

**TCB****GRANT OF EQUIPMENT  
AUTHORIZATION****TCB****Certification****Issued Under the Authority of the  
Federal Communications Commission****By:****UL Verification Services Inc. (formerly UL CCS)  
47173 Benicia Street  
Fremont, CA 94538****Date of Grant: 05/28/2015****Application Dated: 05/28/2015****Qualcomm Atheros, Inc.  
1700 Technology Dr  
San Jose, CA 95110****Attention: Paul Guckian , Vice President, Regulatory  
Engineering****NOT TRANSFERABLE**

EQUIPMENT AUTHORIZATION is hereby issued to the named GRANTEE, and is VALID ONLY for the equipment identified hereon for use under the Commission's Rules and Regulations listed below.

**FCC IDENTIFIER:** PPD-QCNFA364AH  
**Name of Grantee:** Qualcomm Atheros, Inc.  
**Equipment Class:** Part 15 Spread Spectrum Transmitter  
**Notes:** 802.11a/b/g/n/ac + BT 4.1 M.2 2230 Type Card  
**Modular Type:** Single Modular

<u>Grant Notes</u>	<u>FCC Rule Parts</u>	<u>Frequency Range (MHZ)</u>	<u>Output Watts</u>	<u>Frequency Tolerance</u>	<u>Emission Designator</u>
CC	15C	2402.0 - 2480.0	0.015		

Output power listed is maximum combined conducted. This module may be installed only by the OEM or an OEM integrator. This transmitter has been approved for use in mobile RF exposure category configurations with the antenna(s) installed to provide a separation distance of at least 20 cm from all persons. Installation in portable devices is limited to the display section of a laptop or notebook PC where the antennas used during SAR testing (or equivalent antennas) are installed to provide at least 1cm distance from the base of the device and with an antenna-to-antenna separation distance of at least 3cm. The antennas used for this transmitter must not be collocated or operating in conjunction with any other antenna or transmitter within a host device, except in accordance with FCC multi-transmitter product procedures. Grantee must provide installation and operating instructions for complying with FCC multi-transmitter product procedures. Grantee must coordinate with OEM integrators to determine applicable host configurations to ensure RF exposure compliance, including simultaneous transmission. The highest reported SAR value was < 0.1W/Kg.

CC: This device is certified pursuant to two different Part 15 rules sections.

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EQUIPMENT AUTHORIZATION is hereby issued to the named GRANTEE, and is VALID ONLY for the equipment identified hereon for use under the Commission's Rules and Regulations listed below.

**FCC IDENTIFIER:** PPD-QCNFA364AH**Name of Grantee:** Qualcomm Atheros, Inc.**Equipment Class:** Digital Transmission System**Notes:** 802.11a/b/g/n/ac + BT 4.1 M.2 2230 Type Card**Modular Type:** Single Modular

<u>Grant Notes</u>	<u>FCC Rule Parts</u>	<u>Frequency Range (MHZ)</u>	<u>Output Watts</u>	<u>Frequency Tolerance</u>	<u>Emission Designator</u>
CC MO	15C	2402.0 - 2480.0	0.002		
CC MO	15C	2412.0 - 2472.0	0.51		
CC MO	15C	2422.0 - 2462.0	0.423		
CC MO	15C	5745.0 - 5825.0	0.371		
CC MO	15C	5755.0 - 5795.0	0.401		
CC MO	15C	5775.0 - 5775.0	0.569		

Output power listed is maximum combined conducted. This device supports 20 and 40MHz bandwidths for 2.4 GHz. This module may be installed only by the OEM or an OEM integrator. This transmitter has been approved for use in mobile RF exposure category configurations with the antenna(s) installed to provide a separation distance of at least 20 cm from all persons. Installation in portable devices is limited to the display section of a laptop or notebook PC where the antennas used during SAR testing (or equivalent antennas) are installed to provide at least 1cm distance from the base of the device and with an antenna-to-antenna separation distance of at least 3cm. The antennas used for this transmitter must not be collocated or operating in conjunction with any other antenna or transmitter within a host device, except in accordance with FCC multi-transmitter product procedures. Grantee must provide installation and operating instructions for complying with FCC multi-transmitter product procedures. Grantee must coordinate with OEM integrators to determine applicable host configurations to ensure RF exposure compliance, including simultaneous transmission. The highest reported SAR for body and simultaneous transmission conditions are 0.75 W/kg and 0.75 W/kg respectively.

