User Manual

Wideband Compatible
Digital SCR Multiswitch

Ref. 9775
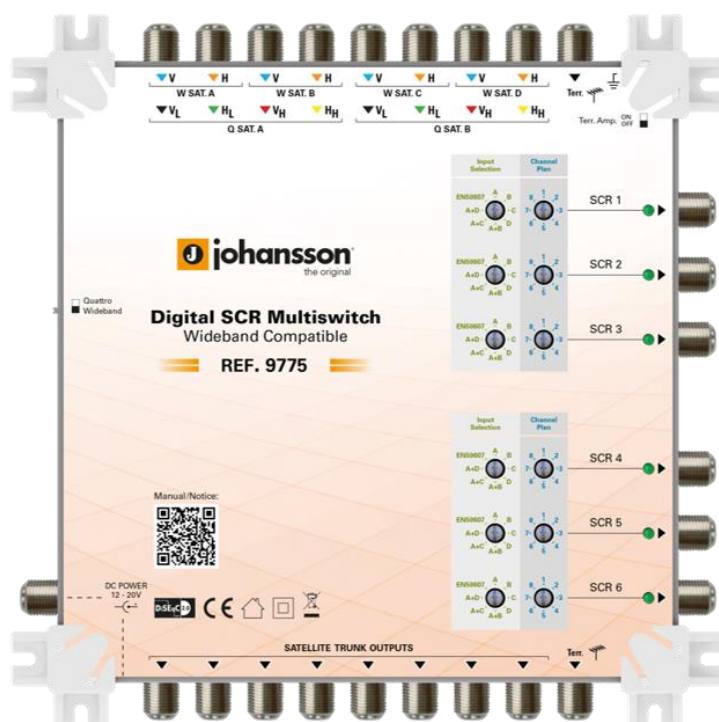
CONTENTS

1. PRODUCT DESCRIPTION

Over the last few years, standard (Legacy) multiswitches have been replaced by more efficient SCR Multiswitches. In these cases, the bandwidth was used 3 times better and 3 times less cables needed to be installed. With the new transition to digital SCR, we can easily make the installations more efficient, or improve the user experience by allowing each family to have 10 tuners installed per apartment. This is ideal for multiroom viewing experiences without sacrificing the possibility of watch-and-record features.

The 9775 has 8 satellite wideband inputs and 1 terrestrial input.
This allows you to use 2 quattro LNBs or 4 wideband LNBs.
The 6 SCR outputs have 10 user bands each.

What makes the 9775 unique is the following:
on each individual output, you can select the input and channel plan.
This multiplies the available content and minimizes your equipment costs.

With the 9775, you can offer a wide range of video content in multi-dwelling units.
For each single family unit, you can select a specific channel plan.
When the family's preferences change, or there's a new family moving in,
you can simply change the output settings.
This gives you much more flexibility and you only need one Multiswitch.

- 8 satellite wideband inputs
  - o compatible with 4 wideband LNBs
  - o compatible with 2 Quattro LNBs
- 6 SCR outputs with each 10 user bands
- 1 terrestrial input
- channel plan can be selected on each input individually

