MAGIC THipPro

MAGIC THipPro VoIP MAGIC THipPro Pure VoIP MAGIC THipPro Lite MAGIC THipPro Pure Lite MAGIC THipPro Intercom MAGIC THipPro VMS

Hardware Manual



A publication of AVT Audio Video Technologies GmbH

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DECLARATION OF CONFORMITY	[′]

1 INTRODUCTION

MAGIC THipPro is available with 8 or 16 VoIP lines. Optionally, POTS modules¹ can be integrated, providing a maximum of 8 POTS interfaces for connection to analogue telephone lines. Alternatively, external gateways can also be connected.

Via the two LAN interfaces on the rear side of the unit, system control and VoIP connections are realised. The system provides eight digital Audio lines (four AES/EBU interfaces) as well as two analogue Audio inputs and outputs. Additionally, two handset/headset interfaces can be used for Pretalk.

MAGIC THipPro has an integrated wide area power supply, a keypad with display and LEDs on the front side.

All other units are **based on the hardware** of the **MAGIC THipPro** hardware but have a reduced range of functions.

MAGIC THipPro Lite is available with 4 or 8 caller lines and has four digital audio lines (two AES/EBU interfaces) and two analogue audio inputs and outputs. Optionally, an extension to eight digital audio lines (four AES/EBU interfaces) is available. In addition, a software upgrade to a full MAGIC THipPro is available.

MAGIC THipPro Pure and **MAGIC THipPro Pure Lite** do not provide physical audio interfaces. The optional AES67 software upgrade or the Dante or Ravenna module is then used for audio connection exclusively.

MAGIC THipPro Intercom is available with eight or sixteen VoIP lines and can be used as gateway for simple intercom applications.

MAGIC THipPro VMS is an answering machine with 16 VoIP lines. The Voicemail System is designed for automated recording of up to – in the maximum configuration level – 32 simultaneous calls, which are stored as WAV files on a file server.

1.1 Conventions

In this manual the following conventions are used as text markers:



The **Tip** symbol marks information which facilitates the operation of the system in its daily use.



The Note symbol marks general notes to observe.



The **Attention** symbol marks very important advice that is absolutely to observe. In case of non-observance malfunctions and even system errors are possible.

1.2 Safety

The unit described has been designed to the latest technical parameters and complies with all current national and international safety requirements. It operates on a high level of reliability because of long-term experience in development and constant and strict quality control in our company.

This manual contains basic safety instructions that must be observed during configuration and operation. It is essential that the user reads this manual before the system is used and that a current version of the manual is always kept close to the equipment.

1.3 General safety requirements

To keep the technically unavoidable residual risk to a minimum, it is absolutely necessary to observe the following rules:

- Transport, storage and operation of the unit must be under the permissible conditions only.
- Installation, configuration and disassembly must be carried out only by trained personal based on the respective manual.
- The unit must be operated by competent and authorised users only.
- The unit must be operated in good working order only.
- The device must be protected from water.
- The device may only be installed in indoor rooms.
- The device may only be cleaned with a dry cloth.
- Any conversions or alterations to the unit or to parts of the unit (including software) must be carried out by trained personnel authorised by the manufacturer. Any conversions or alterations carried out by other persons lead to a complete exemption of liability.
- Only specially qualified personnel are authorised to remove and override safety measures, and to carry out the maintenance of the system.
- External software is used at one's own risk. Use of external software can affect the operation of the system.
- Use only tested and virus-free date carriers.

1.4 Construction

MAGIC THipPro contains a mainboard with an additional connector, a display, a keypad and five LEDs. For analogue telephone lines, two POTS modules can be plugged onto the main board. With **MAGIC THipPro Lite**, one *or* two POTS modules can be fitted.

The functions of the system are implemented in a 19" x 1U housing, the dimensions are 434 mm x 44,5 mm x 252 mm. **MAGIC THipPro** can be used as a table-top device or it can be mounted in 19" racks. The 19" mounting brackets are included in delivery.



