

## PRO-CoaxExt

HDMI extender over Coaxial cable with bi-directional IR

## User's Guide



Transmitter



Receiver



Congratulations for owning a gofanco product. Our products aim to meet all your connectivity needs wherever you go.

Have fun with our products!

Please read this manual carefully before first use.

If you need more information about our products, please visit [www.gofanco.com](http://www.gofanco.com).

For technical support, please email us at [support@gofanco.com](mailto:support@gofanco.com).

For drivers/manuals download, please go to <http://www.gofanco.com/download>.

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## 1. Safety and Notice

Please read all of these instructions carefully before you use the device. Save this manual for future reference.

The **PRO-CoaxExt HDMI extender over Coaxial cable with bi-directional IR** has been tested for conformance to safety regulations and requirements, and has been certified for international use. However, like all electronic equipments, the PRO-CoaxExt should be used with care. Please read and follow the safety instructions to protect yourself from possible injury and to minimize the risk of damage to the unit.

- Follow all instructions and warnings marked on this unit.
- Do not attempt to service this unit yourself, except where explained in this manual.
- Provide proper ventilation and air circulation and do not use near water.
- Keep objects that might damage the device and assure that the placement of this unit is on a stable surface.
- Use only the power adapter and power cords and connection cables designed for this unit.
- Do not use liquid or aerosol cleaners to clean this unit. Always unplug the power to the device before cleaning.

## 2. Introduction

The **PRO-CoaxExt HDMI extender over Coaxial cable with bi-directional IR** boosts up your HDMI transmission range up to 120m (394ft) in HDTV 1080p format through single coaxial cable. PRO-CoaxExt is easy to install and works perfectly with Belden 1694A coaxial cables. Other coaxial cables can also work with PRO-CoaxExt and the transmission distance depends upon the quality and bandwidth of coaxial cables. In addition, PRO-CoaxExt is also equipped with bi-directional IR pass-through path. This bonus feature allows users to rely on the same coax cable to have IR control on IR equipped devices, such as TV and BD players, and PRO-CoaxExt makes IR control possible through only single coax cable along with high quality HDMI A/V signals.

The PRO-CoaxExt includes two units: transmitting (PRO-CoaxExt-TX) and receiving (PRO-CoaxExt-RX) units. The transmitting unit is used to capture the HDMI and HDCP input signals and carry the signals through only coaxial cable. The receiving unit is responsible for auto equalizing the transmitted HDMI multimedia data. The transmission range between the sending and receiving units can be up to 120m (394ft) under Full HD (1080p) with 7.1 channel audio.

## 3. Features

- Supports video resolutions : 480i, 576i, 720p, 1080i, and 1080p
- Extends 1080p60 up to a distance of 120m over a single coaxial cable
- Supports audio formats up to 7.1CH
- Bi-directional IR remote control from both input and output
- EDID management
- HDCP pass through
- Wall mounting housing design for easy and robust installation



The length depends on the characteristics and quality of the coax cables. Higher resolutions and longer transmission distances require low skew cables for best performance. Solid and shielded coax cable such as Belden 1694A with metal 75ΩBNC connectors is recommended.

