

For every evolution a custom made solution

TERRESTRIAL DISTRIBUTION



SATELLITE DISTRIBUTION



HOSPITALITY & RESIDENTIAL MDU



SAT > IP™ DISTRIBUTION



DIGITAL MODULATORS AND STREAMERS



WIDEBAND SATELLITE DISTRIBUTION



Our flexible team offers you for every **evolution** a **custom made** **solution**

"UnitronGroup is an international group of companies, offering state-of-the-art headend Digital Signal Processing technologies and digital TV accessories. These technologies and products are ideal for TV distribution to multi-dwelling and residential buildings.

End users have access to the 'Johansson' branded products via a worldwide network of distributors and integrators.

In this fast moving market, innovation and flexibility are the main keywords. Therefore, UnitronGroup runs multiple factories and R&D centers in Belgium and the Czech Republic. Buying a Johansson product is buying a cutting-edge piece of electronics that will last for years!"

Philippe Lamaire & Elisabeth Lamaire
Managing Directors

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Digital Modular Headends

- ▶ Johansson has developed a complete range of Digital Modular Headends (DMH), which are the ideal TV distribution system for middle-sized and large buildings (MDU). We offer a complete product range, consisting of COFDM (DVB-T) and QAM (DVB-C) modulators and IPTV streamers. All of these products are available with satellite (DVB-S/S2), terrestrial (DVB-T/T2), cable (DVB-C) or A/V inputs (SD & HD). Thanks to the modular design, the system is scalable to suit your specific needs.

We also present our system configurator (page 20) for improved remote accessibility.

The newest product in this Digital Modular Headend is our ProFlex. This very powerful and flexible module can receive up to 8 satellite transponders from 4 different inputs. 2 CAM slots are provided for decoding pay TV channels. The module can output the signals either on RF (DVB-T or DVB-C) or either on IP (SPTS or MPTS).

More-over, the bidirectional IP-port can also receive IP-signals and modulate them on a DVB-T or DVB-C carrier.



See our "Universe" in the Digital Modulator and Streamer section.
+ Rack Mountable (Digital Compact Headend)

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DMH

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NEW

Digital Modular Headends

NEW

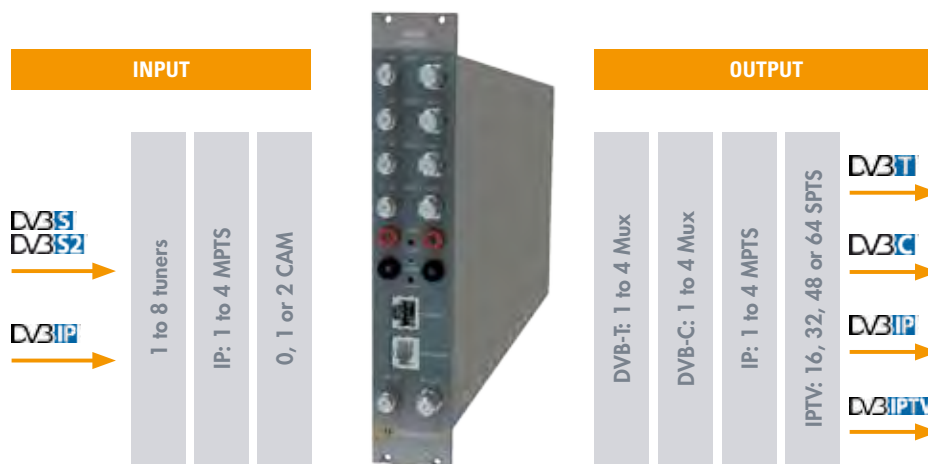
PROFLEX (QAM, COFDM, IP) Versatile Modular Headend

The new satellite modules has 4 inputs allowing the reception of 4 different satellite bands per module. Because the module has 8 satellite tuners and a built-in multiswitch, reception of 8 different transponders coming from any of the 4 input satellite bands is possible.

Depending on the type of configuration, up to 4 DVB-T/C multiplexes, 4 MPTS or 64 STPS streams can be distributed per module, offering you one of the most flexible and cost-efficient solutions available on the market!

5500

- versatile: one module for multiple applications
- flexible: tailor-made configuration
- future proof: configuration upgradable
- scalable: feature upgradable
- feature activation can be time based



5500

Input:		
Inputs	-	4 x satellite (4 satellite bands per module) 1 IP Gigabit input (4 MPTS transport streams per module)
Integrated multiswitch	-	Yes, allows flexible routing of satellite programs to multiplexes (QAM or COFDM)
Configuration	-	Built-in webserver or optional UUI configuration software
Remote access	-	via RMU ref. 5950
Encoded programs	-	From all 8 tuners. Can be routed through 1 or 2 CAMs and can be decoded using multi-service CAMs

Output: DVB-T		
DVB-T output	Mbps	Up to 31.7 / multiplex
DVB-C output	Mbps	Up to 51.3 / multiplex
IP output	-	Up to 4-MPTS transport streams in Unicast
IPTV output	-	Up to 64-SPTS channels in Multicast

General		
Dimensions	-	5 RU x 8 TE x 367 mm

Configuration possibilities

1	DVB-S/S2 to DVB-C
2	DVB-S/S2 to DVB-T
3	DVB-S/S2 to IPTV
4	DVB-S/S2 to IP
5	IP to DVB-C
6	IP to DVB-T
7	IP to IP (Loop)

Features possibilities

1	#Tuners	1 to 8
2	#Mux	1 to 4
3	#CAM	0,1,2
4	#SPTS	16, 32, 48, 64
5	#MPTS	1 to 4

Digital Modular Headends

PROQUAD DVB-S(2) → DVB-T

The **DVB-S(2)** to **DVB-T** modules each have 4 inputs allowing the reception of 4 different satellite bands per module. Because all modules have 4 satellite tuners and a built-in multiswitch, reception of 4 different transponders coming from one of the 4 input satellite bands is possible.

Depending on the type of module, up to 4 DVB-T multiplexes can be distributed per module, offering you one of the most flexible and cost-efficient solutions available on the market!

- 4 satellite tuners (reception of 4 transponders per module)
- 4 satellite inputs (4 satellite bands per module)
- integrated multiswitch allows flexible routing of satellite programs to DVB-T multiplexes
- distribute up to 32 programs per module
- ref. 5303S/T/Q: decode up to 16 programs per module with multi-service CAM (encoded programs from all 4 tuners can be routed through 1 CAM)
- easy configuration with built-in webserver
- remote access possibility via RMU ref. 5950

5302S | T | Q



5303S | T | Q

5302S | 5303S | 5302T | 5303T | 5302Q | 5303Q

Input: DVB-S(2)

Number of inputs	-	4 with 4 active loop-through outputs (0 dB loss)
Tuner	-	4 tuners (4 transponders)
Frequency range	MHz	950-2150
Level	dBm	-55 to -25
Bandwidth	MHz	36
Modulation	-	DVB-S(2): QPSK, 8-PSK DVB-S: QPSK
LNB power (DC+tone)	V	0/13/18 + 22kHz DiSEqC®
LNB current per input	mA	max. 250

Output: DVB-T

Number of outputs	-	1 with 1 loop through (max 1,5 dB loss)
Frequency range	MHz	47-862 (VHF-UHF)
Multiplexes	-	1 2 adjacent 4 adjacent
Channel bandwidth	MHz	6/7/8
Modulation	-	QPSK, 16-QAM, 64-QAM
OFDM mode	-	2K
Forward Error Correction (FEC)	-	1/2, 2/3, 3/4, 5/6, 7/8
Guard interval	-	1/4, 1/8, 1/16, 1/32
Output bitrate/mux	Mbps	up to 31,7
Modulation Error Rate (MER)	dB	40
Spectral inversion	-	yes
Output level	dBμV	68 to 83 (adjustable)
CI-slot	-	no yes no yes no yes
Capacity	-	up to 8 programs up to 16 programs up to 32 programs

General

Connectors	-	RF: 10 x "F" connector female Management: RJ-45 (Ethernet) DC: banana sockets
Power supply	VDC	15
Consumption	A	1,5
Operating temperature	°C	0 to +40
Dimensions	-	5 RU x 8 TE x 195 mm

Digital Modular Headends

PROQUAD DVB-T → DVB-T

The **DVB-T** to **DVB-T** modules are the ideal solution to regenerate a poor quality DVB-T signal. But the 5310Q and 5311Q are much more powerful than a normal DVB-T regenerator! Each module has 4 DVB-T tuners, and 4 DVB-T modulators. Thanks to a built-in multiswitch, remapping of the programs between the input and the output is possible. This makes it possible to rearrange the multiplexes, delete some programs, change the DVB-T parameters,...

5310Q

- 4 tuners allow reception of 4 multiplexes per module
- 4 output DVB-T multiplexes per module
- distribute up to 32 programs per module
- decode up to 16 programs per module with multi-service CAM (5311Q)
- easy configuration with built-in webserver
- remote access possibility via RMU ref. 5950

5311Q

	5310Q	5311Q
Input: DVB-T		
Number of inputs	-	1 with 1 active loop-through output (± 1 dB)
Tuner	-	4 tuners (4 multiplexes)
Frequency range	MHz	VHF: 174-230 UHF: 470-862
Level	dBm	-55 to -20
Bandwidth	MHz	6/7/8
Modulation	-	QPSK: 1/2, 2/3, 3/4, 5/6, 7/8 16-QAM: 1/2, 2/3, 3/4, 5/6, 7/8 64-QAM: 1/2, 2/3, 3/4, 5/6, 7/8
LNA power	V	0/5/12/24 (max. 100 mA)
Output: DVB-T		
Number of outputs	-	1 with 1 loop through (max 1,5 dB loss)
Frequency range	MHz	47-862 (VHF-UHF)
Multiplexes	-	4 adjacent
Channel bandwidth	MHz	6/7/8
Modulation	-	QPSK, 16-QAM, 64-QAM
OFDM mode	-	2K
Forward Error Correction (FEC)	-	1/2, 2/3, 3/4, 5/6, 7/8
Guard interval	-	1/4, 1/8, 1/16, 1/32
Output bitrate/mux	Mbps	up to 31,7
Modulation Error Rate (MER)	dB	40
Spectral inversion	-	yes
Output level	dB μ V	68 to 83 (adjustable)
CI-slot	-	no yes
Capacity	-	up to 32 programs
General		
Connectors	-	RF: 4 x "F" connector female Management: RJ-45 (Ethernet) DC: banana sockets
Power supply	VDC	15
Consumption	A	1,5
Operating temperature	°C	0 to +40
Dimensions	-	5 RU x 8 TE x 195 mm

Digital Modular Headends

PROQUAD AV → DVB-T

The quad **AV** to **DVB-T** module has 4 inputs, to distribute up to 4 analog video sources over the coaxial network.

5330

- 4 AV stereo inputs per module
- easy configuration with built-in webserver
- change important parameters: LCN, resolution, brightness, contrast, hue, saturation,...
- ideal solution for CCTV or near-VOD!
- remote access possibility via RMU ref. 5950



5330

Input: CVBS (A/V)

Number of inputs	-	4 x AV (CVBS)
Video processing	-	Conformance with IEC 13818-2 (MPEG2 video) and ISO/IEC 11172-3 (MPEG1 audio) standards
Video resolution	-	SIF: 352 x 288 SVCD: 480 x 576 HALF D1: 352 x 576 D1: 720 x 576 544: 544 x 576
Video bitrate	kbps	1500 to 7000 (Typ. 6000)
Audio volume	dB	-6 to +6 (Typ. 0)

Output: DVB-T

Number of outputs	-	1 with 1 loop through (max 1,5 dB loss)
Frequency range	MHz	47-862 (VHF-UHF)
Multiplexes	-	2 adjacent
Channel bandwidth	MHz	6/7/8
Modulation	-	QPSK, 16-QAM, 64-QAM
OFDM mode	-	2K
Forward Error Correction (FEC)	-	1/2, 2/3, 3/4, 5/6, 7/8
Guard interval	-	1/4, 1/8, 1/16, 1/32
Output bitrate/mux	Mbps	up to 31,7
Modulation Error Rate (MER)	dB	40
Spectral inversion	-	yes
Output level	dBμV	68 to 83 (adjustable)
Capacity	-	4 programs

General

Connectors	-	Video input: 4 x CINCH Audio input: 4 x 3,5 mm jack RF: 2 x "F" connector female Management: RJ-45 (Ethernet) DC: banana sockets
Power supply	VDC	15
Consumption	A	0,8
Operating temperature	°C	0 to +40
Dimensions	-	5 RU x 8 TE x 195 mm

Digital Modular Headends

PROQUAD DVB-S(2) → DVB-C

The **DVB-S(2)** to **DVB-C** modules each have 4 inputs allowing the reception of 4 different satellite bands per module. Because all modules have 4 satellite tuners and a built-in multiswitch, reception of 4 different transponders coming from one of the 4 input satellite bands is possible. Depending on the type of module, up to 4 DVB-C multiplexes can be distributed per module, offering you one of the most flexible and cost-efficient solutions available on the market!

5352S | T | Q

- 4 satellite tuners (reception of 4 transponders per module)
- 4 satellite inputs (4 satellite bands per module)
- integrated multiswitch allows flexible routing of satellite programs to DVB-C multiplexes
- distribute up to 32 programs per module
- ref. 5353S/T/Q: decode up to 16 programs per module with multi-service CAM (encoded programs from all 4 tuners can be routed through 1 CAM)
- easy configuration with built-in webserver
- remote access possibility via RMU ref. 5950

5353S | T | Q

5352S | 5353S | 5352T | 5353T | 5352Q | 5353Q

Input: DVB-S(2)

Number of inputs	-	4 with 4 active loop-through outputs (0 dB loss)
Tuner	-	4 tuners (4 transponders)
Frequency range	MHz	950-2150
Level	dBm	-55 to -25
Bandwidth	MHz	36
Modulation	-	DVB-S(2): QPSK, 8-PSK DVB-S: QPSK
LNB power (DC+tone)	V	0/13/18 + 22kHz DiSEqC®
LNB current per input	mA	max. 250

Output: DVB-C

Number of outputs	-	1 with 1 loop through (max 1,5 dB loss)
Frequency range	MHz	47-862 (VHF-UHF)
Multiplexes	-	1 2 adjacent 4 adjacent
Channel bandwidth	MHz	6/8
Modulation	-	6 MHz: 64-QAM 8 MHz: 64-QAM/256-QAM
Output bitrate/mux	Mbps	up to 51,3
Modulation Error Rate (MER)	dB	40
Spectral inversion	-	yes
Output level	dBµV	68 to 83 (adjustable)
CI-slot	-	no yes no yes no yes
Capacity	-	up to 8 programs up to 16 programs up to 32 programs

General

Connectors	-	RF: 10 x "F" connector female Management: RJ-45 (Ethernet) DC: banana sockets
Power supply	VDC	15
Consumption	A	1,5
Operating temperature	°C	0 to +40
Dimensions	-	5 RU x 8 TE x 195 mm



Digital Modular Headends

PROQUAD DVB-T → DVB-C

The **DVB-T** to **DVB-C** modules allow the reception of 4 DVB-T multiplexes, which can be remapped and transmodulated to 4 DVB-C multiplexes.

- 4 tuners (reception of 4 multiplexes per module)
- 4 DVB-C output multiplexes per module
- integrated multiswitch allows flexible routing of terrestrial programs to DVB-C multiplexes
- distribute up to 32 programs per module
- ref. 5361Q: decode up to 16 programs per module with multi-service CAM (encoded programs from all 4 tuners can be routed through 1 CAM)
- easy configuration with built-in webserver
- remote access possibility via RMU ref. 5950

5360Q

5361Q

Digital Modular Headends

	5360Q	5361Q
Input: DVB-T		
Number of inputs	-	1 with 1 active loop-through output (± 1 dB)
Tuner	-	4 tuners (4 multiplexes)
Frequency range	MHz	VHF: 174-230 UHF: 470-862
Level	dBm	-55 to -20
Bandwidth	MHz	6/7/8
Modulation	-	QPSK: 1/2, 2/3, 3/4, 5/6, 7/8 16-QAM: 1/2, 2/3, 3/4, 5/6, 7/8 64-QAM: 1/2, 2/3, 3/4, 5/6, 7/8
LNA power	V	0/5/12/24 (max 100 mA)
Output: DVB-C		
Number of outputs	-	1 with 1 loop through (max 1,5 dB loss)
Frequency range	MHz	47-862 (VHF-UHF)
Multiplexes	-	4 adjacent
Channel bandwidth	MHz	6/8
Modulation	-	6 MHz: 64-QAM 8 MHz: 64-QAM/256-QAM
Output bitrate/mux	Mbps	up to 51,3
Modulation Error Rate (MER)	dB	40
Spectral inversion	-	yes
Output level	dBµV	68 to 83 (adjustable)
CI-slot	-	no yes
Capacity	-	up to 32 programs
General		
Connectors	-	RF: 4 x "F" connector female Management: RJ-45 (Ethernet) DC: banana sockets
Power supply	VDC	15
Consumption	A	1,5
Operating temperature	°C	0 to +40
Dimensions	-	5 RU x 8 TE x 195 mm

Digital Modular Headends

PROQUAD AV → DVB-C

The quad **AV** to **DVB-C** module has 4 inputs, to distribute up to 4 analog video sources over the DVB-C network.

5380

- 4 AV stereo inputs per module
- easy configuration with built-in webserver
- change important parameters: LCN, resolution, brightness, contrast, hue, saturation,...
- ideal solution for CCTV or near-VOD!
- remote access possibility via RMU ref. 5950



5380

Input: CVBS(A/V)

Number of inputs	-	4 x AV (CVBS)
Video processing	-	Conformance with IEC 13818-2 (MPEG2 video) and ISO/IEC 11172-3 (MPEG1 audio) standards
Video resolution	-	SIF: 352 x 288 SVCD: 480 x 576 HALF D1: 352 x 576 D1: 720 x 576 544: 544 x 576
Video bitrate	kbps	1500 to 7000 (Typ. 6000)
Audio volume	dB	-6 to +6 (Typ. 0)

Output: DVB-C

Number of outputs	-	1 with 1 loop through (max 1,5 dB loss)
Frequency range	MHz	47-862 (VHF-UHF)
Multiplexes	-	2 adjacent
Channel bandwidth	MHz	6/8
Modulation	-	6 MHz: 64-QAM 8 MHz: 64-QAM/256-QAM
Output bitrate/mux	Mbps	up to 51,3
Modulation Error Rate (MER)	dB	40
Spectral inversion	-	yes
Output level	dBμV	68 to 83 (adjustable)
Capacity	-	4 programs

General

Connectors	-	Video input: 4 x CINCH Audio input: 4 x 3,5 mm jack RF: 2 x "F" connector female Management: RJ-45 (Ethernet) DC: banana sockets
Power supply	VDC	15
Consumption	A	0,8
Operating temperature	°C	0 to +40
Dimensions	-	5 RU x 8 TE x 195 mm

Digital Modular Headends

PROSTREAMER DVB-S(2) → IPTV

Thanks to 4 satellite inputs per module, each module is able to receive the 4 satellite bands. The modules have 4 satellite tuners and a multiswitch inside to offer a fully flexible interconnection between the inputs and the tuners. All IPTV modules have 2 separate Ethernet ports: one for streaming output and one for configuration. This allows the user to separate the streaming traffic from the configuration, to avoid unauthorized access.

- 4 satellite tuners (reception of 4 transponders per module)
- 4 satellite inputs (4 satellite bands per module)
- distribute up to 16 programs per module
- ref. 5203: decode up to 16 programs per module with multi-service CAM (encoded programs from all 4 tuners can be routed through 1 CAM)
- easy configuration with built-in webserver
- remote access possibility via RMU ref. 5950

5202

5203



5202

5203

Input: DVB-S(2)

Number of inputs	-	4 with 4 active loop-through outputs (0 dB loss)
Tuner	-	4 tuners (4 transponders)
Frequency range	MHz	950-2150
Level	dBm	-55 to -25
Bandwidth	MHz	36
Modulation	-	DVB-S(2): QPSK, 8-PSK DVB-S: QPSK
LNB power (DC+tone)	V	0/13/18 + 22kHz DiSEqC®
LNB current per input	mA	max. 250

Output: IPTV

Standard	-	IEEE 802.3 10/100 Base-T
Protocol	-	Multicast IP/UDP
CI-slot	-	no yes
Bitrate	Mbps	100
Capacity	-	up to 16 simultaneous streams

General

Connectors	-	RF: 8 x "F" connector female Streaming: 1 x RJ-45 (Ethernet) Management: 1 x RJ-45 (Ethernet) DC: banana sockets
Power supply	VDC	15
Consumption	A	0,6 0,8
Operating temperature	°C	0 to +40
Dimensions	-	5 RU x 8 TE x 195 mm

Digital Modular Headends

PROSTREAMER DVB-T → IPTV

Many countries offer a nice bouquet of DVB-T programs, often free-to-air. With the **DVB-T** to **IPTV** modules, these programs can be distributed over the network via Ethernet. All modules have 4 DVB-T tuners, to receive 4 DVB-T multiplexes.

- 4 tuners allow reception of 4 multiplexes per module
- distribute up to 16 programs per module
- decode up to 16 programs per module with multi-service CAM
- easy configuration with built-in webserver
- remote access possibility via RMU ref. 5950



5210

5211

Input: DVB-T

Number of inputs	-	1 with 1 active loop-through output (± 1 dB)
Tuner	-	4 tuners (4 multiplexes)
Frequency range	MHz	VHF: 174-230 UHF: 470-862
Level	dBm	-55 to -20
Bandwidth	MHz	6/7/8
Modulation	-	QPSK: 1/2, 2/3, 3/4, 5/6, 7/8 16-QAM: 1/2, 2/3, 3/4, 5/6, 7/8 64-QAM: 1/2, 2/3, 3/4, 5/6, 7/8
LNA power	V	0/5/12/24 (100 mA max)

Output: IPTV

Standard	-	IEEE 802.3 10/100 Base-T
Protocol	-	Multicast IP/UDP
CI-slot	-	no yes
Bitrate	Mbps	100
Capacity	-	up to 16 simultaneous streams

General

Connectors	-	RF: 2 x "F" connector female Streaming: 1 x RJ-45 (Ethernet) Management: 1 x RJ-45 (Ethernet) DC: banana sockets
Power supply	VDC	15
Consumption	A	0,5 0,7
Operating temperature	°C	0 to +40
Dimensions	-	5 RU x 8 TE x 195 mm

Digital Modular Headends

PROSTREAMER AV → IPTV

The quad **AV** to **IPTV** module has 4 inputs, to distribute up to 4 analog video sources over the Ethernet network.

