

TCB

GRANT OF EQUIPMENT
AUTHORIZATION

TCB

Certification
Issued Under the Authority of the
Federal Communications Commission
By:

UL VS Ltd
Unit 3 Horizon, Wade Road,
Kingsland Business Park,
Basingstoke, RG24 8AH
United Kingdom

Date of Grant: 05/31/2016
Application Dated: 04/06/2016

Cambium Networks Limited
Unit B2 Linhay Business Park
Eastern Road
Ashburton, Devon, TQ13 7UP
United Kingdom

Attention: Don Reid , Mr

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: QWP-50650
Name of Grantee: Cambium Networks Limited
Equipment Class: **Unlicensed National Information
Infrastructure TX**
Notes: **Wireless Ethernet Bridge**

<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>
36 48 CC MO	15E	5156.0 - 5247.0	0.076		
36 48 CC MO ND	15E	5255.0 - 5345.0	0.025		
36 48 CC MO ND	15E	5475.0 - 5720.0	0.025		

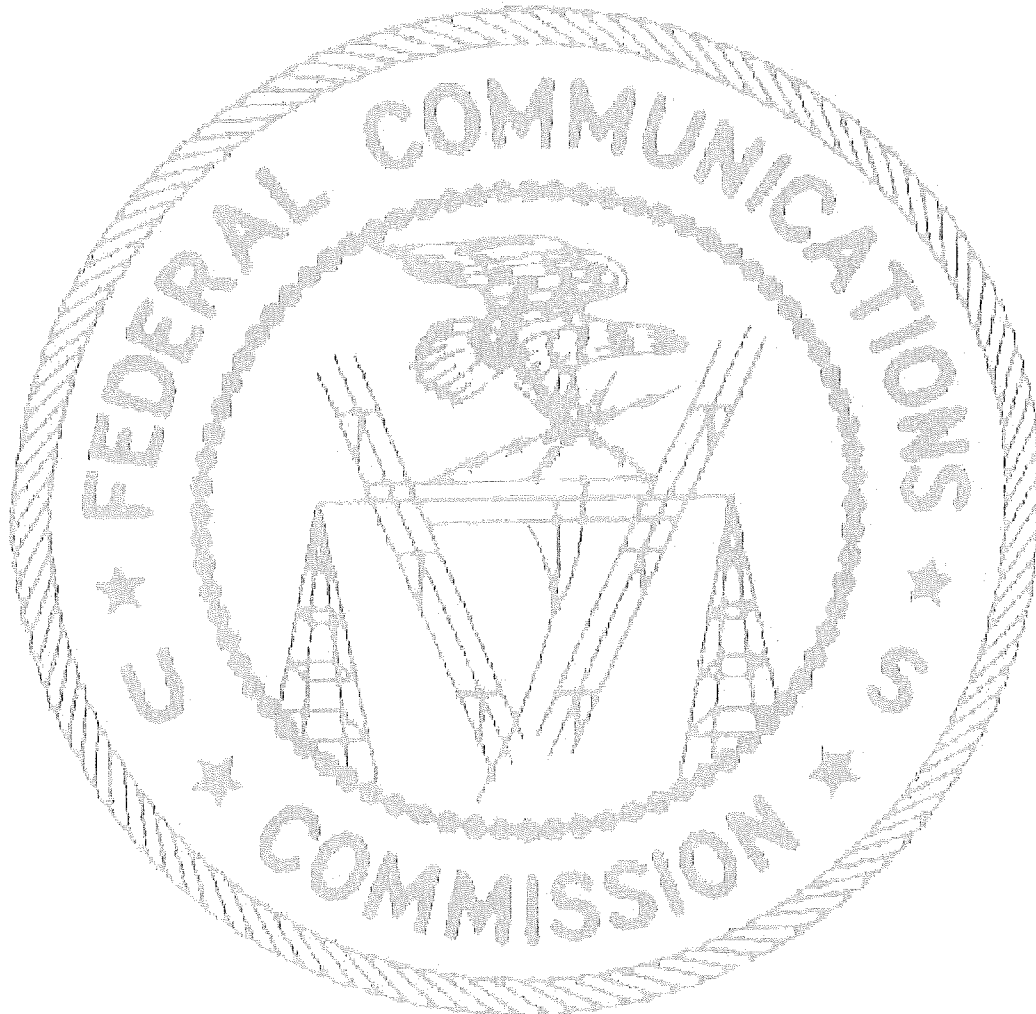
This device has 5/10/15/20/30/40 MHz BW modes. Output power is conducted. Outdoor operation is subject to the professional installation instruction requirements as described in the Users Manual. The antenna(s) used for this transmitter must be installed to provide a separation distance of at least 80cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter. Installers must be provided with antenna installation instructions and transmitter operating conditions for satisfying RF exposure compliance. Users and professional installers are not allowed to have options to select country code.

Class III Permissive Change to add UNII band 1 (5150-5250MHz): The antenna(s) used for this transmitter must be installed to provide a separation distance of at least 112cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.