2. INSTALLATION OF THE HARDWARE

2.1. Wideband – 4 Satellite Orbital Positions
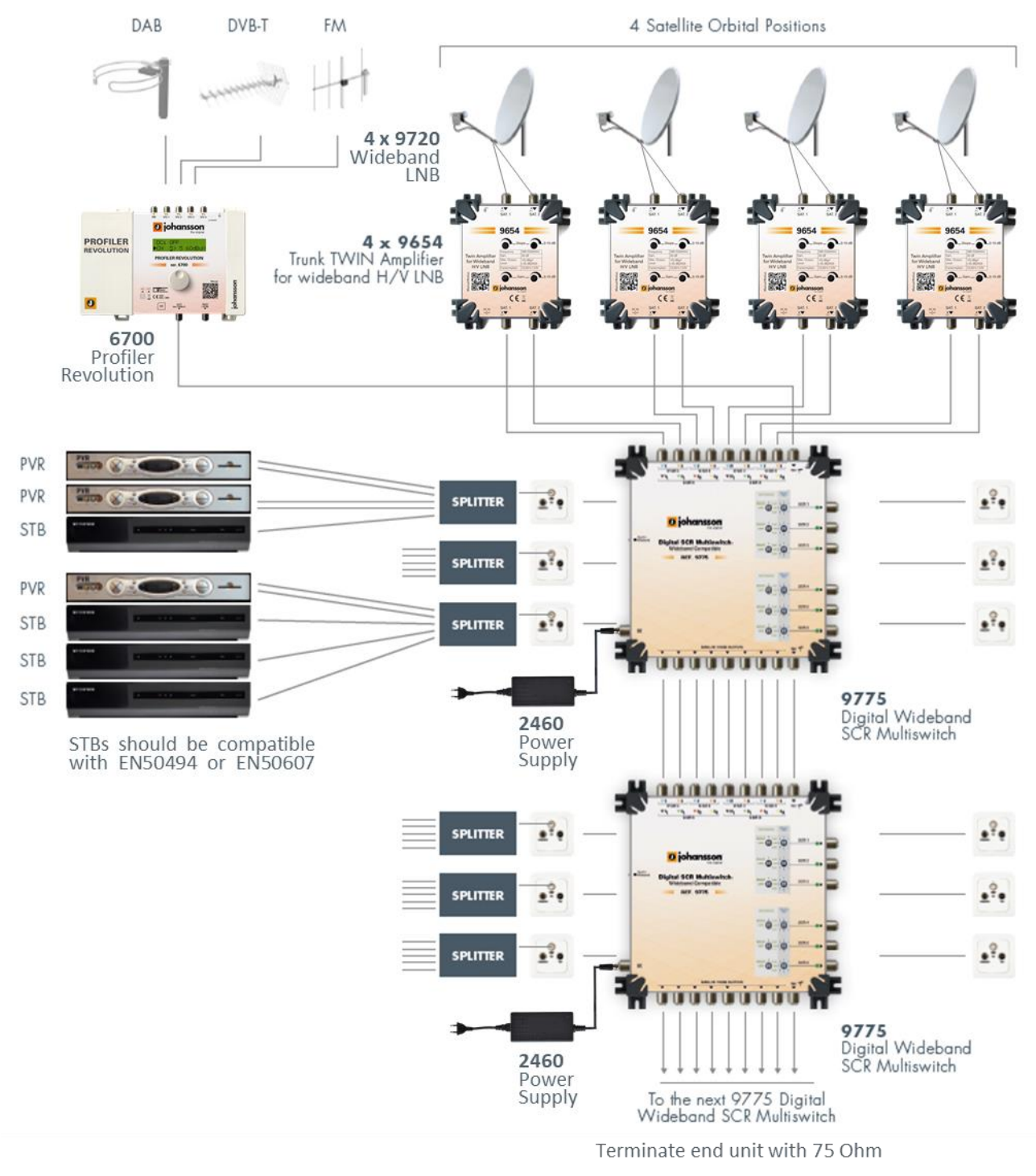
2.2. Quattro - 2 Satellite Orbital Positions

