

Wireless Display Adapter User Manual

Product Introduction

This product is Wi-Fi CERTIFIED Miracast™ source device.

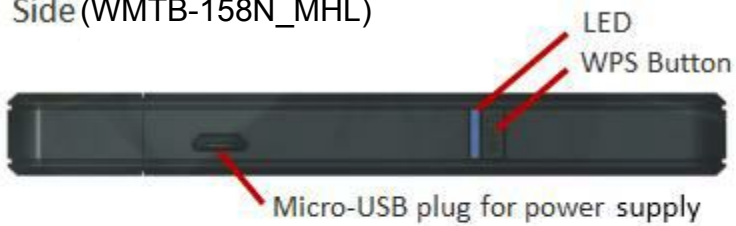
Front



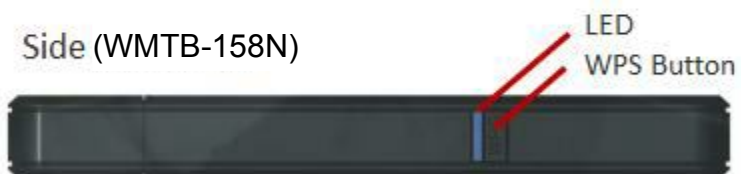
Back



Side (WMTB-158N_MHL)



Side (WMTB-158N)



Preparation

1. WMTB-158N_MHL: Plug WMTB-158N_MHL into the MHL port of your display (TV, Monitor, or Projector), WMTB-158N_MHL will turn on automatically; it takes less than 30 seconds until the standby screen shown on display.
2. WMTB-158N: Plug WMTB-158N into the HDMI port of your display (TV, Monitor, or Projector), plug in the Micro-USB male connector to the Micro-USB port of WMTB-158N, then plug in the other side of USB cable into AC adapter or USB port of PC, make sure the USB port can support 5V@0.5A power supply; it takes less than 30 seconds until the standby screen shown on display.



3. The "Status" information tells you the connection progress, and also describe the actions needed to establish connection.
4. The "SSID" will be used to identify this device, and you may be asked to enter "PIN" numbers during connection.



Screen Projection through WIDI

1. Please make sure the WiDi(1) version is later than 3.5.42.0
2. If your WiDi application, please contact the application provide to find latest version;
3. You may need to install below 3 Driver/Applications to get latest WiDi support.
 - Wireless Driver
 - Intel® HD Graphics Driver
 - Intel® Wireless Display software update
4. You can enjoy screen projection through WiDi application (2) once you get proper WiDi software version.
5. During the progress of establishing connection, you may be asked to press the WPS button of this product, or enter PIN code from the PC;



6. The WPS button is nearby the LED indicator, the PIN code will be shown on display screen. This is to avoid your device to be used without your permission.



(1) WiDi is trademark of Intel.

(2) Contact your WiDi application provide to learn how to use WiDi application.

Screen Projection through Android (3) Devices

Please make sure your device support Miracast (4), and is Wi-Fi CERTIFIED Miracast™ device. Below steps might be different in your Android device, please contact your vendor to learn how to use your Android device.

1. Press “Setting”
2. Turn on “Wi-Fi” in your Android Device



(3) Android is a trademark of Google Inc.

2. Press Display



3. Press "Wireless Display"

4. Press "Search Device"

5. Wait for a few seconds, you can see ""GEM_WDA_xxxx" has been found.



7. Press "GEM_WDA_xxxx" to establish connection; During the progress of establishing connection, you may be asked to press the WPS button of this product, or enter PIN code from the Android Device;



8. The WPS button is nearby the LED indicator; The PIN code will be shown on display screen. This is to avoid your device to be used without your permission.



Trouble Shooting

- No standby screen after plug in WMTB-158N_MHL, and the LED indicator is off: Make sure WMTB-158N_MHL is plugging into MHL port.
- No standby screen after plug in WMTB-158N, and the LED indicator is off: Make sure the Micro-USB cable is connected to WMTB-158N, and the USB port supports 5V voltage, at least 0.5A.
- No standby screen after plug in WMTB-158N_MHL, the LED indicator is on: Make sure you plug in WMTB-158N_MHL into HDMI port first, then plug Micro-USB connector.