5230

- 4 AV stereo inputs per module
- easy configuration with built-in webserver
- change important parameters: resolution, brightness, contrast, hue, saturation,...
- ideal solution for CCTV or near-VOD!
- remote access possibility via RMU ref. 5950



5230

Input: CVBS (A/V)

Number of inputs	-	4 x AV (CVBS)
Video processing	-	Conformance with IEC 13818-2 (MPEG2 video) and ISO/IEC 11172-3 (MPEG1 audio) standards
Video resolution	-	SIF: 352 x 288 SVCD: 480 x 576 HALF D1: 352 x 576 D1: 720 x 576 544: 544 x 576
Video bitrate	kbps	1500 to 7000 (Typ. 6000)
Audio volume	dB	-6 to +6 (Typ. 0)

Output: IPTV

Standard	-	IEEE 802.3 10/100 Base-T
Protocol	-	Multicast IP/UDP
Bitrate	Mbps	100
Capacity	-	4 streams

General

Connectors	-	Video input: 4 x CINCH Audio input: 4 x 3,5 mm jack Streaming: 1 x RJ-45 (Ethernet) Management: 1 x RJ-45 (Ethernet) DC: banana sockets
Power supply	VDC	15
Consumption	A	0,65
Operating temperature	°C	0 to +40
Dimensions	-	5 RU x 8 TE x 195 mm

Digital Modular Headends

PROSTREAMER SD/HD Encoder → IPTV

The **SD/HD Encoder** is a digital head end encoder. It has 8 AV (CVBS) & 1 HD (HD-SDI) inputs. It provides 1 Ethernet IP streaming port and 1 Ethernet management port for system control & WebGUI.

5240

- 8 AV CVBS inputs with stereo or dual-mono audio
- 1 HD-SDI input with up to 4 embedded stereo or dual-mono audio channels
- easy configuration with built-in webserver
- change important parameters: brightness, contrast, saturation, hue, volume,...
- ideal solution for cable TV broadcast, CCTV or near-VOD,...



5240

Input: CVBS (A/V)

Number of inputs	-	8 x AV (CVBS)
Video compression	-	MPEG-2 MP@ML H.264 AVC MP@L3.0 Selectable in groups of 4
Video resolution	-	PAL: 720x576i@25 NTSC: 720x480i@29.97
Video encoding bitrate	Mbps	1 to 10 (step= 100 kbps)
Audio compression	-	MPEG-1 Layer II (MP2)
Audio sampling	kHz	32, 44.1, 48 (16bit sampling)
Audio encoding bitrate	kbps	64 up to 384

Input: HD-SDI (A/V)

Number of inputs	-	1 x AV (HD-SDI)
Video compression	-	H.264 AVC HP@L4.1
Video resolution	-	1920x1080i@25/29.97 1280x720p@50/59.94 Auto-detection
Video encoding bitrate	Mbps	3 to 20 (step= 100 kbps)
Audio compression	-	AAC
Audio sampling	kHz	48 (16bit sampling)
Audio encoding bitrate	kbps	AAC-LC : 64 up to 384 HE-AAC : 32 up to 288

Output: IPTV

Standard	-	Ethernet 100 / 1000 Base-T
Protocol	-	ARP, ICMP, DHCP
Bitrate	GbE	1
Capacity	-	9 streams

General

Connectors	-	<i>Front side:</i> HD-SDI Input : BNC Streaming: 1 x RJ-45 (Ethernet) Management: 1 x RJ-45 (Ethernet) DC: Banana sockets <i>Rear side:</i> CVBS SD Video Input: 8 x RCA Yellow SD Audio (R) Input: 8 x RCA Red SD Audio (L) Input: 8 x RCA White
Power supply	VDC	15
Consumption	A	1,2
Operating temperature	°C	0 to +40 (Fan unit (ref. 5062ETH) is mandatory)
Dimensions	-	5 RU x 8 TE x 330 mm

Digital Modular Headends

ACCESSORIES Power Supply Unit

5050ETH | 5050UKETH

- This power supply is rated to power a full 19 inch rack of IP streamers or up to 5 Transmodulators.



5050ETH | 5050UKETH*

Input voltage	VAC	90 to 264
Output voltage	VDC / A	15 / 10 A
Output power	W	150
Weight	kg	2
Dimensions	-	5 RU x 12 TE x 180 mm

*The 5050UKETH is delivered with a UK power plug.

5051ETH | 5051UKETH

- This power supply is rated to power a full 19 inch rack of Digital Modular Headend devices. The extra DC connectors allow to place this power supply anywhere in the 19 inch rack.
2 power supplies can also be used in the same setup to create a redundant power supply system by connecting them on the same 15V rail.



5051ETH | 5051UKETH*

Input voltage	VAC	90 to 264
Output voltage	VDC / A	15 / 20 A
Output power	W	300
Weight	kg	2,2
Dimensions	-	5 RU x 12 TE x 330 mm

*The 5051UKETH is delivered with a UK power plug.

ACCESSORIES Fan Unit

5062ETH | 5062UKETH

5062ETH | 5062UKETH*

Input voltage	VAC	90 to 264
Power consumption	VA	35
Weight	kg	4,9
Dimensions	-	19" x 2 RU x 155 mm

*The 5062UKETH is delivered with a UK power plug.



Digital Modular Headends

ACCESSORIES 19" Sub-Rack

5060ETH

- Rack or wall mounting (fixings supplied)
- For all DMH products with a depth ≤ 195 mm



5060ETH		
Number of slots	-	Up to 9 modules (+ 1 power supply unit)
Blank plates	-	8 blank plates mounted
Weight	kg	3,3
Dimensions	-	19" x 5 RU x 195 mm

5065ETH

- Rack mounting
- For all DMH products with a depth > 195 mm



5065ETH		
Number of slots	-	Up to 9 modules (+ 1 power supply unit)
Blank plates	-	8 blank plates mounted
Weight	kg	4,55
Dimensions	-	19" x 5 RU x 367 mm

ACCESSORIES Mini Rack

5063ETH

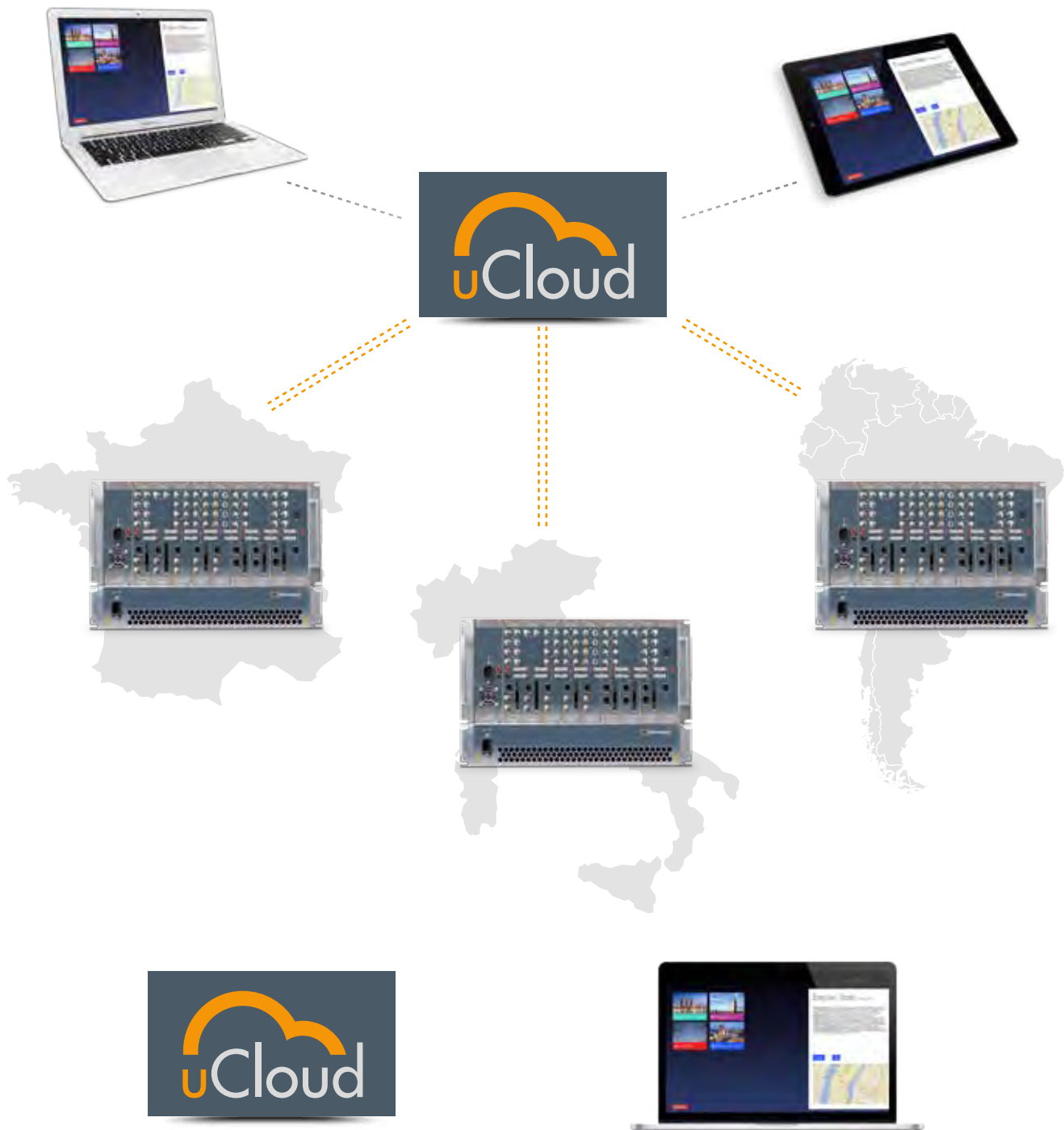
- Table or wall mounting
- For all DMH products with a depth ≤ 195 mm



5063ETH		
Number of slots	-	2
Blank plates	-	1, mounted
Weight	kg	2,2
Dimensions	mm	280 x 260 x 150

Digital Modular Headends

ACCESSORIES Remote Management System



Online platform

- ▶ Online driver library
- ▶ Available 24/7
- ▶ Multitenant architecture
- ▶ Always up to date
- ▶ Automatic device support
- ▶ Future proof

Centralized remote management tool

- ▶ Access all your systems from anywhere in the world
- ▶ Hosted solution: access your installation from every PC without installation
- ▶ Smart and bandwidth-efficient solution: HD screens, even with limited bandwidth
- ▶ Secure connection

Digital Modular Headends

ACCESSORIES Remote Management System

5950

- very simple installation
- powerful configuration and monitoring tool with extended graphical user interface (embedded Universal User Interface)
- no network knowledge needed
- use our uCloud to manage all your installations remotely: google maps overview of all your installations, one button-connect to any installation, add pictures and comments regarding the installation...
- safe remote access with certificates and password authentication
- solve problems from wherever you are



5950		
Connectors	-	2 x USB DC: banana sockets Control: 1 x RJ-45
LEDs	-	1 x alarm LED 1 x power LED 1 x status LED
Power Supply	VDC	15
Consumption	A	0,6
Dimensions	-	5RU x 8TE x 180 mm

The Remote Management Unit (RMU) enables any authenticated user to configure or monitor a specific headend remotely. The RMU is a very smart and powerful solution which connects with a server hosted by us and enables you to connect to any of your installations with any PC or Internet-connected device.

Setup of the unit is as simple as it gets:



Put the RMU in the 19" rack.



Connect the RMU to an Internet-connected switch, together with the DMH modules.



Connect the power.



Go to our hosted website, login and enter the unique code visible on the RMU.



You can now connect to this module from wherever you are on any PC!



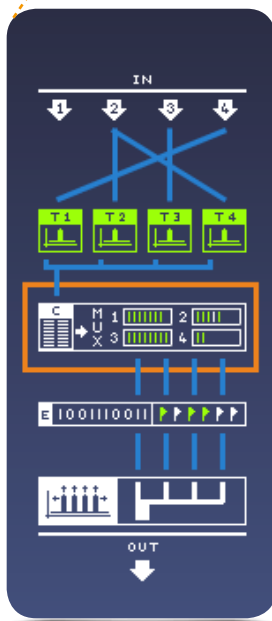
Digital Modular Headends

ACCESSORIES Remote Management System



System level management

- Automatic device discovery
- Overview of all devices in the system
- Direct remote connection on system level
- Direct device status overview
- Hybrid environment: supports configuration of Ethernet and coaxial devices



Rich and accessible user interface

- Import-export of settings
- Drag-and-drop functionality
- Status overview of your device
- Interactive dialogues and diagrams

Digital Compact Headends

- ▶ Johansson developed a nice and versatile range of Digital Compact Headends.

A first product is the new Universe PRO3. This 19" rack mountable Universal Compact Headend enables you to receive 3 transponders from any DVB source (satellite, terrestrial and/or cable) and put it decrypted on your coaxial and IP network.

This Universe PRO3 can also be used as an add-on in your DMH system to enable the DMH to receive DVB-T2 and/or DVB-C signals.

A second product range is the well known Colosseum. Already shortly after the introduction in Germany, these compact TV distribution stations were recommended by several magazines for their ease of use, compactness and most off all, powerful performance! The Colosseum is the perfect solution for hotels, motels, recreation parks, hospitals,... to replace the old analogue TV distribution system with a fully digital one!



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DIGITAL COMPACT HEADEND

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NEW



Digital Compact Headends

NEW

RACK MOUNTABLE Universe PRO 3

This rackmountable Universal Compact Headend enables you to receive any transponder from satellite, terrestrial or cable and put it on your coaxial and IP network.

5600



- receives 3 transponders from any DVB source (satellite, terrestrial or cable)
- decrypts the PayTV channels, when one or more professional CAMs are inserted
- puts the demodulated transponders on your private coaxial and IP network
- can work standalone to insert channels in your existing network
- compatible with SD and HD, with MPEG2 and MPEG4
- supports LCN
- perfect picture quality thanks to a MER, comparable to premium headend equipment
- Plug&Play thanks to a built-in WebGUI

5600

Input		
Number of inputs	-	3
Tuners	-	3
Frequency range	MHz	42-2150
Input level	dBm	-65 to -20
Standard	-	DVB-S/S2 DVB-T/T2 DVB-C
DC remote power for LNB or LNA	V mA	0 / 13 / 18 / 22 kHz / DiSEqC, EN50494, EN50607 350
RF Output		
Number of outputs	-	1 RF with passive loop-through (-8 dB)
Multiplexes	-	3
Frequency range	MHz	174-862
Output level	dBm	-55 to -10 (adjustable)
Standard	-	DVB-T ISDB-T
Modulation error rate (MER)	dB	40
Ethernet output		
Number of outputs	-	3 Gb Ethernet
Standard	-	IEEE 802.3ab 10/100/1000 Base-T
Protocol	-	Multicast IP/UDP
Transport stream	-	SPTS/MPTS*
General		
CI slot	-	3
Input voltage	Vac	100-240, 50/60 Hz
Power consumption	W	30 (without CAM and without remote power)
Operating temperature	°C	0 to +50
Dimensions	-	19 inch x 1RU x 240mm
Weight	kg	3,4
Accessories	-	mains cable, 3 Ethernet cables



*Full MPTS from DVB input transponder

Digital Compact Headends

COLOSSEUM DVB-T CI

The Colosseum DVB-T CI (ref. 8501) is a plug & play compact headend for digital TV. The device is ready to distribute up to 64 satellite programs in DVB-T (COFDM). The only thing you have to do is plug in the cables, configure the channels you want and scan the TV's. This makes it an ideal solution to replace the old analogue headends during or after a switch-off from analog to digital.

8501

- plug&play compact headend
- 8 transponders / 4 satellite bands / 8 COFDM multiplexes
- 2 CI slots: decode up to 32 encoded services
- unit is easily programmable with a built-in webGUI
- innovative and compact design



8506

- plug&play compact headend
- 4 transponders / 4 satellite bands / 4 COFDM multiplexes
- 1 CI slot: decode up to 16 encoded services
- innovative and compact design



Digital Compact Headends

COLOSSEUM DVB-T CI

		8506		8501	
Input: QPSK (DVB-S2)					
Number of inputs	-	4 satellite bands			
Tuner	-	4 tuners (4 transponders)		8 tuners (8 transponders)	
Frequency range	MHz	950-2150			
Level	dBm	-55 to -25			
Bandwidth	MHz	36			
Modulation	-	DVB-S2: QPSK, 8-PSK DVB-S: QPSK			
LNB power (DC+tone)	V	0/13/18 + 22kHz DiSEqC®			
LNB current per input	mA	max. 250			
Output: COFDM (DVB-T)					
Number of outputs	-	1			
Frequency range	MHz	47-862 (VHF-UHF)			
Multiplexes	-	4 adjacent		2 x 4 adjacent	
Channel bandwidth	MHz	6/7/8			
Modulation	-	QPSK, 16-QAM, 64-QAM			
OFDM mode	-	2K			
Forward Error Correction (FEC)	-	1/2, 2/3, 3/4, 5/6, 7/8			
Guard interval	-	1/4, 1/8, 1/16, 1/32			
Modulation Error Rate (MER)	dB	40			
Spectral inversion	-	yes			
Output level	dBµV	68 to 83 adjustable			
CI-slot	-	1 slot		2 slots	
Capacity	-	up to 32 programs		up to 64 programs	
General					
Connectors	-	RF: 10 x "F" connector female Management: 1 x RJ-45 (Ethernet) DC: banana sockets		RF: 20 x "F" connector female Management: 2 x RJ-45 (Ethernet) DC: banana sockets	
Power supply	VDC	15			
Consumption	A	1,5		3	
Operating temperature	°C	0 to +40			
Dimensions	mm	280 x 260 x 150			

Digital Compact Headends

COLOSSEUM DVB-T

The Colosseum DVB-T (ref. 8500) is a plug & play compact headend for digital TV. The device is ready to distribute up to 64 satellite programs in DVB-T (COFDM). The only thing you have to do is plug in the cables, configure the channels you want and scan the TV's. This makes it an ideal solution to replace the old analogue headends during or after a switch-off from analog to digital.

8500

- plug&play compact headend
- 8 transponders / 4 satellite bands / 8 COFDM multiplexes
- unit is easily programmable with a built-in webGUI
- innovative and compact design

DVB-T



8505

- plug&play compact headend
- 4 transponders / 4 satellite bands / 4 COFDM multiplexes
- unit is easily programmable with a built-in webGUI
- innovative and compact design

DVB-T



Digital Compact Headends

COLOSSEUM DVB-T

		8505	8500
Input: QPSK (DVB-S2)			
Number of inputs	-	4 satellite bands	
Tuner	-	4 tuners (4 transponders)	8 tuners (8 transponders)
Frequency range	MHz	950-2150	
Level	dBm	-55 to -25	
Bandwidth	MHz	36	
Modulation	-	DVB-S2: QPSK, 8-PSK DVB-S: QPSK	
LNB power (DC+tone)	V	0/13/18 + 22kHz DiSEqC®	
LNB current per input	mA	max. 250	
Output: COFDM (DVB-T)			
Number of outputs	-	1	
Frequency range	MHz	47-862 (VHF-UHF)	
Multiplexes	-	4 adjacent	2 x 4 adjacent
Channel bandwidth	MHz	6/7/8	
Modulation	-	QPSK, 16-QAM, 64-QAM	
OFDM mode	-	2K	
Forward Error Correction (FEC)	-	1/2, 2/3, 3/4, 5/6, 7/8	
Guard interval	-	1/4, 1/8, 1/16, 1/32	
Modulation Error Rate (MER)	dB	40	
Spectral inversion	-	yes	
Output level	dBµV	68 to 83 adjustable	
Capacity	-	up to 32 programs	up to 64 programs
General			
Connectors	-	RF: 10 x "F" connector female Management: 1 x RJ-45 (Ethernet) DC: banana sockets	RF: 20 x "F" connector female Management: 2 x RJ-45 (Ethernet) DC: banana sockets
Power supply	VDC	15	
Consumption	A	1,5	3
Operating temperature	°C	0 to +40	
Dimensions	mm	280 x 260 x 150	

Digital Compact Headends

COLOSSEUM DVB-C

The Colosseum DVB-C (ref. 8550) is a plug & play compact headend for digital TV. The device is ready to distribute up to 64 satellite programs in DVB-C (QAM). The only thing you have to do is plug in the cables, configure the channels you want and scan the TV's. This makes it an ideal solution to replace the old analogue headends during or after a switch-off from analog to digital.

8550

- plug&play compact headend
- 8 transponders / 4 satellite bands / 8 QAM multiplexes
- unit is easily programmable with a built-in webGUI
- innovative and compact design



8555

- plug&play compact headend
- 4 transponders / 4 satellite bands / 4 QAM multiplexes
- unit is easily programmable with a built-in webGUI
- innovative and compact design



Digital Compact Headends

COLOSSEUM DVB-C

		8555	8550
Input: QPSK (DVB-S2)			
Number of inputs	-	4 satellite bands	
Tuner	-	4 tuners (4 transponders)	8 tuners (8 transponders)
Frequency range	MHz	950-2150	
Level	dBm	-55 to -25	
Bandwidth	MHz	36	
Modulation	-	DVB-S2: QPSK, 8-PSK DVB-S: QPSK	
LNB power (DC+tone)	V	0/13/18 + 22kHz DiSEqC®	
LNB current per input	mA	max. 250	
Output: QAM (DVB-C)			
Number of outputs	-	1	
Frequency range	MHz	47-862 (VHF-UHF)	
Multiplexes	-	4 adjacent	2 x 4 adjacent
Channel bandwidth	MHz	6/8	
Modulation	-	6 MHz: 64-QAM 8 MHz: 64-QAM/256-QAM	
Modulation Error Rate (MER)	dB	40	
Spectral inversion	-	yes	
Output level	dBµV	68 to 83 adjustable	
Capacity	-	up to 32 programs	up to 64 programs
General			
Connectors	-	RF: 10 x "F" connector female Management: 1 x RJ-45 (Ethernet) DC: banana sockets	RF: 20 x "F" connector female Management: 2 x RJ-45 (Ethernet) DC: banana sockets
Power supply	VDC	15	
Consumption	A	1,5	3
Operating temperature	°C	0 to +40	
Dimensions	mm	280 x 260 x 150	

Digital Compact Headends

COLOSSEUM AV

The Johansson Colosseum AV is the perfect solution to distribute AV sources (DVD, set-top boxes, PC, Camera,...) over the coaxial distribution network in DVB-T (COFDM) format. The Colosseum AV is a compact and plug&play solution.