Class III Permissive Change to UNII bands 2a and 2c to ensure compliance to the updated U-NII rules as detailed within this filing.

36: Certain antennas used with this equipment require a minimum cable length, or have output power limitations as documented in the application.

- 48: The device has been approved under § 15.407(b)(4)(ii) for antenna gains greater than 10 dBi and cannot be manufactured, marketed, sold or imported after March 2, 2018.
- 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.
- ND: This UNII device complies with the Transmit Power Control (TPC) and Dynamic Frequency Selection (DFS) requirements in Section 15.407(h).



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UL VS Ltd
Unit 3 Horizon, Wade Road, Kingsland
Business Park,
Basingstoke, RG24 8AH
United Kingdom

Date of Grant: 01/11/2016

Application Dated: 12/01/2015

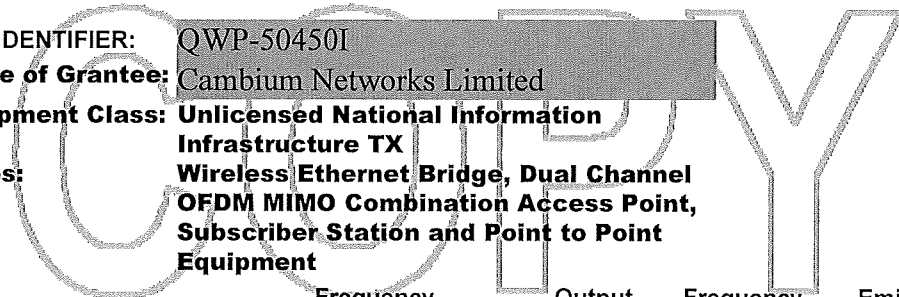
**Cambium Networks Limited
Unit B2 Linhay Business Park
Eastern Road
Ashburton, Devon, TQ13 7UP
United Kingdom**

Attention: Don Reid , Mr

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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: QWP-504501
Name of Grantee: Cambium Networks Limited
Equipment Class: Unlicensed National Information Infrastructure TX
Notes: Wireless Ethernet Bridge, Dual Channel OFDM MIMO Combination Access Point, Subscriber Station and Point to Point Equipment



<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>
36 38 CC MO	15E	5155.75 - 5247.5	0.166		
36 38 CC MO ND	15E	5252.5 - 5343.0	0.04		
36 38 CC MO ND	15E	5472.5 - 5722.5	0.04		

Output power is conducted. This device supports MIMO operations as described in this filing. The device supports 5MHz, 10MHz, 20MHz, and 40MHz bandwidths. Professional installation is required for devices with external antenna connectors. To comply with RF exposure requirements antennas must be installed to ensure a minimum separation distance of 0.44m from persons and must not be co-located or operating in conjunction with any other antenna or transmitter except in accordance with accepted multi-transmitter product procedures.

Class 3 Permissive Change to add U-NII-2A and U-NII-2C bands to the device.

- 36: Certain antennas used with this equipment require a minimum cable length, or have output power limitations as documented in the application.
- 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 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.
- ND: This UNII device complies with the Transmit Power Control (TPC) and Dynamic Frequency Selection (DFS) requirements in Section 15.407(h).

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By:

Elite Electronic Engineering, Inc.
1516 Centre Circle
Downers Grove, IL 60515

Date of Grant: 06/01/2016

Application Dated: 05/19/2016

**Cambium Networks Inc.
3800 Golf Road
Suite 360
Rolling Meadows, IL 60008**

**Attention: Steven Payne , R.F. Principle Staff
Engineer**

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: Z8H89FT0005
Name of Grantee: Cambium Networks Inc.
Equipment Class: Unlicensed National Information Infrastructure TX
Notes: ePMP Fixed Outdoor Transceiver

<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 MO ND	15E	5495.0 - 5705.0	0.013		
38 MO ND	15E	5270.0 - 5330.0	0.008		

This device has 10 MHz, 20 MHz and 40 MHz channel BW modes. Output power is conducted. Outdoor operation is subject to the professional installation instruction requirements as described in the Users Manual. The antenna(s) used for this transmitter must be installed to provide a separation distance of at least 26 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter. Installers must be provided with antenna installation instructions and transmitter operating conditions for satisfying RF exposure compliance. Users and professional installers are not allowed to have options to select country code. Class 3 Permissive Change to update to new UNII rules.

- 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 or imported after the June 1, 2016 transition deadline.
- MO: This Multiple Input Multiple Output (MIMO) device was evaluated for multiple transmitted signals as indicated in the filing.

ND: This UNII device complies with the Transmit Power Control (TPC) and Dynamic Frequency Selection (DFS) requirements in Section 15.407(h).