MAGIC THipPro front view



MAGIC THipPro Intercom and MAGIC THipPro VMS front view



MAGIC THipPro rear view with optional Dual LAN Upgrade, Dante[®] module and redundant power supply upgrade



MAGIC THipPro Pure rear view with optional Dante[®] module and redundant power supply upgrade

1.5 Functionality

MAGIC THipPro is available with 8 or 16 VoIP lines. Optionally, POTS modules¹ can be integrated, providing a maximum of 8 POTS interfaces for connection to analogue telephone lines. Alternatively, external gateways can also be connected.

Via the two LAN interfaces on the rear side of the unit, system control and VoIP connections are realised. The system provides eight digital Audio lines (four AES/EBU interfaces) as well as two analogue Audio inputs and outputs. Additionally, two handset/headset interfaces can be used for Pretalk.

AES67 is available as a software upgrade and allows the use of eight additional audio channels (8 x RX (2 Streams) and 8 x TX (1 Stream)) over IP via AES67. Alternatively, the **MAGIC Dante Interface** with 32 channels I/O or the **MAGIC Ravenna Interface** with 32 channels I/O are available.

With the **Dual LAN Upgrade**, the system can be extended by two additional LAN interfaces, so that a total of four LAN interfaces are available. Optionally the **Redundant Power Supply Upgrade** can be selected, the 5V DC table power supply is included in this hardware upgrade.

The system is controlled via a **Windows PC software**, several workplaces can be set up. **MAGIC PhonerSets**, touchscreen-enabled telephones, can be used parallel to the Windows PC software or independently without a PC.

The systems have an illuminated graphical display with a resolution of 160 x 32 pixels and a front keypad, which can be used for basic settings and status indications.

With **MAGIC THipPro** up to 16 callers can be switched ON AIR or in PRETALK simultaneously. To optimize the Audio quality a digital Echo Canceller, an Automatic Gain Control (AGC) and an Expander for noise suppression are available for each caller line.

All other units are **based on the hardware** of the **MAGIC THipPro** hardware but have a reduced range of functions.

MAGIC THipPro Lite is available with 4 or 8 caller lines and has four digital audio lines (two AES/EBU interfaces) and two analogue audio inputs and outputs. Optionally, an extension to eight digital audio lines (four AES/EBU interfaces) is available.

MAGIC THipPro Pure and **MAGIC THipPro Pure Lite** do not provide physical audio interfaces. The optional AES67 software upgrade or the Dante or Ravenna module is then used for audio connection exclusively.

MAGIC THipPro Intercom is an Intercom Gateway, available in two versions: MAGIC THipPro 8 VoIP Intercom with 8 lines and MAGIC THipPro 16 VoIP Intercom with 16 lines, the 8-lines system can be extended to 16 lines by a hardware upgrade.

MAGIC THipPro VMS is an answering machine with 16 VoIP lines. The Voicemail System is designed for automated recording of up to – in the maximum configuration level – 32 simultaneous calls, which are stored as WAV files on a file server.

1) ISDN modules are no longer available.

2 PUTTING THE SYSTEM INTO OPERATION

2.1 Mounting

With its dimensions of (width x height x depth) 434 mm x 44.5 mm (1U) x 270 mm the **MAGIC ThipPro** system can either be used as desktop device or mounted into a 19-inch rack. 19"mounting brackets are included in delivery. When mounting the unit please keep in mind that the bending radius of the connected cables is always greater than the minimum allowed value.

When the **MAGIC THipPro** is installed, please make sure that there is sufficient cooling: It is recommended to keep a spacing of ca. 3 cm from the openings. In general, the ambient temperature of the system should be within the range of +5 °C and +45 °C. These thresholds are specially to observe if the system is inserted in a rack. The system works without ventilation.



The system temperature can be indicated on the display under MENU > STATUS INFORMATION > DEVICE TEMPERATURE or in the software under Extras > System Monitor > System Temperature.

During operation humidity must range between 30 % and 85 %.



Attention! Incorrect ambient temperature and humidity can cause functional deficiencies.

Improper use of the unit can lead to a loss of warranty claim.

2.2 Connection to the mains voltage



Attention! High touch current possible! Before connecting the power supply, MAGIC THipPro must be earthed.

For this purpose, the earthing cable must have a conductor cross-section of at least 2.5mm² if it is mechanically protected, or otherwise 4.0mm².

The following graphic symbols are located on the rear of the unit to indicate the correct and safe use.