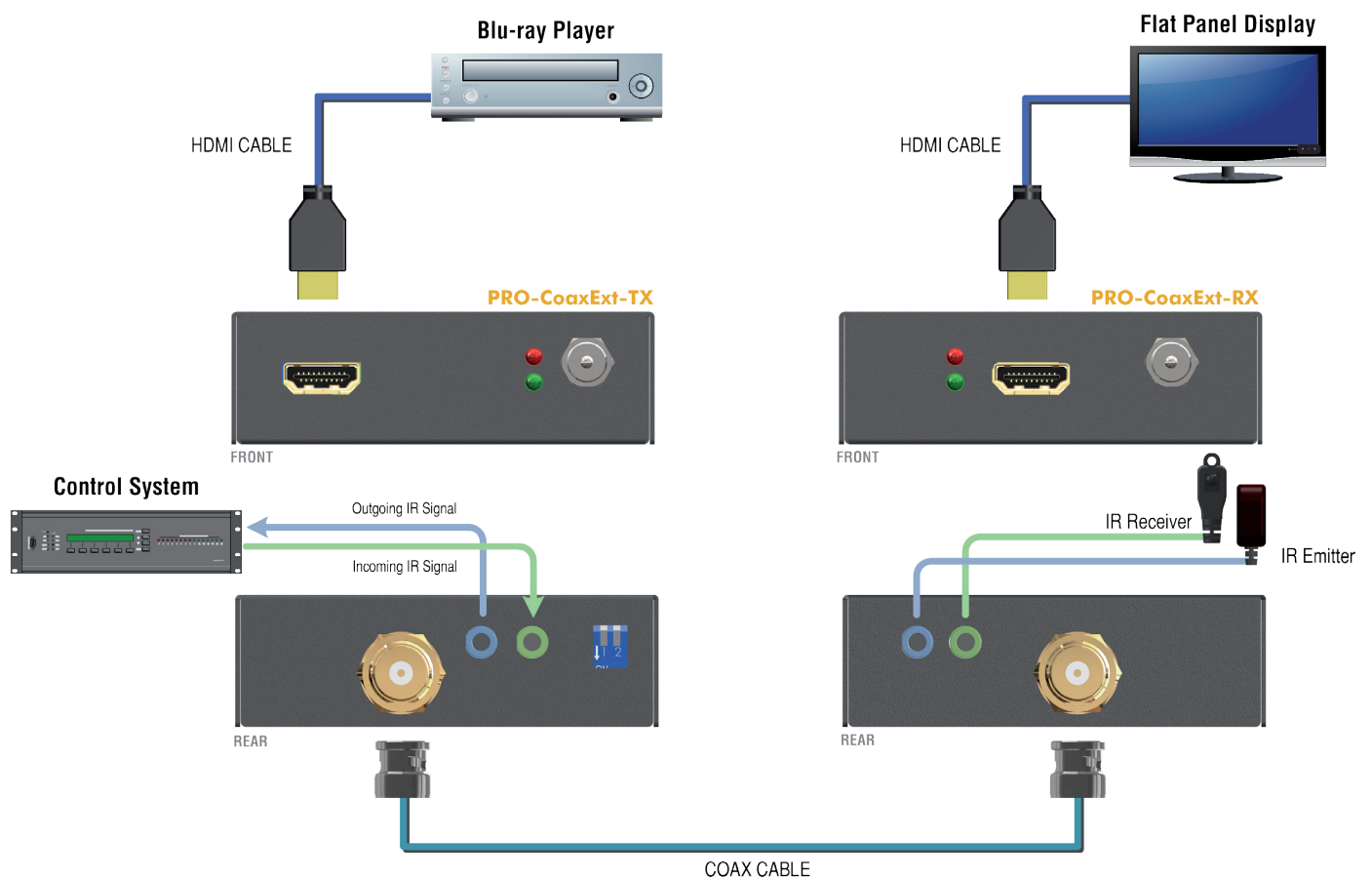
## 4. Specifications

Item		Description	
Technical		PRO-CoaxExt-TX	PRO-CoaxExt-RX
Role of usage		Transmitter [TX]	Receiver [RX]
HDMI compliance		HDMI Deep Color	
HDCP compliance		Yes	
Video bandwidth		Single-link 225MHz [6.75Gbps]	
Video support		480i, 576i, 720p, 1080i and 1080p60(Does NOT support 480p)	
Audio support		Surround sound (up to 7.1ch) or stereo digital audio	
HDMI over Coax transmission range		Full HD [1080p 24-bit color] – up to 120m [394ft]	
HDMI Equalization		Auto	
Input TMDS signal		1.2 Volts [peak-to-peak]	
Input DDC signal		5 Volts [peak-to-peak, TTL]	
ESD protection		Human body model — ±15kV [air-gap discharge] & ±8kV [contact discharge]	
PCB stack-up		6-layer board [impedance control — differential 100Ω; single 50Ω]	
Input		1x HDMI, 1x IR socket	1x BNC, 1x IR socket
Output		1x BNC, 1x IR socket	1x HDMI, 1x IR socket
IR remote control		Electro-optical characteristics: $\pi$ = 25° / Carrier frequency: 20-60kHz	
HDMI connector		Type A [19-pin female]	
BNC connector		75Ω interlocking socket	
3.5mm connector		3.5mm earphone jack for IR blaster to control HDMI source device	
Mechanical			
Housing		Metal enclosure	
Dimensions [L x D x H]	Model	84 x 83 x 26mm[3.3" x 3.2" x 1" ]	84 x 83 x 26mm[3.3" x 3.2" x 1" ]
	Package	264 x 170 x 77mm[10.3" x 6.7" x 3"]	
	Carton	430 x 358 x 291mm[1'4" x 1'2" x 11.5"]	
Weight	Model	225g[7.9 oz]	230g[8.1 oz]
	Package	840g[1.86 lbs]	
Fixedness		Wall-mounting case with screws	
Power supply		5V 2A DC	
Power consumption		6 Watts [max]	
Operation temperature		0~40°C [32~104°F]	
Storage temperature		-20~60°C [-4~140°F]	
Relative humidity		20~90% RH [no condensation]	

