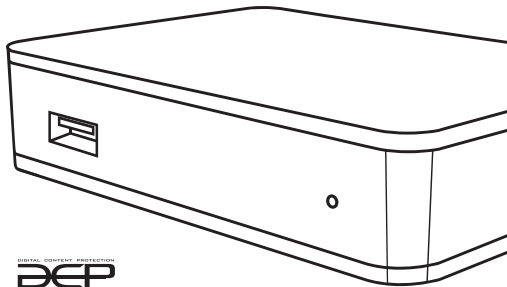




SET-TOP BOX  
**MAG322/323**  
**MAG322w1/323w1**

Instruction Manual



**HDMI**®  **DOLBY AUDIO**™

DIGITAL CONTENT PROTECTION  
**DCP**

## Set-Top Box MAG322/323, MAG322w1/323w1 Instruction Manual

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### Regulatory information

#### EU

This equipment has been tested and found to comply with the essential requirements of the following Directives: 2014/30/EU, 2014/35/EU, 2009/125/EC, 2011/65/EU.

This product is in accordance with Directive WEEE (2002/96/EC)

#### FCC

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 when the equipment is operated in a residential installation. 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. 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 or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to 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.

The models MAG322w1 and MAG323w1 contain FCC ID: 2AATL-F89FTSM13



## Warranty

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### Warranty term:

Europe, MEASA and Oceania:  
2 years from date of sale (but not more than 2,5 years from manufacture date).

The USA, Americas, Russia, Ukraine and other regions:  
1 year from date of sale (but not more than 1,5 years from manufacture date).

See the date of manufacture at «Product Information» section. By virtue of the present Coupon, the absence of defects in manufacturing of the product and its compounds is warranted for a year-term counted since date of sale. If during the mentioned warranty term the defects of materials or operation of product will be found, the product would be repaired or its defective parts would be replaced free of charge in the service warranty processing center with compliance with warranty conditions.

### Warranty Service Coupon

(to be filled in by a shop-assistant)

Date of Sale: \_\_\_\_\_

Company-Seller: \_\_\_\_\_

Address of Company-Seller: \_\_\_\_\_

\_\_\_\_\_

Place of Stamp

I have no claims as to appearance and package contents. I accept the conditions of warranty service.

Signature of Customer: \_\_\_\_\_

Manufacturer:

«Telecommunication Technologies» Ltd,  
1 Mytna Square, Odessa, 65026, Ukraine

## Warranty processing centers

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### Warranty Processing Centers List:

#### Europe:

Ludwig-Erhard-Str. 1A (Eingang B)  
65760, Eschborn, Germany  
Tel: +49 6196 204 83 18  
e-mail: warranty@infomir.com

#### The USA:

174 Bay 49<sup>th</sup> Street  
Brooklyn, NY 11214 USA  
Tel: +1 631 482 66 36  
e-mail: sales@infomirusa.com

#### Russia:

«CMS Pro» Ltd.  
liter A, 177, Moskovskoe shosse, Shushary settl.  
196626, Russian Federation, SPb  
Tel: +7 921 367 17 00  
e-mail: info@cms-pro.com

#### MEASA and Oceania:

Warehouse B1-40  
Sheikh Rashid Bin Saeed Al Maktoum Street  
Ajman Free Zone  
45573, Ajman, UAE  
Tel: +971 6 740 37 55  
e-mail: warranty@infomir.com

#### Ukraine:

4-D, Nebesnoi Sotni Avenue  
(formerly known as Marshal Zhukov Avenue)  
65121, Ukraine, Odessa  
Tel: +38 048 759 09 00  
e-mail: warranty@infomir.com

### Additional Information:

Additional and extended information you can see by reference: [www.infomir.com](http://www.infomir.com)

