johansson

catalogue 2015

For every evolution a custom made solution

TERRESTRIAL DISTRIBUTION
SOLUTIONS

HOSPITALITY & RESIDENTIAL MDU
SOLUTIONS

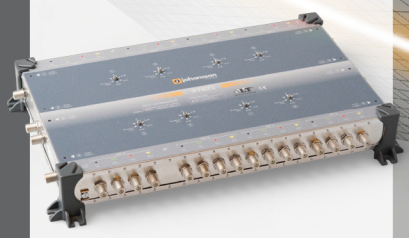
DVB T | DVB C | IPTV

REMOTE MANAGEMENT
SOLUTIONS

uCloud

SATELLITE SINGLE CABLE
SOLUTIONS

OLT | SCR | UNICABLE



WIRELESS SATELLITE DISTRIBUTION
SOLUTIONS

SAT>IP

PERFECT PICTURE
SOLUTIONS

4G lte

UNITRON GROUP

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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UNITRON GROUP

All specifications in this catalogue are subject to change without notice.

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 Multi Tuner SMATV server. This very powerfull satellite to IP streamer uses the latest SAT>IP technology and can be configured as a headend or as an IP multiswitch. In both cases, there is no need for middleware. The channels are managed from within the server.

DVB-S DVB-S2 DVB-T DVB-C

DVB-T2 ISDB-T

See our "Universe" in the Digital Compact Headend section.

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DMH

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 | 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,...

- 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

		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	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-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 multiswich, 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!

- 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

		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
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	
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

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	-	*Front side:* HD-SDI Input : BNC Streaming: 1 x RJ-45 (Ethernet) Management: 1 x RJ-45 (Ethernet) DC: Banana sockets Rear side: 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

