




Important Information

Please read this user manual before you use this product, it contains all the notes and important things regarding operating this product. In accordance with the safety precautions and operating instructions listed on this user manual, our appliances provided the product is handled properly for its intended use, but may not apply to below cases:

- Repairs or product modification and alterations have been executed by unauthorized personnel.
- The damages are caused by accidents including but not limited to lightning, fire, exposed to rain or water, and moisture.
- Do not use provided power adapter with specific power voltage which are not compliant with the rated voltage range in the attached label of the power adapter in package.
- The model label on the product has been modified or the warranty tag has been removed by unauthorized personnel.

Safety Precaution

 Danger! High voltage	To reduce the risks of electricity, do not remove or open the cover. No user-serviceable parts are inside. Please return to original factory for maintenance
 Beware of hot surfaces!	The high temperature in the process of operating the device may cause the high risk of scalding.
 Caution!	Please use our standard power adapter. Detailed information Please refer to the rated voltage range showed on the label at the back of package's power adapter.

Danger: Be careful with electricity.

- As connecting any equipment (such as any player or TV , etc.), please turn off the power to the product before any operation is undertaken.
- Power outlet: To prevent electric shock or fire, short circuit, please make sure the type of electrical plug used on the receiver's and transmitter's power cord are compliant with the rated voltage range in the attached label of the power adapter in package.
- Power cord: Do not place any heavy articles above on the power cord. To avoid being stepped on or pinched by heavy items, the power cord should not be located on the place where people pass by frequently.
- Power overloading: Avoid overloading wall's electrical outlets and extension cord or other multi-socket; otherwise could result in electric shock or fire.
- Lightning: For protection from lightning or when the product is left unattended for a long period, please disconnect it from the power source.
- Please disconnect the power cord from the power outlet when you are not using the receiver and transmitter, this will reduce the risk of electric shock or fire.
- 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.

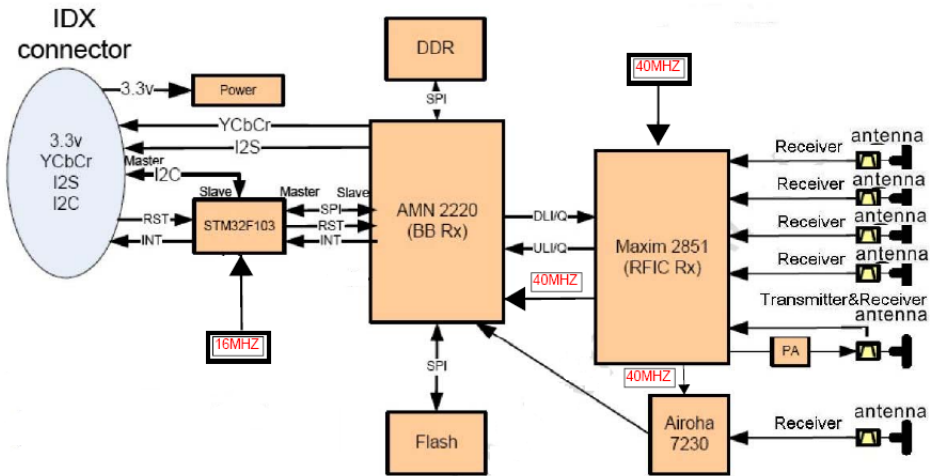
Warning

- This product should not be exposed to dripping or splashing. Do not place any object filled with liquid on the product (eg. vases).
- To avoid electric shock, please do not block or stick anything on the air vent of product; do not remove the cover or put the object just like pins, steel wire into the gap of the air vent.
- Please place the receiver/ transmitter on a flat with hard and stable surface.
- Ventilation: please do not block the air vents on the receiver/transmitter or place any heavy object on top of them . Blocking the air flow can damage the product itself. Please make sure that there is adequate ventilation distance between the receiver and TV, and also put the product away from direct sunlight or any source of heat.
- Water Exposure: To reduce the risk of electric shock or fire , please do not expose the receiver/transmitter to rain or moisture.
- We assume no responsibility for any damage or result caused by using other adapters instead of our standard adapters