After plugging the power cable and switching on the device, the unit boots within 30 seconds.

An additional power supply socket for connecting an external 5 V power supply unit is optional available.

2.3 Operational elements at the front side

The system has an illuminated graphical display with a resolution of 160 x 32 pixel and 19 operating buttons.

On the right next to the display there are two softkeys whose current functions are indicated on the display. In the middle there are two cursor buttons (upwards/ downwards) as well as an OK button. The numerical pad supports the characters 0...9, '*' and '#'.



2.4 Front status LEDs

The system has five LEDs for status indication at the front side.

- **POWER Permanent green:** when system is ready for operation.
- **SYNC** Lights up if at least one telephone connection is established.
- **ALARM** Signals whether there is a system alarm (hardware) or an application alarm (software) pending.
- INFO 1 Depending on system.
- INFO 2 Depending on system.

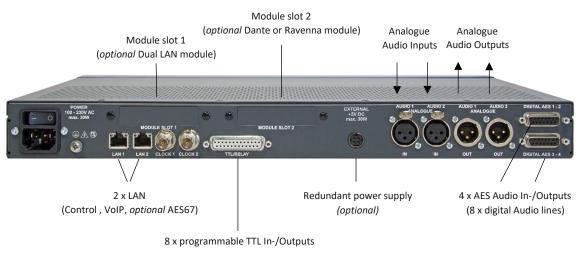
2.5 Wiring

The following figures show the system in the different operating modes and their respective cablings.

2.5.1 VoIP operating mode

MAGIC THipPro can operate as a hybrid with eight or 16 lines, **MAGIC THipPro Lite** with four or eight. One of the LAN interfaces can be used.

Two module slots are available; these can be optionally equipped with the Dante or Ravenna module and/or two further LAN interfaces (Dual LAN Upgrade).

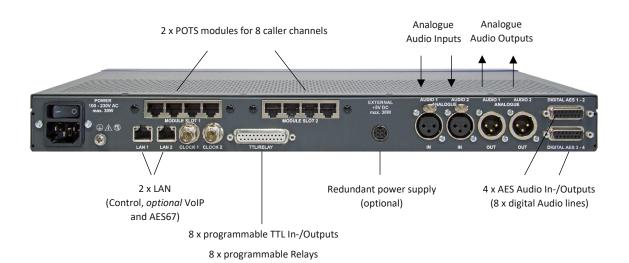


8 x programmable Relays

MAGIC THipPro Intercom and **MAGIC THipPro VMS** can only be used in VoIP mode. The Intercom system provides eight or 16 lines, the VMS 16.

2.5.2 POTS operating mode

MAGIC THipPro can be equipped with two fourfold POTS modules and can be used as an eight-line POTS Hybrid. **MAGIC THipPro Lite** can be equipped with one or two fourfold POTS modules and used accordingly as a four- or eight-line POTS hybrid.



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3 INTERFACES

3.1 MAGIC THipPro

On the front side of the unit 5 LEDs for status indication and 2 Handset/Headset interfaces for PRETALK are available. The connectors for the interfaces are at the rear side of the unit.



MAGIC THipPro front view



MAGIC THipPro Intercom and MAGIC THipPro VMS front view



MAGIC THipPro rear view with optional Dual LAN Upgrade, Dante[®] module and redundant power supply upgrade



MAGIC THipPro Pure rear view with optional Dante[®] module and redundant power supply upgrade

3.2 Control and data interfaces

3.2.1 Ethernet interfaces LAN 1 / LAN 2

The LAN 1 and LAN 2 interfaces can be used as control interfaces. One of the two interfaces can also be used as VoIP interface. For the LAN interfaces RJ-45 sockets are used.

Pin assignment: ETHERNET INTERFACES LAN 1 / LAN 2 Socket: RJ-45



Pin	Signal		Electrical characteristics
1	TX+	Data out +	Recommendation: IEEE 802.3/Ethernet
2	TX-	Data out -	Data rate (Auto neg.): 10/100 Mbit/s
3	RX+	Data in +	Recommended cable: CAT5 or higher
4	not used		Max. cable length: 100m
5	not used		
6	RX-	Data in -	
7	not used		
8	not used		

3.2.2 POTS Line Interfaces

MAGIC THipPro can be equipped with two pieces of 4 x POTS modules and therefore provides 8 x POTS interfaces. **MAGIC THipPro Lite** can be equipped with one or two POTS modules. The POTS interfaces are available on RJ-11 sockets.