CC: This device is certified pursuant to two different Part 15 rules sections.

MO: This Multiple Input Multiple Output (MIMO) device was evaluated for multiple transmitted signals as indicated in the filing.

TCB

GRANT OF EQUIPMENT  
AUTHORIZATION

TCB

## Certification

Issued Under the Authority of the  
Federal Communications Commission

By:

UL Verification Services Inc. (formerly UL  
CCS)  
47173 Benicia Street  
Fremont, CA 94538

Date of Grant: 10/19/2015

Application Dated: 10/16/2015

Qualcomm Atheros, Inc.  
1700 Technology Dr  
San Jose, CA 95110

Attention: Paul Guckian , Vice President, Regulatory Engineering

## NOT TRANSFERABLE

EQUIPMENT AUTHORIZATION is hereby issued to the named GRANTEE, and is VALID  
ONLY for the equipment identified hereon for use under the Commission's Rules and  
Regulations listed below.

**FCC IDENTIFIER:** PPD-QCNFA364AH  
**Name of Grantee:** Qualcomm Atheros, Inc.  
**Equipment Class:** Unlicensed National Information Infrastructure  
 TX  
**Notes:** 802.11a/b/g/n/ac + BT 4.1 M.2 2230 Type Card  
**Modular Type:** Single Modular

<u>Grant Notes</u>	<u>FCC Rule Parts</u>	<u>Frequency Range (MHZ)</u>	<u>Output Watts</u>	<u>Frequency Tolerance</u>	<u>Emission Designator</u>
38 CC MO	15E	5180.0 - 5240.0	0.114		
38 CC MO	15E	5260.0 - 5320.0	0.112		
38 CC MO	15E	5500.0 - 5720.0	0.104		
38 CC MO	15E	5745.0 - 5825.0	0.157		

Class II Permissive change to approve the 5.8GHz band operation as U-NII 3 according to FCC 14-30. Output power listed is maximum combined conducted. This device supports 20, 40, and 80 MHz bandwidths. This module may be installed only by the OEM or an OEM integrator. This transmitter has been approved for use in mobile RF exposure category configurations with the antenna(s) installed to provide a separation distance of at least 20 cm from all persons. Installation in portable devices is limited to the display section of a laptop or notebook PC where the antennas used during SAR testing (or equivalent antennas) are installed to provide at least 1cm distance from the base of the device and with an antenna-to-antenna separation distance of at least 3cm. This device supports client-only operating modes in the 5150-5350 MHz and 5470-5725 MHz bands. The antenna(s) used for this transmitter must not be collocated or operating in conjunction with any other antenna or transmitter within a host device, except in accordance with FCC multi-transmitter product procedures. Grantee must provide installation and operating instructions for complying with FCC multi-transmitter product procedures. Grantee must coordinate with OEM integrators to determine applicable host configurations to ensure RF exposure compliance, including simultaneous transmission. The highest reported SAR for body and simultaneous transmission conditions are 0.66 W/kg and 0.66 W/kg respectively.

38: This device has shown compliance, in all grant-listed U-NII sub-bands, with the new rules for U-NII devices adopted under Docket No. 13-49 and may be marketed, manufactured, installed or imported after the June 1, 2016 transition deadline.

CC: This device is certified pursuant to two different Part 15 rules sections.

MO: This Multiple Input Multiple Output (MIMO) device was evaluated for multiple transmitted signals as indicated in the filing.