
TOSHIBA
Model: 6157-001

AI Camera

Telecommunication regulatory statement

This product is not intended to be connected directly or indirectly by any means whatsoever to interfaces of public telecommunications networks, nor is it intended to be used in a public services network.

Electronic emission notices

When you attach a monitor to the equipment, you must use the designated monitor cable and any interference suppression devices that are supplied with the monitor.

Federal Communications Commission (FCC) statement

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

Properly shielded and grounded cables and connectors must be used in order to meet FCC emission limits. Toshiba Global Commerce Solutions is not responsible for any radio or television interference caused by using other than recommended cables and connectors or by unauthorized changes or modifications to this equipment. Unauthorized changes or modifications could void the user's authority to operate the equipment.

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 might cause undesired operation.

Industry Canada Class A emission compliance statement

This Class A digital apparatus complies with Canadian ICES-003.

Avis de conformité à la réglementation d'Industrie Canada

Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

Australia and New Zealand Class A statement

Attention: This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

European Union EMC Directive conformance statement

This product is in conformity with the protection requirements of EU Council Directive 2014/30/EU on the approximation of the laws of the Member States relating to electromagnetic compatibility. Toshiba Global Commerce Solutions cannot accept responsibility for any failure to satisfy the protection requirements resulting from a nonrecommended modification of the product, including the fitting of non-Toshiba Global Commerce Solutions option cards.

This product has been tested and found to comply with the limits for Class A Information Technology Equipment according to CISPR 32/European Standard EN 55032. The limits for Class A equipment were derived for commercial and industrial environments to provide reasonable protection against interference with licensed communication equipment.

Attention: This is an EN 55032 Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Responsible manufacturer:

Toshiba Global Commerce Solutions
3901 South Miami Blvd.
Durham, NC 27703 USA

European Community contact:

Toshiba Global Commerce Solutions, Inc.
Brand Manager - Europe, Middle East & Africa
Z.1 Researchpark 160, 1731 Asse, Belgium
[Tel:33-6845-35093](tel:33-6845-35093)
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Germany Class A statement

Deutschsprachiger EU Hinweis: Hinweis für Geräte der Klasse A EU-Richtlinie zur Elektromagnetischen Verträglichkeit

Dieses Produkt entspricht den Schutzanforderungen der EU-Richtlinie 2014/30/EU zur Angleichung der Rechtsvorschriften über die elektromagnetische Verträglichkeit in den EU-Mitgliedsstaaten und hält die Grenzwerte der EN 55032 Klasse A ein.

Um dieses sicherzustellen, sind die Geräte wie in den Handbüchern beschrieben zu installieren und zu betreiben. Des Weiteren dürfen auch nur von der Toshiba Global Commerce Solutions empfohlene Kabel angeschlossen werden. Toshiba Global Commerce Solutions übernimmt keine Verantwortung für die Einhaltung der Schutzanforderungen, wenn das Produkt ohne Zustimmung der Toshiba Global Commerce Solutions verändert bzw. wenn Erweiterungskomponenten von Fremdherstellern ohne Empfehlung der Toshiba Global Commerce Solutions gesteckt/eingebaut werden.

EN 55032 Klasse A Geräte müssen mit folgendem Warnhinweis versehen werden: "Warnung: Dieses ist eine Einrichtung der Klasse A. Diese Einrichtung kann im Wohnbereich Funk-Störungen verursachen; in diesem Fall kann vom Betreiber verlangt werden, angemessene Maßnahmen zu ergreifen und dafür aufzukommen."

Deutschland: Einhaltung des Gesetzes über die elektromagnetische Verträglichkeit von Geräten

Dieses Produkt entspricht dem "Gesetz über die elektromagnetische Verträglichkeit von Geräten (EMVG)". Dies ist die Umsetzung der EU-Richtlinie 2014/30/EU in der Bundesrepublik Deutschland.

Zulassungsbescheinigung laut dem Deutschen Gesetz über die elektromagnetische Verträglichkeit von Geräten (EMVG) (bzw. der EMC EG Richtlinie 2014/30/EU) für Geräte der Klasse A

Dieses Gerät ist berechtigt, in Übereinstimmung mit dem Deutschen EMVG das EG-Konformitätszeichen - CE - zu führen.