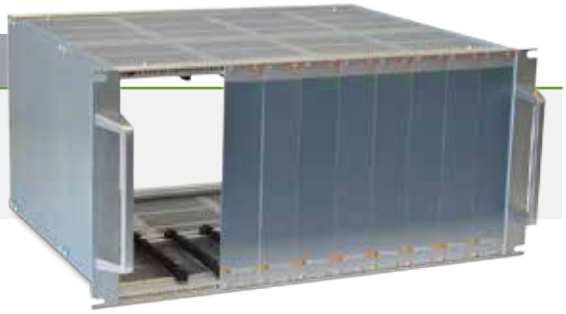
ACCESSORIES 19" Sub-Rack

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

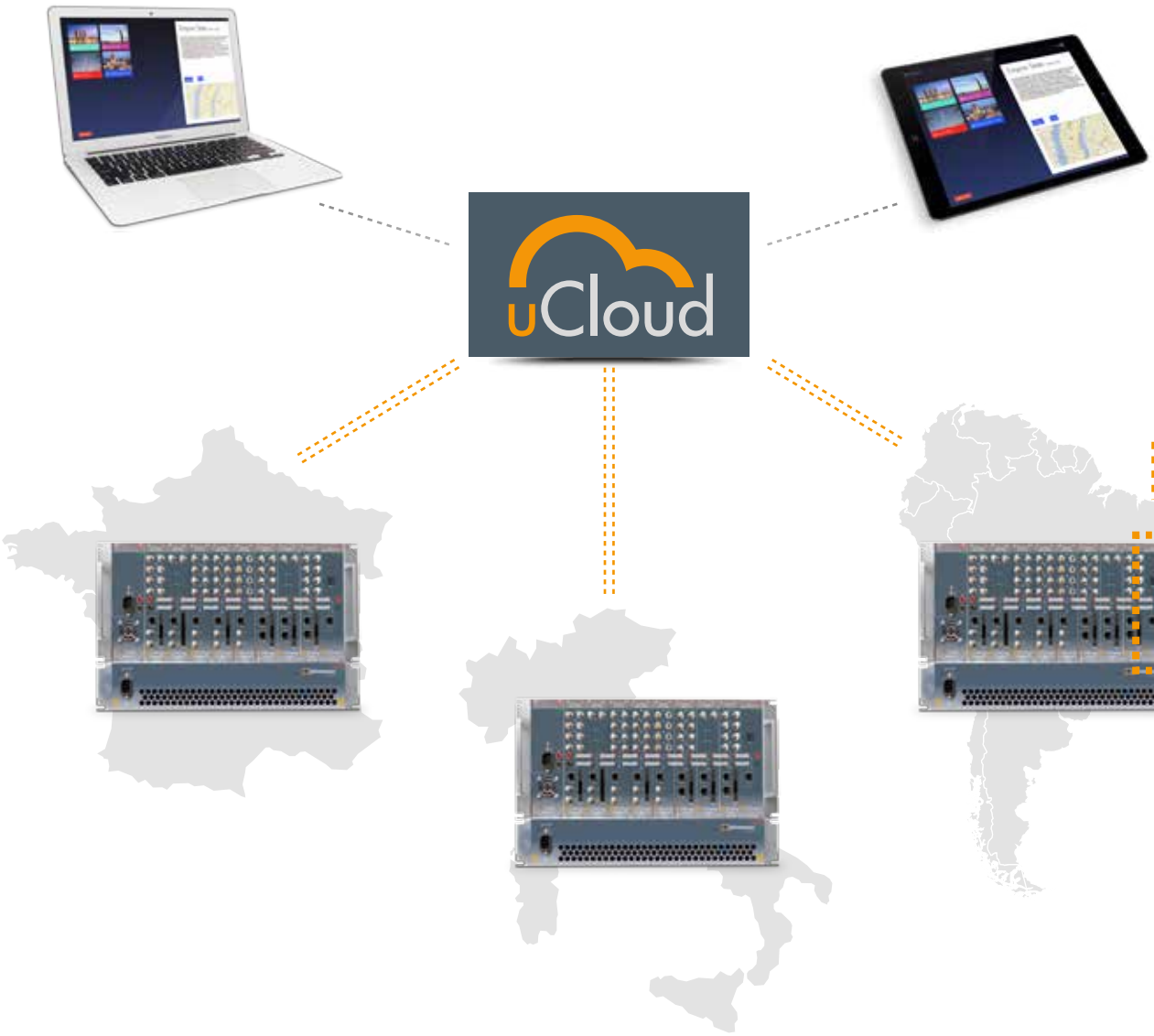
5063ETH

- 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

REMOTE MANAGEMENT SYSTEM



uCloud

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

REMOTE MANAGEMENT SYSTEM

5950

- very simple installation
- powerfull 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:

1. Put the RMU in the 19" rack.
2. Connect the RMU to an Internet-connected switch, together with the DMH modules.
3. Connect the power.
4. Go to our hosted website, login and enter the unique code visible on the RMU.
5. You can now connect to this module from wherever you are on any PC!

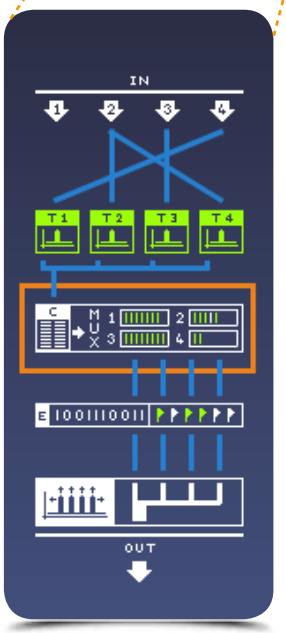
PLUG'N'PLAY

Digital Modular Headends

SYSTEM CONFIGURATOR

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 Modular Headends

SAT>IP™ Multi Tuner SMATV Server

NEW

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

Digital Compact Headends

Johansson developped a nice and versatile range of Digital Compact Headends.

First of all, we present the newest HDMI modulator on the market. Directly after its launch, customers reported back that it is the first modulator with an easy menu structure, and above all the first modulator on the market which is capable of processing all HDMI signals, independent of the resolution and the size of the picture.

Secondly, we are proud to announce our "Universe". The name "Universe" is well chosen to reflect a product that has very universal inputs and outputs and that might become the center of a lot of headend installations. The “Universe” can also be used as an add-on in a DMH system to enable the DMH to receive DVB-T2 and/or DVB-C signals.

A last 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!

INDEX

DIGITAL COMPACT HEADEND

Digital Compact Headends

HDMI MODULATOR

NEW

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 Fraquency | 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 Compact Headends

UNIVERSE

NEW

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

8600

- 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
- perfect picture quality thanks to a MER, comparable to premium headend equipment
- Plug&Play thanks to a built-in WebGUI

		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	-45 to -20 (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
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

*Coming soon

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 preprogrammed to distribute satellite programs in DVB-T (COFDM). Because all services and settings are preconfigured, the only thing you have to do is plug in the cables, and scan the TV's.

8501

- plug&play compact headend
- 8 transponders / 4 satellite bands / 8 COFDM multiplexes
- 2 CI slots: decode up to 32 encoded services
- preconfigured
- changes to the default settings can be made 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

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

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

DVB-C

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

DVB-C

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.

8530 | 8530 UK
8535 | 8535 UK

- 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

		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 is delivered with a UK power plug.

Digital Compact Headends

COLOSSEUM AV

Profilers

- The well-known Profilers are a range of programmable filter-amplifiers. The signals coming from multiple antennas can be combined, filtered, 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.

INDEX

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 (depending on the model), 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.