## Warranty conditions

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1. The present warranty is only valid if the defective product is provided with property filled in Warranty Service Coupon. If date of sale is not pointed, the warranty term is counted since date of the product manufacturing which is defined under serial number. Warranty processing center reserves the right to refuse free warranty service and parts replacement in case the mentioned above documents are not presented or the filled in it information is not complete or unreadable.
2. The present warranty does not enable the right for compensation and cover of loss received as a result of rearrangement of the product.
3. The present guarantee is invalid if model or serial number of the product is altered, erased, removed or unreadable, or warranty seal is broken.
4. The present warranty does not cover the following:
  - 4.1. Any adaptations and alterations with the aim of perfection and widening of the common scope of the product application specified in the Manual.
  - 4.2. Devices and accessories not specified in the coupon.
  - 4.3. Damage caused in result of:
    - a) Improper maintenance including but not limited by following:
      - (1) use of the product not according to its intended purpose or Manual;
      - (2) mounting and maintenance of the product in conditions not corresponding to safety standards and regulations valid in the country of use;
      - (3) incorrect software installation provided by service operator.
    - b) Repair performed by not authorized service centers or dealers;
    - c) Accidents, lightning stroke, flood, fire, incorrect ventilation;
    - d) Transporting excluding cases when it is carried out by ASC;
    - e) Faults of system in which the present product had been using.
5. These warranty conditions do not intend to restrict or limit in any way statutory rights of customers which may not be altered in some jurisdictions and other customers' rights which may arise out of any agreements with third parties, provided that nothing contained in such agreements states or implies that the manufacturer or manufacturer affiliates assume any obligations or liabilities other than those expressly stipulated in this Warranty Service Coupon.

While maintaining warranty liabilities on product repair or replacement, Manufacturer takes no responsibilities for personal data safety, including logins, passwords, paid or free subscriptions, settings, portals, media files, content and software installed or set up by Customer or other third parties.

## Copyrights and Trademarks

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### Notice of Copyright

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### Software Use Agreement

IMPORTANT - read carefully: when using the Software with your device, you agree thereby with every clauses of the Software Use Agreement. If you do not agree with the terms and conditions of the Software Use Agreement, you should immediately stop using the device and return it to your services provider completely.

### License provision. Limitations

According to this Agreement, Telecommunication Technologies LTD and your services provider are

jointly to provide you with non-exclusive and non-transferrable license, without the right to sublicense, for use of all software and documents with the product only. You recognize and acknowledge that Telecommunication Technologies LTD and your services' provider may regularly renew, change or extend the product software abilities. You confirm that:

- a) You will not take attempts to change, extend, or decompile, disassembly, or redesign, nor otherwise get access to the software source code.
- b) You will not take attempts to delete or upload the product software. Any sale or transfer of the product will be ruled hereby.

### Ownership

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### Warranty for the Software

To the maximum extent according to applicable law, the Company does not make any submission and

## Copyrights and Trademarks

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declines any and all warranties, whether express or implied, as to the Software, including, with no limitations, any implied demand warranties, correspondence to target destination, abuse of rights of third parties, neither those being result of interrelations or result of commerce. The Company does not guarantee the Software will be free of defects or errors; that any defects or errors will be corrected, or any function abilities of the Software will meet all your requirements.

### Warranty

Warranty for your product is supplied via your services' provider. In the event your product requires maintenance service, you should contact the services' supplier directly.

### Trademarks

Инфомир, Infomir are the trademarks of Infomir Ltd. HDMI is the trademark of HDMI Licensing, LLC. Manufactured under license from Dolby Laboratories. Dolby, Dolby Audio, and the double-D symbol are trademarks of Dolby Laboratories. DCP is the trademark of Digital Content Protection LLC. Redesigning and disassembling is illegal. Company name: Telecommunication Technologies Ltd. 1 Mytna Sq., Odessa 65026, Ukraine.

## Terms of using

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### Safe and Efficient Using

Device does not contain harmful or hazardous substances.

### Accessories

Use the accessories supplied with your arrangement or recommended by the manufacturer only. Using of the accessories which are not supplied or not sanctioned by the manufacturer may be dangerous for the User or do harm to the arrangement operation. Using of the not appropriate accessories eliminates guarantees of the product therewith.