Verantwortlich für die Einhaltung der EMV Vorschriften ist der Hersteller:

Toshiba Global Commerce Solutions
3901 South Miami Blvd.
Durham, NC 27703 USA

Der verantwortliche Ansprechpartner des Herstellers in der EU ist:

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Brand Manager - Europe, Middle East & Africa
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1731 Asse, Belgium
[Tel:33-6845-35093](tel:33-6845-35093)
e-mail: cthery@toshibages.com

Generelle Informationen:

**Das Gerät erfüllt die Schutzanforderungen nach EN 55024 und EN 55032
Klasse A.**

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.

For product available in the USA/Canada market, only channel 1~11 can be operated. Selection of other channels is not possible.

FCC 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.

Section 15.204(b) states that an approved "transmission system" must always be marketed as a complete system including the antenna.

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:

1. This device may not cause interference.
2. This device must accept any interference, including interference that may cause undesired operation of the device.

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

1. L'appareil ne doit pas produire de brouillage;
2. L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

This device is restricted to indoor use.

IC Radiation Exposure Statement:

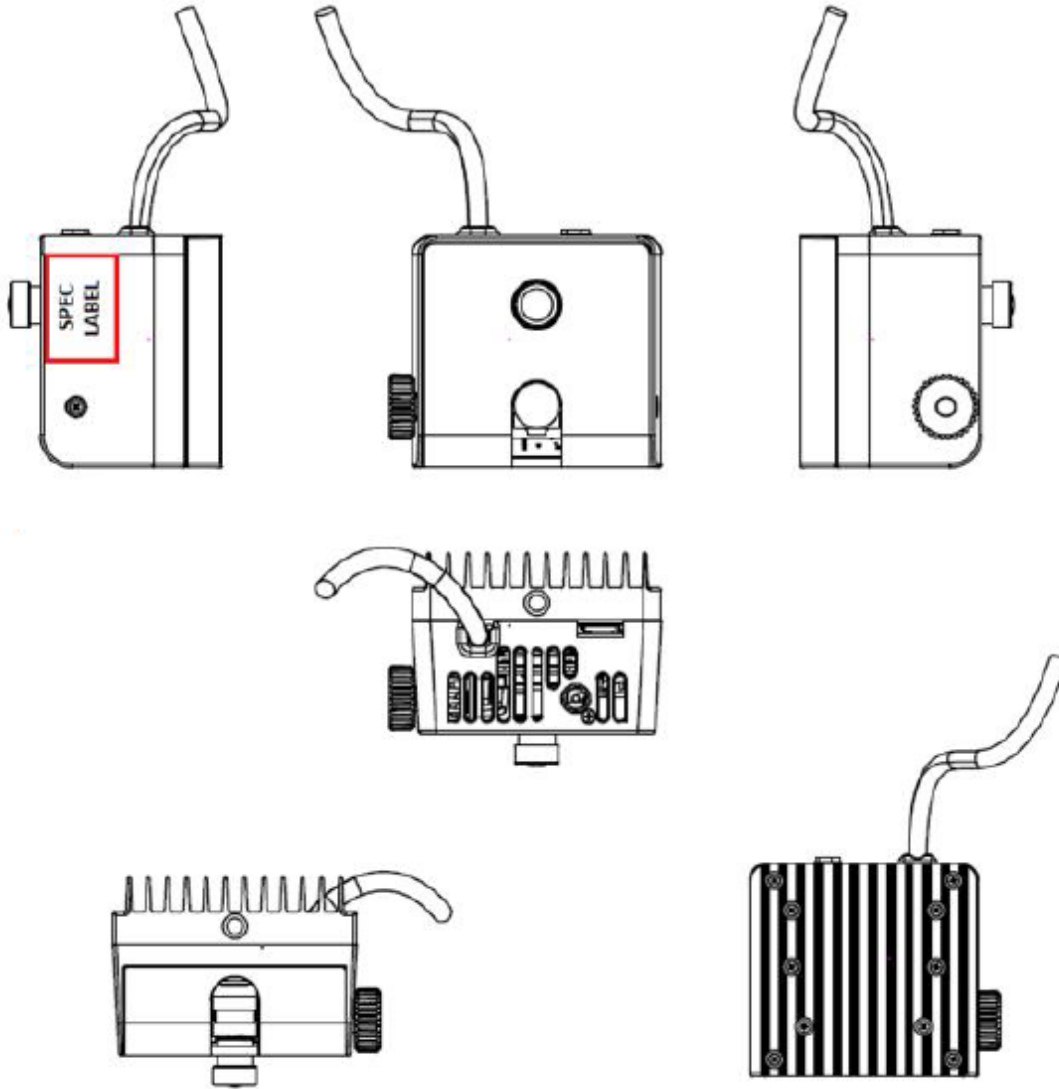
This equipment complies with IC RSS-102 radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance **20cm** between the radiator & your body.

