HDMI HDBaseT Extender, 100m with ARC

SC05.8100

Scion Tech Ltd
Unit 10
Thatcham Business Village
Colthrop Lane
Thatcham
Berkshire. RG19 4LW
United Kingdom

Thank you for purchasing this product

For optimum performance and safety, please read these instructions carefully before connecting, operating or adjusting this product. Please keep this manual for future reference.

Surge protection device recommended

This product contains sensitive electrical components that may be damaged by electrical spikes, surges, electric shock, lighting strikes, etc. Use of surge protection systems is highly recommended in order to protect and extend the life of your equipment.

Table of Contents

Description

This 18Gbps HDMI Extender extends high definition video, audio, bi-directional IR, RS-232 and LAN signals. The supported transmission distance is up to 131ft / 90 meters for 4K2K@60Hz 4:4:4 resolution and 230ft / 100 meters for 1080P60Hz resolution between transmitter and receiver via a single CAT 5e/6 cable.

The transmitter supports ARC (audio return channel) and local audio extraction. In addition, the extender is equipped with bi-directional IR pass-through which allows for source and display control. It also supports PoC (power over cable).

The extender includes two units, transmitter and receiver. The transmitter captures and transmits the input signals over one cost effective Cat5e/6 cable. The receiver receives the incoming signals and presents them as outputs for your devices.

This extender offers the most convenient solution for HDMI extension via a single Cat5e/6 with long distance capability, and is the perfect solution for any application.

Main Features

- HDMI 2.0b, HDCP 2.2 Compliant

- Up to 4K/60Hz with 24bit RGB/YCBR 4:4:4

- 18Gbps Zero Latency (Uncompressed)

- HDR, HDR10, HDR10+ and Dolby Vision pass through

- LPCM 7.1CH, Dolby True HD and DTS-HD Master Audio

- Up to 100m using CAT6/6a cable

- Supports ARC to Transmitter

- Two way IR, Full Duplex RS232 and 1G LAN pass-through

- Receiver Supports Audio Extraction

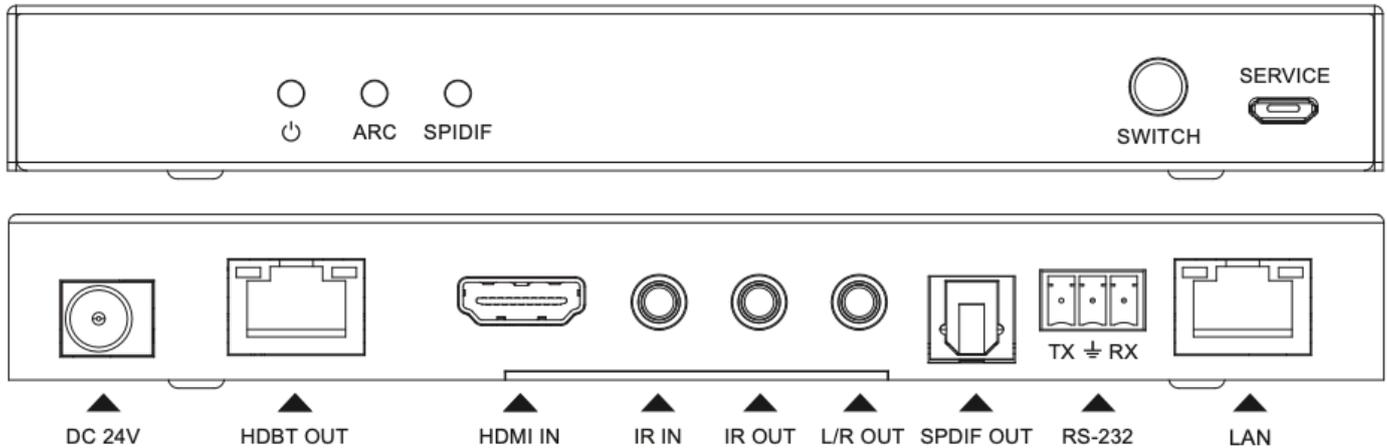- Power over Cable (PoC)

Package Contents

1 x Transmitter
1 x Receiver
1 x IR Blaster Cable (1.5m)
1 x IR Receiver Cable (1.5m)
1 x 24V / 1A Power Supply
2 x 3-Pin Phoenix Terminal
4 x Mounting Ears
1 x User Manual