- ref. 8530/8530UK: distribute up to 8 AV sources over the coaxial network in digital (DVB-T) format
- ref. 8535/8535UK: distribute up to 4 AV sources over the coaxial network in digital (DVB-T) format
- compact and innovative design
- easy plug&play installation
- edit all kinds of parameters: LCN numbers (configurable for all countries), resolution, brightness, aspect ratio, hue, saturation, ...
- configure with built-in webGUI

8530 | 8530 UK
8535 | 8535 UK



8535/8535UK*

8530/8530UK*

Input: CVBS (A/V)

Number of inputs	-	4 x AV (CVBS)	8 x AV (CVBS)
Video processing	-	Conformance with IEC 13818-2 (MPEG2 video) and ISO/IEC 11172-3 (MPEG1 audio) standards	
Video resolution	-	SIF: 352 x 288 SVCD: 480 x 576 HALF D1: 352 x 576 D1: 720 x 576 544: 544 x 576	
Video bitrate	kbps	1500 to 7000 (Typ. 6000)	
Audio volume	dB	-6 to +6 (Typ. 0)	

Output: COFDM (DVB-T)

Number of outputs	-	1	
Frequency range	MHz	47-862 (VHF-UHF)	
Multiplexes	-	2 adjacent	2 x 2 adjacent
Channel bandwidth	MHz	6/7/8	
Modulation	-	QPSK, 16-QAM, 64-QAM	
OFDM mode	-	2K	
Forward Error Correction (FEC)	-	1/2, 2/3, 3/4, 5/6, 7/8	
Guard interval	-	1/4, 1/8, 1/16, 1/32	
Modulation Error Rate (MER)	dB	40	
Spectral inversion	-	yes	
Output level	dBµV	68 to 83 adjustable	
Capacity	-	4 Audio-Video services	8 Audio-Video services

General

Connectors	-	RF: 2 x "F" connector female Video input: 4 x CINCH Audio input: 4 x 3,5 mm jack Management: 1 x RJ-45 (Ethernet) DC: banana sockets	RF: 4 x "F" connector female Video input: 8 x CINCH Audio input: 8 x 3,5 mm jack Management: 2 x RJ-45 (Ethernet) DC: banana sockets
Power supply	VDC	15	
Consumption	A	1	2
Operating temperature	°C	0 to +40	
Dimensions	mm	280 x 260 x 150	

*The 8530UK and the 8535UK are delivered with a UK power plug.

Digital Modulator and Streamer



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DIGITAL MODULATOR AND STREAMER

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Digital Modulator and Streamer

HDMI MODULATOR

This HDMI modulator enables you to transmit your HDMI signal over your coaxial network.

8200 | 8200 UK

- 1 HDMI input, capable of receiving all standard resolutions
- 1 RF input, to by-pass terrestrial or cable signals
- 1 RF output, where the HDMI signal is added to the signals from the RF input
- perfect picture quality thanks to a MER, comparable to premium headend equipment
- easiest menu structure on the market with the Johansson rotary button and display
- lowest power consumption
- 8200UK is delivered with a UK power cord



8200 | 8200 UK

HDMI Input

Video resolution	-	576i up to 1080p
Video encoding	-	H264/AVC
Audio encoding	-	MPEG1 Layer II
Connector type	-	HDMI Type A

RF Input

Frequency	Mhz	5 - 1002
Loss to RF output	dB	2

RF Output (=RF Input signal + HDMI modulated transponder)

Modulated channel frequency	MHz	170-230 / 470-862 (channel plan: E5-E12 / E21-E69)
Output level	dBμV	75-90 (adjustable)
MER	dB	Typ. 40

DVB-T Settings

Modulation	-	2K/8K up to 18 Mbit/s
Constellation	-	QPSK / 16QAM / 64QAM
FEC	-	1/2 up to 7/8
Guard interval	-	1/4 up to 1/32
Channel bandwidth	MHz	7-8

Configuration

Basic configuration	-	Country Output Channel Frequency Output Level LCN Channel Name
Advanced configuration	-	RF Frequency Offset SID PMT, VPID, APID, PCR NIT, ONID PDS TS ID

Power & dimensions, etc...

Power	-	Input Voltage: 12 VDC Consumption: 5 WTyp. (7 W max.) Jack Ø 2.1 mm
Dimensions, weight, EAN code	-	180 x 175 x 65 mm 1 kg 2082000000011
Accessories	-	12 V power adapter 1.5 HDMI cable



Digital Modulator and Streamer

UNIVERSE

LCN SUPPORTED

This universal Compact Headend enables you to receive any transponder from Satellite, Terrestrial or Cable and put it on your coaxial and IP network.

- receives 1 transponder from any DVB source (satellite, terrestrial or cable)
- decrypts the PayTV channels, when a professional CAM is inserted
- puts the demodulated transponder on your private coaxial and IP network
- can work standalone to insert channels in your existing network
- more products can be combined to make a complete headend (cascadable inputs and outputs foreseen with remote powering capabilities)
- compatible with SD and HD, with MPEG2 and MPEG4
- supports LCN
- perfect picture quality thanks to a MER, comparable to premium headend equipment
- Plug&Play thanks to a built-in WebGUI

8600



Digital Modulator
and Streamer

8600

Input

Number of inputs	-	1 with passive loop-through (-2 dB)
Tuners	-	1
Frequency range	MHz	42-2150
Input level	dBm	-65 to -20
Standard	-	DVB-S/S2 DVB-T/T2 DVB-C
DC remote power for LNB or LNA	V mA	0 / 13 / 18 / 22 kHz / DiSEqC, EN50494, EN50607 350

RF Output

Number of outputs	-	1 RF with passive loop-through (-2 dB)
Multiplexes	-	1
Frequency range	MHz	174-862
Output level	dBm	-55 to -10 (adjustable)
Standard	-	DVB-T ISDB-T
Modulation error rate (MER)	dB	40

Ethernet output

Number of outputs	-	1 Gb Ethernet
Standard	-	IEEE 802.3ab 10/100/1000 Base-T
Protocol	-	Multicast IP/UDP
Transport stream	-	SPTS/MPTS*

General

CI slot	-	1
Input voltage	Vdc	12-20
Power consumption	W	7 (without CAM and without remote power)
DC jack	mm	Ø 2.1
Powering remote units	-	Yes, 1 unit can power other units
Operating temperature	°C	0 to +50
Dimensions	mm	222x142x50
Weight	kg	1,1
EAN-13 code	-	2086000000019
Accessories	-	15V Power adapter 1 Ethernet cable

DVB-S

DVB-S2

DVB-T

DVB-T2

DVB-C

ISDB-T

*Full MPTS from DVB input transponder

SAT>IP



INDEX

SAT>IP

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 - ▶ Multiswitch 39
-



SAT>IP™ is a revolutionary technology for the cost-effective distribution of satellite signals via in-home or private IP networks. The rack mountable **SAT>IP™** Multi Tuner SMATV server supports both dynamic and static operation; a combination of these modes is also possible.

In static mode the rack mountable **SAT>IP™** Multi Tuner SMATV server can receive signals from 4 satellite bands and multicast up to 32 channels on your private IP network to a large amount of clients.

In dynamic mode 32 clients can simultaneously watch every channel which is available on the 4 satellite bands.

5400



- 4 LNB inputs for Quattro or Quad LNB. If the LNB is not already powered use the 9930 for Quattro and Quad LNB
- 4 trunk outputs for cascading multiple server units
- support both static and dynamic operation
- streams satellite TV (SD and HD) and radio over IP
- configuration with built-in webserver

5400

Sat. input / Trunk output	-	4/4
Frequency	MHz	950 - 2150
Max. input level	dBμV	99
Min. input level	dBμV	51
Trunk loss	dB	5
Return loss in/out	dB	>10
Modulation	-	DVB-S(2): QPSK, 8-QPSK DVB-S: QPSK
Output	-	1 x RJ45 100 / 1000 Ethernet port
Users/channels	-	32
Protocol	-	SAT>IP V 1.2 compliant
Dynamic unicast	-	HTTP / RTSP
Static multicast	-	RTP
Power supply - mains	VAC	100 to 240 VAC, 50/60 Hz
Max. power consumption	W	40
Operating temperature	°C	0 to +50
Dimensions	mm	19" x 1RU x 400 mm

SAT > IP™

MULTISWITCH IP Multiswitch

SAT > IP™ enables you to watch satellite TV on your smart phone, tablets, PC and also your standard TV as well as smart TV. **SAT > IP™** is a revolutionary technology for the cost-effective distribution of satellite signals via in-home or private IP networks.

This **SAT > IP™** enabled multiswitch is the perfect solution to provide TV signals over **Ethernet** or **WiFi**. All channels available over satellite can be followed on hand-held devices, smartphones and tablets, using the **SAT > IP™** app for Android an iOS.

The **SAT > IP™ multiswitch** can be powered by Power over Ethernet (PoE), making an external power supply or adapter superfluous. In case the routers or switches in the building are not yet PoE-enabled, an optional PoE power supply can be delivered to power the unit.

This scalable multiswitch system can receive signals from 4 satellite bands and can distribute up to 16 IP streams through 2 Gigabit Ethernet ports. **This means 8 users per household can independently watch TV!**

- 4 LNB inputs for Quattro or Quad LNB
- 4 Trunk outputs for cascading with any type of Multiswitch, as well in new or existing installations
- 2 IP outputs, each supporting up to 8 independent users on a gigabit network
- streams satellite TV (SD and HD) and radio over IP

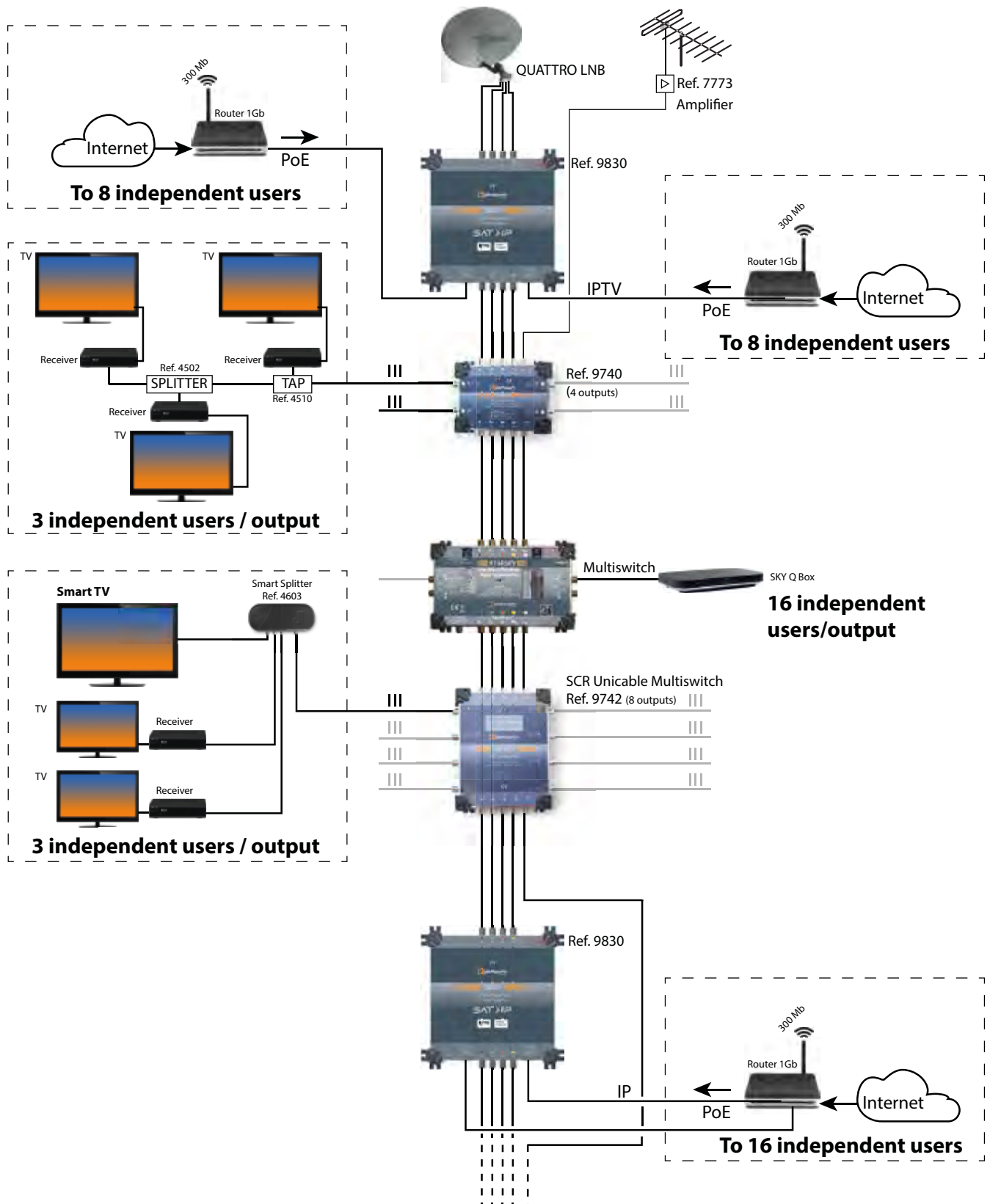
9830



9830

		9830
Inputs	-	4
Ethernet outputs	-	2 x RJ45 100 / 1000 Mbps port
Frequency	MHz	950 - 2150
Users/output	MHz	2 x 8 or 1 x 16
Protocol	-	SAT > IP™ V 1.2 compliant
Addressing	-	DHCP / AUTO - IP
PoE Powered Device	-	PD class 3
Max. input level	dBμV	99
Min. input level	dBμV	49
Trunk loss	dB	2,5
Return loss in/out	dB	> 10
Power supply (PoE)	VDC	48 (Power over Ethernet or optional external adapter)
Max. power consumption on each output port	W	8
Operating temperature	°C	0 to 50
Dimensions	mm	210 x 210 x 50





SAT Distribution (SCR & Legacy)

- Multiswitches are a key element in the distribution of satellite signals over coaxial cable throughout big buildings. In many cases there is only one coax cable available from the technical riser to the apartment.

UnitronGroup offers a wide range of multiswitches with integrated 'SCR' technology. With those multiswitches, you can connect multiple set-top boxes for multi-room applications to numerous satellites using one coax cable only!

By enabling Single Cable Router mode in Unitron's "Johansson SCR multiswitch" we simplify the deployment and lower the overall cost of satellite service installation.



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SAT Distribution (SCR & Legacy)

NEW

DIGITAL SCR LNB dLNB

The SCR technology has widely expanded the capabilities of satellite multiswitches. Since this technology is a great success in our products and on the market, it was the perfect time for Unitron to take the next step: putting the SCR technology into LNBs.

This opens up a lot of new and very cost effective solutions for our customers. Unitron has developed 2 different use cases for these digital LNB products, based on the following specifications.

24UB
User Bands

or

24TP
Transponders

32UB
User Bands

or

32TP
Transponders

9721 | 9722

- LNB, able to receive 1 Ku satellite orbital slot
- connect up to 24 or 32 users
- high output power (AGC controlled)
- low noise
- multistandard support: EN50494 / EN50607. Other standards, like FSK, on request
- both products can be programmed in static or in dynamic mode



		9721		9722
Input	-	1 Ku		
Input frequency	MHz	10700 – 12750		
Outputs	-	1		
Output SCR channels	-	24 - 32		32
Chipset	-	MaxLinear		Broadcom
Supported standards	-	EN50494 / EN50607		
Conversion gain	dB	Typ. 55		
Noise figure	dB	Typ. 0.7		
Cross polarization isolation	dB	25		
Output channel power	dBm	-25 (AGC)		
DC supply voltage	VDC	9 – 20		
Power consumption	W	4.5		5.5
Operating temperature	°C	-40 to +60		
LNB mount fitting	Ø mm	40		
Dimensions	mm	135 x 120 x 60		

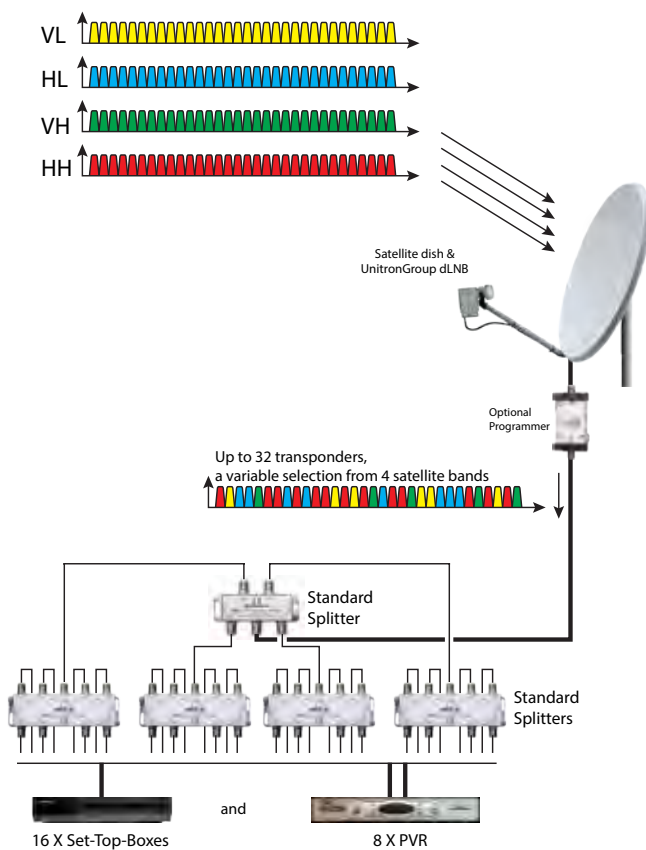
SAT Distribution (SCR & Legacy)

NEW

DIGITAL SCR LNB dLNB

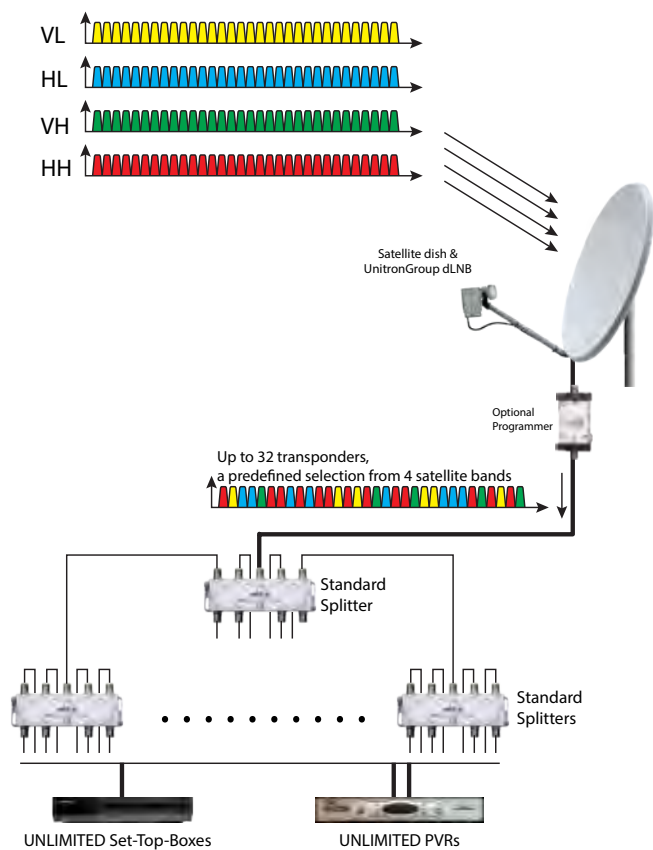
USE CASE 1

The first use case is for SFU or small MDU applications, where up to 32 users can connect to the dLNB. Each of those users can independently connect to any transponder of 1 satellite orbital position, for instance Astra 23.5°E. The following installation describes this "dynamic" setup:



USE CASE 2

The second use case is suited for all MDU applications, but the bigger the more cost effective this solution becomes. In fact the dLNB serves as a complete headend and if the system is well designed, the distribution of the satellite signal downstream from the LNB, can be done with simple splitters and taps. No need for expensive satellite distribution!! The way the dLNB is configured, can be done both by the installer or by the operator over the air. The following installation describes this "static" setup:



For more detailed information or cooperations, please contact our sales team.

SAT Distribution (SCR & Legacy)

NEW

DIGITAL SCR MULTISWITCH

Unitron offers a wide range of multiswitches with integrated 'SCR' technology. With those multiswitches, you can connect multiple set-top boxes for multi-room applications to numerous satellites using one coax cable only!



9731 | 9732

- up to 16 UBs per SCR Output
- supports all SCR standards
- ultra compact housing
- trunk output for cascading multiple products



		9731	9732
Trunk inputs	-	4	
Trunk outputs	-	4	
Frequency	MHz	950 - 2150	
Trunk loss	dB	3	
dCSS/dSCR outputs	-	1	2
dCSS/dSCR output connector	-	75 Ohm F type (Female)	
dCSS/dSCR UBs	-	16	16 + 16
dCSS/dSCR output level	dBμV	85	
Return loss	dB	>=8 (typ 12)	
Tap loss	-	Not applicable, AGC (automatic Gain control)	
Band and polarity selection	-	DiSEqC 1.0 (unidirectional) DiSEqC 2.0 (bidirectional) Standard EN 50494 (SCD) Standard EN 50607 (SCD2) SKY UK standard	
Max DC current consumption	mA	<300 @13Volt	<320 @13Volt
Power supply	-	From STB, power inserter or trunk (VL)	
Power inserter (2460 + 9669 available separately)	-	3A, 20V	
Dimensions	mm	90 x 80 x 40	

For optional power supplies, see compatibility matrix pag 55

SAT Distribution (SCR & Legacy)

NEW

DIGITAL SCR MULTISWITCH

The 974xSKY products are designed to support a wide range of new and existing multiswitch installations. Have a mixed network of STBs, not a problem with the Johansson SCR family of multiswitches. Auto detection of what type of STB is on the network, is built-in to all our solutions.