Pin assignment: POTS LINE INTERFACES Socket: RJ-11

Pin	Signal	Electrical characteristics
1	Not used	Typical characteristics:
2	Not used	Bandwidth: 300 – 3.3 kHz Signal to noise ratio: 45 dB
3	TEL LINE +	Average level: -9 dBm (275 mV) Impedance: 600 ohms
4	TEL LINE -	DC voltage: 48 V (±6 V typ.) DC current: 20-26 mA (typ.)
5	Not used	Ringing voltage 90 Vrms
6	Not used	Ringing frequency: 20 Hz (2 sec on, 4 sec off)

3.2.3 ISDN Line interfaces

Existing MAGIC THipPro units may have been equipped with a maximum of 2 x 4 ISDN BRI modules. ISDN modules are no longer available for newly purchased systems. The already existing ISDN BRI interfaces are available on RJ-45 sockets.

Pin assignment: BRI ISDN INTERFACES
Socket: RJ-45

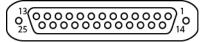
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Pin	Signal		Electrical characteri	stics
1	not used		Recommendation: I.	430
2	not used		Data rate: B	channel: 2 x 64 kbit/s
3	TX+	Data out +	D	channel: 16 kbit/s
4	RX+	Data in +		
5	RX-	Data in -		
6	TX-	Data out -		
7	not used			
8	not used			

3.2.4 TTL/Relay interface

The TTL/relay interface is realised as a 25-pin socket. It provides eight TTL inputs/outputs as well as eight relay contacts.

Pin assignment: TTL/RELAY INTERFACE
Socket: SUB-D 25-pin



Pin	Signal		Electrical characteristics
1	TTL 1	input/output	TTL interface:
2	TTL 2	input/output	Capacity of the TTL outputs:
3	TTL 3	input/output	Maximum voltage: 3.3V
4	TTL 4	input/output	Maximum current: 10mA
5	TTL 5	input/output	
6	TTL 6	input/output	Relay interface:
7	TTL 7	input/output	Capacity of the relays:
8	TTL 8	input/output	Maximum voltage: 48V
9	RELAY 4 (B)	output, NO	Maximum current: 200mA
10	RELAY 5 (B)	output, NO [*]	*NC on THipPro Pure and THipPro Pure Lite
11	RELAY 6 (B)	output, NO [*]	
12	RELAY 7 (B)	output, NO	
13	RELAY 8 (B)	output, NO	
14	RELAY 1 (A)	output, NO [*]	
15	RELAY 1 (B)	output, NO [*]	
16	GND		
17	RELAY 2 (A)	output, NO [*]	
18	RELAY 2 (B)	output, NO [*]	
19	RELAY 3 (A)	output, NO	
20	RELAY 3 (B)	output, NO	
21	RELAY 4 (A)	output, NO	
22	RELAY 5 (A)	output, NO [*]	
23	RELAY 6 (A)	output, NO [*]	
24	RELAY 7 (A)	output, NO	
25	RELAY 8 (A)	output, NO	

NO = normally open contact

NC = normally closed contact

3.3 Audio interfaces

3.3.1 Handset/Headset Interfaces

Two Handset/Headset interfaces are available at the front side.

Pin assignment: HANDSET INTERFACE Socket: RJ-10



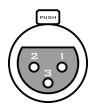
Pin	Signal	Electrical characteristics
1	HANDSET IN a/+5V phantom power	Typical characteristics:
2	HANDSET OUT b (GND)	Microphone: Impedance: ~ 2 kOhm
3	HANDSET OUT a	Sensitivity: ~ -60 dB @ 1-kHz
4	HANDSET IN b	Telephone receiver: Impedance: ~150 Ohm Sensitivity: ~ 97dB @ 1-kHz

3.3.2 Analogue Audio interfaces

The system provides two analogue Audio (Audio 1, Audio 2) inputs and outputs.