Cet équipement est conforme aux limites d'exposition aux rayonnements IC établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de 20cm de distance entre la source de rayonnement et votre corps

The transmitter module may not be co-located with any other transmitter or antenna.
Le module émetteur peut ne pas être coimplanté avec un autre émetteur ou antenne.

The Country Code Selection feature is disabled for products marketed in the US/Canada

Camera Introduction



Warning: Do not defeat the safety purpose of grounding type plug. Only use the power supplying cord in combination with earthing socket-outlet.

Key Component

#	Function	Model	Remark
1	SOC+PMIC	RK3399PRO+RK809-3(PMIC)	
2	NPU	INTEL Myriad X MA 2085	
3	Wi-Fi/BT	AMPAK AP6398S	2.4G+5G, SDIO3.0 IEEE 802.11 a/b/g/n/ac (2.4G/5G) with MIMO
4.1	Camera module 1	Sensor: OV4689	4Mp
4.1.1	IR cut		
4.2	Camera module 2	Sensor: IMX258	13Mp
5	Antenna (Internal)	CHILISIN	
6	Antenna (External)	Invax	
7	DDR	LPDDR3 8Gb(1GB) x 3	For RK3399PRO
8	OS	Linux Kernel 4.4	
9	IO	RJ45 (Gigabit Ethernet)	
10	IO	RS232 x2 (or UART1 for debug; UART2 for NPU)	
11	IO	Micro SD card	
12	Dimension	8cm x 7.5 cm x 6cm	

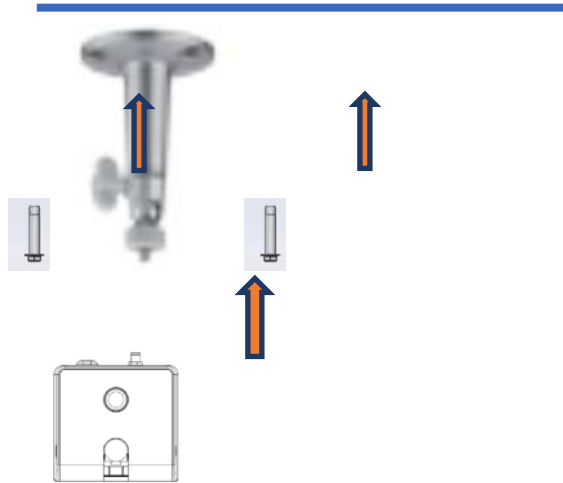
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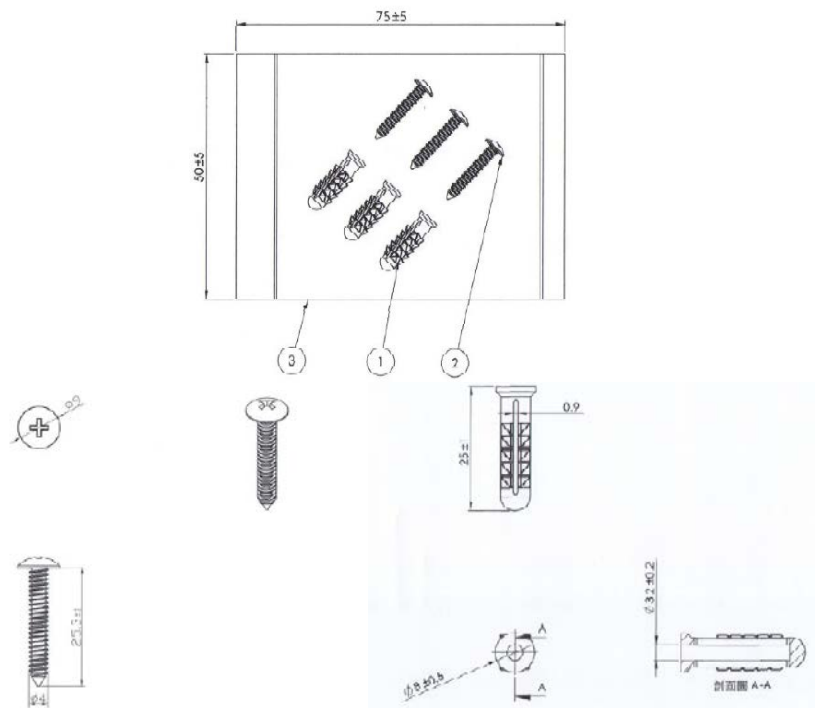
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Tips on Placement