### Water and Moisture

To avoid damage that can cause ignition of the present product or lesion to the User with electrical current, the product and its accessories should not be undergone with any liquids, rain or high moisture. Do not use the present product in the places where it may be exposed to the contact with a liquid or vapor.

## Product Care

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### Maintenance of Product

The product should not be disassembled. The tries of the disassembling of the product may be dangerous for your life and for serviceability of the product.

The self-supporting disassembling invalidates you the product guarantee.

The maintenance should be affected by qualified specialists in the warranty processing centers only.

The product possesses protective sealing.

Breaking or changing of the mentioned sealing invalidates guarantee of the product.

### Cleaning

The product and accessories should be rubbed with dry cloth or tissue only.

To ensure safety, before shell cleaning switch the power supply off the alternative current socket.

The shell may be cleaned from persistent spots with a slightly wet cloth or cleaning tissue.

Do not use cleaner or polish, benzyl, solvents, abrasive items, liquid or aerosol detergent means for the product and accessories cleaning.

## Modifications

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<b>Modifications*</b>	<b>Built-in Wi-Fi</b>	<b>Verimatrix ViewRight client</b>
MAG322	-	-
MAG322w1	+	-
MAG323	-	+
MAG323w1	+	+



## Specifications

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### Physical Parameters

Model MAG322/MAG323, MAG322w1/MAG323w1

Weight: 144 gr.

Dimensions (approximately): 87 mm depth,  
132 mm width, 26 mm height

### Operation temperature and Humidity

1°C - 40°C; 5% ~ 93%RH

### Ethernet Interface

Ethernet Connector: RJ-45 shielded

Cable: UTP and STP 5 categories

Speed: Auto-choice, 10/100 Mbit/s

Indicators: Green – Activity, Yellow – Connection

#### \* Wi-Fi Interface

Built-in Wi-Fi module: 802.11 b/g/n, 150 Mbps  
(only MAG322w1/MAG323w1)

#### \* DRM option

Secure Media,  
Verimatrix (only MAG323, MAG323w1)

### USB Interface

Type: USB2.0x2pc.

### Supported Audio-Video Formats

Video codecs: MPEG-1/2, MPEG-4, H.264/AVC HP@L4.2,  
WMV9, H.265/HEVC Main and Main10 profile

up to 1080p at 60 fps, Xvid, 3D video supporting  
Audio codecs: MPEG-1 layer I/II/III, WMA, AAC-LC,

HE-AAC v1, HE-AAC v2

This product supports Dolby Digital™

Video modes: 1080i, 1080p, 720p, 576p, PAL, NTSC

Subtitles: DVB, PGS, SRT, SSA/ASS, SUB, Teletext subs, WebVtt

### Audio-Video Interfaces

Audio Connectors: TRRS (On adapter cable:

White=Left channel, Red=Right channel)

Output: 2 V RMS nominal, Loading: 10KΩ

Composite Video Interface, Type:

TRRS (Yellow connector on adapter cable)

Output: 1Vp-p

### Power supply Interface

Connector: DC cylindrical 2.5 mm x 5.5 mm

Type: plug-and-socket, DC current, center plus

Input 12V±10%

Power Less than 7.5W in typical conditions

### Outer Power Supply Unit

Type: Pulse with universal inlet

Input: 110-240 VAC, 50-60 Hz, 0.5A max

Output: 12V 1A

### Package

Type: cardboard box

Dimensions (approx.):

60 mm height, 225 mm width, 95 mm depth

Shipping weight: 435 gr.

## The Product Unpacking and Installation

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After the product extraction out of the package it is necessary to handle it with care, do not drop, shake it and afford other influence. The product is designed for horizontal allocation onto flat surface.

Do not place the product onto slippery surface, in place where it may be exposed to vibration or hazard to drop and other possible risks to the product to be damaged which may cause invalidation the product guarantee.

Do not dispose the product onto soft surface like on the carpet, bed, etc., for such surfaces cease access to the ventilation openings and complicate air flow that may cause the product overheating and invalidate guarantee in result.