3. CONFIGURATION OF THE MODULE

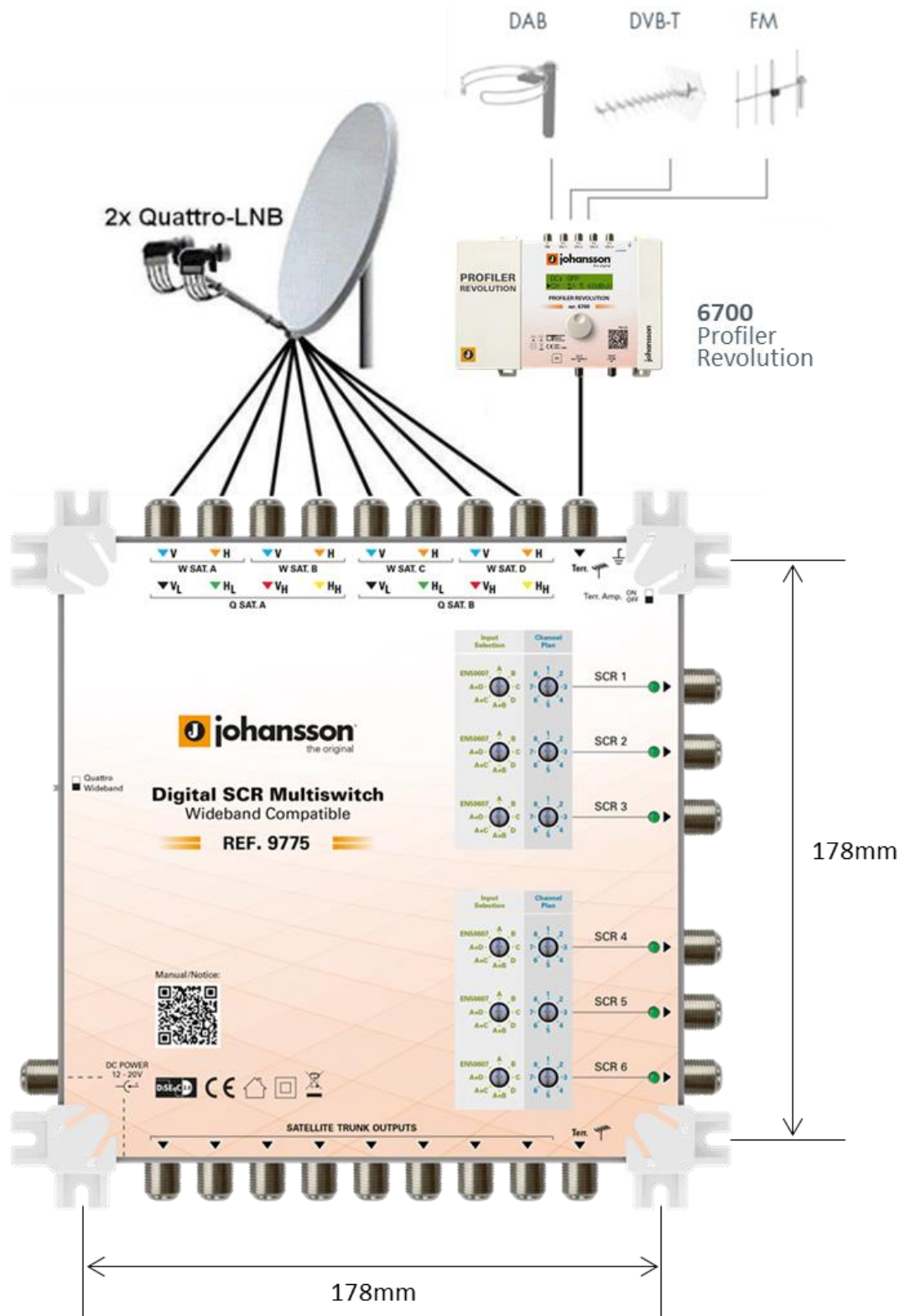**CAUTION: for proper operation of the device, mount the Multiswitch vertically to a wall in a well-ventilated room, leave a minimum space of 15cm around the device**

CAUTION: the back side of the device can get hot when in operation
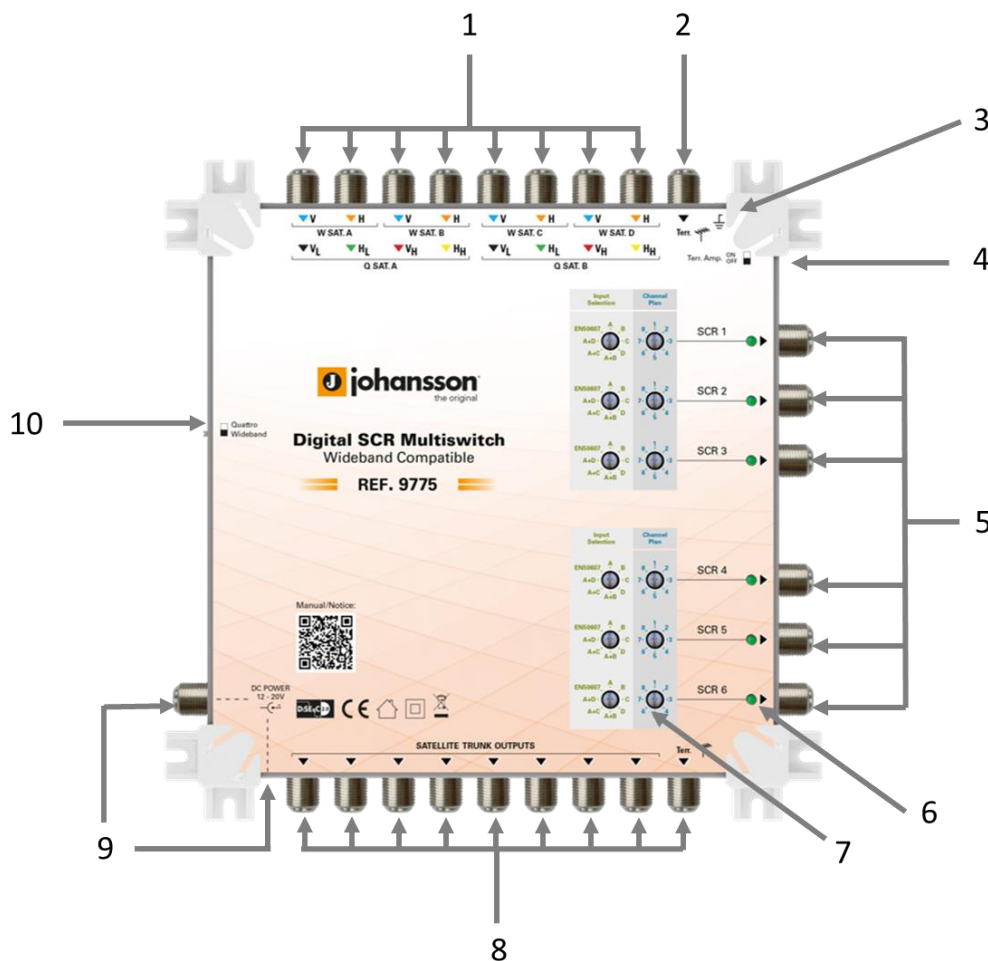
1. **connect the satellite trunk cables to the Multiswitch**