4. Specifications

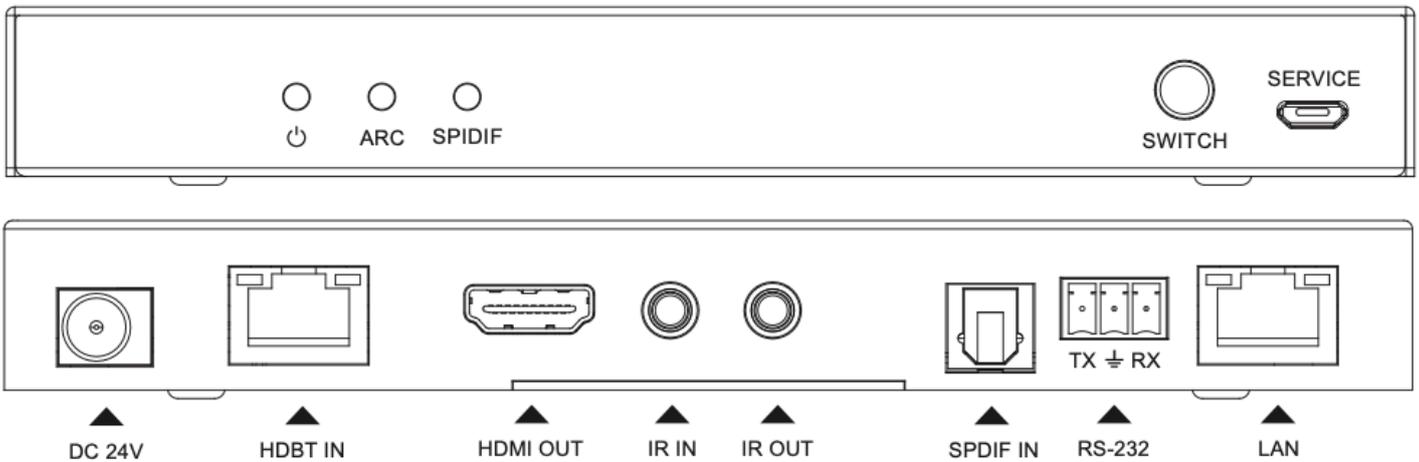| Connections			
Transmitter	Input:		1 x HDMI Type A (19-Pin Female)
	Output:		1 x HDBaseT (RJ45 Data Socket)
			1 x L/R Stereo Audio (3.5mm Jack Socket)
			1 x SPDIF (Optical)
			1 x 1G LAN, (RJ45 data socket)
	Control:		1 x IR IN (3.5mm Jack Socket)
			1 x IR Out (3.5mm Jack Socket)
			1 x RS232 (Phoenix Terminal)
			1 x Service (Mini-USB)
Receiver	Input:		HDBaseT (RJ45 Data Socket)
			1 x SPDIF (Optical)
	Output:		1 x HDMI Type A (19-Pin Female)
			1 x 1G LAN, (RJ45 data socket)
	Control:		1 x IR IN (3.5mm Jack Socket)
			1 x IR Out (3.5mm Jack Socket)
			1 x RS232 (Phoenix Terminal)
			1 x Service (Mini-USB)
Technical			
HDMI			HDMI 2.0b / DVI 1.0
HDCP Compliance			HDCP 2.2 / HDCP 1x
HDMI in/out Video Resolutions			4K2K 50/60Hz 4:4:4
			4K2K 50/60Hz 4:2:0
			4K2K 30Hz 4:4:4
			1080p, 1080i, 720p, 480p, 480i
			All PC resolutions including 1920 x 1200
Colour Space			RGB, YCbCr 4:4:4, YCbCr 4:2:2, YCbCr 4:2:0
Colour Depth			8-bit, 10-bit, 12-bit, [1080p, 4K/30Hz, 4K/60Hz (YCbCr 4:2:0) 8-bit [4K/60Hz (YCbCr 4:4:4)]
HDMI Audio Formats			PCM 2.0 / 5.1 / 7.1CH, Dolby Digital/Plus/EX, Dolby True HD, DTS, DTS-EX, DTS-96/24, DTS High Res, DTS HD Master Audio, DSD
HDR Formats			HDR10, HDR10+, Dolby Vision
L/R Audio Formats			LPCM 2.0CH Note: If ARC is enabled the audio port will mute
Power			
Power Supply	Input:		100~240V 50/60Hz
	Output:		DC 24V / 1A
Power Consumption			13W (max)
Operating Temperature			0℃ ~ 40℃
Storage Temperature			-20℃ ~ 60℃
Relative Humidity			20~90% RH (non-condensing)
Mechanical			
Housing			Metal Enclosure, colour black
Dimensions			TX & RX = (W) 165 x (D) 88 x (H) 20mm
Weight			TX = 170g and RX = 165g