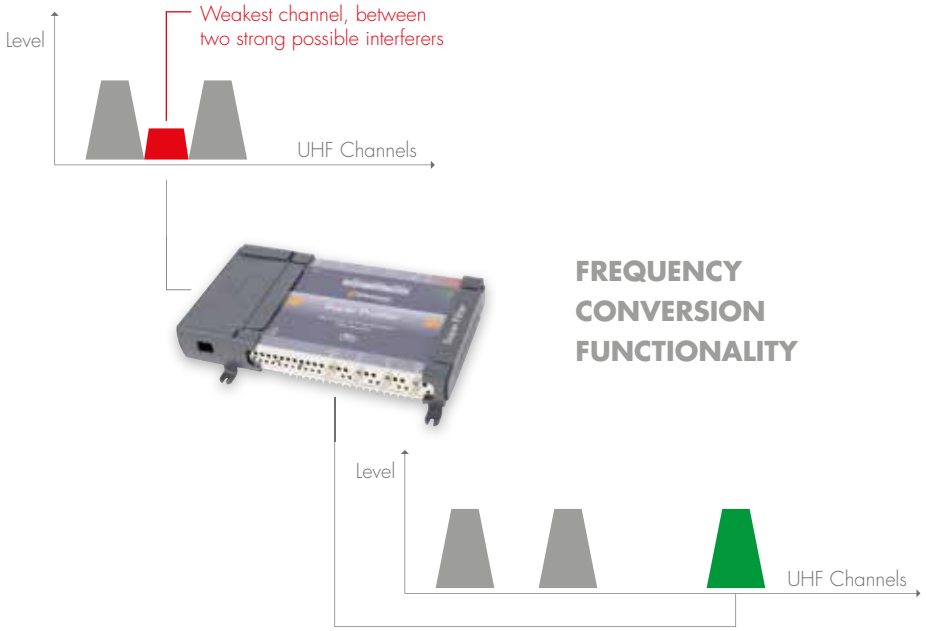
Configuration is done with a standalone remote control unit (ref. 6565).

4G lte

remote

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

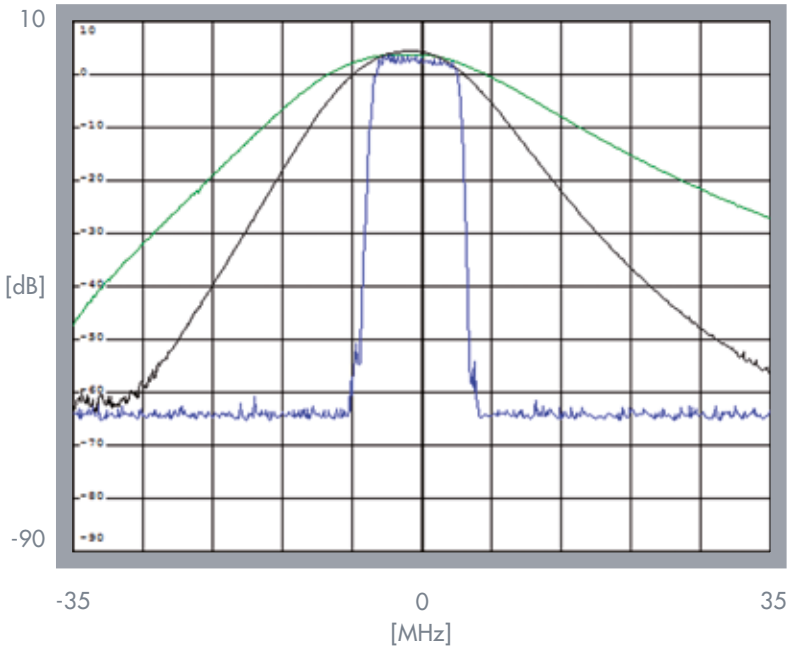


Profilers

SUPER PROFILER

		6630/6630 UK						
INPUTS	-	BI-FM	BIII/DAB	AUX	UHF1	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	dBµV	80	80	100	105			
Max. output level*	dBµV	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

PROFILER PLUS

remote

6620 | 6620 UK

- 7 inputs: 4 x UHF/BI-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

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

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.

6603

- 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					
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

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

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

PROFILER SAT+ | 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.

Profiler SAT | 6602

- 1 SAT input + 6 Terrestrial inputs : BI-FM/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+ | 6605

- 1 SAT input + 6 Terrestrial inputs : BI-FM/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

		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

PROFINO PLUS

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.

Profino Plus | 6611

- 4 inputs : FM, BIII / DAB and 2 x UHF
- 6 UHF clusters from 1 to 7 channels bandwidth
- BIII/ DAB input
- BI-FM input for BI or FM or BI + FM
- high UHF input levels (up to 105 dBµV)
- selectable remote power (12/24V) on BIII and UHF inputs
- -30 dB test output

		6611			
Inputs	-	BI-FM	BIII/DAB	UHF1	UHF2
Frequency range	MHz	88-108	174-240	470-862	
Filter bandwidth	-	-	-	1-7 Ch. (8-56 MHz)	
Cluster configuration	-	-	-	4	2
				3	3
				6	0
Gain	dB	35	35	45	
Gain adjustment	dB	20	20	30	
Noise figure	dB	5	5	6	
Max. input level	dBµV	75	85	110	
Max. output level*	dBµV	115	110	110	
Selectivity	dB/Ch±2	20	30	15	
Return loss	dB	>10			
LNA remote voltage	V	-	12/24	12/24	
LNA remote current	A	-	100 mA in total		
Outputs	-	1 x TV output 1 x Test output: -30 dB			
Data transfer	-	DSUB9 connector			
Power supply	-	230-240 V~ / 12 VDC / 20 VA			
Operating temperature	°C	-5 to +50			
Dimensions	mm	231 x 185 x 53			

*Terr.: -60 dBc/IM3

Profilers

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

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

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. 50.