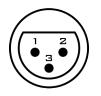
For the inputs XRL sockets and for the outputs XLR plugs are available.

Pin assignment: ANALOGUE AUDIO INPUT Socket: 3 pin XLR female



Pin	Signal	Description
1	GND	Ground
2	А	+
3	В	-

Pin assignment: ANALOGUE AUDIO OUTPUT Socket: 3 pin XLR male



PinSignalDescription1GNDGround2A+3B-

3.3.3 Digital AES/EBU Audio Interfaces

MAGIC THipPro provides eight digital Audio inputs and outputs available on four physical AES/EBU interfaces. **MAGIC THipPro Lite** has four digital audio lines (two AES/EBU interfaces) and can be optionally upgraded to eight digital audio lines (four AES/EBU interfaces).

Two 15-pin Sub-D sockets provide the digital AES/EBU interfaces. The BNC socket CLOCK 1 can be used to insert an external AES/EBU clock or to receive an AES/EBU clock. The CLOCK 2 interface is not in use.

As an option adapter cables with XLR connectors can be provided.

Pin	Signal	Description
1	AES 1 IN +	IEC 60958
2	AES 1 IN -	
3	AES 2 IN +	
4	AES 2 IN -	
5	AES 1 OUT +	
6	AES 1 OUT -	
7	AES 2 OUT +	
8	AES 2 OUT -	
9	GND	
10 15	GND	

Pin assignment: DIGITAL AUDIO INTERFACES AES/EBU 1-2 AND AES/EBU 3-4 Socket: SUB-D 15-pin

Pin assignment: WORLD CLOCK, BNC SOCKET "CLOCK 1"

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	Pin	Signal	Electrical characteristics
ſ	1	CLOCK IN/ OUT	Amplitude: 0,5 to 1,9 V _{0P}
	2	GND	Impedance: 75 Ohm unbalanced

3.3.4 Dante Interface Card

The Ethernet interfaces P and S on the *optional* Dante[®] module are used to connect the device to a Dante[®] network. 32 audio inputs/outputs can be connected over IP to Dante or AES67 compatible audio equipment.

Pin assignment: Ethernet Interfaces Dante® Socket: RJ-45

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	Pin	Signal		Electrical characteristics
ĺ	1	RX/TX A P	Pair A +	Recommendation: IEEE 802.3/Ethernet
	2	RX/TX A N	Pair A -	Data rate (Auto neg.): 100/1000 Mbit/s
	3	RX/TX B P	Pair B +	Recommended cable: CAT5e or higher
	4	RX/TX C N	Pair C +	Max. cable length: 100m
	5	RX/TX C P	Pair C –	Max. cable length. 100m
	6	RX/TX B N	Pair B -	
	7	RX/TX D P	Pair D +	
	8	RX/TX D N	Pair D -	

3.3.5 Ravenna Interface Card

The Ethernet interfaces NIC1 and NIC2 on the *optional* Ravenna® module are used to connect the device to a Ravenna® network. 32 audio inputs/outputs can be connected over IP to Ravenna or AES67 audio equipment. AES67, SMPTE ST 2110-30/31, ST 2022-2022-7 and NMOS are supported.

Pin assignment: Ethernet Interfaces Ravenna® Socket: RJ-45



Pin	Signal		Electrical characteristics
1	RX/TX A P	Pair A +	Recommendation: IEEE 802.3/Ethernet
2	RX/TX A N	Pair A -	Data rate (Auto neg.): 100/1000 Mbit/s
3	RX/TX B P	Pair B +	Recommended cable: CAT5e or higher
4	RX/TX C N	Pair C +	Max. cable length: 100m
5	RX/TX C P	Pair C –	
6	RX/TX B N	Pair B -	_
7	RX/TX D P	Pair D +	
8	RX/TX D N	Pair D -	_

3.4 Power supply

3.4.1 AC power supply socket



100-230 V AC, 50-60 Hz, auto adjusting, max. 30 W

3.4.2 Optional DC power supply socket

Only use the +5 V DC power supply provided by AVT.