5. Operation Controls and Functions
5.1 Transmitter Panel

Name	Description / Function
Power LED	The LED will illuminate RED when powered ON
ARC LED	The LED will illuminate GREEN when ARC is Enabled
SPDIF LED	The LED will illuminate GREEN when audio is received from the Receivers SPDIF input
Switch Button	Switch between SPDIF and L/R Audio
Service Port	Used only for firmware updates
Power	DC 24V /1A Power Input. Note: The products support PoC and therefore only one end (either the transmitter or receiver) requires power.
HDBaseT Out	RJ45 Data output for connecting directly to the receiver. Note: This product does not support routers, switches or other network devices and should be connected end to end only.
Connection LED	Illuminates: Good connection between transmitter & receiver Flashes: Poor connection between transmitter & receiver Dark: No connection between the transmitter & receiver
Signal LED	Illuminates: HDMI signal with HDCP Flash: HDMI signal without HDCP Dark: No HDMI Signal
HDMI In	Connect HDMI source
IR In	IR input for receiver IR signals from a remote control
IR Out	IR output for controlling source device.
L/R Out	Stereo analogue audio output
SPDIF Out	SPDIF digital audio output
RS232	Full Duplex RS232 data between transmitter & receiver
1G LAN	RJ45 connector for 1G LAN pass-through

5.2 Receiver Panel

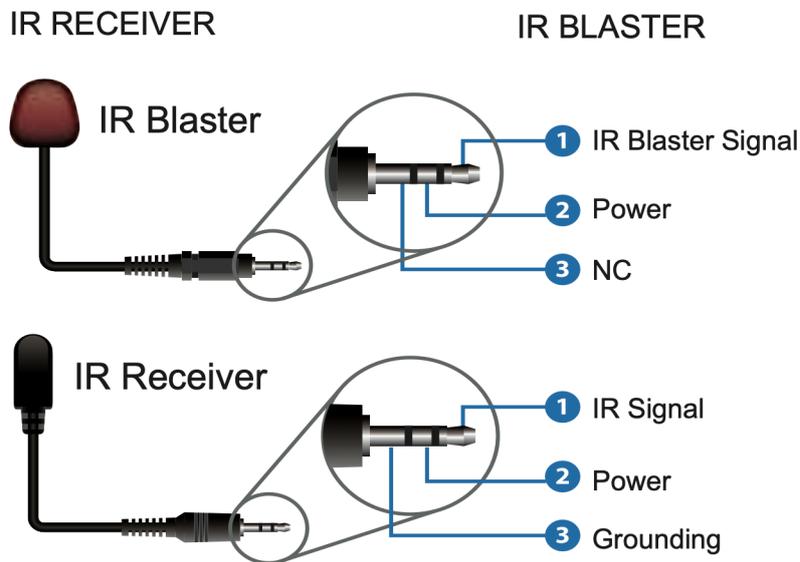| Name	Description / Function
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Service Port	Used only for firmware updates
Power	DC 24V /1A Power Input Note: The products support PoC and therefore only one end (either the transmitter or receiver) requires power.
HDBaseT In	RJ45 Data output for connecting directly to the transmitter. Note: This product does not support routers, switches or other network devices and should be connected end to end only.
Connection LED	Illuminates: Good connection between transmitter & receiver Flashes: Poor connection between transmitter & receiver Dark: No connection between the transmitter & receiver
Signal LED	Illuminates: HDMI signal with HDCP Flash: HDMI signal without HDCP Dark: No HDMI Signal
HDMI In	Connect HDMI display
IR In	IR input for receiver IR signals from a remote control
IR Out	IR output for controlling display device.
SPDIF In	SPDIF digital audio input
RS232	Full Duplex RS232 data between transmitter & receiver
1G LAN	RJ45 connector for 1G LAN pass-through

5.3 Audio Signal Output Switching

Switch the output audio signal source for SPDIF OUT and L/R OUT port using the "SWITCH" button on the panel (the corresponding LED will illuminate). The status of ARC LED and SPDIF LED indicate the audio output logic, as shown in the table below:

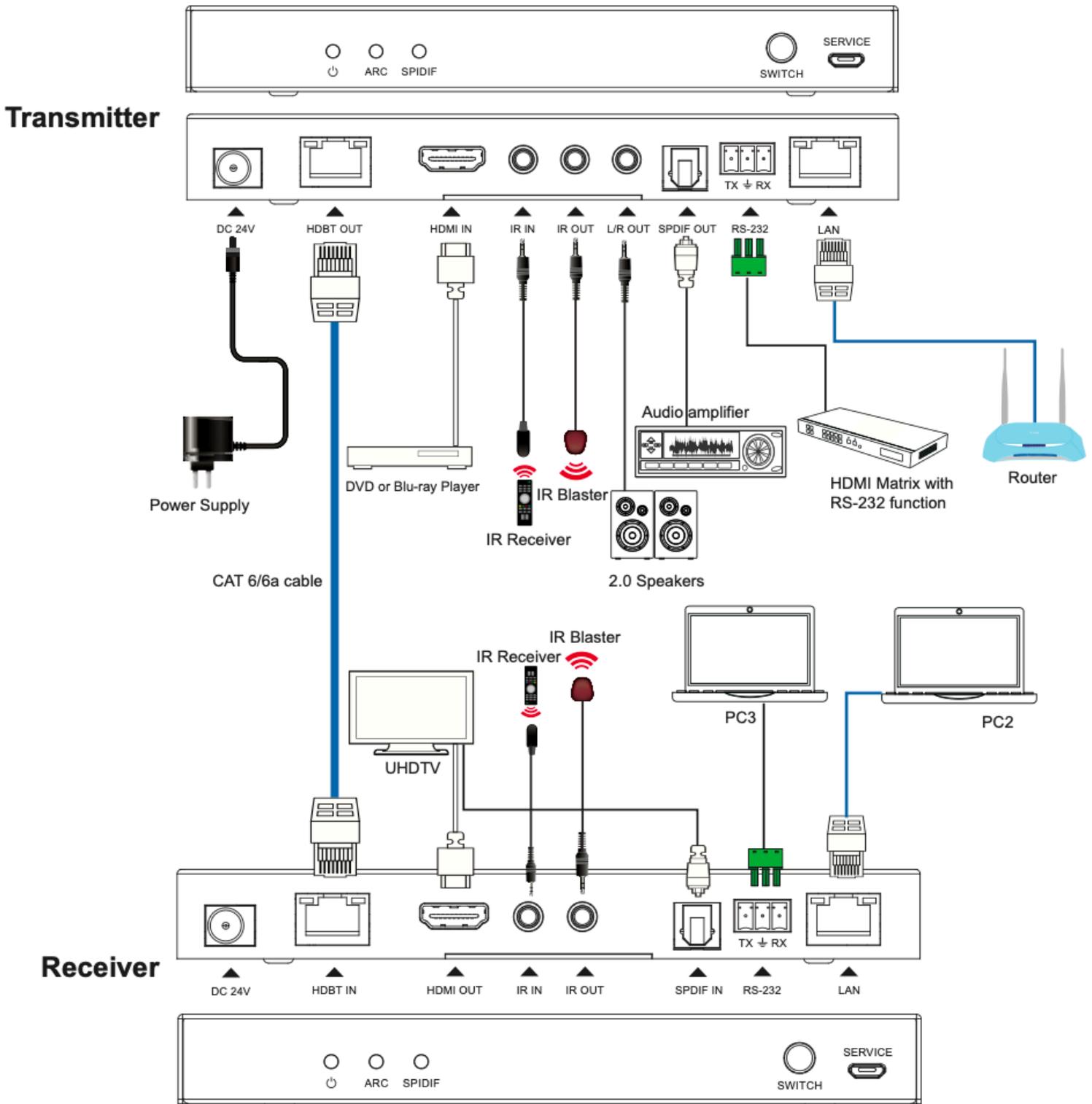| ARC LED Status	SPDIF LED Status	Audio Output Logic
ON	OFF	The SPDIF OUT, L/R OUT and HDMI IN ports of the Transmitter simultaneously output the audio signal returned from HDMI (display device) on Receiver.
ON	ON	The SPDIF OUT and L/R OUT ports output the audio signal returned from HDMI (display device) on Receiver.
OFF	ON	The SPDIF OUT and L/R OUT ports output the audio signal returned from SPDIF IN on Receiver.
OFF	OFF	The SPDIF OUT and L/R OUT ports output the audio signal extracted from the Transmitter.