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

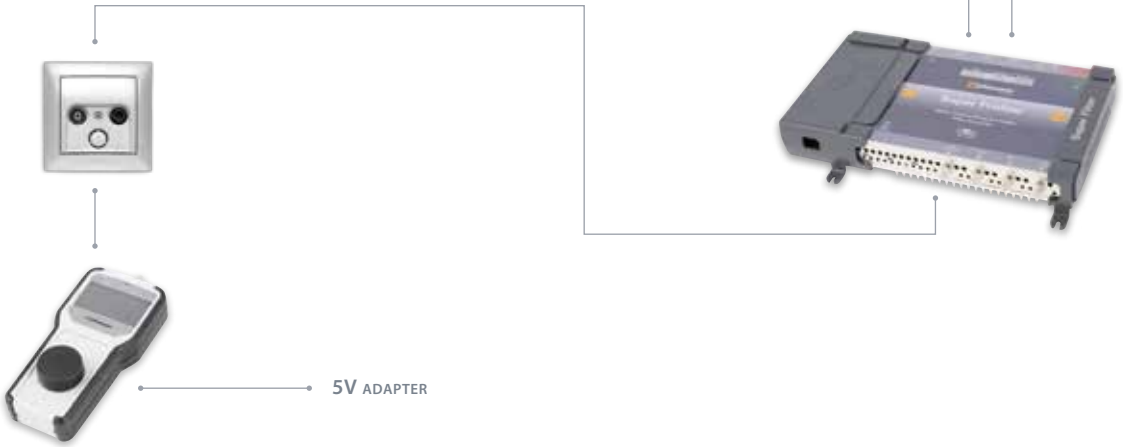
Compatible products

- 6620(UK)
- 6630(UK)
- 6510A
- 6520
- 6550A/6555A/6556A/6557A

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
  - 6611
- 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

ACTIVE COMBINER		
6550A	Active Combiner 2 inputs	1 UHF input / 1 UHF bypass input / 1 UHF cluster + bypass
6555A	Active Combiner 2 inputs	2 UHF inputs / 2 UHF clusters
6556A	Active Combiner 3 inputs	3 UHF inputs / 4 UHF clusters
6557A	Active Combiner 4 inputs	4 UHF inputs / 6 UHF clusters

ACCESSORIES	
6554	PC to Coax Module for active combiners
6564	Ethernet to coax adapter for the following references: 6620/6630/6510A, 6520 and 6550A/6555A/6556A/6557A

For more information please send an e-mail to sales@unitrongroup.com or visit our website www.unitrongroup.com.

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) 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!

INDEX

AMPLIFIERS

Amplifiers

TERRESTRIAL DISTRIBUTION AMPLIFIER

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.

4G lte | HIGH EFFICIENCY

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

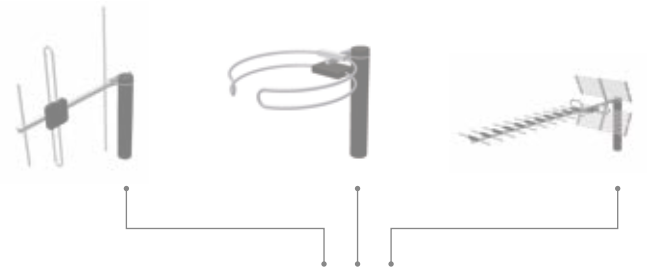
- 3/4 inputs
- VHF-UHF input with return path (ref. 7774, 7775), ideal for CATV applications
- split-band amplifiers with interstage attenuators and dynamic range of 30 dB
- high gain (up to 40 dB), high output power (>122 dBµV)
- slope adjustment on VHF-UHF (ref. 7774, 7775)
- high input power: up to 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