## 5. Package Contents

- 1x PRO-CoaxExt [TX&RX]
- 2x DC 5V 2A wall wart
- 1x IR receiver
- 1x IR blaster
- 4x Ear mount
- 1x User Manual

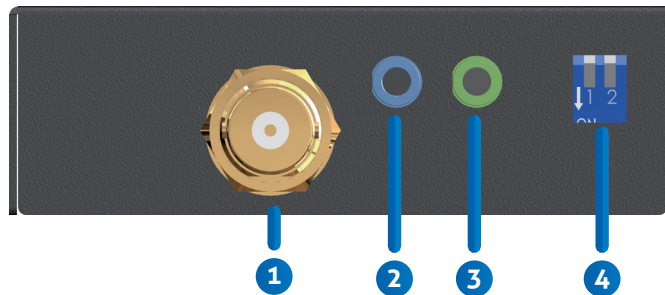
## 6. Connection Diagram



## 7. Panel Description

### Transmitting unit ► PRO-CoaxExt-TX

Front Panel



- 1. COAX OUT:** Connects to a coaxial cable with BNC connector
- 2. IR Blaster:** Connection is used to control the local source device from IR Receiver connected at RX side
- 3. IR Receiver:** Connection is used to extend IR over the coaxial signal to control devices located at RX side
- 4. MODE:** 4 EDID setting ON[↓] OFF[↑]

Pin #1	Pin #2	EDID
OFF[↑]	OFF[↑]	HDMI 1080p, Multi-channel audio
OFF[↑]	ON[↓]	HDMI 1080p, Audio 2ch PCM
ON[↓]	OFF[↑]	HDMI 720p 60Hz, Audio 2ch PCM
ON[↓]	ON[↓]	Copy EDID from display

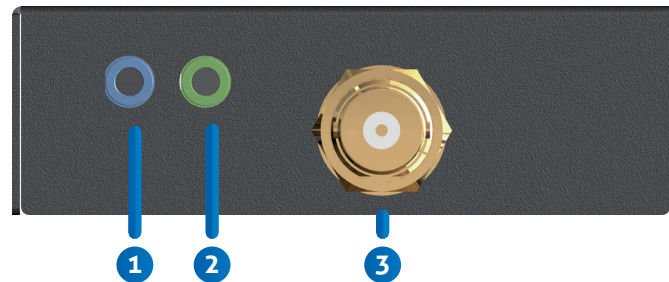
Rear Panel



- 5. HDMI IN:** Connects to a HDMI source device
- 6. LED indicator:**  
Red– Power  
Green– Signal Active
- 7. DC 5V**

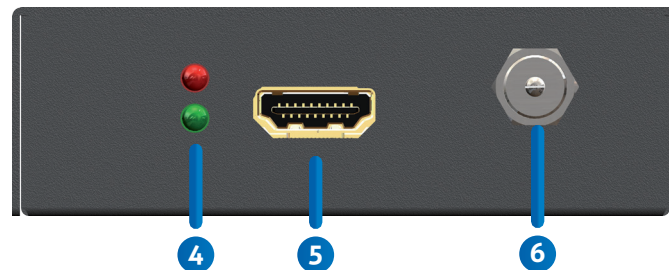
## Transmitting unit ► PRO-CoaxExt-RX

Front Panel



1. **IR Blaster:** Connection is used to control the local display device from IR sensor located at the source/TX side
2. **IR Receiver:** Connection is used to control sources devices located at TX side
3. **COAX IN:** Connect to a coaxial cable with BNC connector
4. **LED indicator :**  
Red– Power  
Green– Signal Active