16UB
User Bands

9746SKY

- 8 SCR outputs
- up to 16 UBs per SCR Output
- auto detection for SCR and Legacy Mode
- support all SCR standards
- compatible with all Legacy STBs
- amplified/bypass terrestrial diplexer
- soft power-up mode for Legacy
- power diagnostics for trunk power
- supports the channelplan of the SKY Europe family of operators (SKY UK, SKY Italia and SKY Germany)



16UB
User Bands

9748SKY

- 16 SCR outputs
- up to 16 UBs per SCR Output
- auto detection for SCR and Legacy Mode
- support all SCR standards
- compatible with all Legacy STBs
- amplified/bypass terrestrial diplexer
- soft power-up mode for Legacy
- power diagnostics for trunk power
- supports the channelplan of the SKY Europe family of operators (SKY UK, SKY Italia and SKY Germany)



SAT Distribution
(SCR & Legacy)

JOHANSSON

Variants can be made on request.
Custom SW solutions are available to meet unique systems needs

SAT Distribution (SCR & Legacy)

NEW

DIGITAL SCR MULTISWITCH



9744SKY



- 4 SCR outputs
- up to 16 UBs per SCR Output
- auto detection for SCR and Legacy Mode
- support all SCR standards
- compatible with all Legacy STBs
- amplified/bypass terrestrial diplexer
- soft power-up mode for Legacy
- power diagnostics for trunk power
- supports the channelplan of the SKY Europe family of operators (SKY UK, SKY Italia and SKY Germany)

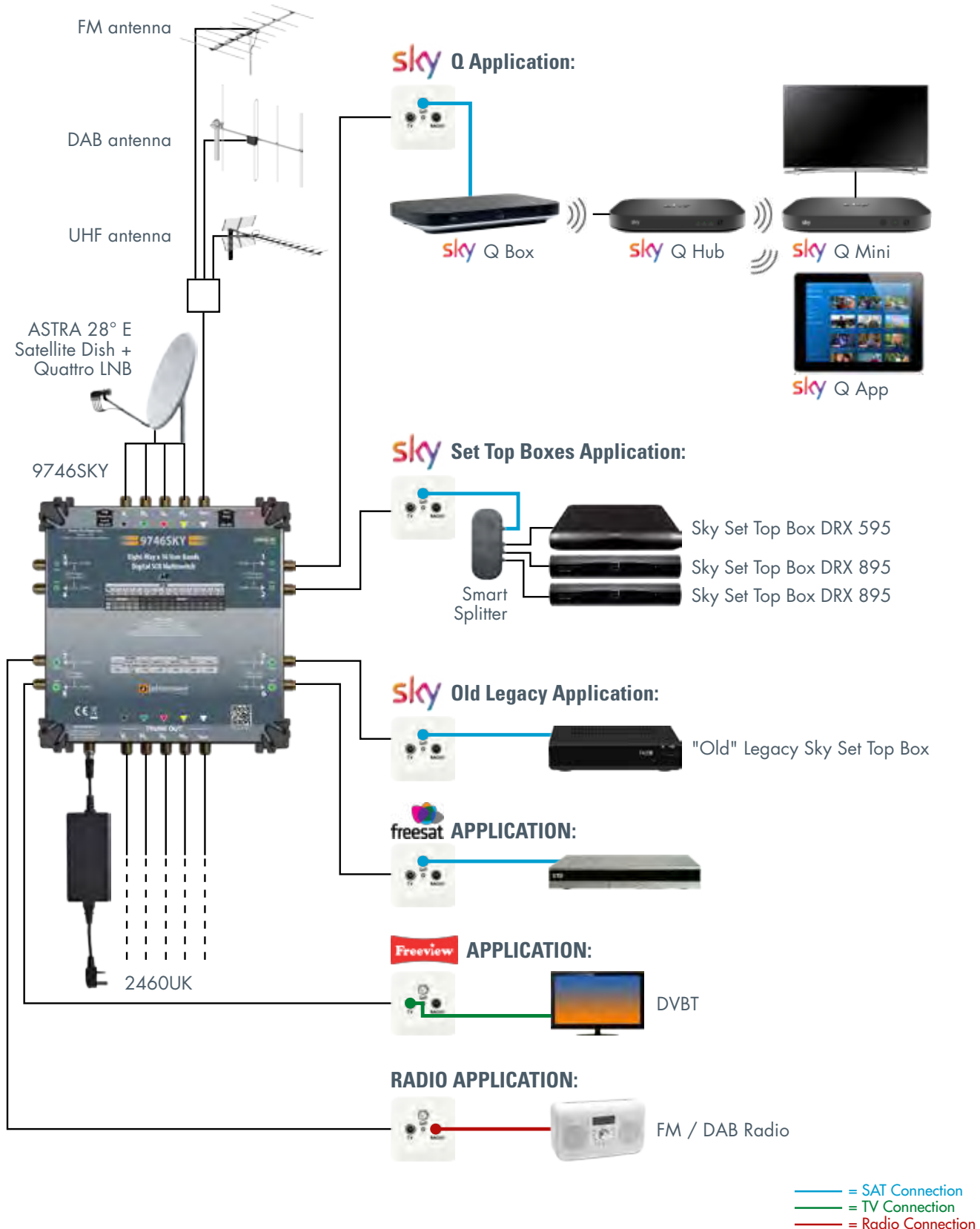
			9744SKY	9746SKY	9748SKY
SATELLITE	Operating Frequency Range	MHz	950 – 2150		
	Inputs	–	4		
	Outputs* (Trunk)	–	4		
	Max. and Min. Input Txp Power Level	dBm	-35 to -5		
	Trunk lines IN to OUT	dB	-2.5 max. (-1.5 typical)	-4 max. (-2.5 typical)	-9 max. (-6 typical)
	IN to SCR OUT gain	dB	-15 to +15 typical, AGC controlled		
	IN to Legacy OUT gain	dB	-13 max. (-8 typical)		
	Return Loss	dB	>8		
	Operating Frequency Range	MHz	88-790		
TERRESTRIAL	Inputs	–	1		
	Outputs* (Trunk)	–	1		
	Max. Input Mux Power Level	dBpV	Amplified: 96	Amplified: 96	Amplified: 88
	Trunk lines IN to OUT	dB dB dB	Bypass: -7 max. (-5 typical) Amplified: +4 min. (+6 typical)	Bypass: -10 max. (-8 typical) Amplified: +1 min. (+3 typical)	Bypass: -20 max. (-16 typical) Amplified: +2 min. (+6 typical)
	IN to SCR OUT gain	dB dB dB dB	Bypass: -23 max. (-17 typical) Amplified: -12 max. (-6 typical)	Bypass: -27 max. (-21 typical) Amplified: -16 max. (-10 typical)	Bypass: -34 max. (-24 typical) Amplified: -16 max. (-10 typical)
DSCR OUTPUT PORTS	dSCR Output ports	–	4	8	16
	Supported output Modes	–	SCR + Legacy + DTT / DAB / FM		
	SCR Mode Indication	–	Multicolor / Flashing LED		
	SCR Output Power per Txp	dBm	-23 min. (-21 typical), AGC controlled		
	SCR Channel bandwidth	MHz	46		
	SCR User bands	–	16		
	SCR Standard (auto detect a switch)	–	SKY UK SCR, CENELEC EN50494, CENELEC EN50607, Universal LNB Tone & Voltage		
	Legacy Output Power per Txp	dBm	Up to -15, no AGC		
	DiSEqC signaling	–	DiSEqC compliant		
DC POWER	DC Power Connector	–	Unit can be powered via PWR port, trunk lines or outputs (all F-type)		
	Power Indication	–	Green LED (front of unit)		
	Power Supply Voltage	VDC	10 to 20	10 to 20	10 to 20 (from STB) 11 to 20 (from PWR port)
	Max. Power Consumption	W	SCR mode: 6 (per pair of ports) LNB emulation mode: <2 (per port - Ter Amp OFF)		
	DC from trunk lines OUT to IN	–	Yes (not for terrestrial trunk)		
	Supply current to LNB (switchable)	mA	500 (@ 20 V)		
	Short Circuit protection & Power on Diagnostics	–	Yes		
	Ground Post	–	1		
	Operating temperature Range	°C	-20 to +50 (indoor housing)		
	Dimensions	mm	223 x 143 x 50	223 x 223 x 50	223 x 423 x 50

*Unused ports need to be terminated by 75 Ohm DC-blocked terminators
For power supplies: see page 55 with 2460 and 2461

SAT Distribution (SCR & Legacy)

DIGITAL SCR MULTISWITCH

TYPICAL APPLICATION FOR THE UK:



SAT Distribution (SCR & Legacy)

NEW

DIGITAL SCR MULTISWITCH



Over the last few years, standard (Legacy) multiswitches have been replaced by more efficient SCR multiswitches, see the 9730I through 9762 product range. 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 5 times more efficient. Or improve the user experience by allowing each family to have 5 tuners installed per apartment. This is ideal for multiroom viewing experiences without sacrificing the possibility of watch-and-record features.

Today, Unitron is proud to announce this digital SCR multiswitch with 5 userbands per outlet and allowing up to 4 satellite orbital positions, when using wideband LNBs.

9775

- 8 satellite wideband inputs
 - compatible with 4 wideband LNBs
 - compatible with 2 Quattro LNBs
- 6 SCR outputs with each 5 User Bands
- 1 CATV input
- 1 Terrestrial input

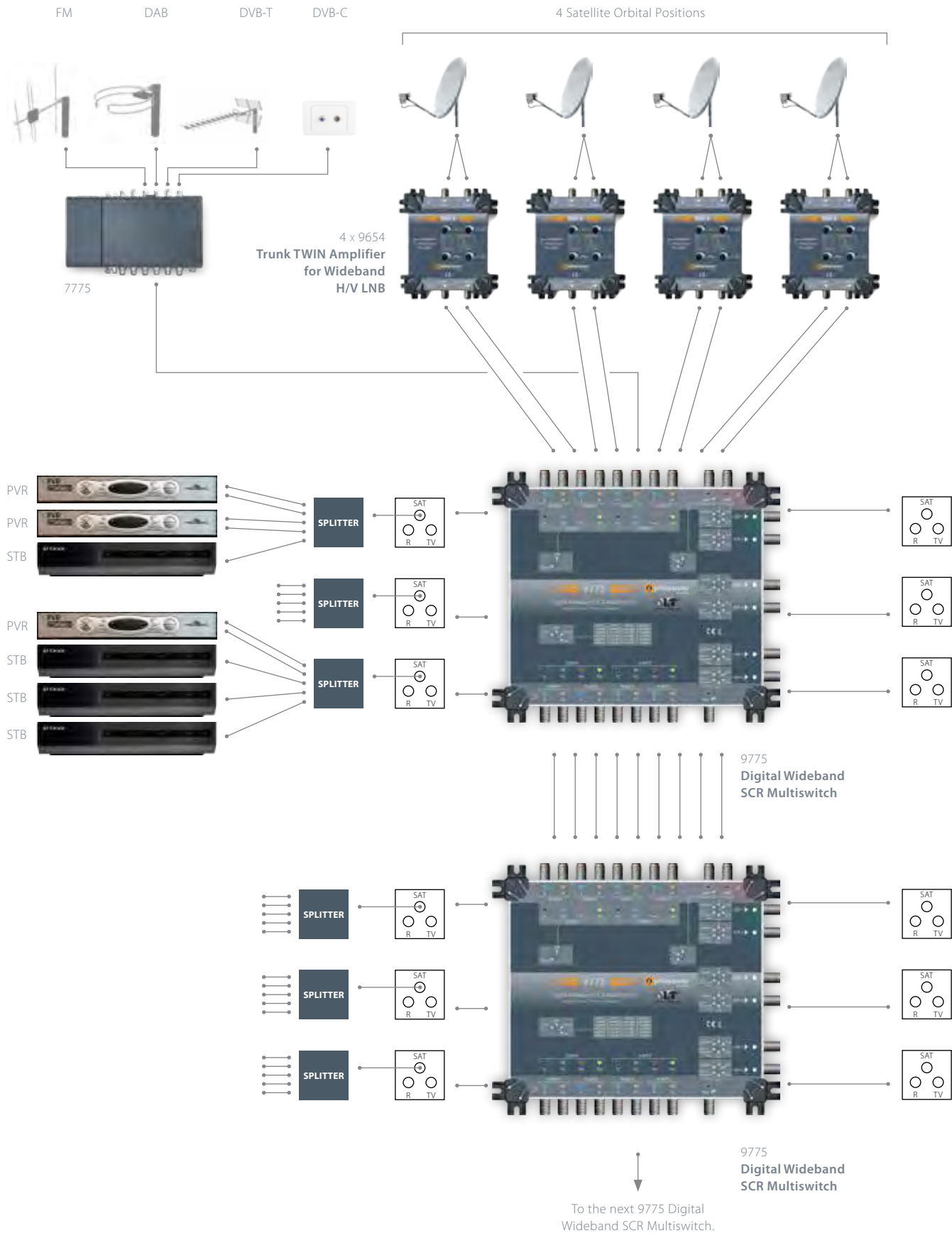


9775

Inputs	-	1 x CATV 1 x Terrestrial 8 x Satellite
Outputs	-	6 outputs (up to 30 SCR tuners)
Frequency	MHz	Terr. / CATV: 5-1002 (DOCSIS compatible) Sat. In: 290-2340
SCR channels (5 users/output)	MHz	Configurable between 1210 and 1688
Supported standards	-	EN50494/EN50607 / SKY UK
Trunk insertion loss	dB	Terr.: -5 Sat.: -3
Tap insertion loss	dB	Terr.: -16 or -6 (switchable)
Output level	dBµV	85 (AGC controlled)
Consumption	W	15
Dimensions	mm	220 x 250 x 50

SAT Distribution (SCR & Legacy)

DIGITAL SCR MULTISWITCH application with wideband LNBS



SAT Distribution (SCR & Legacy)

SMART SPLITTER

Standard splitters can give collisions when two commands come at the same time or when one of the set-top boxes uses a permanent high voltage. A smart splitter captures the commands of the different set-top boxes and serializes them to guarantee no collisions happen.

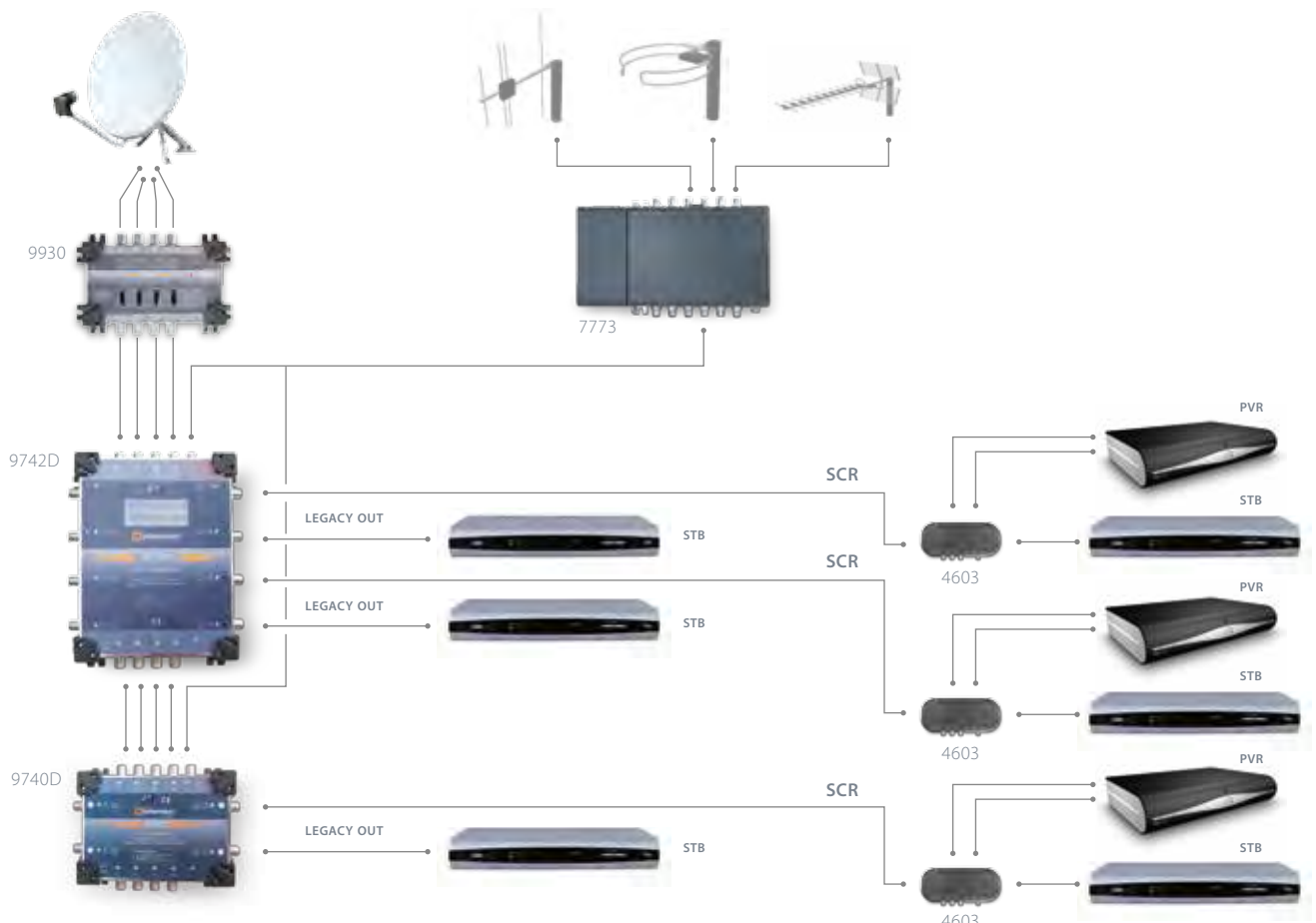


4603



- indoor housing
- 3-way
- no power adapter needed
- buffers and sends out the different command signals

4603		
Way	-	3
Frequency	MHz	5-2150
Insertion Loss	dB	9
Return loss in/out	dB	> 10
DC power pass	mA	500 max.
Input voltage	VDC	10 min. / 20 max.
Message buffer	-	3/receiver port
Dimensions	mm	40 x 68 x 140
Supported standards	-	Sky UK, EN 50494



SAT Distribution (SCR & Legacy)

MULTI BAND CONVERTER Stacker - Destacker

The Stacker-Destacker is the perfect solution to upgrade an old single-cable system with a twin (or quad) LNB to be used in combination with a dual input receiver (PVR) or 2 separate single input receivers. The advantage of using the Stacker-Destacker is that you don't need an additional cable. The Stacker converts the frequencies of the second input, so it is literally stacked above the frequencies of the first input. The Destacker converts the frequencies back to the original ones.

This new version of the Stacker-Destacker doesn't need an additional power adapter by default. Thanks to the built-in attenuator with adjustment, it is protected against high input signals, avoiding saturation of the device.

- no power adapter needed! Power the device with the satellite receiver.
- built-in switchable attenuator to protect against high input signals
- Transparent for unidirectional DiSEqC® (receive signals from up to 4 satellites)
- wide band 5-2150 MHz to combine terrestrial signals (FM, DAB, TV)
- no additional coax cable needed between dish and receiver
- no need to replace the existing cable
- transparent system
- no degradation of picture
- HD compliant

9645 KIT



Stacker



Destacker

9645 KIT			
		Stacker	Destacker
Input	-	2	1
Input frequency	MHz	5-2150 MHz / 950-2150 MHz	5-3550 MHz with "F" High Quality connector
Output	-	1	2
Output	MHz	5-3550 MHz with "F" High Quality connector	5-2150 MHz / 950-2150 MHz
Insertion loss/gain	dB	-1 @ 5-862 MHz -3 @ 950-2150 MHz Converted Sat.Pos. 1 (0 dB)= +6 Converted Sat. Pos. 2 (10 dB att.)= +4	-1 @ 5-862 MHz -3 @ 950-2150 MHz Converted Sat.= +5
Max. Input level*	dBµV	pos. 1 (0 dB) = 88 Pos. 2 (10 dB att.) = 98	-
Consumption	W	160 max. Optional power adaptor available for more LNB current. Ø 2.1 mm **	
Dimensions	mm	125 x 115 x 45	150 x 90 x 40
General specification	-	Operating system up to 75 m CT100 or 17 VAiC coaxial cable	

* Sat.: -35 dBc/IM3

** Optional power adaptor only needed in extreme situations: ref. 2452 (24 Vdc)



SAT Distribution (SCR & Legacy)

NEW

POWER SUPPLY FOR dSCR

This power supply is designed to power the trunk lines or the DC input connector.

2460 | 2460UK

		2460 2460UK
Input voltage	VAC	100 - 240
Output voltage	VDC	20
Output current	A	3,25
Output Connector	-	F-type
Dimensions	mm	115 x 55 x 35



POWER SUPPLY/2-WAY SMARTSPLITTER

NEW

This power inserter (with integrated smart splitter) is designed to power the dSCR products from the dSCR outputs (in case the set-top box does not provide enough power).

- powers SCR products without overloading the set-top boxes
- copies the set-top box voltage, tone and DiSEqC to the SCR product (EN50494 and EN50607)

2461

		2461
Inputs	-	1
Outputs	-	2
Frequency range	MHz	950 - 2150
Insertion loss	dB	6
Return loss	dB	> 10
Input voltage	VAC	100 - 240
Output voltage	VDC	18
Output current	mA	500
Dimensions	mm	110 x 94 x 41
Supported standards	-	EN50494, EN50607

* 2461US available with US plug



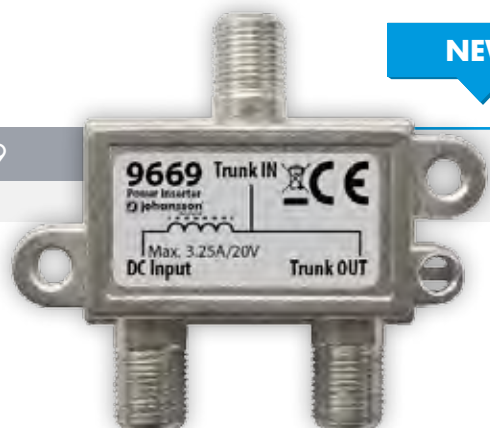
POWER SUPPLY INSERTER

NEW

- this product enables you to add DC-power on to a coaxial cable

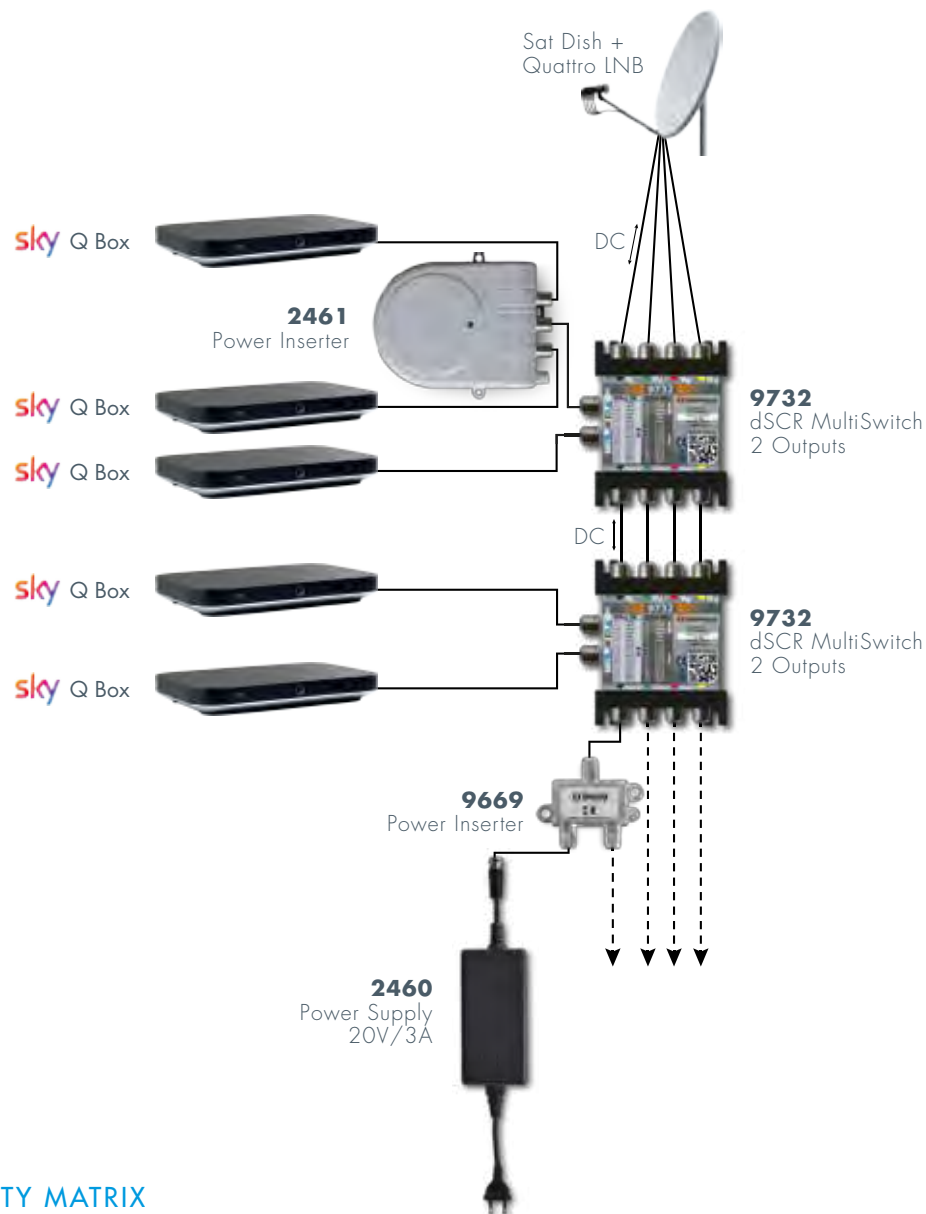
9669

		9669
Frequency range	MHz	250 - 2340
Insertion loss	dB	1
DC power pass	A	3,25
Dimensions	mm	61 x 51 x 16



SAT Distribution (SCR & Legacy)

POWER SUPPLY Power adaptors for SCR



COMPATIBILITY MATRIX

	Trunk Powering		SCR Output Powering
	9933 9933UK	2460 2460UK	2461
9731 / 9732	No	Yes, with 9669	Yes, only non UK applications
974xSKY	No	Yes	Yes, only non UK applications Terrestrial channels will be blocked
9775	Yes	Yes, with 9669	Yes, only non UK applications Terrestrial channels will be blocked
974x 975x 976x I-versions	Yes, only to power the LNB, not to power the product	No	Yes, only non UK applications Terrestrial channels will be blocked

SAT Distribution (SCR & Legacy)

LNB POWER INSERTER

The 9930 is a satellite power inserter, which can be used to ensure a universal LNB is locked on the correct satellite band. Each of the 4 inputs can be configured to deliver the desired control signals (13/18V + 0/22 kHz). The selected control signal is indicated by a bi-color LED.