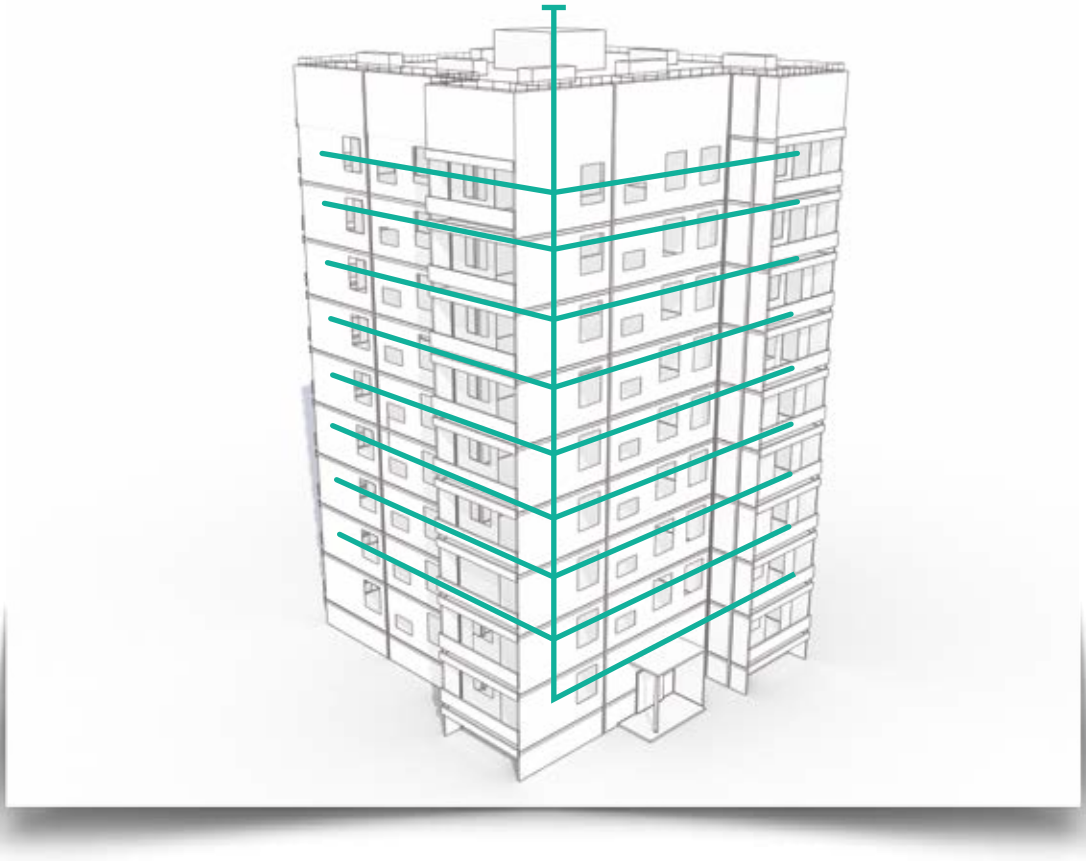
		7773(UK)	7774(UK)	7775(UK)
Inputs	-	FM BIII/DAB UHF	FM BIII/DAB UHF VHF-UHF	FM BIII/DAB UHF VHF-UHF
Frequency range	MHz	FM: 88-108 BIII/DAB: 174-240 UHF: 470-790	FM: 88-108 BIII/DAB: 174-240 UHF: 470-790 VHF-UHF: 5-1000 (RP: 5-65)	FM: 88-108 BIII/DAB: 174-240 UHF: 470-790 VHF-UHF: 5-1000 (RP: 5-65)
Gain	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 AMPLIFIER





Amplifiers

MULTIBAND AMPLIFIER

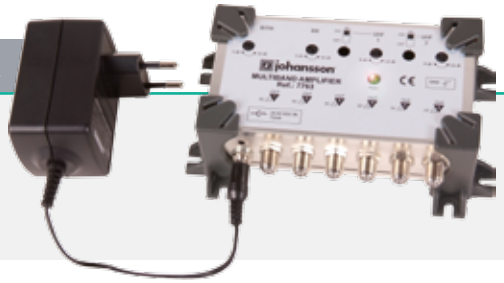
7760A | 7761A

- 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		

MULTIBAND AMPLIFIER

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 AMPLIFIER

NEW

4G LTE

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 AMPLIFIER

NEW

4G LTE

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 AMPLIFIER

NEW

4G lte

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	dBµV	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

UHF PREAMPLIFIER POWER SUPPLY KIT

NEW

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

VHF/UHF PREAMPLIFIER POWER SUPPLY KIT

4G LTE

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

VHF/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

VHF/UHF PREAMPLIFIER POWER SUPPLY KIT

4G LTE

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. 69.

Amplifiers

UHF PREAMPLIFIER

- 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

UHF PREAMPLIFIER

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

		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

Amplifiers

UHF PREAMPLIFIER

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

		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

VHF/UHF PREAMPLIFIER

- 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		

Amplifiers

VHF/UHF PREAMPLIFIER

- 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	

VHF/VHF-UHF UNIVERSAL PREAMPLIFIER (1 INPUT/2 OUTPUTS)

- 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 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	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

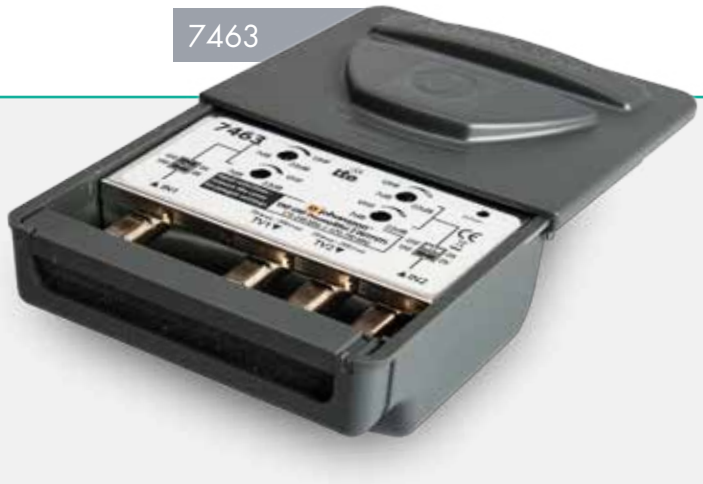
▸ For other products within this category see p. 69.