Special Notice

- Although the product has provided the function of data encryption when transmitting, you still need to pay attention to deliberate signal interception. There will be the possibility of a third party intentionally intercept the transmission signal since the product adopt wireless communication. Please do not use the product on confidential and important communications, or life-related communications. The main concern is that the content of wireless communication might be received by the third party's wireless devices deliberately or accidentally.
- The impact of radio waves (such as the following environment may cause the abnormal audio and video (blocked image, noise ...etc.).
 - 1) Transmit near the wall which is hard for the radio waves to get through.
 - 2) Quite close to the refrigerator, metal fitment and appliances, or next to the crowded situation.
- This product has been tested and manufactured to comply with national electrical safety rules, however, there will be noise caused by the interference with other machines in rare cases. If the interference is happened, please keep a certain distance away from other machines.
- The product is susceptible to interference from 5GHz wireless local area network or other wireless devices.
- Optimal range between transmitter and receiver is between 1 meter and 30 meters within line of sight indoor.
- Please do not set up the transmitter and receiver in metal shelf, or it will hinder the wireless communications.
- 1080P/60 Hz Wireless transmitting.
- It will take 15-20 seconds to boot the system before wireless communication start, the media receiver can not be operated during this time.
- Keep the product away from the body 20cm.
- Use only indoor.
- No enclosure provided, need add a complete 5VB enclosure.

1. AMN32200-IR Block Diagram



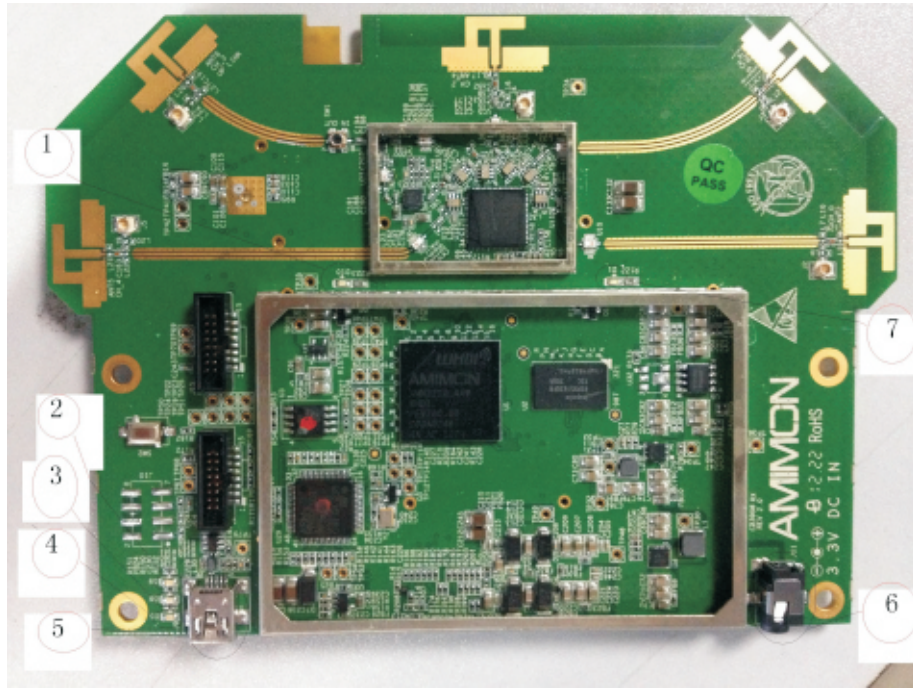
2. Features :

1. Uncompressed and uncompromised FHD video quality
2. Supports 40 MHz channels for supreme video quality and high rate video/audio signals
3. Supports WHDI、Unicast、Broadcast
4. Supports HDMI、SDI output device (Need connect ES001 to use)
5. Strong 256-bit/128-bit AES based encryption
6. Supports MIMO technology
7. Supports OSD display WHDI 1.0 compliance, including HDCP 2.0

3. Performance parameters :

Number	Item	Unit	Specification
1	Transmitter&Receiver Frequency	GHZ	5.15~5.25, 5.25~5.35, 5.47~5.725, 5.725~5.825 (GHZ)
2	RF Communication Systems		MIMO
3	Modulation Mode		OFDM
4	Frequency Stability	PPM	±20
5	Operating Bandwidth	MHZ	40
6	Typical Transmit Power	dBm	15(MAX)
7	Receiver Sensitivity	dBm	-70
8	System Delay	ms	≤1 (Video No Compression)
9	Transmit Channel&Receive Channel	Channel	1 & 5
10	HD Video System		HD: 480i, 480p, 576i, 576p, 720p, 1080i, 1080p PC: VGA (640x480), SVGA (800x600), XGA (1024x768), Panel: 854x800, 1280x768, 1366x768, 1920x1080
11	HD Video Encryption		HDCP 1.2
12	Multi-path Transmission Distance	m	50
13	Consumption Current	mA	820±10%
14	Power Supply	VDC	3.3±5%
15	Operation Temperature	℃	0℃ - + 40℃
16	Storage Temperature	℃	-20℃ - + 60℃
17	Operation Humidity	RH	15% - 85%
18	Dimensions	mm	144.92X105X1.78