Product Name	Wireless Display Dongle	
Model Number	WMTB-158N_MHL	
Host Interface	HDMI type A for output to HDMI display	
Chipset solution	SOC- BCM2835 RF- BCM43236	
Memory	256Mbit Flash/ 2Gbits DDR3	
Dimensions	PCBA: 72mmX25mmX6mm (not including HDMI female connector)	
Weight	140g	
Operating Voltage	5V/500mA	
Power Consumption	2.5Watt-1080p30	
Antenna	2 print dual band antenna for Transmitter/ Receiver, Peak Gain 3 dBi	
Transmit Power	10 dBm at PA output	
Frequency Band	2.4G band	2400~2483.5MHz of RF module
	5G band	5150~5250, 5725~5825MHz of RF module
Channel Bandwidth	20MHz / 40MHz	
Modulation	64QAM, 16QAM, QPSK, BPSK MCS0~MCS15	
Video resolutions	Up to1080p/30Hz	
Temperature Range	0 ~ 40°C (Operating), -20~60°C (Storage)	
Standards	MHL 1.1	
Regulatory	FCC , CE, etc.	
LED	Two LEDs	

Product Name	Wireless Display Dongle	
Model Number	WMTB-158N	
Host Interface	HDMI type A for output to HDMI display Micro USB type B for power	
Chipset solution	SOC- BCM2835 RF- BCM43236	
Memory	256Mbit Flash/ 2Gbits DDR3	
Dimensions	PCBA: 72mmX25mmX6mm (not including HDMI female connector)	
Weight	140g	
Operating Voltage	5V/500mA	
Power Consumption	2.5Watt-1080p30	
Antenna	2 print dual band antenna for Transmitter/ Receiver, Peak Gain 3 dBi	
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Video resolutions	Up to1080p/30Hz	
Temperature Range	0 ~ 40°C (Operating), -20~60°C (Storage)	
Standards	HDMI 1.3	
Regulatory	FCC , CE, etc.	
LED	Two LEDs	

Federal Communication Commission Interference Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Operations in the 5.15-5.25GHz band are restricted to indoor usage only.

Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

FOR COUNTRY CODE SELECTION USAGE (WLAN DEVICES)

Note: The country code selection is for non-US model only and is not available to all US model. Per FCC regulation, all WiFi product marketed in US must fixed to US operation channels only.

Europe – EU Declaration of Conformity

This device complies with the essential requirements of the R&TTE Directive 1999/5/EC. The following test methods have been applied in order to prove presumption of conformity with the essential requirements of the R&TTE Directive 1999/5/EC:

- EN 60950-1: 2001
- EN 60950-1/A1: 2010
- EN 60950-1/A11: 2009
- EN 60950-1/A12: 2011

Safety of Information Technology Equipment

- EN50385 : 2002 / Article 3(1)(a)

Product standard to demonstrate the compliance of radio base stations and fixed terminal stations for wireless telecommunication systems with the basic restrictions or the reference levels related to human exposure to radio frequency electromagnetic fields (110MHz - 40 GHz) - General public

- EN 300 328 V1.7.1: 2006

Electromagnetic compatibility and Radio spectrum Matters (ERM); Wideband Transmission systems; Data transmission equipment operating in the 2,4 GHz ISM band and using spread spectrum modulation techniques; Harmonized EN covering essential requirements under article 3.2 of the R&TTE Directive

- **EN 301 489-1 V1.9.2 (2011-09)**

Electromagnetic compatibility and Radio Spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements

- EN 301 489-17 V2.2.1: 2012

Electromagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 17: Specific conditions for 2,4 GHz wideband transmission systems and 5 GHz high performance RLAN equipment

- EN 301 893 V1.6.1: 2011

Broadband Radio Access Networks (BRAN); 5 GHz high performance RLAN; Harmonized EN covering essential requirements of article 3.2 of the R&TTE Directive