Do not locate the product into the furniture in case of vacant clearance around the product is not provided for the sufficient product ventilation.

Do not place the product in place where it may be exposed to influence of direct sunlight, next to the sources of open fire and convectors.

Do not dispose the product on surfaces which in operating process may get warm, for instance, video record player or intensifier and do not put anything on the top of the shell as well. Do not cover the product with anything.

Containing liquids objects, such as vase, plant pot

are not to be placed next to or on the product. Do not touch or move the product during its operation. Switch off the product if you need to shift it.

The product is intended for use indoors.

The power supply cord is to be put to prevent its deformation and jamming and touching it well. The power supply cord is not to be laid under the carpets or blocked with anything where any damage may not be noticed.

### **Power supply unit**

The product should be used with power supply unit provided by the manufacturer only.

The power supply unit is fitted out with plug which is intended for connecting to socket in your country usage. In case of the necessity in the product connecting in other country or in the region with other data of electric circuit the power supply unit adopted for use in the specified area should be received from the manufacturer.

### **Operation**

The outer power supply unit of the product is getting warm in operation. In case of outer power supply unit gets hot, switch off promptly and get in touch with the equipment supplier for its replacement.

### **Protection from atmospheric electricity or not using for a long time**

On coming the thunderstorm and also in case of the product is intended to be in no use for a long time, disconnect the power supply cord out of socket, switch off Ethernet, video and audio cables. It is to protect the product from thunder discharges and power surges in the circuit.

### **Usage with Plasma Displays**

In the product usage for watching with plasma screens do not pause the picture for more than 5 minutes, otherwise it with other objects as may cause 'burn-out' pixels on the screen. It is not considered as a defect of the product but peculiarity of plasma screens structure. The producer does not bear the responsibility for damages had been caused in such manner.

### **The Arrangement Designation**

The product is intended to select digital audio & video channels from transport streams, decode and display them on TV. Any other use is prohibited. It means Telecommunication Technologies insists on the product usage in entirely accordant to the law of copyright. The compliance with the specified laws leaves on conscience of the user. The unauthorized copying of the protected materials or spreading of the specified copies under definite conditions may

violate the law of copyright and is to be previously adopted by possessor of the rights for the further commercial use.

### **Updating Software**

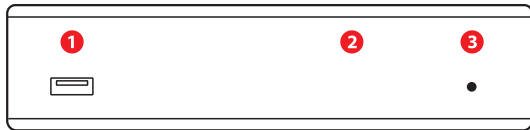
The product possesses the capability of automatic software updating. The manufacturer and your services provider reserve the right for automatic software updating to improve the product functional capability.

During the software updating the product should not be used for watching and switched off until the complete software updating. During the software updating the product switching off is inadmissible. The updating takes several minutes and since then you are able to continue enjoy on all delights of digital television services.

## About your MAG322/323, MAG322w1/323w1

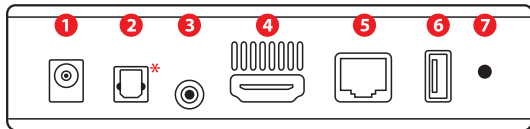
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### Front Panel



1. USB
2. IR-receiver
3. Indicator of stand-by mode/  
Indicator of the Remote Unit  
Buttons pushed

### Back Panel



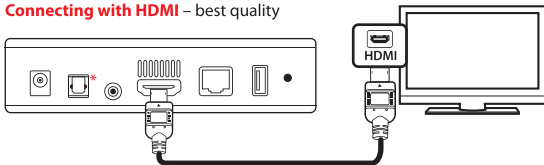
1. Power Supply
2. S/PDIF\*
3. 4-pin 3,5 mm jack, Composite  
video output, Stereo line output
4. HDMI
5. Ethernet
6. USB
7. Fn – Reset to factory settings/  
Load from the first U-boot/  
Select alternative NAND/  
“Emergency” – Load the basic  
software from USB/DHCP