- 4 satellite inputs / 4 satellite outputs
- frequency range: 5-2150 MHz
- current/input: up to 350 mA
- low insertion loss: <1 dB
- independent satellite band for each input (indicated by bi-color LED)

9930 | 9930UK

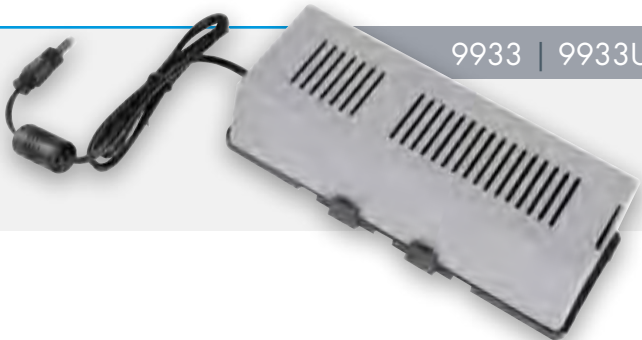


		9930 9930UK
Inputs	-	4
Frequency range	MHz	5 - 2150
Insertion loss	dB	< 1
Isolation between ports	dB	> 35
Return loss	dB	> 10
Control signals	VDC	switchable : 13/18/13 + tone/18 + tone
Added power supply adapter	-	20V - 1A
Dimensions	mm	158 x 102 x 51

POWER SUPPLY

- compatible with:
 - 9740/9742/9750/9752/9760/9762 + I-versions
 - 9934/9935
 - 9775

9933 | 9933UK



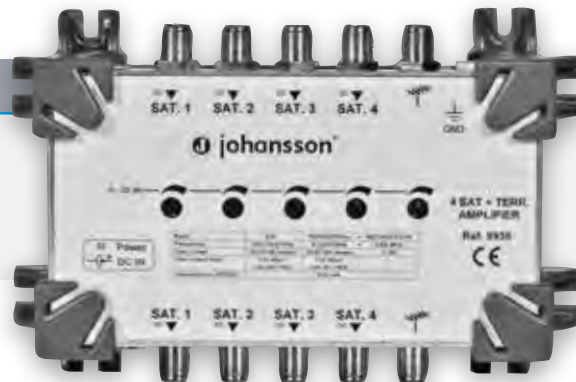
		9933 9933UK
AC input	-	230 V~ / 50 Hz
DC output	VDC	15
Max. Output/ current	A	2
Connector	mm/female	Jack 2,1
Dimensions	mm	176 x 71 x 47

SAT Distribution (SCR & Legacy)

SATELLITE IF AMPLIFIERS

- separate adjustment for sloped gain on every line
- DC input for powering trunk line amplifiers & LNB
- works from 12 to 20 VDC

9935



NEW

Compatible with Wideband LNBs

9654

SAT Distribution
(SCR & Legacy)

		NEW	
		9935	9654
Inputs	-	4 SAT + 1 TERR	2 SAT
Outputs	-	5	2
Frequency range	MHz	Sat.: 950-2300 MHz Terr.: 5-65 MHz + 87-862 MHz	290-2340
Gain	dB	Sat.: 20-25 dB(sloped) Terr.: 87-862 MHz - 20-27 dB (sloped) return path: - 1 dB	30
Noise figure	dB	Sat.: 5 dB - Terr.: 6 dB	5
Gain adjustment	dB	Sat.: 20 dB - Terr.: 20 dB	15
Slope adjustment	dB	-	15
Max. Output level	-	Sat.: 110 dBμV (-35 dB/IM3) Terr.: RP: passive 87-862 MHz: 114 dBμV (-54 dB/IM3)	110 dBμV (-35 dB/IM3)
Consumption	-	200 mA from 20 VDC external power supply or input/output	150mA from 20 VDC external power supply or input/output
Dimensions	mm	158 x 102 x 51	129 x 114 x 51

SAT Distribution (SCR & Legacy)

SATELLITE SPLITTER

9937



- 2-way satellite splitter
- terrestrial input/output
- DC power pass
- 5 dB loss

9937		
Nb of inputs	-	4 SAT + 1 Terr
Nb of outputs	-	2 x 5
Frequency range	MHz	Sat.: 950-2300 Terr.: 5-862
Loss	dB	Sat.: 5 - Terr.: 5
DC power pass in / out	-	yes
Dimensions	mm	158 x 162 x 51

SATELLITE TAPS

9938

9939



- 2-way satellite tap
- terrestrial input/output (ref. 9939)
- DC power pass
- loss: 10 dB (tap loss) / 1 dB (through loss)

		9938	9939
Nb of inputs	-	4 SAT	4 SAT + 1 TERR
Nb of outputs	-	4 taps/ 4 through	5 taps/ 5 through
Frequency range	MHz	950-2300	Sat.: 950-2300 Terr.: 5-862
Tap loss	dB	-10	Sat.: -10 Terr.: -13
Through loss	dB	-1	Sat.: -1 Terr.: -1
DC power pass in/tap/out	-	yes	yes
Dimensions	mm	142 x158 x 51	142 x 158 x 51

SAT Distribution (SCR & Legacy)

ADDITIONAL PRODUCTS

SCR MULTISWITCH

4+1

4 outputs	UB frequencies	8 outputs	UB frequencies
9740	1280 / 1382 / 1484 MHz	9742	1280 / 1382 / 1484 MHz
9740 I	1210 / 1420 / 1680 MHz	9742 I	1210 / 1420 / 1680 MHz

8+1

4 outputs	UB frequencies	8 outputs	UB frequencies
9750	1280 / 1382 / 1484 MHz	9752	1280 / 1382 / 1484 MHz
9750 I	1210 / 1420 / 1680 MHz	9752 I	1210 / 1420 / 1680 MHz

16+1

4 outputs	UB frequencies	8 outputs	UB frequencies
9760	1280 / 1382 / 1484 MHz	9762	1280 / 1382 / 1484 MHz
9760 I	1210 / 1420 / 1680 MHz	9762 I	1210 / 1420 / 1680 MHz

MULTISWITCH

4+1

4 outputs		Sat.	Ter.
9942	cascadable	-10 dB	-15 dB
9943	end unit	-5 dB	-15 dB

6 outputs		Sat.	Ter.
9946	cascadable	-10 dB	-15 dB
9947	end unit	-5 dB	-15 dB

8 outputs		Sat.	Ter.
9950	cascadable	-10 dB	-20 dB

12 outputs		Sat.	Ter.
9954	cascadable	-10 dB	-20 dB
9955	end unit	-5 dB	-20 dB

16 outputs		Sat.	Ter.
9958	cascadable	-10 dB	-25 dB

8+1

8 outputs		Sat.	Ter.
9980	cascadable	-10 dB	-20 dB
9981	end unit	-5 dB	-20 dB

12 outputs		Sat.	Ter.
9984	cascadable	-10 dB	-20 dB
9985	end unit	-5 dB	-20 dB

ACTIVE SPLITTER

4492	2 Way Splitter	40 MHz - 3,6 GHz, 2 dB gain
4494	4 Way Splitter 3,6 GHz	40 MHz - 3,6 GHz, 2 dB gain
4498	8 Way Splitter 3,6 GHz	40 MHz - 3,6 GHz, 3 dB loss

Wideband Satellite Distribution

- Wideband Satellite Distribution is a new and more efficient way of distributing satellite signals. While in universal LNBs, the Ku band is split in a low and high part for both vertical and horizontal polarisation, the wideband LNB converts each polarisation as a whole, leaving only 2 cables coming from the LNB.

This is a much more efficient way of distribution, with the following benefits.

- lower consumption in all products of the distribution
- lower cost of the products
- less cables needed, making the installation cheaper
- less connections, which leads to a more reliable system



INDEX

WIDEBAND SATELLITE DISTRIBUTION

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▶ Wideband Amplifiers	64	NEW
▶ Wideband Splitters and Taps	65	NEW



Wideband Satellite Distribution

NEW

WIDEBAND LNB

The first product in this wideband satellite range is the Wideband LNB. It receives any standard Ku satellite signal and generates a Horizontal and Vertical IF signal. Each output contains both the low and the high band of the polarization.

9720

- LNB, able to receive 1 Ku satellite orbital slot
- 1 Horizontal and 1 Vertical output
- low noise
- output frequency range 290-2340 MHz



9720		
Input	-	1 Ku
Input frequency	MHz	10,700 - 12,750
Outputs	-	2
Output frequency	MHz	290 - 2340
LO frequency	MHz	10 410
Conversion gain	dB	Typical 55
Noise figure	dB	Typical 0.7
Cross polarization isolation	dB	25
Output power	dBm	-25
DC supply voltage	VDC	9 - 20
Power consumption	W	1
Operating temperature	°C	-40 to +60
LNB mount fitting	Ømm	40
Dimensions	mm	135 x 120 x 60

Wideband Satellite Distribution

NEW

WIDEBAND TO QUATTRO CONVERTOR

This wideband to quattro convertor makes it possible to upgrade a complete system to a wideband application, without disabling the homes that do not have wideband tuners.

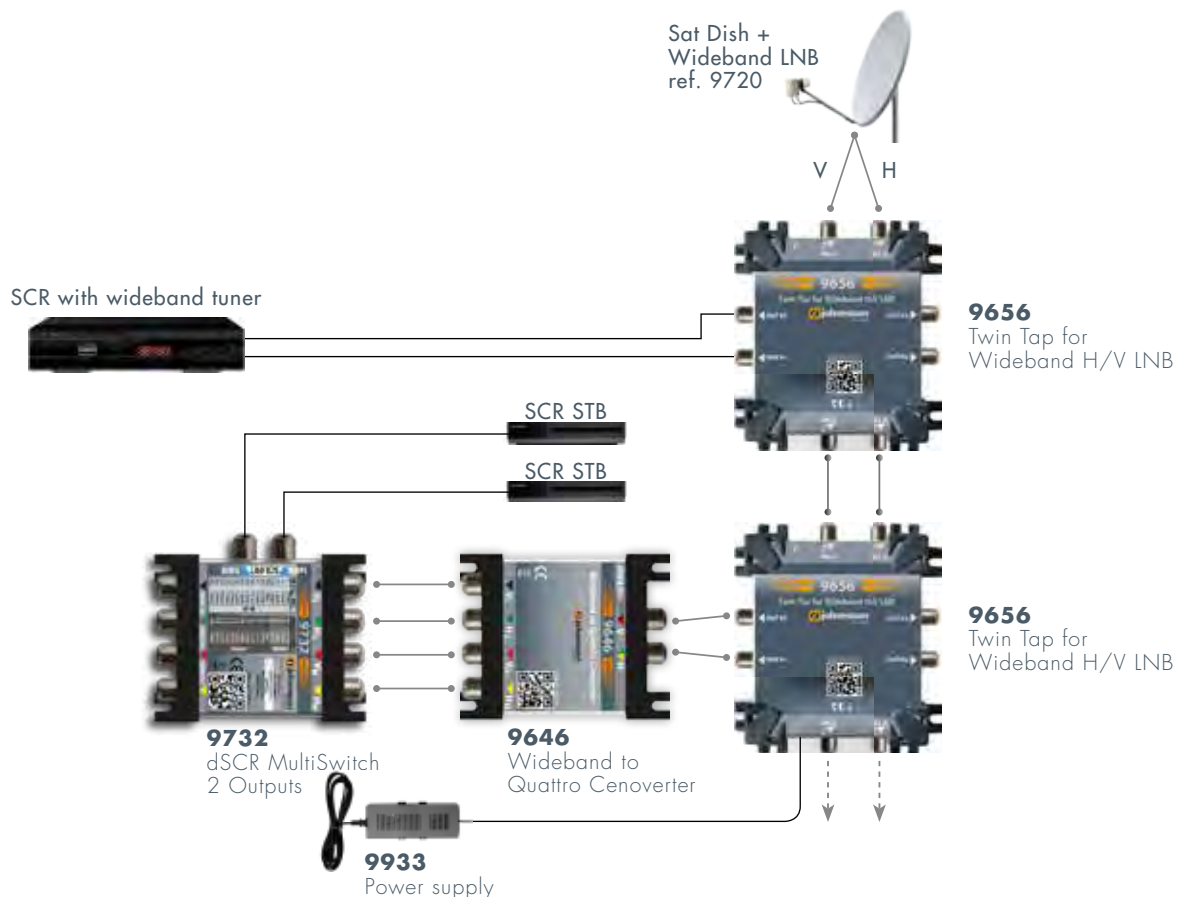
- converts a wideband LNB (V,H) into a quattro LNB (VL, HL, VH, HH)
- DC pass through on VL to power the wideband LNB
- ideal for systems with a mix of new wideband Set-Top-Boxes and other Set-Top-Boxes

		9646
Inputs	-	2
Input frequencies	MHz	290 - 2340
Outputs	-	4
Output frequencies	MHz	950 - 2150
Conversion gain	dB	typical 0
Input power	dBμV	54 to 84
Isolation	dB	26
DC consumption	mA	150 @ 20 VDC
DC input voltage	VDC	10 - 20
Dimensions	mm	90 x 80 x 40

9646



APPLICATION



Wideband Satellite Distribution

NEW

WIDEBAND LINE AMPLIFIER

9653



- sloped gain for compensating coaxial cable losses
- 40-2340 MHz

9653		
Frequency range	MHz	40-2340
Gain	dB	5 (40 MHz) 20 (2340 MHz)
Noise figure	dB	7
Max. Output level	dBμV	110
Power supply	V	13-18 / 60 mA
DC power pass	mA	500 max.
Dimensions	mm	68 x 26 x 16

WIDEBAND SATELLITE TRUNK AMPLIFIER

NEW

9654



- separate adjustment for gain and slope on every line
- DC input for powering trunk line amplifier & LNB
- works from 12 to 20 VDC

9654		
Inputs	-	2 SAT
Outputs	-	2
Frequency range	MHz	290-2340
Gain	dB	30
Noise figure	dB	5
Gain adjustment	dB	15
Slope adjustment	dB	15
Max. Output level	-	110 dBμV (-35 dB/IM3)
Consumption	-	150 mA from 20 VDC external power supply or input/output
Dimensions	mm	129 x 114 x 51

Wideband Satellite Distribution

NEW

WIDEBAND SPLITTERS

- 2-way splitter for wideband trunklines (H/V)
- Low insertion loss
- DC power pass

		9655
Inputs	-	2 (H&V)
Outputs	-	4 (dual H&V)
Frequency range	MHz	290 - 2340
Insertion loss	dB	5
Return loss	dB	10
DC power pass (in/out)	-	Yes
Dimensions	mm	90 x 80 x 40

9655



WIDEBAND TAPS

NEW

- 2-way tap for wideband trunklines (H/V)
- Low insertion loss
- DC power pass

		9656
Inputs	-	2 (H&V)
Outputs	-	2 trunk, 4 taps
Frequency range	MHz	290 - 2340
Insertion loss	dB	3 (trunk), 13 (tap)
Return loss	dB	10
DC power pass (in/out)	-	Yes
Dimensions	mm	90 x 80 x 40

9656



Wideband
Satellite Distribution

Profilers

- The well-known Profilers are a range of programmable filter-amplifiers. The signals coming from multiple antennas can be combined, filtered and amplified, to offer the best possible signal for distribution of TV throughout the building. The profilers are very flexible and can be configured to your specific needs. We offer a broad range of profiler products, to fulfill your specific needs.



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Profilers

PROFILERS Super Profiler

The next generation profilers, commercialized as Profiler PLUS and Super Profiler, offer even better performance than their predecessors! Thanks to a new, in-house developed technology, the selectivity of the filters has noticeably increased. Because the new profilers have 4 UHF inputs, and 10 highly selective filters, even the most exotic situations are covered.

The Super Profilers have two built-in super selective single-channel filters with a selectivity of 30 dB at only 1 MHz. A very attractive feature is the frequency conversion: A multiplex can be converted to another frequency channel, offering you the possibility to manage your own frequency plan. This can be done by removing unwanted interferers, and moving the multiplexes of interest to other frequencies to avoid saturation or interference.

Configuration is done with a standalone remote control unit (ref. 6565).

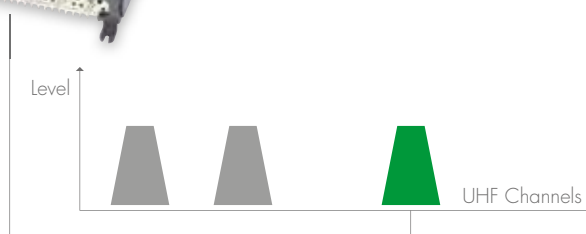


6630 | 6630 UK

- 7/8 inputs: 4 x UHF/Bi-FM/BIII+DAB/AUX
- highly selective filters thanks to new filter technology (LTE proof)
- 2 super selective single channel filters: 30 dB @ 1 MHz
- 8 UHF filter clusters (30 dB @ 16 MHz): 1 to 7 channels bandwidth
- frequency conversion functionality
- high output level: >120 dBμV
- 2 programmable outputs
- high-efficiency and ultra-reliable power supply (detachable)
- easy programming by dedicated control unit (ref. 6565)
- 6630 UK is delivered with UK power cord



FREQUENCY CONVERSION FUNCTIONALITY



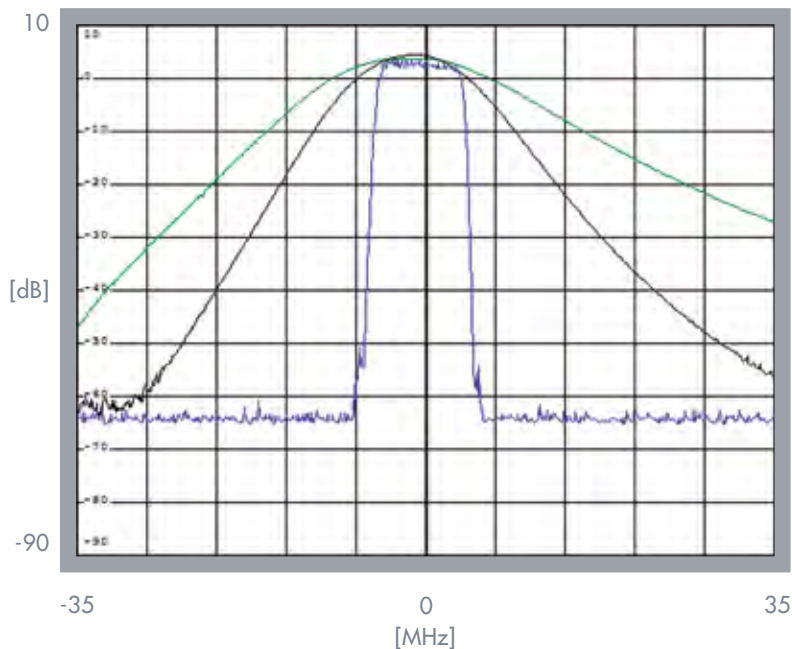
Profilers

PROFILERS Super Profiler

6630/6630 UK

INPUTS	-	BI-FM	BIII/DAB	AUX	UHF 1	UHF2	UHF3	UHF4
Frequency range	MHz	47-68 88-108	174-240	47-862	470-862			
Filter bandwidth	MHz	-			8 x cluster filter: 8-56 (1-7 ch.) 2 x super filter: 8 (single channel)			
Gain	dB	35	40	30	60			
Gain adjustment	dB	20	20	20	30			
Slope adjustment	dB	-						
General UHF level adjustment	dB	-			+10 to -10			
Noise figure	dB	7	5	15	6			
Max. input level	dB μ V	80	80	100	105			
Max. output level*	dB μ V	118	118	122	122			
Selectivity	-	-			30 dB/1 MHz (2 x super filters) 30 dB/16 MHz (8 x cluster filters)			
Return loss	dB	>10						
LNA remote voltage: 5/12/24 V LNA remote current	-	-	yes 100 mA	-	yes 100 mA total			
Outputs	-	2 x TV output 1 x Test output: -30 dB (12 VDC)						
Configuration	-	Control Unit (ref. 6565)						
Power supply	-	230-240 V~						
Operating temperature	°C	-5 to +50						
Dimensions	mm	325 x 220 x 60						

* 1 output active (2 outputs active: -5dB) | Terr.: -60 dBc/IM3 | SAT: -35 dBc/IM3



SUPER SELECTIVE FILTERS

- First generation profiler: 15 dB @ 16 MHz
- Normal single-channel filter: 30 dB @ 16 MHz
- Super filter: 30 dB @ 1 MHz

Profilers

PROFILERS Profiler Plus



6620 | 6620 UK

- 7 inputs: 4 x UHF/B1-FM/BIII+DAB/AUX
- highly selective filters thanks to new filter technology (LTE proof)
- 10 UHF filter clusters (30 dB @ 16 MHz):
1 to 7 channels bandwidth
- high output level: >120 dBμV
- 2 programmable outputs
- high-efficiency and ultra-reliable power supply (detachable)
- easy programming by dedicated control unit (ref. 6565)
- 6620 UK is delivered with UK power cord



6620/6620 UK

INPUTS	-	BI-FM	BIII/DAB	AUX	UHF1	UHF2	UHF3	UHF4
Frequency range	MHz	47-68 88-108	174-240	47-862	470-862			
Number of UHF cluster filters	-	-			10 x cluster filter			
UHF cluster filter bandwidth		-			1-7 Ch. (8-56 MHz)			
Gain	dB	35	40	30	60			
Gain adjustment	dB	20	20	20	30			
General UHF level adjustment	dB	-			+10 to -10			
Noise figure	dB	7	5	15	6			
Max. input level	dBμV	80	80	100	105			
Max. output level*	dBμV	118	118	122	122			
Selectivity	dB/Ch±2	-			30			
Return loss	dB	>10						
LNA remote voltage: 5/12/24 V LNA remote current: 100 mA total	-	-	yes	-	yes			
Outputs	-	2 x TV output 1 x Test output: -30 dB (12 VDC)						
Configuration	-	PC (UUI software) or Control Unit (ref. 6565)						
Power supply	-	230-240 V~						
Operating temperature	°C	-5 to +50						
Dimensions	mm	325 x 220 x 60						

* 1 output active (2 outputs active: -5dB) | Terr.: -60 dBc/IM3

Profilers

PROFILERS Profiler

All profiler models have an automatic signal level equalizer, helping you to find the optimal gain for each filter. The profilers are equipped with a display, indication LEDs and a rotary button to make the configuration an easy task. Thanks to our memory-stick (ref. 6604), settings can easily be transferred from one unit to another. To avoid unauthorized people changing the settings, all Profiler products can be locked with a security code.