Pin assignment: 5 V power supply socket Socket: KYCON KPJ-S4



Pin	Signal	Electrical characteristics
1,3	GND	Voltage: + 5V
2,4	+5 V	Power: max. 30W

4 TECHNICAL DATA

Coding algorithms:

- G.711 3,1-kHz (Telephone algorithm)
- G.722 (with HD Voice Upgrade in VoIP or ISDN mode)

Line interfaces:

- 2 x Ethernet 10/100 Mbit/s
- Optional: 4/8 x POTS
- Optional: 8/16 x ISDN (no longer available)

Pretalk interfaces:

• 2 x Handset/ Headset interfaces

Control interfaces:

- 2 x Ethernet 10/100 Mbit/s
 - Optional: Dual LAN Upgrade
- 8 x TTL Input/Output
- 8 x Relays

Audio interfaces:

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• Analogue Audio 1/2:

0	Electronically balanced input		XLR female	
0	Electronically balanced output		XLR male	
0	Impedance		Input: > 25 kΩ Output: < 50 Ω	
0	Frequency response		50 Hz 3400 Hz	
Digital Audio AES/EBU:				
0	Format	IEC-60958	AES/EBU Professional	
0	Electronically balanced input		15-pin DUB-D female	

	, .	
0	Electronically balanced output	15-pin DUB-D female
0	Impedance	Input: 110 Ω Output: 110 Ω

• Separate Sample Rate Converter for Inputs

• Handset/Headset:

• RJ10 socket Electronically balanced input/output

- *Optional:* Dante[®] module
 - o 1x Primary 1 GbE
 - o 1x Secondary 1 GbE
 - o 32x32 channels
 - AES67 compatible
- Optional: Ravenna® module
 - o 1x Primary 1 GbE
 - o 1x Secondary 1 GbE
 - o 32x32 channels
 - o AES67
 - SMPTE ST 2110-30/31
 - o ST 2022-2022-7
 - o NMOS

Signal processing:

- AGC per channel, configurable
 - \circ ~ Level adjustment control during connection: -16 dB ... +16 dB
- Echo Canceller per channel
- Expander per channel, configurable

Display:

- Graphical, resolution 160 x 32 pixels
- Illuminated (can be switched off)

Power supply:

- Integrated power supply: AC 100 – 230 V Power max. 30 W
- Redundant external power supply (opt.):
 DC +5 V
 Power max. 30 W

Power consumption:

• Typ. 15 W, max. 30 W

Dimensions (W x H x D):

• 434 mm x 44.5 mm x 270 mm

Weight:

• Ca. 3.7 kg

Further Information:

٠	Temperature Range	+5 – 45 °C
•	Relative humidity	30 – 85 %
•	Mains voltage	100 – 230V
•	Mains frequency	50 – 60 Hz
•	Power consumption	max. 30 W

5 GENERAL

5.1 Order numbers

MAGIC THipPro 8 VolP	802050 802053
MAGIC THipPro 16 VoIP	802053
MAGIC THipPro Pure 8 VoIP	802097
MAGIC THipPro Pure 16 VoIP	802098
MAGIC THipPro Lite	802095
MAGIC THipPro Pure Lite	802096
MAGIC THipPro 8 VoIP Intercom	802080
MAGIC THipPro 16 VoIP Intercom	802081
MAGIC THipPro 16 VMS	802091
Optional Modules:	
MAGIC POTS-4 Option ¹	802069
MAGIC POTS-8 Option ¹	802070
MAGIC Dante Interface	802067
MAGIC Ravenna Interface	800037
Dual LAN Upgrade	802034
Redundant Power Supply Upgrade	802035

5.2 Scope of delivery

- MAGIC THipPro Telephone Hybrid
 - 1 x external power supply adapter
 - o 4 x Self-adhesive feet
 - o 19" Mounting brackets

5.3 Declaration of conformity

Find the declaration of conformity at the end of this document.

¹ An external gateway is available as an alternative to the POTS modules.

8 x FXO Ports VoIP Gateway VoIP-POTS Gateway

800038

6 SERVICE INFORMATION

6.1 Software and firmware updates

Download software updates from our website. No registration required.

http://www.avt-nbg.de

Navigate to *Downloads* > *Software*.