Amplifiers

VHF/VHF-UHF UNIVERSAL PREAMPLIFIER (2 INPUTS/2 OUTPUTS)

4G LTE

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	

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

2434

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

		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

ADDITIONAL PRODUCTS

INDOOR AMPLIFIER

7708	VHF-UHF Indoor Amplifier	2 outputs - separate VHF and UHF adjustment
7710	Indoor Amplifier	4 outputs - separate VHF and UHF adjustment
7718	VHF-UHF Indoor Amplifier	2 outputs - separate VHF and UHF adjustment

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
7320	DTT Preamplifier	UHF DTT 25-35 dB
7320A	4G/LTE preamplifier	UHF ch. 21-60, 25-35 dB
7403A	2 inputs Preamplifier	BIII: 8-28 dB / UHF: 20-35 dB
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

For more information please send an e-mail to sales@unitrongroup.com or visit our website www.unitrongroup.com.

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!

INDEX

DISTRIBUTION ACCESSORIES

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 band-width-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.

FILTERS LTE (4G) + GSM Filter

6022GSM

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

Example of outdoor product

		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

FILTERS LTE (4G) Filter

6023C57 | 6023C58 | 6023C59

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

		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

FILTERS LTE (4G) Filter

- 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

FILTERS LTE (4G) Filter

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

6024C58 | 6024C59 | 6025C60

		6024C58 | 6024C59		6025C60
Frequency range	MHz	5-774	5-782	5-790
Cut off channel	-	58	59	60
Insertion loss	dB	2,5	2,5	1,5
LTE (4G) rejection	dB	45	40	30
GSM rejection	dB	15	15	No
DC power pass	mA	500	500	500
Connectors	-	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)
Dimensions	mm	112 x 98 x 56	112 x 98 x 56	112 x 98 x 56

Example of indoor product

FILTERS LTE (4G) Tetra Filter

- UHF/Tetra filter
- indoor and outdoor mountable

6040C58 | 6040C59

		6040C58 | 6040C59	
Bandwitdth	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

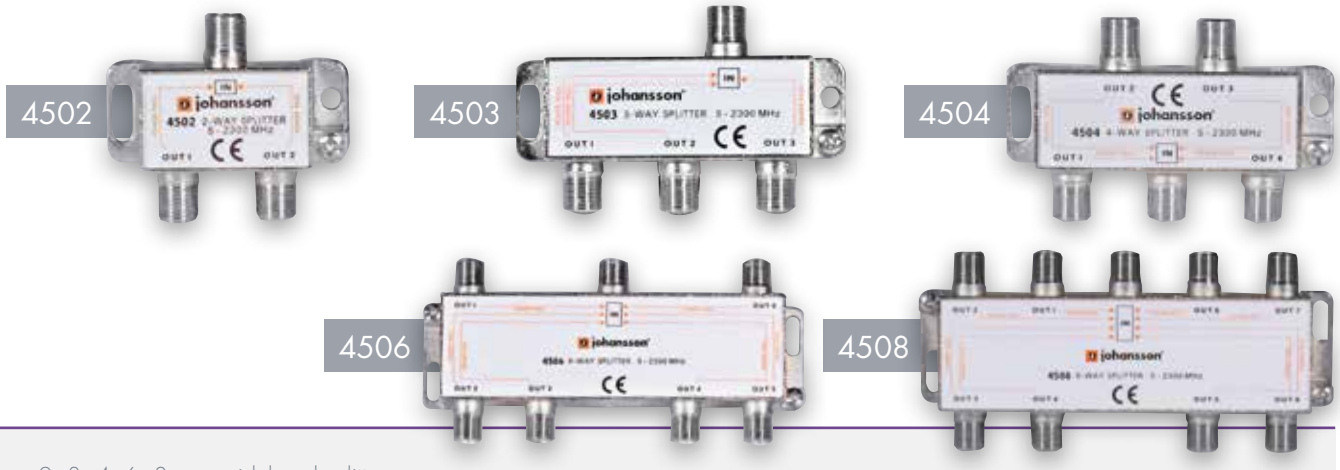
Example of outdoor product

▸ For other products within this category see p. 80 and 81.

Distribution Accessories

SPLITTERS Wideband Indoor Splitters 5-2340 MHz

NEW 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

▸ For other products within this category see p. 80 and 81.

Distribution Accessories

COMBINERS TV Combiners

1269

1464

- low-loss
- indoor/outdoor use

		1269	1281	1200A
Inputs (DC power pass=*)	MHz	VHF: 40-230 * UHF: 470-862 *	UHF1: 470-862 * UHF2: 470-862 *	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

▸ For other products within this category see p. 80 and 81.

Distribution Accessories

DiSEqC SWITCHES

9208

9210

		9208	9210
Number of inputs	-	2	4
Frequency range	MHz	950-2150	
Insertion loss	dB	2	4
Isolation	dB	15	30
Switching control	-	Tone Burst and DiSEqC 1.0	DiSEqC 1.0
Consumption	mA	25 max.	
Dimensions	mm	112 x 98 x 56	

▶ For other products within this category see p. 80 and 81.