6600 | 6600A | 6600UK

- 6 inputs: BI-FM/BIII/VHF-UHF/3 x UHF
(UK version : FM/BIII/VHF-UHF/3 x UHF)
- 10 UHF programmable clusters from 1 to 7 channels bandwidth.
- high gain (55 dB) and high power (118 dBμV)
- 24 V remote power on UHF and VHF-UHF inputs
(12V for 6600UK and 6600A)
- VHF-UHF split band amplifier with inter-stage attenuators
- 30 dB test output



6600 | 6600A | 6600UK

Inputs	-	BI-FM	BIII/DAB	VHF-UHF		UHF1	UHF2	UHF3
Frequency range	MHz	47-108**	174-240	47-240 + 470-862		470-862		
Filter bandwidth	-	-				1-7 Ch. (8-56 MHz)		
Cluster configuration	-	-				2	8	0
						2	7	1
						2	5	3
Gain	dB	35	40	40		55		
Gain adjustment	dB	20	20	20		30		
General UHF level adjustment	dB	-				+ 10 to -9		
Noise figure	dB	5	5	5		6		
Max. input level	dBµV	75	85	80		105		
Max. output level*	dBµV	115	115	VHF: 116	UHF: 118	118		
Selectivity	dB/Ch±2	-				15		
Return loss	dB	>10						
LNA remote voltage	V	-				24***		
LNA remote current	A	-		100 mA total				
Outputs	-	1 x TV output 1 x Test output: -30 dB						
Data transfer	-	DSUB9 connector						
Power supply	-	230-240 V~ / 15 VDC / 35 VA						
Operating temperature	°C	-5 to +50						
Dimensions	mm	265 x 220 x 95						

*Terr.: -60 dBc/IM3
**6600UK: 88-108MHz
***6600A/6600UK: 12V

Profilers

PROFILERS Profiler US

NEW

This profiler is designed for application where the UHF channels are only 6 MHz wide, this is for instance the case in the US. The other specifications are similar to the 6600.

PFA-6600UAM

- 6 inputs: VHF Low-FM/VHF High/VHF-UHF/3xUHF
- 10 UHF programmable clusters from 1 to 7 channels bandwidth.
- high gain (55 dB) and high power (118 dBμV)
- 24 V remote power on UHF and VHF-UHF inputs
- VHF-UHF split band amplifier with inter-stage attenuators
- 30 dB test output



	PFA-6600UAM						
Inputs	VHF Low + FM	VHF High	VHF + UHF		UHF 1	UHF 2	UHF 3
Inputs							
Frequency range (MHz)	54 - 88 88 - 108	174 - 216	54 - 216	470 - 806	470 - 806	470 - 806	470 - 806
Configuration of clusters	-	-	-		6 - 42 (1 to 7 channels / cluster)		
Option #1	-	-	-		2	8	0
Option #2	-	-	-		2	7	1
Option #3	-	-	-		2	5	3
Gain (dB)	35	40	40		55		
Attenuator (dB)	20	20	20		30		
General UHF level adj. (dB)	-	-	-	+10 to -9			
Noise figure (dB)	5	5	5		6		
Max. input level (dBmV)	20	20	20		20		
Max. output level (dBmV)	58	58	58	63	63		
Selectivity	-				10 dB / 10 MHz		
Return Loss IN/OUT (dB)	10	10	10		10	10	10
Selectable remote power	No	No	No		24V / 100 mA in total		
Test output	-30						
Data transfer	DSUB9 connector						
Power supply	Via Switching Mode Power Adapter: 120AC / 15VDC, 2.0A						
Operating temperature (C°)	-5 to +50						
Dimensions	266 x 220 x 95 mm						

Profilers

PROFILERS Profiler VHF

The Profiler VHF is based on the normal Profiler, but offers 2 independent BIII/DAB inputs, and 2 programmable BIII/DAB filter clusters.

- 6 inputs : BI-FM/2 x BIII/3 x UHF
- 8 UHF programmable clusters from 1 to 7 channels bandwidth
- 2 BIII programmable clusters from 1 to 4 channels bandwidth
- high gain (55 dB) and high power (118 dBμV)
- 24 V remote power on BIII and UHF inputs
- VHF-UHF split band amplifier with inter-stage attenuators
- -30 dB test output

6603



6603

Inputs	-	BI-FM	BIII/DAB 1	BIII/DAB 2	UHF1	UHF2	UHF3
Frequency range	MHz	47-108	174-240	174-240	470-862		
Filter bandwidth	-	-	1-4 Ch. (7-28 MHz)	1-4 Ch. (7-28 MHz)	1-7 Ch. (8-56 MHz)		
Cluster configuration	-	-			2	6	0
					2	5	1
					2	3	3
Gain	dB	35	40	40	55		
Gain adjustment	dB	20	30	30	30		
General UHF level adjustment	dB	-	+10 to -9				
Noise figure	dB	5	5	5	6		
Max. input level	dBµV	75	75	80	105		
Max. output level*	dBµV	112	100	100	118		
Selectivity	dB/Ch±2	28	25	25	15		
Return loss	dB	>10					
LNA remote voltage	V	-	24				
LNA remote current	A	-	100 mA total				
Outputs	-	1 x TV output 1 x Test output: -30 dB					
Data transfer	-	DSUB9 connector					
Power supply	-	230-240 V~ / 15 VDC / 35 VA					
Operating temperature	°C	-5 to +50					
Dimensions	mm	265 x 220 x 95					

*Terr.: -60 dBc/IM3

Profilers

PROFILERS Profiler VHF+

NEW

The new Profiler VHF+ completes the well-known Profiler range offering ideal solution to filter and amplify both VHF and UHF for the reception of digital SD and HD signals.



6608



- 5 inputs headend amplifier
 - BIII/DAB with 4 programmable clusters (1 to 4 channels bandwidth)
 - 2 x UHF splitted over 6 programmable clusters (1 to 7 channels bandwidth)
 - BI-FM
 - VHF-UHF
- 4G/LTE proof (UHF Ch. 21 to 60)
- easy programming by using one rotary/push button viewed on 2 digits display and LEDs for each cluster and each input
- unit can be locked by security code. -30 dB test output
- "copy" function in order to transfer all settings from one unit to another (or with optional memory stick) reducing time of installation
- high selectivity filters
- low noise figure and high power split band amplifiers
- high UHF input levels up to 105 dBμV by switchable 20 dB input amplifier
- automatic leveling of signal or manual with 30 dB attenuator with 1 dB step for accurate equalization
- selectable remote power on BIII/DAB, VHF-UHF and UHF inputs
- -30 dB test output

6608

Inputs	-	BI-FM	BIII/DAB	VHF-UHF	UHF1	UHF2
Frequency range	MHz	47-108	174-240	174-240 + 470-862	470-790	
Filter bandwidth	-	-	1-4 Ch. (7-28 MHz)	-	1-7 Ch. (8-56 MHz)	
Cluster configuration	-	-	4	-	6	0
					5	1
					3	3
Gain	dB	35	40	40	55	
Gain adjustment	dB	20	30	20	30	
General UHF level adjustment	dB	-	+10 to -9	+10 to -9	+10 to -9	
Noise figure	dB	5	5	5	6	
Max. input level	dBµV	75	75	80	105	
Max. output level (-60dBc/IM3)	dBµV	112	105	VHF:115/UHF:116	116	
Selectivity	dB/Ch±2	28	25	-	15	
Return loss	dB	>10				
LNA remote voltage	V	-	24			
LNA remote current	A	-	100 mA total			
Outputs	-	1 x TV output 1 x Test output: -30 dB				
Data transfer	-	DSUB9 connector				
Power supply	-	230-240 V~ / 15 VDC / 35 VA				
Operating temperature	°C	-5 to +50				
Dimensions	mm	265 x 220 x 95				

Profilers

PROFILERS Profiler Lite 10

The Profiler Lite devices are slimmed down versions of the basic 6600 Profiler, offering the same flexibility, but a lower gain, less filter clusters and a lower number of inputs. These are ideal for smaller buildings, where the high gain of the 6600 Profiler is not needed.

6601 | 6601A | 6601UK

- 5 inputs : BI-FM/BIII/3 x UHF (UK version: FM/BIII/3 x UHF)
- 10 UHF programmable clusters from 1 to 7 channels bandwidth
- gain: 45 dB
- 24 V remote power on UHF inputs (12V for 6601UK and 6601A)
- VHF-UHF split band amplifier with inter-stage attenuators
- -30 dB test output



6601 | 6601A | 6601UK

Inputs	-	BI-FM	BIII/DAB	UHF1	UHF2	UHF3
Frequency range	MHz	47-108	174-240	470-862		
Filter bandwidth	-	-		1-7 Ch. (8-56 MHz)		
Cluster configuration	-	-	-	2	8	0
				2	7	1
				2	5	3
Gain	dB	35	40	45		
Gain adjustment	dB	20	20	30		
General UHF level adjustment	dB	-		+10 to -9		
Noise figure	dB	5	5	6		
Max. input level	dBµV	75	80	105		
Max. output level*	dBµV	115	115	110		
Selectivity	dB/Ch±2	-		15		
Return loss	dB	>10				
LNA remote voltage	V	-		24 ***		
LNA remote current	A	-		100 mA total		
Outputs	-	1 x TV output 1 x Test output: -30 dB				
Data transfer	-	DSUB9 connector				
Power supply	-	230-240 V~ / 15 VDC / 30 VA				
Operating temperature	°C	-5 to +50				
Dimensions	mm	265 x 220 x 95				

*Terr.: -60 dBc/IM3

**6601UK: 88-108MHz

***6601A/6601UK: 12V

Profilers

PROFILERS Profiler Lite 8

6606

- 4 inputs : BI-FM/BIII/2 x UHF
- 8 UHF programmable clusters from 1 to 7 channels bandwidth
- gain: 45 dB
- 24 V remote power on UHF inputs
- VHF-UHF split band amplifier with inter-stage attenuators
- -30 dB test output



6606

Inputs	-	BI-FM	BIII/DAB	UHF1	UHF2
Frequency range	MHz	47-108	174-240	470-862	
Filter bandwidth	-	-		1-7 Ch. (8-56 MHz)	
Cluster configuration	-	-		8	0
				7	1
				5	3
Gain	dB	35	40	45	
Gain adjustment	dB	20	20	30	
General UHF level adjustment	dB	-		+10 to -9	
Noise figure	dB	5	5	6	
Max. input level	dBμV	75	80	105	
Max. output level*	dBμV	115	115	110	
Selectivity	dB/Ch±2	-		15	
Return loss	dB	>10			
LNA remote voltage	V	-		24	
LNA remote current	A	-		100 mA total	
Outputs	-	1 x TV output 1 x Test output: -30 dB			
Data transfer	-	DSUB9 connector			
Power supply	-	230-240 V~ / 15 VDC / 30 VA			
Operating temperature	°C	-5 to +50			
Dimensions	mm	265 x 220 x 95			

*Terr.: -60 dBc/IM3

Profilers

PROFILERS Profiler SAT I Profiler SAT+

In some situations the roof-top terrestrial antennas are accompanied by a satellite antenna, and both terrestrial and satellite signals have to be combined on the same coaxial cable for distribution throughout the building. The Profiler SAT series is the ideal product for these situations, by extending the normal Profiler with a satellite input.

- 1 SAT input + 6 Terrestrial inputs : BIFM/BIII/VHF-UHF/3 x UHF
- 10 UHF programmable clusters from 1 to 7 channels bandwidth
- VHF-UHF-SAT split band amplifiers with inter-stage attenuators
- high gain (55 dB) and high output power (116 dBμV)
- 0-13-18 V / 0-22 kHz remote power for LNB
- VHF-UHF split band amplifier with inter-stage attenuators
- -30 dB test output

Profiler SAT
6602



- 1 SAT input + 6 Terrestrial inputs : BIFM/BIII/VHF-UHF/3 x UHF
- 2 outputs: TV/TV-SAT
- 10 UHF programmable clusters from 1 to 7 channels bandwidth
- VHF-UHF-SAT split band amplifiers with inter-stage attenuators
- high gain (50 dB) and high output power (110 dBμV)
- 0-13-18 V / 0-22 kHz remote power for LNB
- VHF-UHF split band amplifier with inter-stage attenuators
- -30 dB test output

Profiler SAT+
6605



		6602 6605						
INPUTS	-	BI-FM	BIII/DAB	VHF-UHF	UHF1	UHF2	UHF3	SAT
Frequency range	MHz	47-108	174-240	47-240 + 470-862	470-862			950-2300
Filter bandwidth	-	-			1-7 Ch. (8-56 MHz)			-
Cluster configuration	-	-			2	8	0	-
					2	7	1	
					2	5	3	
Gain (ref. 6602)	dB	35	40	40	55			40
Gain (ref. 6605)	dB	30	35	35	50			40
Gain adjustment	dB	20	20	20	30			20
Slope adjustment	dB	-						9
General UHF level adjustment	dB	-			+10 to -9			-
Noise figure	dB	5	5	5	6			8
Max. input level	dBµV	75	80	80	105			90
Max. output level (ref. 6602)*	dBµV	115	115	VHF: 116 - UHF: 116	116			116
Max. output level (ref. 6605)*	dBµV	112	112	VHF: 113 - UHF: 113	110			116
Selectivity	dB/Ch±2	-			15			SAT/TERR.: >30
								TERR./SAT: >25
Return loss	dB	>10						
LNA/LNB remote voltage	V	-		24			0/13/18V and 0/22 kHz	
LNA/LNB remote current	A	-		100 mA total			300 mA	
Outputs (ref. 6602)	-	1 x TV-SAT output 1 x Test output: -30 dB						
Outputs (ref. 6605)	-	1 x TV output 1 x TV-SAT output 1 x Test output: -30 dB						
Data transfer	-	DSUB9 connector						
Power supply	-	230-240 V~ / 15 VDC / 45 VA						
Operating temperature	°C	-5 to +50						
Dimensions	mm	265 x 220 x 95						

*Terr.: -60 dBc/IM3 | SAT: -35 dBc/IM3

Profilers

PROFILERS Profino Plus

NEW

In situations where a medium gain (in the order of 45 dB) is sufficient, and the high number of antenna inputs is not needed, the Profino could be the ideal solution! The Profino is more compact than a normal Profiler, and apart from the reduced number of inputs, filter clusters and gain, the operation is identical to the other Profilers.



6611L | 6611L UK

- designed for both analogue and digital SD/HD channels
- 4 inputs: FM, BIII/DAB and 2 UHF inputs splitted over 6 UHF programmable clusters
- UHF clusters can have 1 to 7 channels bandwidth
- channel 21-60, 4G-LTE compatible
- easy programming by using one rotary/push button viewed on 2 digits display and LEDs for each cluster and each input
- unit can be locked by security code
- "copy" function in order to transfer all settlements from one unit to another reducing time of installation
- high selectivity filters
- low noise and high gain split band amplifiers
- high UHF input levels up to 105 dBμV by switchable 20 dB input amplifier
- attenuator with 1 dB step for accurate equalization
- selectable remote power on BIII/DAB and UHF inputs
- 12 - 24V selectable remote power
- -30 dB test output



6611L | 6611L UK

Inputs	-	FM	BIII/DAB	UHF1	UHF2
Frequency range	MHz	88-108	174-240	470-790	470-790
				8-56 (1 to 7 channels / cluster)	
Cluster configuration	-	-	-	6	0
				4	2
				3	3
Gain	dB	35	35	45	45
Attenuator	dB	20	20	30	30
Noise figure	dB	5	5	6	6
Max. input level	dBμV	80	80	105	105
Max. output level (-54dBc/1M3)	dBμV	116	116	116	116
Selectivity	dB	-	15 dB/ 10 MHz	10 dB/ 10 MHz	
Return loss IN/OUT	dB	>10	>10	>10	>10
Selectable remote power 12 - 24V (100mA in total)	mA	-	Yes	Yes	Yes
Test output	dB	-30			
Data transfer	-	DSUB9 connector			
Power supply	-	230V~ / 20A			
Operating temperature	°C	-5 to +50			
Dimensions	mm	231 x 185 x 53			

Profilers

EQUALIZERS 4 IF Channel Processor

The 6520 offers 4 super-selective SAW filters in one compact sized zamak diecast housing. These filters can be used to convert 4 digital terrestrial channels to another frequency in the UHF band. Of course it can also be used as a super-selective single-channel filter in case a normal UHF filter is not sufficient (e.g. strong interference from an LTE source, or adjacent channel interference).

The 6520 can also be used as an extension with an existing Profiler Plus or Super Profiler. By connecting the 6520 to the AUX input of the Profiler, 4 frequency converting SAW filters are added to the system. And of course, it is also possible to interconnect several 6520's to provide more frequency converting single-channel filters.

The 6520 can be controlled by means of a remote control (ref. 6565).



remote



6520

- 4 super selective single-channel filters: 40 dB @ 1.25 MHz
- 4 frequency converters to convert a digital channel to another UHF frequency
- auto install functionality: device automatically finds all digital channels, and lets the user choose the channels of interest
- interconnection of several 6520's or use in combination with a Super Profiler or Profiler Plus
- medium gain: 40 dB



6520			
Inputs	-	UHF	Bypass input
Frequency range	MHz	470-862	5-862
Number of IF clusters	-	4	-
Filter bandwidth	MHz	8 (single-channel)	-
Gain	dB	40	-6
Gain adjustment	dB	30	-
Max. input level	dBμV	109	-
Max. output level*	dBμV	113	-
Selectivity	dB/± 1 MHz	30	-
Return loss	dB	10	10
Remote power	-	5 VDC / 12 VDC (100 mA)	DC power pass from OUT (1 A)
Outputs	-	1 x TV output/1x control port	
Power consumption	W	10	
Operating temperature	°C	-5 to +50	
Dimensions	mm	238 x 152 x 55	

*Terr.: -60 dBc/IM3

Profilers

EQUALIZERS Programmable Filter-Equalizer

NEW



6503L | 6503L UK

- 2 UHF inputs
- 6 UHF clusters from 1 to 7 channels bandwidth
- selectable remote power on all inputs
- LTE protected



6503L | 6503L UK

Input/ Output	-	2	1
Number of clusters	-	6	
Input	-	UHF 1	UHF 2
Channels	-	21-60	21-60
Frequency range	MHz	470-790	470-790
Bandwidth/cluster	MHz	8-56 (1 to 7 ch.)	8-56 (1 to 7 ch.)
Configuration of clusters	-	6	0
		5	1
		3	3
Gain	dB	5	5
Attenuator	dB/1 dB step	30	30
Noise figure	dB	6	6
Max. input level*	dBμV	95	95
Max. output level*	dBμV	75	75
Selectivity	-	10dB / 10MHz	10dB / 10MHz
Return loss IN/OUT	dB	>10	>10
Selectable DC power pass	-	Yes	Yes
Power supply	-	External power adapter 230-240V~ / 5V DC / Ø2.1mm DC Jack	
Consumption	mA	350	
Operating temperature	°C	-5 to +50	
Dimensions	mm	157 x 142 x 65	

*-54 dB/ 1M3

Profilers

EQUALIZERS Programmable Filter-Equalizer

6504 | 6504UK

- 3 UHF inputs
- 10 UHF clusters from 1 to 7 channels bandwidth
- selectable remote power on all inputs



6504 | 6504UK

Inputs	-	UHF1	UHF2	UHF3
Frequency range	MHz	470-862		
Filter bandwidth	-	1-7 Ch. (8-56 MHz)		
Cluster configuration	-	2	8	0
		2	7	1
		2	5	3
Gain	dB	5		
Gain adjustment	dB	30		
Noise figure	dB	6		
Max. input level	dBµV	95		
Max. output level*	dBµV	75		
Selectivity	dB/Ch±2	20		
Return loss	dB	>10		
Selectable DC power pass	-	yes		
Outputs	-	1 x TV output		
Power supply	-	External power adapter: 230-240 V~ / 5 VDC / Ø2,1 mm DC jack		
Consumption	mA	500		
Operating temperature	°C	-5 to +50		
Dimensions	mm	222 x 142 x 51		

*Terr.: -60 dBc/IM3

Profilers

EQUALIZERS Programmable Filter-Equalizer



6506 | 6506UK

- 2 UHF inputs (LTE protected)
- 8 UHF clusters from 1 to 7 channels bandwidth
- selectable remote power on all inputs



6506 | 6506UK

Inputs	-	UHF1	UHF2
Frequency range	MHz	470-790	
Filter bandwidth	-	1-7 Ch. (8-56 MHz)	
Cluster configuration	-	8	0
		7	1
		5	3
Gain	dB	5	
Gain adjustment	dB	30	
Noise figure	dB	6	
Max. input level	dBμV	95	
Max. output level*	dBμV	75	
Selectivity	dB/Ch±2	20	
Return loss	dB	>10	
Selectable DC power pass	-	yes	
Outputs	-	1 x TV output	
Power supply	-	External power adapter: 230-240 V~ / 5 VDC / Ø2,1 mm DC jack	
Consumption	mA	400	
Operating temperature	°C	-5 to +50	
Dimensions	mm	222 x 142 x 51	

► For other products within this category see p. 85.