[cs] Český [Czech]	<i>[Jméno výrobce]</i> tímto prohlašuje, že tento <i>[typ zařízení]</i> je ve shodě se základními požadavky a dalšími příslušnými ustanoveními směrnice 1999/5/ES.
[da] Dansk [Danish]	Undertegnede <i>[fabrikantens navn]</i> erklærer herved, at følgende udstyr <i>[udstyrets typebetegnelse]</i> overholder de væsentlige krav og øvrige relevante krav i direktiv 1999/5/EF.
[de] Deutsch [German]	Hiermit erkläre <i>[Name des Herstellers]</i> , dass sich das Gerät <i>[Gerätetyp]</i> in Übereinstimmung mit den grundlegenden Anforderungen und den übrigen einschlägigen Bestimmungen der Richtlinie 1999/5/EG befindet.
[et] Eesti [Estonian]	Käesolevaga kinnitab <i>[tootja nimi = name of manufacturer]</i> seadme <i>[seadme tüüp = type of equipment]</i> vastavust direktiivi 1999/5/EÜ põhinõuetele ja nimetatud direktiivist tulenevatele teistele asjakohastele sätetele.
[en] English	Hereby, <i>[name of manufacturer]</i> , declares that this <i>[type of equipment]</i> is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.
[es] Español [Spanish]	Por medio de la presente <i>[nombre del fabricante]</i> declara que el <i>[clase de equipo]</i> cumple con los requisitos esenciales y cualesquiera otras disposiciones aplicables o exigibles de la Directiva 1999/5/CE.
[el] Ελληνική [Greek]	ΜΕ ΤΗΝ ΠΑΡΟΥΣΑ <i>[name of manufacturer]</i> ΔΗΛΩΝΕΙ ΟΤΙ <i>[type of equipment]</i> ΣΥΜΜΟΡΦΩΝΕΤΑΙ ΠΡΟΣ ΤΙΣ ΟΥΣΙΩΔΕΙΣ ΑΠΑΙΤΗΣΕΙΣ ΚΑΙ ΤΙΣ ΛΟΙΠΕΣ ΣΧΕΤΙΚΕΣ ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ 1999/5/EK.
[fr] Français [French]	Par la présente <i>[nom du fabricant]</i> déclare que l'appareil <i>[type d'appareil]</i> est conforme aux exigences essentielles et aux autres dispositions pertinentes de la directive 1999/5/CE.
[it] Italiano [Italian]	Con la presente <i>[nome del costruttore]</i> dichiara che questo <i>[tipo di apparecchio]</i> è conforme ai requisiti essenziali ed alle altre disposizioni pertinenti stabilite dalla direttiva 1999/5/CE.
[lv] Latviski [Latvian]	Ar šo <i>[name of manufacturer / izgatavotāja nosaukums]</i> deklarē, ka <i>[type of equipment / iekārtas tips]</i> atbilst Direktīvas 1999/5/EK būtiskajām prasībām un citiem ar to saistītajiem noteikumiem.
[lt] Lietuvių [Lithuanian]	Šiuo <i>[manufacturer name]</i> deklaruoja, kad šis <i>[equipment type]</i> atitinka esminius reikalavimus ir kitas 1999/5/EB Direktyvos nuostatas.
[nl] Nederlands [Dutch]	Hierbij verklaart <i>[naam van de fabrikant]</i> dat het toestel <i>[type van toestel]</i> in overeenstemming is met de essentiële eisen en de andere relevante bepalingen van richtlijn 1999/5/EG.
[mt] Malti [Maltese]	Hawnhekk, <i>[isem tal-manifattur]</i> , jiddikjara li dan <i>[il-mudel tal-prodott]</i> jikkonforma mal-htigijiet essenzjali u ma provvedimenti oħrajn relevanti li hemm fid-Dirrettiva 1999/5/EC.
[hu] Magyar [Hungarian]	Alulírott, <i>[gyártó neve]</i> nyilatkozom, hogy a <i>[... típus]</i> megfelel a vonatkozó alapvető követelményeknek és az 1999/5/EC irányelv egyéb előírásainak.
[pl] Polski [Polish]	Niniejszym <i>[nazwa producenta]</i> oświadczam, że <i>[nazwa wyrobu]</i> jest zgodny z zasadniczymi wymogami oraz pozostałymi stosownymi postanowieniami Dyrektywy 1999/5/EC.
[pt] Português [Portuguese]	<i>[Nome do fabricante]</i> declara que este <i>[tipo de equipamento]</i> está conforme com os requisitos essenciais e outras disposições da Directiva 1999/5/CE.
[sl] Slovensko [Slovenian]	<i>[Ime proizvajalca]</i> izjavlja, da je ta <i>[tip opreme]</i> v skladu z bistvenimi zahtevami in ostalimi relevantnimi določili direktive 1999/5/ES.
[sk] Slovensky [Slovak]	<i>[Meno výrobcu]</i> týmto vyhlasuje, že <i>[typ zariadenia]</i> spĺňa základné požiadavky a všetky príslušné ustanovenia Smernice 1999/5/ES.

[fi] Suomi [Finnish]	[Valmistaja = manufacturer] vakuuttaa täten että [type of equipment = laitteen tyyppimerkintä] tyyppinen laite on direktiivin 1999/5/EY oleellisten vaatimusten ja sitä koskevien direktiivin muiden ehtojen mukainen.
[sv] Svenska [Swedish]	Härmed intygar [företag] att denna [utrustningstyp] står i överensstämmelse med de väsentliga egenskapskrav och övriga relevanta bestämmelser som framgår av direktiv 1999/5/EG.