    - The satellite inputs are intended for satellite signals in the range of 290 to 2340 MHz. The supply voltage is applied on all satellite inputs.

2. **connect the terrestrial cable to the module**

    - Depending on the application, an additional LTE blocking filter may be required.

    - The terrestrial trunk should always be terminated with a 75-0hm F-terminator if it is not connected to a subsequent device

3. **connect an earth wire to the grounding clamp**

4. **select to enable or disable the terrestrial amplifier**
   - With amplification the attenuation amounts to only 8 dB,
     without amplification it is 20 dB.

5. **connect the SCR output cables to the Multiswitch**
   - There are 6 SCR outputs, each with 10 user bands,
     for each outputs the channel plans can be assigned separately.
   - The 9775 (and the LNBs) cannot be powered via the STB.
     The 9775 (except the LNBs) can be powered via SCR output port with a power
     inserter. The LNBs can only be powered via an external power supply (see 9.)
   - The STBs connected to the 9775 should be compatible with EN 50494 or
     EN50607

6. **green LED = powered**
   green blinking LED = device is receiving commands

7. **switch the rotary buttons to select the settings for each SCR output**
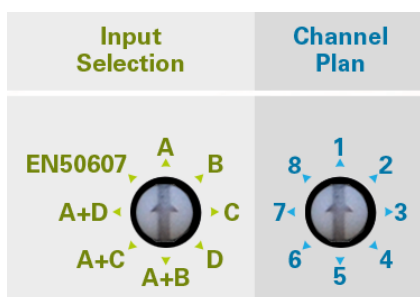
Input selection:	A	B	C	D	A+B	A+C	A+D	EN50607
Quattro LNB	Q.SAT A	Q.SAT B	Q.SAT A	Q.SAT B	Q.SAT A + B	Q.SAT A + A	Q.SAT A + B	Q.SAT A + B
Wideband LNB	W.SAT A	W.SAT B	W.SAT C	W.SAT D	W.SAT A + B	W.SAT A + C	W.SAT A + D	W.SAT A or B or C or D

Channel plan can be found on the next page of this manual

8. **connect the satellite and terrestrial trunk output cables to the Multiswitch**

9. **power the device with 20 Vdc**

- You can use an F-connector (ref. 2460) or DC-jack.
  The ref. 2460 can power two 9775 Multiswitches.

- note: the LED will become red when the power is too low or when the power supply has failed while the product is still getting power from the satellite trunk lines

10. **select the type of LNBs that is used**

- Ouattro: You can connect 2 Quattro LNBs for 2 Sat positions

- Wideband: 4 wideband LNBs (LO 10.41 GHz) can be connected

- A mixed operation is not possible!

4. CHANNEL PLANS:

UB ID	P1: Sky			P2: Germany		P3: Multichoice	
	EN50494	EN50607	BSkyB	EN50494	EN50607	EN50494	EN50607
1	1210	-	3: 1680	1280	1280	1210	1210
2	1420	-	9: 1280	1382	1382	1420	1420
3	1680	-	11: 1380	1484	1484	1680	1680
4	2040	-	14: 1480	1586	1586	2040	2040
5		985	15: 980	1688	1688	1006	1006
6		1050	16: 1030	1790	1790	1057	1057
7		1115	17: 1080	1892	1892	1108	1108
8		1275	18: 1130	1994	1994	1159	1159
9		1340	19: 1530	-	2045		1261
10		1485	20: 1580	-	2096		1312
	UB BW = 46MHz			UB BW = 46MHz		UB BW = 46MHz	