Profilers

ACCESSORIES Control Unit

The 6565 control unit is designed to control the Johansson products through the coax cable. Many products, like profilers, active combiners,... can be configured with this device. Thanks to a clear OLED display and easy rotary button, configuration is made very easy. A great advantage is that you can control the Profiler from wherever you are in the building. Just connect the control unit to the nearest outlet and you will be able to configure the Profiler, without even standing next to it!



remote

6565



Compatible products

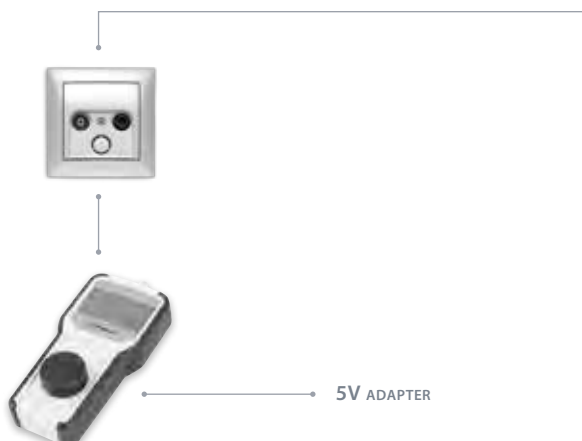
- 6620(UK)
- 6630(UK)
- 6510A
- 6520

**ROTARY BUTTON
FOR EASY CONTROL**

6565 | 6565UK

Connectors	-	1 x F female (control port) 1 x 2,1 mm power jack
Memory capacity	-	10 presets
Operating voltage	V	5-24
Power supply	-	Delivered with 5V power adapter (can be powered through COAX)
Consumption	mA	160 (@5VDC) 70 (@24VDC)
Operating temperature	°C	-5 to +50
Dimensions	mm	176 x 83 x 43

CONTROL ON DISTANCE THROUGH THE OUTLET



Profilers

ACCESSORIES Memory-stick

6604

- Compatible with:
 - 6600/6601/6602/6603/6605/6606/6608
 - 6611L
- 16 memory positions



	6604
Memory capacity	16 memory slots
Memory type	EEPROM
Connectors	DSUB9 Male/Female
LED	3 color status indication LED
Dimensions	78 x 41 x 25 mm

Profilers

ADDITIONAL PRODUCTS

EQUALIZER

6510A

Programmable Digital
Single-Channel Equalizer

1 UHF input / 1 bypass input / 1 output / 6 single-channel
highly selective filters / programmable by PC or Control Unit

Amplifiers

- An essential part in the distribution of TV signals over coaxial cables is the amplifier. In domestic applications, this will typically be a masthead preamplifier while large collective installations require high-power distribution amplifiers. With the upcoming LTE (4G and 5G) signals in several countries, big disturbances will arise in the TV systems that are not LTE-protected. This is why we present a whole new range of amplifiers that makes your installations future proof, and offer you the best TV images possible!



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NEW

NEW

NEW



Amplifiers

TERRESTRIAL DISTRIBUTION AMPLIFIERS Multiband Amplifiers

The new distribution amplifiers from Johansson set the new standard! The amplifiers are fully LTE-ready and have a high gain, ensuring a perfect signal quality throughout the building. Thanks to the new technologies used, the amplifiers are far more efficient than their predecessors.



7773(UK) | 7774(UK) | 7775(UK)

- 3/4 inputs
- VHF-UHF input with return path (ref. 7774, 7775), ideal for CATV applications
- split-band amplifiers with interstage attenuators and dynamic range of 30
- high gain (up to 40 dB), high output power (>122 dBμV)
- slope adjustment on VHF-UHF (ref. 7774, 7775)
- high input power: up to 110 dBμV (saturation of input virtually impossible)
- 5/12 VDC switchable remote voltage to power a preamplifier
- thanks to the new technology used, the efficiency of the amplifiers is 400% better compared to older amplifiers!
- green solution: 5,5W for high power model / <3W for mid and low-power models
- zamak diecast housing
- detachable power supply included
- -30 dB test output
- UK versions are delivered with UK power plug

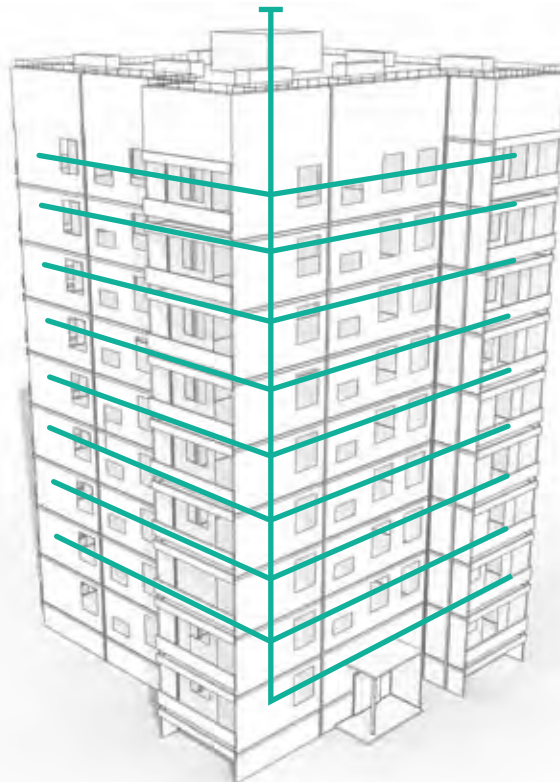
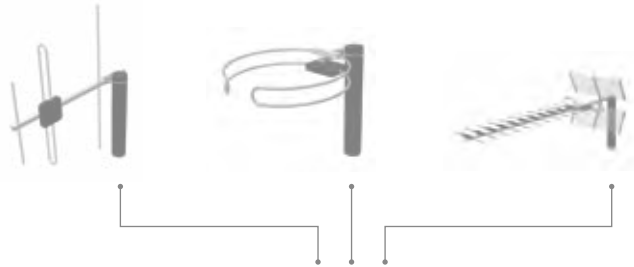


		7773(UK)	7774(UK)	7775(UK)
Inputs	-	FM BIII/DAB UHF	FM BIII/DAB UHF VHF-UHF	FM BIII/DAB UHF VHF-UHF
Frequency range	MHz	FM: 88-108 BIII/DAB: 174-240 UHF: 470-790	FM: 88-108 BIII/DAB: 174-240 UHF: 470-790 VHF-UHF: 5-1000 (RP: 5-65)	FM: 88-108 BIII/DAB: 174-240 UHF: 470-790 VHF-UHF: 5-1000 (RP: 5-65)
Gain	dB	FM: 8 to 30 BIII/DAB: 8 to 30 UHF: 20 to 40	FM: -12 to 20 BIII/DAB: -12 to 20 UHF: -4 to 26 VHF-UHF: -4 to 26	FM: 0 to 32 BIII/DAB: 0 to 32 UHF: 5 to 40 VHF-UHF: 5 to 40
Return path loss	dB	-	-2	-2
Slope adjustment	dB	-	VHF-UHF: 0 to 15	VHF-UHF: 0 to 15
Max. input power*	dBμV	90	110	110
Max. output power*	dBμV	110	116	>122
Noise figure	dB	FM: 9 BIII/DAB: 9 UHF: 6	FM: 8 BIII/DAB: 7 UHF: 5 VHF-UHF: 6,5	FM: 8 BIII/DAB: 7 UHF: 5 VHF-UHF: 6,5
Return loss	dB	>10	>10	>10
Remote power	-	UHF: 5 VDC (200 mA) /12 VDC (100 mA)	BIII/DAB: 5 VDC (200 mA) /12 VDC (100 mA) UHF: 5 VDC (200 mA)/12 VDC (100 mA)	BIII/DAB: 5 VDC (200 mA) /12 VDC (100 mA) UHF: 5 VDC (200 mA)/12 VDC (100 mA)
Supply voltage	VAC	200-264	200-264	200-264
Power consumption	W	1,5	3	5,5
Dimensions	mm	238 x 152 x 55		

*Terr.: -60 dBc/IM3

Amplifiers

TERRESTRIAL DISTRIBUTION AMPLIFIERS Multiband Amplifiers



Amplifiers

TERRESTRIAL DISTRIBUTION AMPLIFIERS Multiband Amplifiers

7760A | 7761A

- 3 inputs: BI-FM/BIII-DAB/UHF
- 1 or 6 outputs
- powering from outputs or adapter

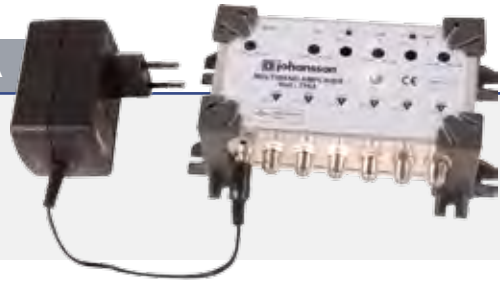


		7760A			7761A		
Inputs	-	3			3		
Outputs	-	1			6		
Frequency range	MHz	BI-II: 47-88	B III: 170-240	UHF: 470-862	BI-II: 47-88	B III: 170-240	UHF: 470-862
Adjustable gain	dB	8-28	8-28	20-36	0-20	0-20	12-28
Noise figure	dB	8	8	5	8	8	5
Max. input level	dBμV	97	97	86	97	97	86
Max. output level	dBμV	105	105	110	97	97	102
Return loss in/out	dB	>10			>10		
Isolation between outputs	dB	-			>15		
Selectable remote power	-	-	-	yes	-	-	yes
Consumption	mA	70			70		
Power Supply (20-24 VDC)	-	from power adapter 230 V~ / jack Ø 2,1mm (included) or from output			from power adapter 230 V~ / jack Ø 2,1mm (included) or from output (diode protected)		
Dimensions	mm	158 x 98 x 51			158 x 98 x 51		

TERRESTRIAL DISTRIBUTION AMPLIFIERS Multiband Amplifiers

7762A | 7763A

- 4 inputs: BI-FM/BIII-DAB/2 x UHF
- 1 or 6 outputs
- powering from outputs or adapter



		7762A			7763A		
Inputs	-	4			4		
Outputs	-	1			6		
Frequency range	MHz	BI-II: 47-88	B III: 170-240	UHF1 / UHF2: 470-862	BI-II: 47-88	B III: 170-240	UHF1 / UHF2: 470-862
Adjustable gain	dB	8-28	8-28	16-32	0-20	0-20	8-24
Noise figure	dB	8	8	5	8	8	5
Max. input level	dBμV	97	97	86	97	97	86
Max. output level	dBμV	105	105	106	97	97	98
Return loss in/out	dB	>10			>10		
Isolation between outputs	dB	-			>15		
Selectable remote power	-	-	-	yes	-	-	yes
Consumption	mA	70			70		
Power Supply (20-24 VDC)	-	from power adapter 230 V~ / jack Ø 2,1mm (included) or from output			from power adapter 230 V~ / jack Ø 2,1mm (included) or from output (diode protected)		
Dimensions	mm	158 x 98 x 51			158 x 98 x 51		

Amplifiers

WIDEBAND INDOOR AMPLIFIERS



7720 | 7720L

- 1 wideband input: 47-862 MHz (VHF-UHF)
- 2 outputs
- adjustable gain: 13-28 dB
- power LED indicator
- wall and DIN rail mountable



		7720	7720L
Frequency range	MHz	47-862	47-790
Adjustable gain	dB	13-28	
Noise figure	dB	4,0	
Max. output level	dBμV	101	
Return loss (input/output)	dB	10	
Isolation between outputs	dB	15	
Power	-	230V~/4VA	
Dimensions	mm	110 x 94 x 41	

VHF/UHF INDOOR AMPLIFIERS



7722 | 7722L

- 1 input: 40-320 MHz + 470-862 MHz (790 MHz for L version)
- 2 outputs
- adjustable VHF gain: 15-30 dB
- adjustable UHF gain: 18-28 dB
- power LED indicator
- 24 Vdc switchable remote power (7722L only)
- wall and DIN rail mountable (7722L only)



		7722	7722L
Frequency range	MHz	40-320 + 470-862	40-320 + 470-790
Adjustable gain	dB	VHF: 15-30/UHF: 18-28	
Noise figure	dB	3,0	
Max. output level*	dBμV	107	
Return loss (input/output)	dB	10	
Isolation between outputs	dB	15	
Switchable remote power	-	no	yes (24V/55mA)
Power	-	230V~/6,9VA	
Dimensions	mm	102 x 76 x 54	137 x 92 x 42

*Terr.: -60 dBc/IM3

Amplifiers

VHF/UHF INDOOR AMPLIFIERS



7724L

- 1 input: 40-320 MHz + 470-790 MHz
- 4 outputs
- adjustable VHF gain: 13-28 dB
- adjustable UHF gain: 15-25 dB
- power LED indicator
- 24 Vdc switchable remote power
- wall and DIN rail mountable



7724L

Frequency range	MHz	40-320 + 470-790
Adjustable gain	dB	VHF: 13-28/UHF: 15-25
Noise figure	dB	3,0
Max. output level	dBpV	102
Return loss (input/output)	dB	10
Isolation between outputs	dB	15
Switchable remote power	-	yes (24V/55mA)
Power	-	230V~ /6,9VA
Dimensions	mm	137 x 92 x 42

Amplifiers

TV-SAT INDOOR AMPLIFIERS

NEW



9671L



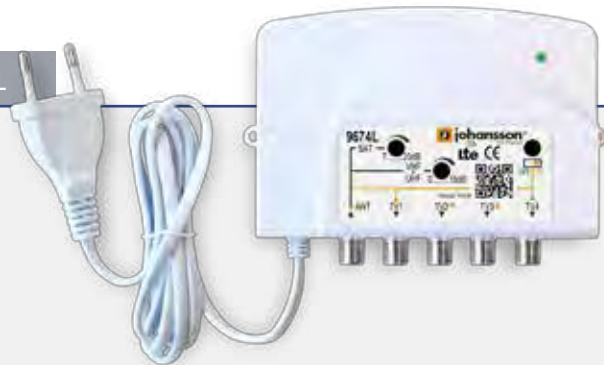
- 1 input/1 output
- LTE (4G) compatible
- adjustable gain
- fixed slope on satellite
- DC power pass: switchable
- Universal input power: 85-240V~

9672L



- 1 input/2 output
- LTE (4G) compatible
- adjustable gain
- fixed slope on satellite
- DC power pass: switchable
- Universal input power: 85-240V~

9674L



- 1 input/4 output
- LTE (4G) compatible
- adjustable gain
- fixed slope on satellite
- DC power pass: switchable
- Universal input power: 85-240V~

		9671L	9672L	9674L
Outputs	-	1	2	4
Frequency range	MHz	47 - 790 / 950 2150		
Gain	dB	Ter.: 7 - 25 Sat.: 17 - 30	Ter.: 3 - 22 Sat.: 10 - 25	Ter.: 0 - 18 Sat.: 7 - 20
Slope	dB	8, fixed		
Noise figure	dB	Ter.: 4 Sat.: 7		
Max. output level	dBμV	113	108	103
AC input voltage/frequency/power	-	85-240 VAC / 50-60 Hz / 7VA		
DC power pass (Out to In)	Vcc	Switchable		
Dimensions	mm	137 x 92 x 42		

Amplifiers

UHF PREAMPLIFIER/POWER SUPPLY KIT



KIT 7322 | 2434

- 1 input/1 output
- LTE (4G) rejection
- ultra low-noise
- 10-25 dB adjustable gain
- power indication LED
- 24 VDC operating voltage
- 24 V high-efficiency power supply
- short-circuit protection
- 2 outputs
- power LED
- wall or DIN-rail mountable



7322

Frequency range	MHz	470-790 (Ch. 21-60)
Gain	dB	10-25
Noise figure	dB	2,0
Max. input level	dBµV	80
Max. output level	dBµV	100
Power supply	VDC	24
Consumption	mA	35
Dimensions	mm	120 x 115 x 50 mm

2434

Outputs	-	2
Insertion loss	dB	4
Isolation between outputs	dB	10
AC input voltage/Frequency/Power	-	230 V~ / 50 Hz / 4,8 W
DC output voltage	VDC	24
Output current	mA	150
Dimensions	mm	110 x 94 x 41

Amplifiers

UHF PREAMPLIFIER/POWER SUPPLY KIT



KIT 7328 | 2434



- 1 input/1 output
- LTE (4G)
- low-noise
- 15-35 dB adjustable gain
- power indication LED
- 24 VDC operating voltage
- 24 V high-efficiency power supply
- short-circuit protection
- 2 outputs
- power LED
- wall or DIN-rail mountable

7328

Frequency range	MHz	470-790 (Ch. 21-60)
Gain	dB	15-35
Noise figure	dB	3,5
Max. input level	dBμV	82
Max. output level	dBμV	104
Power supply	VDC	24
Consumption	mA	35
Dimensions	mm	120 x 115 x 50

2434

Outputs	-	2
Insertion loss	dB	4
Isolation between outputs	dB	10
AC input voltage/Frequency/Power	-	230 V~ / 50 Hz / 4,8 W
DC output voltage	VDC	24
Output current	mA	150
Dimensions	mm	110 x 94 x 41

Amplifiers

VFH/UHF PREAMPLIFIER/POWER SUPPLY KIT



KIT 7460 | 2434

- 1 x VHF input/1 x UHF input
- 1 wideband output
- up to 107 dBμV output power
- 5-20 dB adjustable gain on VHF
- 20-35 dB adjustable gain on UHF
- LTE (4G) + GSM rejection
- low-noise
- power indication LED
- 24 VDC operating voltage
- 24 V high-efficiency power supply
- short-circuit protection
- 2 outputs
- power LED
- wall or DIN-rail mountable



7460			
Inputs	-	VHF (BIII/DAB)	UHF (Ch. 21-60)
Frequency range	MHz	170-240	470-790
Gain	dB	5-20	20-35
Noise figure	dB	4,2	2,5
Max. input level	dBμV	107	85
Max. output level	dBμV	107	103
Power supply	VDC	24	
Consumption	mA	35	
Dimensions	mm	120 x 115 x 50	

2434		
Outputs	-	2
Insertion loss	dB	4
Isolation between outputs	dB	10
AC input voltage/Frequency/Power	-	230 V~ / 50 Hz / 4,8 W
DC output voltage	VDC	24
Output current	mA	150
Dimensions	mm	110 x 94 x 41

Amplifiers

VFH/UHF PREAMPLIFIER/POWER SUPPLY KIT



KIT 7462 | 2434

- 1 universal input: VHF only, UHF only or VHF+UHF (switchable with jumpers)
- 2 wideband outputs
- up to 105 dBμV output power
- 7-22 dB adjustable gain on VHF
- 7-22 dB adjustable gain on UHF
- LTE (4G) + GSM rejection
- low-noise
- power indication LED
- DC power pass (with jumper)
- 5-24 VDC voltage
- 24 V high-efficiency power supply
- short-circuit protection
- 2 outputs
- power LED
- wall or DIN-rail mountable



7462

Inputs	-	VHF only / UHF only / VHF-UHF
Frequency range	MHz	174-240/470-790/174-240+470-790
Gain	dB	VHF: 7-22 UHF: 7-22
Noise figure	dB	VHF: 3,5 UHF: 3,5
Max. input level	dBμV	80
Max. output level	dBμV	105
Power supply	VDC	5-24
Consumption	mA	35 mA @ 24VDC / 90 mA @ 5 VDC
Dimensions	mm	112 x 98 x 56

2434

Outputs	-	2
Insertion loss	dB	4
Isolation between outputs	dB	10
AC input voltage/Frequency/Power	-	230 V~ / 50 Hz / 4,8 W
DC output voltage	VDC	24
Output current	mA	150
Dimensions	mm	110 x 94 x 41

Amplifiers

VFH/UHF PREAMPLIFIER/POWER SUPPLY KIT



KIT 7463 | 2434

- 2 universal input: VHF only, UHF only or VHF+UHF (switchable with jumpers)
- 2 wideband outputs
- up to 105 dBμV output power
- 7-22 dB adjustable gain on VHF
- 7-22 dB adjustable gain on UHF
- LTE (4G) + GSM rejection
- low-noise
- power indication LED
- DC power pass (with jumper)
- 5-24 VDC voltage
- 24 V high-efficiency power supply
- short-circuit protection
- 2 outputs
- power LED
- wall or DIN-rail mountable



7463			
Inputs	-	VHF only / UHF only / VHF-UHF (switchable with jumpers)	VHF only / UHF only / VHF-UHF (switchable with jumpers)
Outputs	-	2 x wideband output	
Frequency range	MHz	174-240/470-790/174-240+470-790	174-240/470-790/174-240+470-790
Gain	dB	VHF: 7-22 UHF: 7-22	VHF: 7-22 UHF: 7-22
Noise figure	dB	VHF: 3,5 UHF: 3,5	
Max. input level	dBμV	80	
Max. output level	dBμV	105	
Power supply	VDC	5-24	
Consumption	mA	50 mA @ 24 V / 120 mA @ 5 V	
Dimensions	mm	112 x 98 x 56	

2434		
Outputs	-	2
Insertion loss	dB	4
Isolation between outputs	dB	10
AC input voltage/Frequency/Power	-	230 V~ / 50 Hz / 4,8 W
DC output voltage	VDC	24
Output current	mA	150
Dimensions	mm	110 x 94 x 41

► For other products within this category see p.105.