Rear Panel



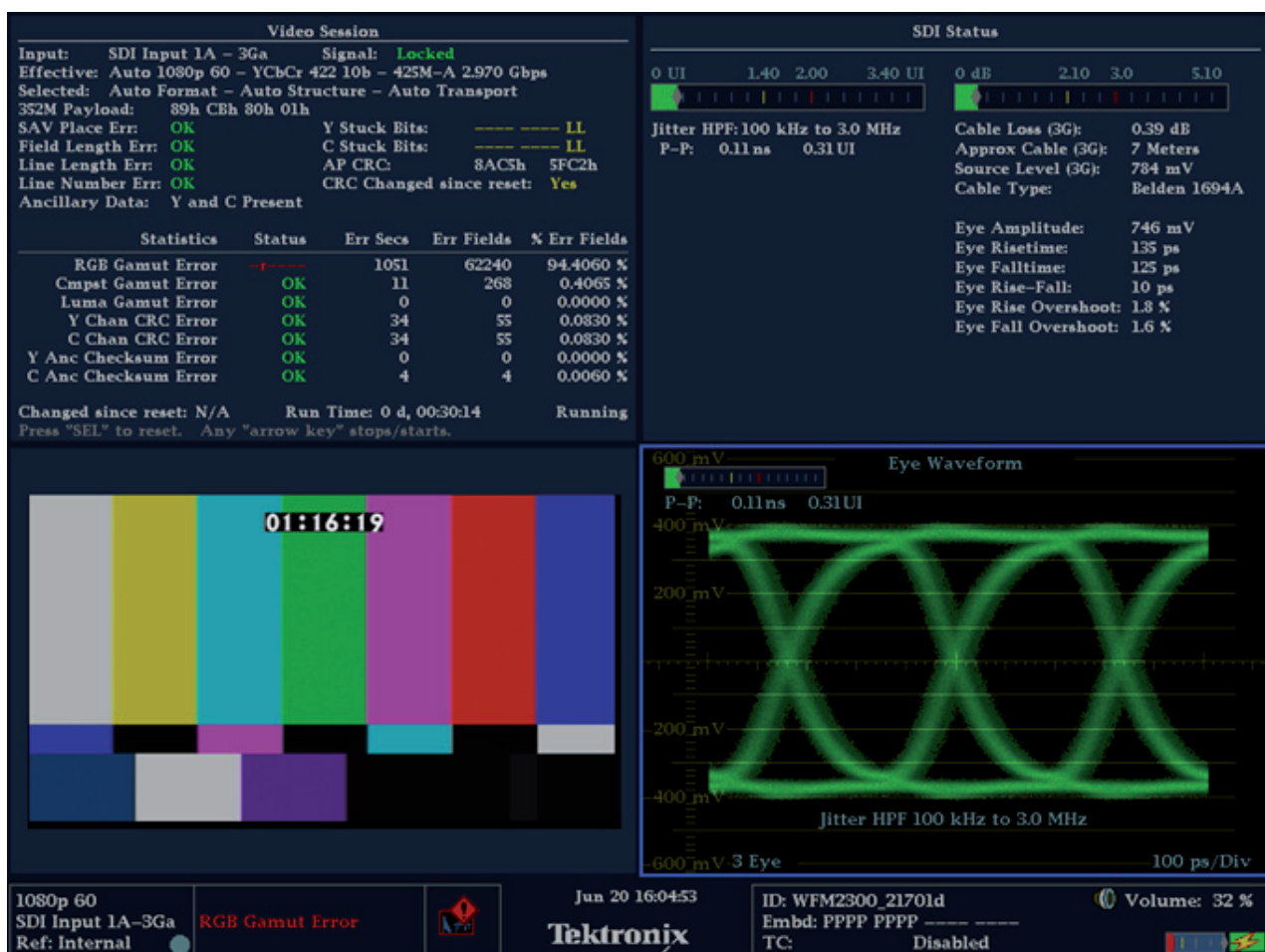
5. **HDMI OUT:** Connects to a HDMI display
6. **DC 5V**