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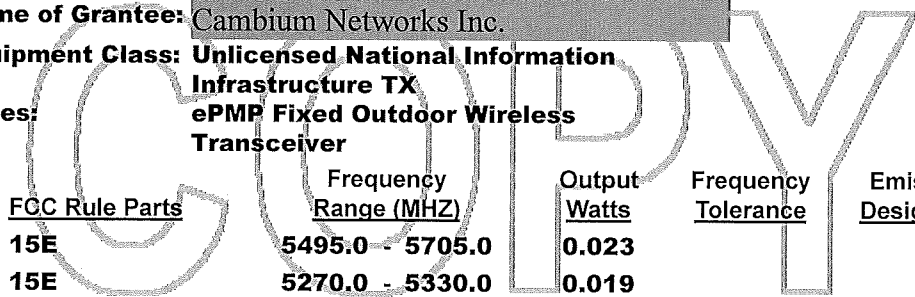
**Cambium Networks Inc.
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FCC IDENTIFIER: Z8H89FT0006
Name of Grantee: Cambium Networks Inc.
Equipment Class: **Unlicensed National Information Infrastructure TX**
Notes: **ePMP Fixed Outdoor Wireless Transceiver**



<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 MO ND	15E	5495.0 - 5705.0	0.023		
38 MO ND	15E	5270.0 - 5330.0	0.019		

This device has 10 MHz, 20 MHz and 40 MHz BW modes. Output power is conducted. Outdoor operation is subject to the professional installation instruction requirements as described in the Users Manual. The antenna(s) used for this transmitter must be installed to provide a separation distance of at least 26 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter. Installers must be provided with antenna installation instructions and transmitter operating conditions for satisfying RF exposure compliance. Users and professional installers are not allowed to have options to select country code. Class 3 Permissive Change to add new DFS requirements.

- 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 or imported after the June 1, 2016 transition deadline.
- MO: This Multiple Input Multiple Output (MIMO) device was evaluated for multiple transmitted signals as indicated in the filing.

ND: This UNII device complies with the Transmit Power Control (TPC) and Dynamic Frequency Selection (DFS) requirements in Section 15.407(h).

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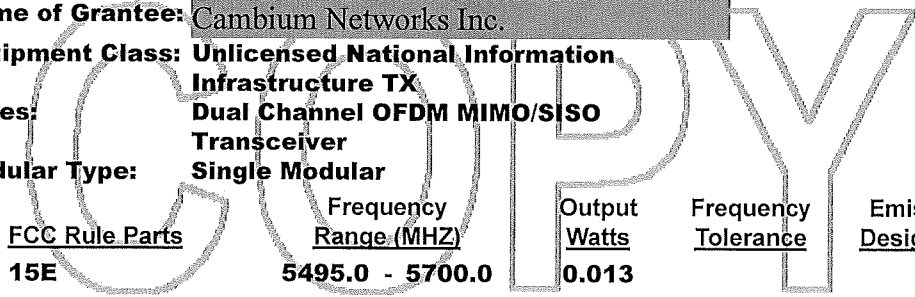
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FCC IDENTIFIER: Z8H89FT0015
Name of Grantee: Cambium Networks Inc.
Equipment Class: Unlicensed National Information Infrastructure TX
Notes: Dual Channel OFDM MIMO/SISO Transceiver
Modular Type: Single Modular



<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 ND	15E	5495.0 - 5700.0	0.013		
38 CC MO ND	15E	5265.0 - 5335.0	0.008		

Power Output listed is maximum combined conducted power operating in a 2x2 MIMO configuration. The antennas used for this transmitter must be installed to provide a separation distance of at least 123cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter within a device, except in accordance with accepted multi-transmitter product procedures. End-users and installers must be provided with antenna installation instructions and transmitter operating conditions for satisfying RF exposure compliance. This device is capable of 10, 20, and 40MHz bandwidths. Class 3 Permissive Change to update to new UNII rules.

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 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.

ND: This UNII device complies with the Transmit Power Control (TPC) and Dynamic Frequency Selection (DFS) requirements in Section 15.407(h).

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Date of Grant: 06/02/2016
Application Dated: 05/19/2016

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FCC IDENTIFIER: Z8H89FT0001
Name of Grantee: Cambium Networks Inc.
Equipment Class: **Unlicensed National Information Infrastructure TX**
Notes: **Fixed Outdoor Point to Point Transceiver**

<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 MO ND	15E	5480.0 - 5720.0	0.061		

Output power is conducted. Only those antenna(s) tested with the device or similar antenna(s) with equal or lesser gain may be used with this transmitter. The antennas used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter not described in this application. End-users and installers must be provided with specific operating instructions for satisfying RF exposure compliance. Users and professional installers are not allowed to have options to select country code. This device is capable of 10 MHz and 20 MHz bandwidths. Class III Permissive Change to update to new UNII rules.

- 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 or imported after the June 1, 2016 transition deadline.
- MO: This Multiple Input Multiple Output (MIMO) device was evaluated for multiple transmitted signals as indicated in the filing.
- ND: This UNII device complies with the Transmit Power Control (TPC) and Dynamic Frequency Selection (DFS) requirements in Section 15.407(h).

