www.intel.com/content/www/us/en/design/resource-design-center.html> at
respective product page.