6.2 Support

Our support is available on working days:

Monday to Friday from 09:00 - 16:30 CET.		
Support portal:	https://avt-nbg.zammad.com	
Email:	support@avt-nbg.de	
Phone number:	+49 911 5271-110	

To deal with your problem efficiently please note down the factory number of the unit as well as the software version that you use.



The factory number is visible in the software under Administration > Registration.

If you bought the system via your local dealer, please contact them first.

6.3 Repairs

If your unit is defective, please contact us before sending in the device.

To send in the system please fill in the *Service Request*¹ and send the unit to the following address:

- AVT Audio Video Technologies GmbH
- Repairs -
- Nordostpark 91
- 90411 NÜRNBERG
- GERMANY

¹ Download from: <u>https://www.avt-nbg.de/sites/default/files/2022-08/service-request-avt.pdf</u>

6.4 WEEE (Directive on Waste Electrical and Electronic Equipment)

Due to Directive 2012/19/EU on waste disposal, this device must be recycled.

All electrical and electronic equipment must be disposed of separately from general household waste via approved collection points or disposal companies. The proper disposal and separate collection of old electrical and electronic equipment serves to prevent possible damage to the environment and health. The device contains



valuable raw materials that can be recycled. For proper recycling, send the device to us:

> AVT Audio Video Technologies GmbH - Recycling -Nordostpark 91 90411 NÜRNBERG GERMANY

WEEE Reg. No. DE83099164

Only prepaid parcels will be accepted!



These instructions only apply to appliances installed and sold in countries of the European Union. In countries outside the European Union, other regulations may apply to the disposal of electrical and electronic equipment.

Always recycle packaging material and electrical appliances or their components through authorised collection points or disposal companies.

CE EU-Konformitätserklärung

EU-Declaration of Conformity

Name des Anbieters: AVT Audio Video Technologies GmbH Supplier's name: AVT Audio Video Technologies GmbH				
Anschrift des Anbieters: Supplier's address:	Nordostpark 91 90411 Nürnberg Germany			
erklärt, dass das Produkt declares, that the product				
Produktname(n): MAGIC THipPro 8 VoIP Telephone Hybrid Product name(s): MAGIC THipPro 16 VoIP Telephone Hybrid			802050 802053	
	MAGIC THipPro Pure 8 VoIP Telephone Hybrid MAGIC THipPro Pure 16 VoIP Telephone Hybrid		802097 802098	
	MAGIC THipPro Lite Telephone Hybrid MAGIC THipPro Pure Lite Telephone Hy	/brid	802095 802096	
	MAGIC THipPro 8 VoIP Intercom MAGIC THipPro 16 VoIP Intercom		802080 802081	
	MAGIC THipPro 16 VMS		802091	
mit den Vorschriften folgender Europäischer Richtlinien übereinstimmt: conforms to the standards of the following European directives:				
Elektromagnetische Verträglichkeit (EMV) Electromagnetic compatibility (EMC)		2014/30/EU		
Niederspannungs-Richtlini Low voltage directive	e	2014/35/EU		
Beschränkung der Verwendung bestimmter gefährlicher Stoffe in Elektro- und Elektronikgeräten (RoHS) Restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS)		2011/65/EU incl. amendment 2015/863/EU		

Die Übereinstimmung wird nachgewiesen durch vollständige Einhaltung folgender Normen: The conformity is evidenced by strictly meeting the following standards:

• EN IEC 62368-1	• EN 55016-2-3	• EN 61000-4-5
 EN IEC 63000 	• EN 61000-3-2	• EN 61000-4-6
• EN 55032	 EN 61000-3-3 	 EN 61000-4-8
• EN IEC 61000-6-2	• EN 61000-4-2	• EN 61000-4-11
• EN IEC 61000-6-4	 EN 61000-4-3 	
• EN 55016-2-1	• EN 61000-4-4	

Ort, Datum: Nürnberg, 01.07.2022 Place, date: Name(n): Name: Wolfgang Peters

N. Pels

Rechtsverbindliche Unterschrift: Legally binding signatures:

Diese Erklärung beinhaltet keine Zusicherung von Eigenschaften. This declaration includes no warranty of properties.

Die Sicherheitshinweise der mitgelieferten Produktdokumentation sind zu beachten. The safety instructions specified in the product documentation delivered must be observed.