- Assemble the bracket and camera
- And lock the bracket with the screw



➤ Note: Screw drawing



Operation Frequency and Radiation Power

FCC

Mode	Frequency Range	Total Power (max)
Bluetooth Low Energy (1Mbps)	2402 ~ 2480 MHz	6.32 dBm
Bluetooth Low Energy (2Mbps)	2402 ~ 2480 MHz	6.06 dBm
WiFi 802.11b 1Tx	2412 ~ 2462 MHz	22.32 dBm
WiFi 802.11g 2Tx	2412 ~ 2462 MHz	23.26 dBm
WiFi 802.11n 2Tx	2412 ~ 2462 MHz	23.42 dBm

Mode	Frequency Range	Total Power (max)
WiFi 802.11a 2Tx	5150 ~ 5250 MHz	20.90 dBm
WiFi 802.11ac(20MHz) 2Tx	5150 ~ 5250 MHz	21.02 dBm
WiFi 802.11ac(40MHz) 2Tx	5150 ~ 5250 MHz	21.37 dBm
WiFi 802.11ac(80MHz) 2Tx	5150 ~ 5250 MHz	18.22 dBm

Mode	Frequency Range	Total Power (max)
WiFi 802.11a 2Tx	5725 ~ 5825 MHz	20.90 dBm
WiFi 802.11ac(20MHz) 2Tx	5725 ~ 5825 MHz	21.02 dBm
WiFi 802.11ac(40MHz) 2Tx	5725 ~ 5825 MHz	21.37 dBm
WiFi 802.11ac(80MHz) 2Tx	5725 ~ 5825 MHz	18.22 dBm

CE

Mode	Frequency Range	EIRP (max)
Bluetooth Low Energy (1Mbps)	2402 ~ 2480 MHz	8.12 dBm
Bluetooth Low Energy (2Mbps)	2402 ~ 2480 MHz	8.13 dBm
WiFi 802.11b 1Tx	2412 ~ 2472 MHz	17.45 dBm
WiFi 802.11g 2Tx	2412 ~ 2472 MHz	19.86 dBm
WiFi 802.11n 2Tx	2412 ~ 2472 MHz	19.85 dBm

Mode	Frequency Range	EIRP (max)
WiFi 802.11a 2Tx	5150 ~ 5250 MHz	20.65 dBm
WiFi 802.11ac(20MHz) 2Tx	5150 ~ 5250 MHz	21.04 dBm
WiFi 802.11ac(40MHz) 2Tx	5150 ~ 5250 MHz	22.65 dBm
WiFi 802.11ac(80MHz) 2Tx	5150 ~ 5250 MHz	22.88 dBm

Mode	Frequency Range	EIRP (max)
WiFi 802.11a 2Tx	5725 ~ 5825 MHz	13.89 dBm
WiFi 802.11ac(20MHz) 2Tx	5725 ~ 5825 MHz	13.87 dBm
WiFi 802.11ac(40MHz) 2Tx	5725 ~ 5825 MHz	13.97 dBm
WiFi 802.11ac(80MHz) 2Tx	5725 ~ 5825 MHz	13.82 dBm

Antenna Specification

Both antennas support Dual-Band(2.4GHz/5GHz)

Ant.	Brand	Model Name	Antenna Type
1	HILISIN	BTFA00280825GC1A01	PIFA
2	INVAX	AN2450-3902BRS	Dipole