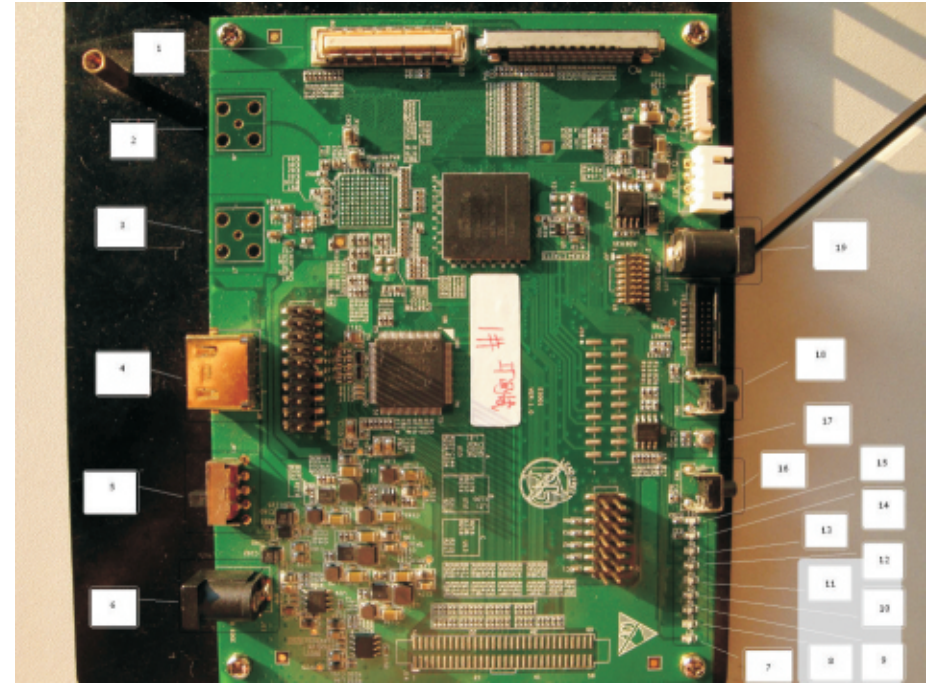
4. AMN32200-IR Product appearance and Interface definition



Interface and Button definition :

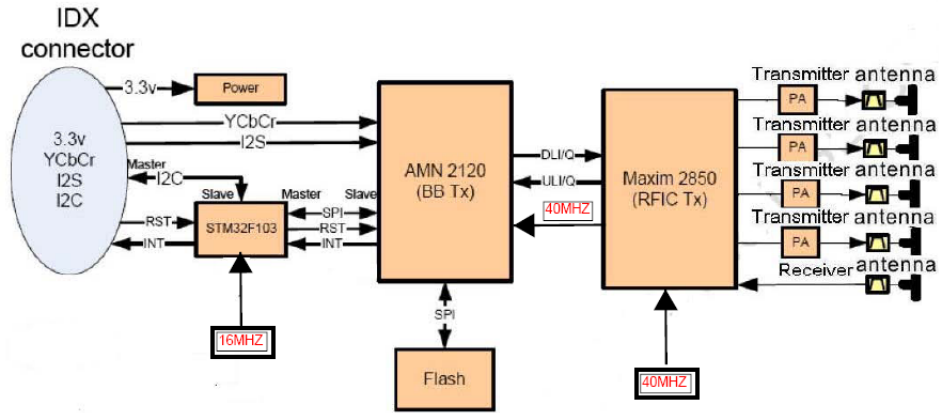
- 1. Blue LED ■ BB I/O Work indicator
- 2. Blue LED ■ Video connection indicator
- 3. Blue LED ■ Wireless connection indicator
- 4. Blue LED ■ ARM working indicator
- 5. USB Interface
- 6. DC IN : 3.3V Power input
- 7. Blue LED : RF IC Work indicator

5.ES001 Interface and Button definition :



- 1. 80PIN Connector : Connected with the AMN32200-IR
- 2. BNC (75Ω) : BNC cable to connect the output of the SDI signal
- 3. BNC (75Ω) : BNC cable to connect the SDI signal loop output
- 4. HDMI Interface : HDMI output
- 5. Toggle switch : Power switch
- 6. DC IN: 5V Power input
- 7. Blue LED:YCbC 444 Indicator
- 8. Blue LED:SDI Signal Lock Indicator
- 9. Blue LED:SDI Signal bit error rate indicator
- 10. Blue LED:YCbCr Input indicator
- 11. Blue LED:YCbCr 422 indicator
- 12. Blue LED:SDI Signal input indicator
- 13. Blue LED: Not defined
- 14. Blue LED:5V Power indicator
- 15. Blue LED:FLAG1 Power indicator
- 16. Tact Switch : Not defined
- 17. Tact Switch : System reset button
- 18. Tact Switch : HDMI and SDI Output select buttons, Default HDMI
- 19. DC IN: 5V Power input