Amplifiers

NEW



7329



- 1 input/1 output
- LTE (5G) rejection
- low-noise
- 15-35 dB adjustable gain
- power indication LED
- 24 VDC operating voltage

7329		
Frequency range	MHz	470-694 (Ch. 21-48)
Gain	dB	15 - 35
Noise figure	dB	3,5
Input level	dBμV	82
Output level	dBμV	104
Power supply	VDC	24
Consumption	mA	35
Dimensions	mm	120 x 115 x 50

PREAMPLIFIER UHF Preamplifier (LTE/4G)



7327



- 1 input/1 output
- LTE (4G) rejection
- ultra low-noise
- 19 dB gain
- low power consumption: only 20 mA
- power indication LED
- 5-24 VDC operating voltage

7327		
Frequency range	MHz	470-790 (Ch. 21-60)
Gain	dB	19
Noise figure	dB	2,0
Input level	dBμV	78
Output level	dBμV	97
Power supply	VDC	5-24
Consumption	mA	20
Dimensions	mm	120 x 115 x 50

Amplifiers

PREAMPLIFIER UHF Preamplifier (LTE/4G)



- 1 input/1 output
- LTE (4G) rejection
- ultra low-noise
- 10-25 dB adjustable gain
- power indication LED
- 24 VDC operating voltage



7322

7322		
Frequency range	MHz	470-790 (Ch. 21-60)
Gain	dB	10-25
Noise figure	dB	2,0
Max. input level	dBμV	80
Max. output level	dBμV	100
Power supply	VDC	24
Consumption	mA	35
Dimensions	mm	120 x 115 x 50 mm

UHF PREAMPLIFIER



- 1 input/1 output
- LTE (4G)
- low-noise
- 15-35 dB adjustable gain
- power indication LED
- 24 VDC operating voltage



7328

7328		
Frequency range	MHz	470-790 (Ch. 21-60)
Gain	dB	15-35
Noise figure	dB	3,5
Max. input level	dBμV	82
Max. output level	dBμV	104
Power supply	VDC	24
Consumption	mA	35
Dimensions	mm	120 x 115 x 50

Amplifiers

VHF/UHF PREAMPLIFIER



7415L



- FM input/B.III or DAB input/UHF input
- 1 wideband output
- 12 dB gain on FM
- 15-30 dB adjustable gain on B.III/DAB
- 20-35 dB adjustable gain on UHF
- LTE (4G)
- low-noise
- 24 VDC operating voltage
- wall or mast mountable

7415L

Inputs	-	BII (FM)	BIII/DAB	UHF C21-60
Frequency range	MHz	88-108	170-240	470-790
Gain	dB	12	15-30	33-20
Noise Figure	dB	4	2,0	3,2
Max. input level	dBμV	99	91	84
Max. Output level	dBμV	111	107	108
Power supply	VDC	24		
Consumption	mA	60		
Dimensions	mm	112 x 98 56 mm		



7460



- 1 x VHF input/1 x UHF input
- 1 wideband output
- up to 105 dBμV output power
- 5-20 dB adjustable gain on VHF
- 20-35 dB adjustable gain on UHF
- LTE (4G)
- low-noise
- power indication LED
- 24 VDC operating voltage

7460

Inputs	-	VHF (BIII/DAB)	UHF (Ch. 21-60)
Frequency range	MHz	170-240	470-790
Gain	dB	5-20	20-35
Noise Figure	dB	4,2	2,5
Max. input level	dBμV	107	85
Max. Output level	dBμV	107	103
Power supply	VDC	24	
Consumption	mA	35	
Dimensions	mm	120 x 115 x 50	

► For other products within this category see p.105.

Amplifiers

VHF/VHF-UHF UNIVERSAL PREAMPLIFIER (1 input/2 outputs)



7462

- 1 universal input: VHF only, UHF only or VHF+UHF (switchable with jumpers)
- 2 wideband outputs
- up to 105 dB μ V output power
- 7-22 dB adjustable gain on VHF
- 7-22 dB adjustable gain on UHF
- LTE (4G) + GSM rejection
- low-noise
- power indication LED
- DC power pass (with jumper)
- 5-24 VDC operating voltage



7462		
Inputs	-	VHF only / UHF only / VHF-UHF
Frequency range	MHz	174-240/470-790/174-240+470-790
Gain	dB	VHF: 7-22 UHF: 7-22
Noise figure	dB	VHF: 3,5 UHF: 3,5
Max. input level	dB μ V	80
Max. output level	dB μ V	105
Power supply	VDC	5-24
Consumption	mA	35 mA @ 24VDC / 90 mA @ 5 VDC
Dimensions	mm	112 x 98 x 56

Amplifiers

VHF/VHF-UHF UNIVERSAL PREAMPLIFIER (2 inputs/2 outputs)



7463

- 2 universal inputs: VHF only, UHF only or VHF+UHF (switchable with jumpers)
- 2 wideband outputs
- up to 105 dBμV output power
- 7-22 dB adjustable gain on VHF
- 7-22 dB adjustable gain on UHF
- LTE (4G) + GSM rejection
- low-noise
- power indication LED
- DC power pass (with jumper)
- 5-24 VDC operating voltage



7463			
Inputs	-	VHF only / UHF only / VHF-UHF (switchable with jumpers)	VHF only / UHF only / VHF-UHF (switchable with jumpers)
Outputs	-	2 x wideband output	
Frequency range	MHz	174-240/470-790/174-240+470-790	174-240/470-790/174-240+470-790
Gain	dB	VHF: 7-22 UHF: 7-22	VHF: 7-22 UHF: 7-22
Noise figure	dB	VHF: 3,5 UHF: 3,5	
Max. input level	dBμV	80	
Max. output level	dBμV	105	
Power supply	VDC	5-24	
Consumption	mA	50 mA @ 24 V / 120 mA @ 5 V	
Dimensions	mm	112 x 98 x 56	

Amplifiers

POWER SUPPLY FOR dSCR

NEW

This power supply is designed to power the trunk lines or the DC input connector.

2460 | 2460UK

		2460		2460UK
Input voltage	VAC	100 - 240		
Output voltage	VDC	20		
Output current	A	3,25		
Output Connector	-	F-type		
Dimensions	mm	115 x 55 x 35		



POWER SUPPLY/2-WAY SMARTSPLITTER

NEW

This power inserter (with integrated smart splitter) is designed to power the dSCR products from the dSCR outputs (in case the set-top box does not provide enough power).

2461

- powers SCR products without overloading the set-top boxes
- copies the set-top box voltage, tone and DiSEqC to the SCR product (EN50494 and EN50607)

		2461
Inputs	-	1
Outputs	-	2
Frequency range	MHz	950 - 2150
Insertion loss	dB	6
Return loss	dB	> 10
Input voltage	VAC	100 - 240
Output voltage	VDC	18
Output current	mA	500
Dimensions	mm	110 x 94 x 41
Supported standards	-	EN50494, EN50607

*2461US available with US plug



5V POWER SUPPLY

2425

- 5 V high-efficiency power supply
- output current: 25 mA
- 1 output
- power LED
- wall or DIN-rail mountable
- short-circuit protected

		2425
Outputs	-	1
Insertion loss	dB	1
AC input voltage/Frequency/Power	-	230 V~ / 50 Hz / 1,3 W
DC output voltage	VDC	5
Output current	mA	25
Dimensions	mm	110 x 78 x 41



Amplifiers

24V POWER SUPPLY

- high-efficiency
- 2 outputs
- 24V stabilized
- short-circuit protection
- power LED indicator
- wall or DIN-rail mountable



2434

2434

Outputs	-	2
Insertion loss	dB	4
Isolation between outputs	dB	10
AC input voltage/Frequency/Power	-	85 - 240 V~ / 50 - 60 Hz / 4,8 W
DC output voltage	VDC	24
Output current	mA	150
Dimensions	mm	110 x 94 x 41

*2434US available with US plug

ADDITIONAL PRODUCTS

PREAMPLIFIER / POWER SUPPLY KIT

KIT 7316/2430A	One Band Preamplifier and Power Supply	UHF: 25-40 dB
KIT 7404/2430A	2 inputs Preamplifier and Power Supply	VHF: 10-30 dB / UHF: 25-40 dB
KIT 7415/2430A	3 inputs Preamplifier-combiner and Power Supply	FM: 12 dB / BIII: 10-28 dB / UHF: 20-35 dB
KIT 7422/2430A	3 inputs Preamplifier and Power Supply	VHF: 10-30 dB / UHF: 25-40 dB / UHF: 25-40 dB
KIT 7422E/2430AE	3 inputs Preamplifier and Power Supply	VHF: 10-30 dB / UHF: 25-40 dB / UHF: 25-40 dB
KIT 7490/2430A	2 inputs Preamplifier-combiner and Power Supply	VHF: 10-30 dB / UHF: 25-40 dB

PREAMPLIFIER

7211	Multiband Preamplifier	UHF + UHF/VHF: 10-30 dB / UHF 25-40 dB
7310	One Band Preamplifier	UHF ch. 21-69, 18 dB
7316	One Band Preamplifier	UHF ch. 21-69, 25-40 dB adjustable
7410	3 inputs Preamplifier-combiner	BIII: 10-30 dB / UHF: 25-40 dB / UHF: 20-35 dB
7415	3 inputs Preamplifier-combiner	Bd. II (FM): 12 dB / Bd III: 10-28 dB / UHF : 20-35 dB
7441	3 inputs Preamplifier-combiner	Bd. II (FM): 10 dB / Bd III: -5 - +10 dB / UHF : 10-25 dB

Distribution Accessories

- ▶ Johansson offers a wide range of high-quality accessories for the distribution of terrestrial, cable and satellite TV. All products are designed with the future LTE-networks in mind and make sure your TV distribution system is future-proof!



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Distribution Accessories

FILTERS LTE + GSM Filter

Long Term Evolution (LTE) is a consequence of the digitization of the TV-signals. Digital signals offer a great bandwidth-advantage, which will be used for next-generation telecommunication applications (4G). This implies the UHF channels 61-69 will no longer be used for TV-purposes, and have to be filtered-out carefully to avoid interference! Our LTE-ready products offer strong filtering capabilities for the UHF channels 61-69 and the GSM-band.

The next LTE evolution is already happening. For the 5G networks, the UHF-channels will be limited to 694MHz (or channel 48). Look for the 5G logo in our catalog to find compatibel products.

LTE (4G) + GSM FILTER

- >15 dB LTE rejection
- wall or mast mountable with strap
- indoor and outdoor mountable

6022GSM

		6022GSM
Frequency range	MHz	5-790
Cut off channel	-	60
Insertion loss	dB	1
GSM rejection 880-960 MHz	dB	60
LTE (4G) rejection	dB	20
DC power pass	mA	500
Connectors	-	2 x F female
Mounting	-	Indoor/outdoor (indoor flange provided)
Dimensions	mm	112 x 98 x 56



Example of outdoor product

LTE (4G) FILTERS

- 25 dB LTE rejection
- in-line small housing
- indoor use

6023C57 | 6023C58 | 6023C59

		6023C57	6023C58	6023C59
Frequency range	MHz	5-766	5-774	5-782
Cut off channel	-	57	58	59
Insertion loss	dB	1	1	1
LTE (4G) rejection	dB	35	30	25
GSM rejection	dB	25	25	25
DC power pass	mA	500	500	500
Connectors	-	2 x F female	2 x F female	2 x F female
Mounting	-	Indoor Use	Indoor Use	Indoor Use
Dimensions	mm	112 x 98 x 56	112 x 98 x 56	112 x 98 x 56



Distribution Accessories

LTE (4G) FILTERS

- 20 dB LTE rejection
- indoor use (direct plug-in mounting behind TV)
- IEC connectors

6030C58



		6030C58
Frequency range	MHz	5-782
Cut off	-	58
Insertion Loss	dB	1
LTE (4G) rejection	dB	20
GSM rejection	dB	25
DC power pass	mA	500
Connectors	-	IEC male/female
Mounting	-	Indoor Use
Dimensions	mm	67 x 33 x 22



- high LTE (4G/5G) rejection
- indoor and outdoor mountable

6024C48 | 6024C58 | 6024C59 | 6025C60

		NEW			
		6024C48	6024C58	6024C59	6025C60
Frequency range	MHz	5-694	5-774	5-782	5-790
Cut off channel	-	48	58	59	60
Insertion loss	dB	2,5	2,5	2,5	1,5
LTE (4G/5G) rejection	dB	40	45	40	30
GSM rejection	dB	15	15	15	No
DC power pass	mA	500	500	500	500
Connectors	-	2 x F female	2 x F female	2 x F female	2 x F female
Mounting	-	Indoor/outdoor (indoor flange provided)	Indoor/outdoor (indoor flange provided)	Indoor/outdoor (indoor flange provided)	Indoor/outdoor (indoor flange provided)
Dimensions	mm	112 x 98 x 56	112 x 98 x 56	112 x 98 x 56	112 x 98 x 56

Example of indoor product



LTE (4G) TETRA FILTERS

- UHF/Tetra filter
- indoor and outdoor mountable

6040C58 | 6040C59



Example of outdoor product

		6040C58	6040C59
Bandwidth	MHz	470-774	470-782
Channels	-	C21-58	C21-59
Insertion loss	dB	1,5	1,5
Rejection	dB	35	30
GSM rejection	dB	30	30
DC power pass	mA	500	500
Connectors	-	2 x F female	2 x F female
Mounting	-	Indoor/outdoor (indoor flange provided)	Indoor/outdoor (indoor flange provided)
Dimensions	mm	112 x 98 x 56	112 x 98 x 56



► For other products within this category see p.116 and 117.

Distribution Accessories

SPLITTERS Wideband Indoor Splitters 5-2340 MHz

Compatible with Wideband LNBs



- 2, 3, 4, 6, 8-way wideband splitters
- low insertion loss
- nickel plated zinc diecast housing
- "F"-type connectors
- DC power pass from all output ports to the input port (diode protection)

		4502	4503	4504	4506	4508
Way	-	2	3	4	6	8
Frequency	MHz	5-2340	5-2340	5-2340	5-2340	5-2340
Insertion loss	dB	6,5	11	11	16	18
Isolation	dB	16	20	20	20	20
Return loss in/out	dB	10	10	10	10	10
DC power pass (out/in)	-	2	3	4	6	8
Dimensions (mm)	mm	47x56x21	47x77x21	47x77x21	57x120x25	57x120x25

Distribution Accessories

COMBINERS TV Combiners

- low-loss
- indoor/outdoor use



		1269	1281	1200A
Inputs (DC power pass=*)	MHz	VHF: 40-230 * UHF: 470-862 *	UHF1: 470-790 * UHF2: 470-790 *	FM: 88-108 VHF-UHF: 40-68 + 175-862 (rej. FM) *
Insertion loss	dB	VHF: 0,5 UHF: 1,0	UHF1: 4,5 UHF2: 4,5	FM: 1,0 VHF-UHF: 1,0 (FM rejection >20)
Dimensions	mm	112 x 98 x 56		

		1352	1353
Inputs (DC power pass=*)	MHz	VHF: 40-230 * UHF1: 470-862 * UHF2: 470-862 *	BI-FM: 40-108 * BIII: 170-230 * UHF: 470-862
Insertion loss	MHz	VHF: 0,5 UHF1: 4,5 UHF2: 4,5	BI-FM: 1,0 BIII: 1,0 UHF: 2,0
Dimensions	mm	112 x 98 x 56	

		1464
Inputs (DC power pass=*)	MHz	BI-FM: 40-108 * BIII: 170-230 * UHF1: 470-862 * UHF2: 470-862 *
Insertion loss	dB	BI-FM: 0,5 BIII: 0,5 UHF1: 3,5 UHF2: 3,5
Dimensions	mm	112 x 98 x 56

Distribution Accessories

NEW

DiSEqC SWITCHES

9208



9210



NEW

9216A



		9208	9210	9216A
Number of inputs	-	2	4	1 Sat/Ter
Frequency range	MHz	950-2150		Terr.: 5-862 - Sat.: 950-2150
Insertion loss	dB	2	4	2,5 - 4
Isolation	dB	15	30	25
Switching control	-	Tone Burst and DiSEqC 1.0		DiSEqC Option A/B
Consumption	mA	25 max.		
Dimensions	mm	112 x 98 x 56		

► For other products within this category see p.116 and 117.

TWIN DiSEqC SWITCH 5/2

9920

- switch for 2 TWIN LNB's combined with terrestrial

		9920
Frequency range	MHz	Terr.: 5-790 - Sat.: 950-2150
Insertion loss	dB	Terr.: 8 max. - Sat.: 4 max.
Switching control	dB	Tone Burst and DiSEqC 1.0/1.1
Isolation each SAT in/out	dB	40 min
Isolation SAT/TERR	dB	30 min
Current	mA	20 mA per receiver
DC power pass on SAT inputs	mA	350 max
Dimensions	mm	112 x 98 x 56



Distribution Accessories

COMBINERS TV-SAT Combiners

- indoor/outdoor combiner
- DC power pass

9506



9501



		9501	9506
Band/Insertion loss (DC power pass=*)	MHz	VHF-UHF 5-862/1 dB	VHF-UHF 5-862/2 dB
	MHz	SAT* 950-2150 /2 dB	SAT* 950-2150 /2,5 dB
Isolation	dB	> 15 (Terr.) > 30 (Sat.)	> 15 (Terr.) > 40 (Sat.)
Note	-	indoor use	outdoor use
Dimensions	mm	61 x 51 x 16	112 x 98 x 56

LINE AMPLIFIERS DTT Line Amplifier

- low noise UHF line amplifier
- ideal to pump up low level signals and reject impulse noise in DTT reception
- powered with 5-24V of DTT (DVB-T) receiver

7317



		7317
Band	-	UHF C 21- 69
Frequency	MHz	470-862
Gain	dB	15
Noise figure	dB	2,0
Max. Output level	dBμV	102
Consumption	mA	20
Voltage supply range	V	5 to 24
Dimensions	mm	72 x 22 x 17

LINE AMPLIFIERS Satellite Line Amplifier

- sloped gain for compensating coaxial cable losses
- available in 3 versions with different bandwidth
 - 40-2150 MHz
 - 950-2150 MHz
 - 40-2340 MHz (for wide band LNB applications)

9604



		NEW		
		9604	9617	9653
Frequency range	MHz	950-2150	40-2150	40-2340
Gain	dB	13 (950 MHz) 18 (2150 MHz)	9 (40 MHz) 12 (860 MHz) 13 (950 MHz) 16 (2150 MHz)	5 (40 MHz) 20 (2340 MHz)
Noise figure	dB	4	4	7
Max. Output level	dBμV	110	110	110
Power supply	V	13-18 / 30 mA	13-18 / 30 mA	13-18 / 60 mA
DC power pass	mA	500 max.	500 max.	500 max.
Dimensions	mm	72 x 22 x 17		68 x 26 x 16

Distribution Accessories

OTHERS Attenuator

- small housing
- adjustable attenuation: 0-20 dB
- DC power pass

9609



9609		
Frequency range	MHz	700-2150
Attenuation	dB	0-20 adjustable
DC power pass	-	yes
Dimensions	mm	77 x 22 x 17

OTHERS 22 kHz Tone Blocking Filter

- small housing
- low insertion loss

9613



9613		
Frequency range	MHz	950-2150
Insertion loss	dB	1
DC loss	V	0,5 typ.
Dimensions	mm	77 x 22 x 17

OTHERS DC Block - DC Inserter

- block DC voltage to receiver
- pass DC voltage to LNB

9602



9602		
Frequency range	MHz	40-2150
Insertion loss	dB	1
DC power pass	mA	500 max.
Dimensions	mm	61 x 51 x 16

Distribution Accessories

OTHERS DC Block

- block DC voltage from input to output

9631



		9631
Frequency range	MHz	5-2300
Attenuation	dB	1
Dimensions	mm	72 x 22 x 17

OTHERS F-F Galvanic Isolator

- high galvanic isolation of both center and shield
- small design

9620



		9620
Frequency range	MHz	5-2150
Galvanic isolation	VDC	400-800
Capacitor value	nF	center: 1 / shield:4
Dimensions	mm	51 x 14 x 14

OTHERS Priority Switch

- priority switching
- signaling bypass to LNB

9337



		9337
Frequency range:	MHz	950 - 2150
Insertion loss	dB	< 3,5
Isolation	dB	> 15
Signaling bypass to LNB	-	22 KHz tone and 13/18V power
Switch control	-	Priority receiver gets priority (if voltage >10V)
DC loss	V	1.0 max.
Dimensions	mm	61 x 51 x 16

Distribution Accessories

ADDITIONAL PRODUCTS

TAPS		
4510	1 way tap	5-2300 MHz, 10 dB
4511	1 way tap	5-2300 MHz, 15 dB
4512	1 way tap	5-2300 MHz, 20 dB
4513	1 way tap	5-2300 MHz, 25 dB
4520	2 way tap	5-2300 MHz, 10 dB
4521	2 way tap	5-2300 MHz, 15 dB
4522	2 way tap	5-2300 MHz, 20 dB
4523	2 way tap	5-2300 MHz, 25 dB
4524	2 way tap	5-2300 MHz, 30 dB
4540	4 way tap	5-2300 MHz, 12 dB
4541	4 way tap	5-2300 MHz, 15 dB
4542	4 way tap	5-2300 MHz, 20 dB
4543	4 way tap	5-2300 MHz, 25 dB
4544	4 way tap	5-2300 MHz, 30 dB
4561	6 way tap	5-2300 MHz, 15 dB
4562	6 way tap	5-2300 MHz, 20 dB
4563	6 way tap	5-2300 MHz, 25 dB
4581	8 way tap	5-2300 MHz, 15 dB
4582	8 way tap	5-2300 MHz, 20 dB
4583	8 way tap	5-2300 MHz, 25 dB
FILTER		
6020	Rejection Filter 425/433 MHz	
6006F	Tattoo Filter 466 MHz	
COMBINER		
1282	2 inputs Combiner	Bd. I-IV DC : bd. V DC
9507	SAT/TV Combiner high isolation	VHF-UHF DC/ Satellite DC, high isolation Recommended for universal LNB
9509	SAT/TV Combiner high isolation	VHF+UHF / Satellite DC combiner, high isolation

DiSEqC SWITCH

9208E	DiSEqC Switch	2 inputs / 1 output
9209	DiSEqC Switch + Terrestrial	2 inputs + 1 terrestrial input / 1 output
9209E	DiSEqC Switch	2 inputs + 1 terrestrial input / 1 output
9210E	DiSEqC Switch	4 inputs / 1 output
9213	DiSEqC Switch + Terrestrial	3 inputs + 1 terrestrial input / 1 output
9214	DiSEqC Switch + Terrestrial	4 inputs + 1 terrestrial input / 1 output
9215	DiSEqC Switch + Terrestrial	3 inputs / 1 output
9218	DiSEqC Option Switch	2 inputs / 1 output
9219	Singel User DiSEqC Option Switch	2 inputs / 1 output
9222	DiSEqC 2.0 Switch	2 inputs / 1 output
9223	DiSEqC 2.0 Switch	3 inputs / 1 output
9224	DiSEqC 2.0 Switch	4 inputs / 1 output

OTHERS

6050E	VHF-UHF Attenuator, adjustable	
9412	22 kHz / 12 V Generator	
9614	Lightning Protection Filter	
9614E	Lightning Protection Filter	
9615	Voltage Regulator	input: 13/18V, output: 12V

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UNITRON NV | Frankrijklaan 27 | B-8970 Poperinge | Belgium

T + 32(0)57 33.33.63 | **F** + 32(0)57 33.45.24

E-mail sales@unitrongroup.com | www.unitrongroup.com