TWIN DiSEqC SWITCH 5/2

9920

■ switch for 2 TWIN LNB's combined with terrestrial

		9920
Frequency range	MHz	Sat.: 950-2150 - Terr.: 5-862
Insertion loss	dB	Sat.: 4 max. - Terr.: 8 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

9506

9501

- indoor/outdoor combiner
- DC power pass

		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

7317

- 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
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

9604

- 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)

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

9609

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

		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

9613

- small housing
- low insertion loss

		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

9602

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

		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

9631

- block DC voltage from input to output

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

OTHERS F-F Galvanic Isolator

9620

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

		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

9337

- priority switching
- signal by pass

		9337
Frequency range:	MHz	950 - 2150
Insertion loss	dB	< 3,5
Isolation	dB	> 15
Signal by pass	-	22 KHz tone and 13/18V power
Switch control	-	Coaxial voltage 0V/13-18V of the priority satellite receiver Power > 10.0V = ON/<7.0 = OFF
DC loss	V	1.0 max.
Dimensions	mm	61 x 51 x 16

▸ For other products within this category see p. 80 and 81.

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	Tatoo 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 Recommanded for universal LNB
9509	SAT/TV Combiner high isolation	VHF+UHF / Satellite DC combiner, high isolation

For more information please send an e-mail to sales@unitrongroup.com or visit our website www.unitrongroup.com.

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
9215E	DiSEqC Switch	3 inputs / 1 output
9216	DiSEqC 1.1 Switch option A/B 2 inp 1 outp	2 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

Multiswitches & SCR

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.

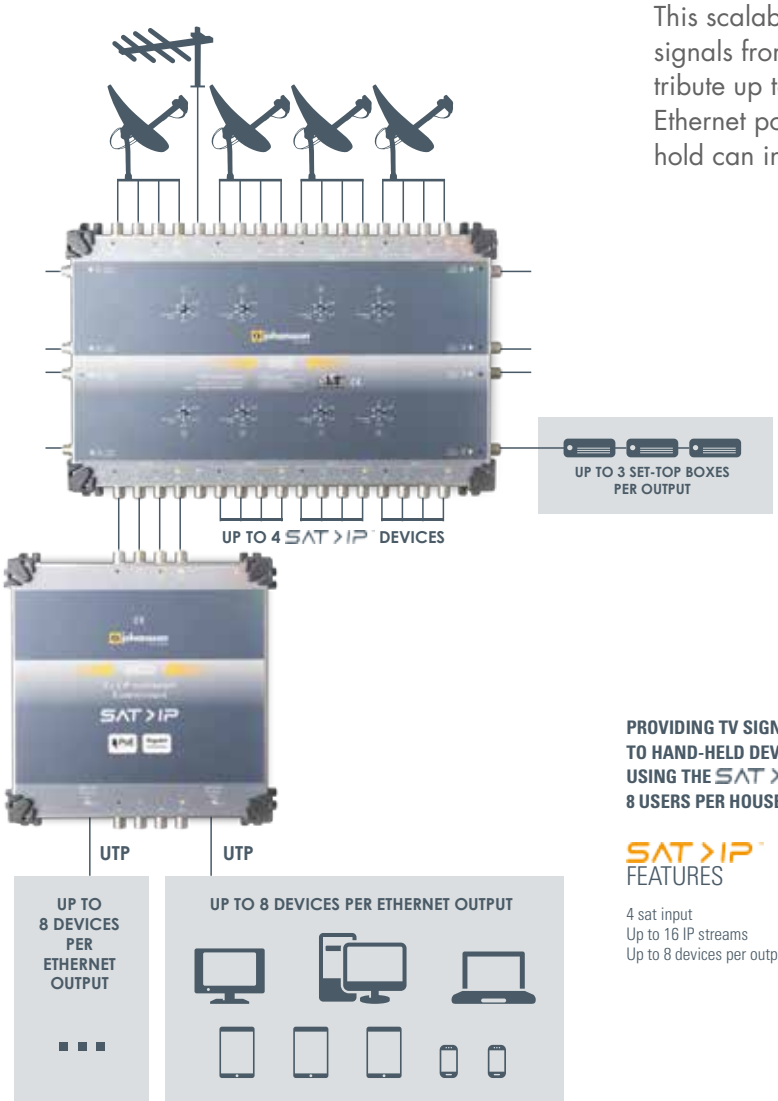
UnitronGroup offers a wide range of multiswitches with integrated 'SCR' technology. With those multiswitches, you can connect multiple set-top boxes for multi-room applications to numerous satellites using one coax cable only!

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.

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 and 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!