1. AMN31200-IR Block Diagram



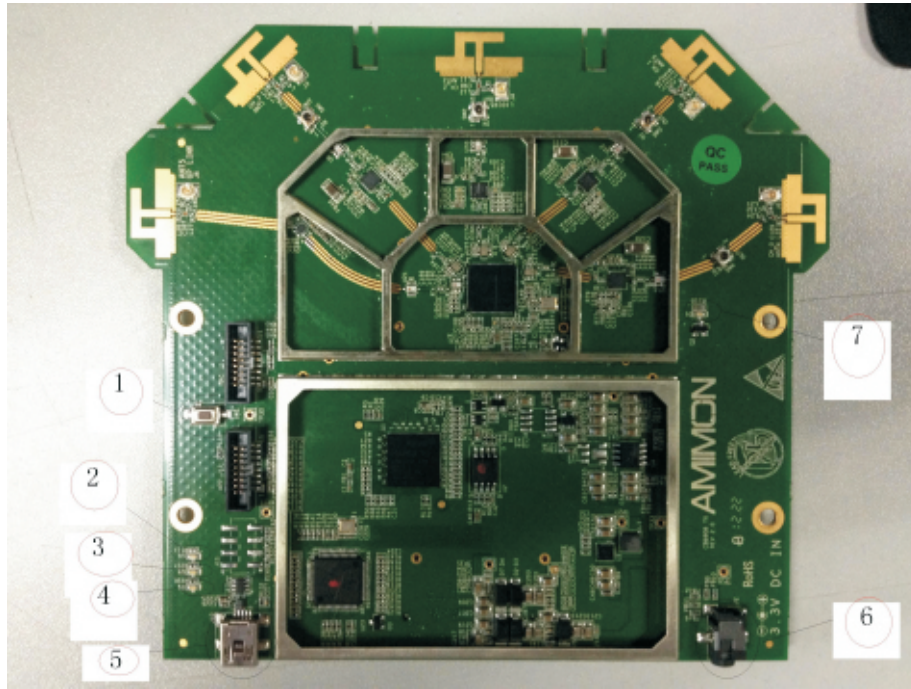
2. Features :

1. Uncompressed and uncompromised FHD video quality
2. Supports 40 MHz channels for supreme video quality and high rate video/audio signals
3. Supports WHDI, Unicast, Broadcast
4. Supports HDMI SDI output device (Need connect ES002 to use)
5. Strong 256-bit/128-bit AES based encryption
6. Supports MIMO technology
7. Supports OSD display WHDI 1.0 compliance, including HDCP 2.0

3. Performance parameters :

Number	Item	Unit	Specification
1	Transmitter&Receiver Frequency	GHZ	5.15~5.25, 5.25~5.35, 5.47~5.725, 5.725~5.825 (GHZ)
2	RF Communication Systems		MIMO
3	Modulation Mode		OFDM
4	Frequency Stability	PPM	±20
5	Operating Bandwidth	MHZ	40
6	Typical Transmit Power	dBm	12(MAX)
7	Receiver Sensitivity	dBm	-70
8	System Delay	ms	≤1 (Video No Compression)
9	Transmit Channel&Receive Channel	Channel	4 & 1
10	HD Video System		HD: 480i, 480p, 576i, 576p, 720p, 1080i, 1080p PC: VGA (640x480), SVGA (800x600), XGA (1024x768), Panel: 854x800, 1280x768, 1366x768, 1920x1080
11	HD Video Encryption		HDCP 1.2
12	Multi-path Transmission Distance	m	50
13	Consumption Current	mA	360±10%
14	Power Supply	VDC	3.3±5%
15	Operation Temperature	°C	0°C - + 40°C
16	Storage Temperature	°C	-20°C - + 60°C
17	Operation Humidity	RH	15% - 85%
18	Dimensions	mm	144.92X130X1.78