\* Optional, may not be available on your device

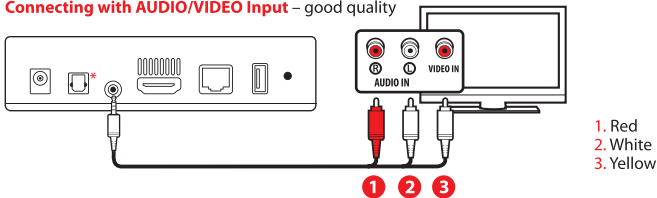
## Connecting to MAG322/323, MAG322w1/323w1

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### Connecting with HDMI – best quality



### Connecting with AUDIO/VIDEO Input – good quality



**Warning!** Switch off all the devices (TV, amplifier, etc.) and take the power supply unit out of the socket before connecting or disconnecting any cable. If the amplifier is not connected leave digital audio outputs disconnected.

\* Optional, may not be available on your device

## Using Remote Control to control the Device

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This section explains how to unpack Remote Control (RC) and prepare it for work. Your service provider can supply the product with an alternative RC. In that case please refer to the manual supplied by your service provider. Remote Control requires two batteries type AAA, R03, LR03, UM-4, 286.

Important information about using batteries. Do not mix different types of battery or old and new batteries. Do not use rechargeable batteries with the remote control. Remove the batteries from the remote control if you are not going to use it for several weeks, to avoid the risk of leakage. Please respect your environment and any local regulations and dispose of old batteries in a responsible manner.



Caution! Do not attempt to recharge the batteries. Immediately remove any leaking batteries. Take care when handling leaking batteries as they may cause burns to the skin or eyes, or other physical injuries.

### Introduction to the Programmable Remote Control Unit (optional)

If MAG322/323, MAG322w1/323w1 package includes a remote control with a block of five programmable

buttons (marked with blue print colour), then you may want to choose these buttons for controlling other devices (TV set, amplifier).

To program the buttons do the following:



















- Press the «On/Off» and «A/V» buttons at the same time and hold it for 2 seconds. When the green light of the «On/Off» button will stop blinking and will light steadily, it means the RC is ready to learn.
- Press the button you want to «teach» — the green light will start blinking.
- Place the infrared lamps of two RCs opposite each other and press the button on the RC of the other device, the function of which you wish to copy on device RC. Hold for 2 seconds.
- After the green light two quick blinks you may continue programming other buttons.
- Repeat the procedure described above for all buttons you want to program for controlling external devices.
- Press the the «On/Off» and «A/V» buttons to save the programmed data; the green light should fade off.

### Reset
















Press SETUP and OK buttons at same time and hold for 2 seconds red LED will flash 5 times. Reset is done.

## RCU

## Programmable RCU (optional)

- Favorites / Programmable section  
- Additional functions 
- Sound On/Off 
- Record / AV  
- Menu 
- Exit 
- Back 
- Info 
- Up 
- Left    Right
- Confirm Down 
- Volume 
- Change aspect ratio 
- To select a TV channel 



-  Turn the Media Player On / Off
-  Change audio mode
-  Setup menu
-  Context menu
-  Quick TV access
-  TV Guide
-  Virtual keyboard
-  Skip
-  Skip
-  Fast play
-  Fast play
-  Switch channels
-  Play / Pause
-  Stop
-  Update

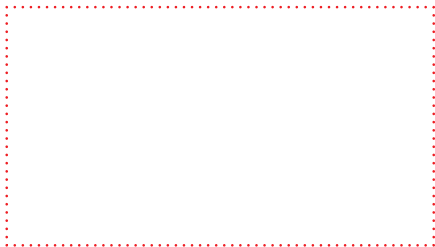
## Product information

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Product:

Serial Number:

MAC:



### **The set includes the following:**

Set-Top Box	- 1 pc.
External Power Supply 12V	- 1 pc.
IR Remote Control	- 1 pc.
AAA batteries	- 2 pc.
Instruction manual	- 1 pc.
Package box	- 1 pc.

### **Optionally the set may include the following:**

3,5 mm Jack to 3 RCA cable	- 1 pc.
LAN network cable	- 1 pc.
HDMI cable	- 1 pc.