5.4 IR Pin Connections

IR Receiver and Blaster pin connections.

IR RECEIVER   IR BLASTER

IR Blaster
1 IR Blaster Signal
2 Power
3 NC

IR Receiver
1 IR Signal
2 Power
3 Grounding

Note: *When the angle between the IR receiver and the remote control is ± 45 °, the transmission distance is 0-5 meters; when the angle between the IR receiver and the remote control is ± 90 °, the transmission distance is 0-8 meters.* the angle between the IR receiver and the remote

6. Application Drawing

Transmitter

DC 24V | HDBT OUT | HDMI IN | IR IN | IR OUT | L/R OUT | SPDIF OUT | RS-232 | LAN

Power Supply

DVD or Blu-ray Player

IR Blaster
IR Receiver

Audio amplifier

2.0 Speakers

HDMI Matrix with RS-232 function

Router

CAT 6/6a cable

IR Blaster
IR Receiver

PC3

PC2

UHDTV

Receiver

DC 24V | HDBT IN | HDMI OUT | IR IN | IR OUT | SPDIF IN | RS-232 | LAN

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7. Maintenance, Service & Warranty

Clean this unit with a soft, dry cloth. Never use alcohol, pint thinner of benzene to clean these devices.

7.1 Servicing

Damage requiring service: This product should be serviced by a qualified service engineer if:
● The DC power cord or AC adaptor has been damaged.
● Objects or liquids have entered the housings.
● The product has been exposed to rain.
● The product has stopped working or shows signs of significant change in operating performance or function. ● The unit has been dropped or severely damaged externally.
Servicing personnel: Do not attempt to service the product beyond that described in these instructions. Refer all other servicing to authorised serving personnel.
Replacement parts: When parts need replacing ensure the service engineer uses parts specified by the manufacture or parts that have the same characteristics as the original parts. Unauthorised substitutes may result in fire, electric shock or other hazards.
Safety check: After a repair or service, ask the engineer to perform safety checks to confirm the product is in proper working condition.

7.2 Warranty

If your product does not work properly because of a defect in materials or workmanship, our Company (referred to as "the warrantor") will , for the length of the period indicated as below, (Parts and labour 2 years) which starts with the date of original purchase ("Limited Warranty period"), at its option either (a) repair your product with new or refurbished parts, or (b) replace it with a new of a refurbished product. The decision to repair or replace will be made by the warrantor.
During the "Labour" Limited Warranty period there will be no charge for labour. During the "Parts" warranty period, there will be no charge for parts. You must mail-in your product during the warranty period. This Limited Warranty is extended only to the original purchaser and only covers product purchased as new. A purchase receipt or other proof of original purchase date is required for Limited Warranty service.

7.3 Returning a Product

When shipping the unit carefully pack and send it prepaid, adequately insured and preferably in the original carton. Include a letter detailing the complaint and provide a day time phone number and/or email address where you can be reached.

7.4 Limited warranty limits and exclusions

This Limited Warranty ONLY COVERS failures due to defects in materials or workmanship, and DOES NOT COVER normal wear and tear or cosmetic damage. The Limited Warranty ALSO DOES NOT COVER damages which occurred in shipment, or failures which are caused by products not supplied by warrantor, or failures which result from accidents, misuse, abuse, neglect, mishandling, misapplication, alteration, faulty installation, set-up adjustments, maladjustment of consumer controls, improper maintenance, power line surge, lightning damage, modification, or service by anyone other than a Factory Service centre or other authorised service engineer, or damage that is attributable to acts of God.

THERE ARE NO EXPRESS WARRANTIES EXCEPT AS LISTED UNDER "LIMITED WARRANTY COVERAGE".THE WARRANTOR IS NOT LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OF THIS PRODUCT, OR ARISING OUT OF ANY BREACH OF THIS WARRANTY. (As examples, this excludes damages for lost time, cost of having someone remove or re-install an installed unit if applicable, travel to and from the service, loss of or damage to media or images, data or other recorded content. The items listed are not exclusive, but are for illustration only).

PARTS AND SERVICE, WHICH ARE NOT COVERED BY THIS LIMITED WARRANTY, ARE YOUR RESPONSIBILITY. This returns policy does not affect your legal rights. Details of your legal rights are available from Trading Standards or Citizens Advice Consumer Service.

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