UB ID	P4: OSN		P5: Cyfrowy Polsat	
	EN50494	EN50607	EN50494	EN50607
1	1210	1210	1210	1210
2	1420	1420	1420	1420
3	1680	1680	1680	1680
4	2040	2040	2040	2040
5	975	975	978	978
6	1020	1020	1028	1028
7	1065	1065	1072	1072
8	1110	1110	1116	1116
9		1155		1160
10		1260		1271
	UB BW = 40MHz		UB BW = 40MHz	

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5. TECHNICAL SPECIFICATIONS

Inputs		
Inputs	-	SAT: 8 TERR: 1
Frequency	MHz	SAT: 290 - 2340 TERR: 88 - 862
Input level	dBµV dBµV	SAT-Universal: 58 to 108 TERR: 100 (amplified)
Return loss IN/OUT	dB	SAT: -10 TERR: -10
Insertion loss	dB	SAT: 2 TERR: 3
SAT positions	-	Quattro: 2 Wideband: 4
Supported LNB types	-	Quattro (LO: 9750/10600) Wideband (LO:10410)
Outputs		
Trunk Outputs	-	SAT: 8 TERR:1
dSCR channel power	dBµV	86 (AGC controlled)
Output return loss	dB	10
Trunk insertion loss	dB	SAT.: -2 TERR: -3
TERR output loss	dB	-20 or -8 (switchable)
SCR channels (10 users/output)	MHz	Configurable between 950 and 2150
Supported standards	-	EN50494 / EN50607 / BskyB
General		
Trunk termination DC blocked required	Ohm	75 (SAT & TERR)
DC supply to SAT trunks from power adapter	V	20
DC supply from SAT trunks	V	20
DC power pass	-	SAT: Yes – TERR: No
Max LNB current /LNB	mA	500
Power: F Con DC input or DC jack 2,1mm	V V	20 20
DC power from output port	-	Yes
Consumption (without LNB)	W	24 (20V – 1.2A)
Dimensions	mm	220 x 220 x 50
Operating temperature	°C	0 to 50, indoor housing

6. SAFETY INSTRUCTIONS

Read these instructions carefully before connecting the unit

To prevent fire, short circuit or shock hazard:
- Do not expose the unit to rain or moisture.
- Install the unit in a dry location without infiltration or condensation of water.
- Do not expose it to dripping or splashing.
- Do not place objects filled with liquids, such as vases, on the apparatus.
- If any liquid should accidentally fall into the cabinet, disconnect the power plug.

To avoid any risk of overheating:
- Install the unit in a well aery location and keep a minimum distance of 15 cm around the apparatus for sufficient ventilation
- Do not place any items such as newspapers, table-cloths, curtains, on the unit that might cover the ventilation holes.
- Do not place any naked flame sources, such as lighted candles, on the apparatus
- Do not install the product in a dusty place
- Use the apparatus only in moderate climates (not in tropical climates)
- Respect the minimum and maximum temperature specifications

To avoid any risk of electrical shocks:
- Connect apparatus only to socket with protective earth connection.
- The mains plug shall remain readily operable
- Pull out power plug to make the different connections of cables
- To avoid electrical shock, do not open the housing of adapter.

Maintenance

Only use a dry soft cloth to clean the cabinet.
Do not use solvent
For repairing and servicing refer to qualified personnel.

Dispose according your local authority's recycling processes

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7. CONDITIONS OF WARRANTY

Unitron N.V. warrants the product as being free from defects in material and workmanship for a period of 24 months starting from the date of production indicated on it. See note below.

If during this period of warranty the product proves defective, under normal use, due to defective materials or workmanship, Unitron N.V, at its sole option, will repair or replace the product. Return the product to your local dealer for reparation

THE WARRANTY IS APPLIED ONLY FOR DEFECTS IN MATERIAL AND WORKMANSHIP AND DOES NOT COVER DAMAGE RESULTING FROM:

- Misuse or use of the product out of its specifications.
- Installation or use in a manner inconsistent with the technical or safety standards in force in the country where the product is used
- Use of non-suitable accessories (power supply, adapters...).
- Installation in a defect system.
- External cause beyond the control of Unitron N.V. such as drop, accidents, lightning, water, fire, improper ventilation…

THE WARRANTY IS NOT APPLIED IF

- Production date or serial number on the product is illegible, altered, deleted or removed.
- The product has been opened or repaired by a non-authorized person.

NOTE

Date of production can be found in the product's serial number code. The format will either be "YEAR W WEEK" (e.g., 2018W01 = year 2018 week 1) or "YYWW" (e.g., 1847 = year 2018 week 47).

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