



**Wi-SUN Alliance**

**Test and Certification Working Group (TCWG)**

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**Protocol Implementation Conformance Statement (PICS)  
for CISCO IR510  
Submission for Wi-SUN Certification  
Based on Wi-SUN IEEE802.15.4g PHY PICS 1v02**

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**Revision 1V00**

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# 6 Identification of the Implementation

## Implementation under test (IUT) identification

IUT name: Cisco IR510

IUT version: IR510

## System under test (SUT) identification

SUT name: IR510-OFDM-FCC/K9

Software Version: V6.1

Hardware Version: A0

## Product supplier

Name: Cisco Systems, Inc.

Address: 170 West Tasman Dr. San Jose, CA 95134 USA

Telephone number: See PICS contact below

Facsimile number: Deprecated

Email address: awalb@cisco.com

Additional information: None

## Client

Name: Cisco Systems, Inc.

Address: 560 McCarthy Blvd., Milpitas, CA 95035 USA

Telephone number: See PICS contact below

Facsimile number: Deprecated

Email address: awalb@cisco.com

Additional information: None

## PICS contact person

Name: Adam Walb

Address: 560 McCarthy Blvd., Milpitas, CA 95035 USA

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- 2 Telephone number: +1-408-526-4124
- 3 Facsimile number: Deprecated
- 4 Email address: awalb@cisco.com
- 5 Additional information: None

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1           **7 Identification of the Protocol**

2           This PICS proforma applies to standards given in the following:

- 3           - IEEE Std. 802.15.4-2011 [A1]  
4           - IEEE Std. 802.15.4g-2012 [A2]

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## 8 Global Statement of Conformance

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The implementation described in this PICS proforma meets all of the mandatory requirements of the referenced standards:

- IEEE Std. 802.15.4-2011 [A1]
- IEEE Std. 802.15.4g-2012 [A2]

Note -- Answering 'No' indicates non-conformance to the specified protocol standard. Non-supported mandatory capabilities are to be identified in the following tables, with an explanation by the implementer explaining why the implementation is non-conforming.

The supplier will have fully complied with the requirements for a statement of conformance by completing the statement contained in this subclause. However, the supplier may find it helpful to continue to complete the detailed tabulations in the subclauses that follow.

# 9 PICS Proforma Tables

The following tables are composed of the detailed questions to be answered, which make up the PICS proforma.

## 9.1 Major Capabilities for the PHY

The requirements for the PHY capabilities are described in this section.

### 9.1.1 PLP Capabilities

The requirement for the PLP is described in 1.

**Table 1 – PHY packet**

Item number	Item description	Reference	Status	Support		
				N/A	Yes	No
PLP 1	Transmission of PPDU packets	9 [A1]	M		X	
PLP 2	Reception of PPDU packets	9 [A1]	M		X	
PLP3	PSDU size up to 2047 octets <sup>†</sup>	9.2 [A2]	M		X	

<sup>†</sup> For Echonet Profile, the PSDU size is up to 255 octets.

### 9.1.2 RF Capabilities

The requirements for the PHY RF capabilities are described in Table .

**Table 2 – Radio frequency (RF)**

Item number	Item description	Reference	Status	Support		
				N/A	Yes	No
RF1	SUN PHYs					
RF1.1	MR-FSK	18.1	M		X	
RF1.2	MR-FSK Generic PHY	8.1.2.10.2	O			X
RF1.3	Transmit and receive using CSM	8.1	M**	X		

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Item number	Item description	Reference	Status	Support		
RF1.4	At least one of the bands given in Table 66 [A2]	8.1	M		X	
RF1.5	Support of 915 MHz band in Table 66 [A2]	8.1.1	O.1		X	
RF1.6	Support of 920 MHz band or 950 MHz band in Table 66 [A2]	8.1.1	O.1		X	
RF1.7	Support of channel plan	8.1.2	M		X	
RF2	SUN PHY operating modes					
RF2.1	Operating mode #1 in 915 MHz band	18.1	RF1.5:M		X*1	
RF2.2	Operating mode #2 in 915 MHz band	18.1	RF1.5:O			
RF2.3	Operating mode #3 in 915 MHz band	18.1	RF1.5:O		X	
RF2.4	Operating mode #1 and #2 in 920 MHz or 950 MHz band	18.1	RF1.6:M*			
RF2.5	Operating mode #3 and #4 in 920 MHz or 950 MHz band	18.1	RF1.6:O			
RF3	MR-FSK Options					
RF3.1	MR-FSK FEC	18.1.2.4	RF1.1: O RF1.2: O			
RF3.2	MR-FSK interleaving	18.1.2.5	RF1.1: O RF1.2: O			
RF3.3	MR-FSK data whitening	18.1.3	RF1.1: O RF1.2: O		X	

1 \* Note: 1. Only mode #1b and mode #3 in the 915MHz band is required for USFAN PHY test.

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