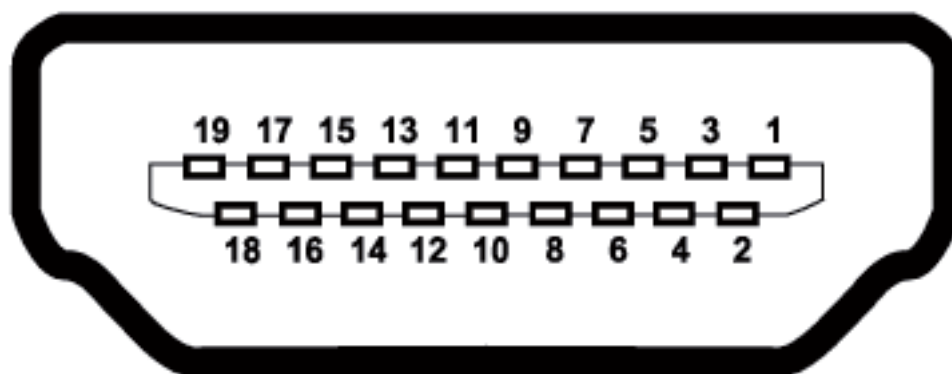
## 8. EDID Learning

1. Please make sure the Pin #1 - Pin #2 of DIP switch is at On-On [↕↕].
2. Connect the HDMI display to the HDMI port of TX.
3. Power on TX.
4. The green LED in the transmitting module will light up indicating the EDID learning procedure is complete.
5. Please DO NOT change the DIP switch, otherwise the built-in EDID Learning information will be lost.

## 9. EYE Pattern



## 10. HDMI PIN Definition



**Type A (Receptacle) HDMI**

Pin 1	TMDS Data2+	Pin 11	TMDS Clock Shield
Pin 2	TMDS Data2 Shield	Pin 12	TMDS Clock–
Pin 3	TMDS Data2–	Pin 13	NC
Pin 4	TMDS Data1+	Pin 14	Reserved (N.C. on device)
Pin 5	TMDS Data1 Shield	Pin 15	SCL
Pin 6	TMDS Data1–	Pin 16	SDA
Pin 7	TMDS Data0+	Pin 17	DDC/CEC Ground
Pin 8	TMDS Data0 Shield	Pin 18	+5V Power
Pin 9	TMDS Data0–	Pin 19	Hot Plug Detect
Pin 10	TMDS Clock+		

## 11. Hardware Installation

1. Since PRO-CoaxExt is sensitive to the HDMI source's input jitters, the input HDMI signals with larger jitters will shorten the transmission distance significantly, especially for full HD 1080p@60!
2. The lab testing result shows that Belden 1694A coaxial cables can transmit HDMI signals up to 120m (394ft).
3. If your HDMI display has multiple HDMI inputs, it is found that the first HDMI input [HDMI input #1] generally can produce better transmission performance among all HDMI inputs.
4. Please notice that audio must be 48KHz and 480p is not supported.

## 12. Limited Warranty

The SELLER warrants the **PRO-CoaxExt HDMI extender over Coaxial cable with bi-directional IR** free from defects in the material and workmanship for 1 year from the date of purchase from the SELLER or an authorized dealer. Should this product fail to be in good working order within 1 year warranty period, The SELLER, at its option, repair or replace the unit, provided that the unit has not been subjected to accident, disaster, abuse or any unauthorized modifications including static discharge and power surge. This warranty is offered by the SELLER for its BUYER with direct transaction only. This warranty is void if the warranty seal on the metal housing is broken.

Unit that fails under conditions other than those covered will be repaired at the current price of parts and labor in effect at the time of repair. Such repairs are warranted for 90 days from the day of reshipment to the BUYER. If the unit is delivered by mail, customers agree to insure the unit or assume the risk of loss or damage in transit. Under no circumstances will a unit be accepted without a return authorization number.

The warranty is in lieu of all other warranties expressed or implied, including without limitations, any other implied warranty or fitness or merchantability for any particular purpose, all of which are expressly disclaimed.

Proof of sale may be required in order to claim warranty. Customers outside Taiwan are responsible for shipping charges to and from the SELLER. Cables and power adapters are limited to a 30 day warranty and must be free from any markings, scratches, and neatly coiled.

The content of this manual has been carefully checked and is believed to be accurate. However, The SELLER assumes no responsibility for any inaccuracies that may be contained in this manual. The SELLER will NOT be liable for direct, indirect, incidental, special, or consequential damages resulting from any defect or omission in this manual, even if advised of the possibility of such damages. Also, the technical information contained herein regarding the PRO-CoaxExt features and specifications is subject to change without further notice.

### Disclaimer

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