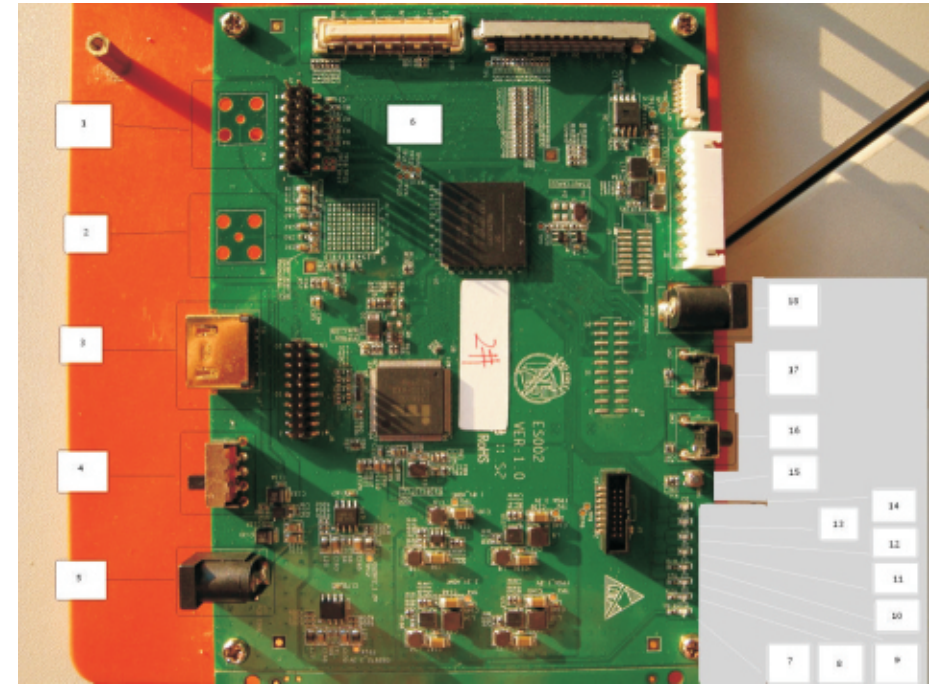
4. AMN31200-IR Product appearance and Interface definition



Interface and Button definition :

- 1. Tact Switch ■ System reset button
- 2. Blue LED ■ ARM working indicator
- 3. Blue LED: Wireless connection indicator
- 4. Blue LED: Video connection indicator
- 5. USB Interface
- 6. DC IN ■ 3.3V Power input
- 7. Blue LED: RFIC Work indicator

5.ES002 Interface and Button definition :



- 1. BNC (75Ω) : BNC cable to connect the output of the SDI signal
- 2. BNC (75Ω) : BNC cable to connect the output of the SDI signal
- 3. HDMI Interface : HDMI input
- 4. Toggle switch : Power switch
- 5. DC IN: 5V Power input
- 6. 80PIN Connector : Connected with the AMN-31200-IR
- 7. Blue LED:5V Power indicator
- 8. Blue LED:5V Power indicator
- 9. Blue LED:HDMI Signal Lock Indicator
- 10. Blue LED:SDI Signal Lock Indicator
- 11. Blue LED:YCbC 444 Indicator
- 12. Blue LED:YCbCr 422 Indicator
- 13. Blue LED:YCbCr Output Indicator
- 14. Blue LED:SDI Signal output indicator
- 15. Tact Switch : System reset button
- 16. Tact Switch : Not defined
- 17. Tact Switch : HDMI and SDI Output select buttons, Default HDMI
- 18. DC IN: 5V Power input

FCC Caution :

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

Notice:

This module in its final integration requires the end-product to continue to comply with DFS requirements. A Class II Permissive Change may be required for operation not already described in the FCC Grant filing.

OEM Labeling Requirements

NOTICE: The OEM or final integrator must ensure that FCC labeling requirements are met. This includes an additional label on the outside of the final product housing with the following contents:

Company Name

MODEL:

Contains Model: AMN31200-IR, FCC ID: VO SCB890802120528

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 interferences, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Company Name

MODEL:

Contains Model: AMN32200-IR, FCC ID: VO SCB390802120528

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 interferences, and (2) this device must accept any interference received, including interference that may cause undesired operation.

The applicable usage is to be used as a wireless device, connected to the back of a professional camera using V lock connectors, and transmitting live video, coming from BNC connectors, with less than 1msec delay.

FCC Radiation Exposure Statement

This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

This equipment 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.

Caution!

The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user authority to operate the equipment.

IC Warning :

Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that , the equivalent isotropically radiated power (e.i.r.p) is not more than that necessary for successful communication.

This device complies with Industry Canada licence-exempt RSS standard(s).

Operation is subject to the following two conditions:

- (1) this device may not cause interference, and
- (2) this device must accept any interference, including interference that may cause undesired operation of the device.