WATCH SATELLITE TV FROM MULTIPLE SATELLITES IN EVERY ROOM WITH ONE COAX CABLE

SCR MULTISWITCH FEATURES

INPUT
1 x Terrestrial input
from 4, 8 or 16 satellite inputs
from 1, 2 or 4 satellite positions

OUTPUT
4 or 8 outputs (up to 12 or 24 tuners)
Up to 4 or 8 legacy receivers
Up to 12 or 24 SCR receivers

PROVIDING TV SIGNALS OVER ETHERNET OR WIFI TO HAND-HELD DEVICES, SMARTPHONES AND TABLETS, USING THE SAT>IP APP FOR ANDROID AND iOS. 8 USERS PER HOUSEHOLD CAN INDEPENDENTLY WATCH TV

SAT>IP FEATURES

4 sat input
Up to 16 IP streams
Up to 8 devices per output

INDEX

MULTISWITCHES & SCR

Multiswitches & SCR

SAT>IP

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.

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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
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

Multiswitches & SCR

dLNB

NEW

Now that the new SCR technology has found its way into our multiswitch range and into the market, it was only logical that Unitron was taking the next step : put the SCR technology into LNBs.

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

dLNB24 | dLNB32

- 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

		dLNB24 | dLNB32	
Input	-	1 Ku	
Input frequency	MHz	10700 – 12750	
Outputs	-	1	
Output SCR channels	-	24	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	

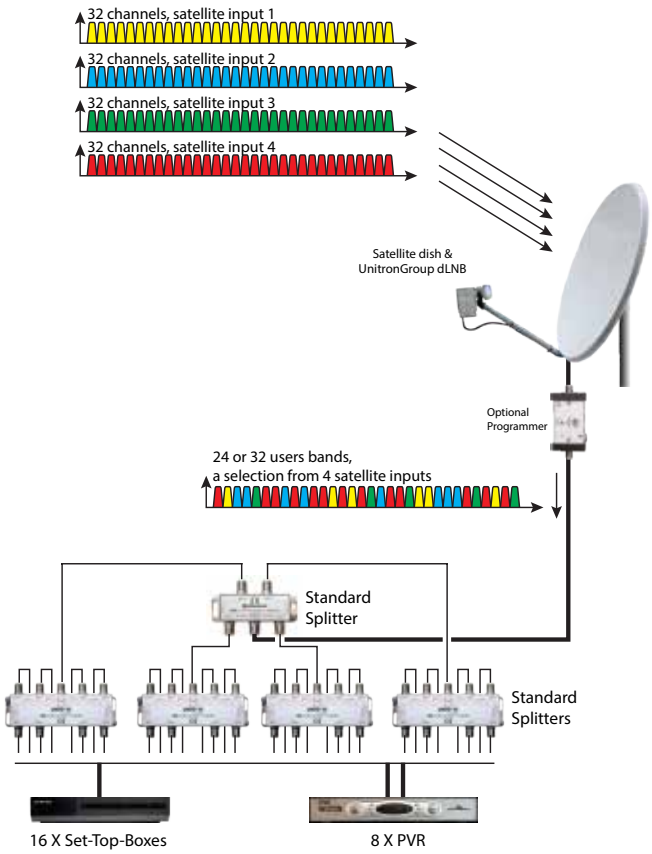
Multiswitches & SCR

dLNB

NEW

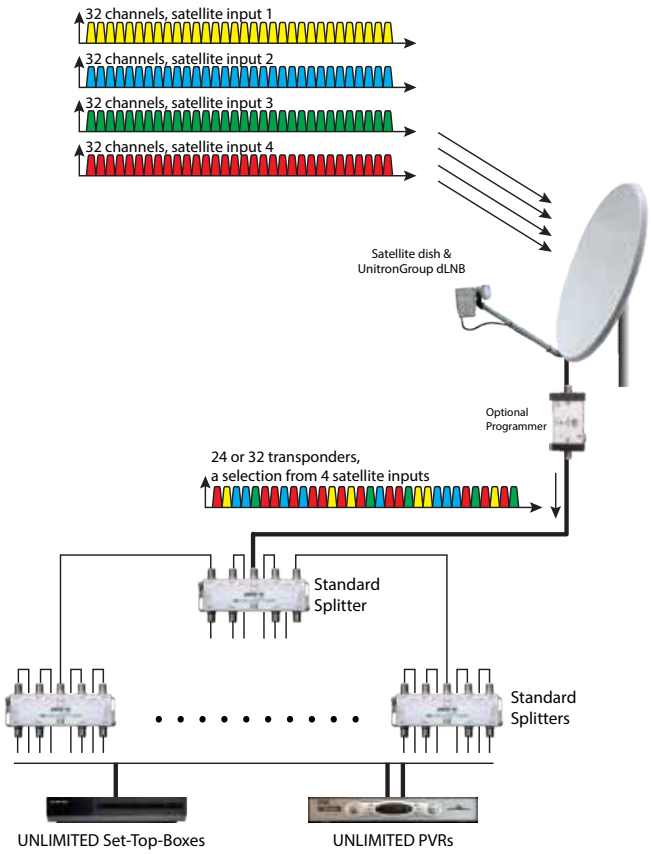
USE CASE 1

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.

Multiswitches & SCR

DIGITAL SCR MULTISWITCH

NEW

OLT One-Liner Technology | UNICABLE | 4 satellite positions

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 the first digital SCR multiswitch with 5 userbands per outlet and allowing up to 4 satellite orbital positions, when using wideband LNBs.

9775

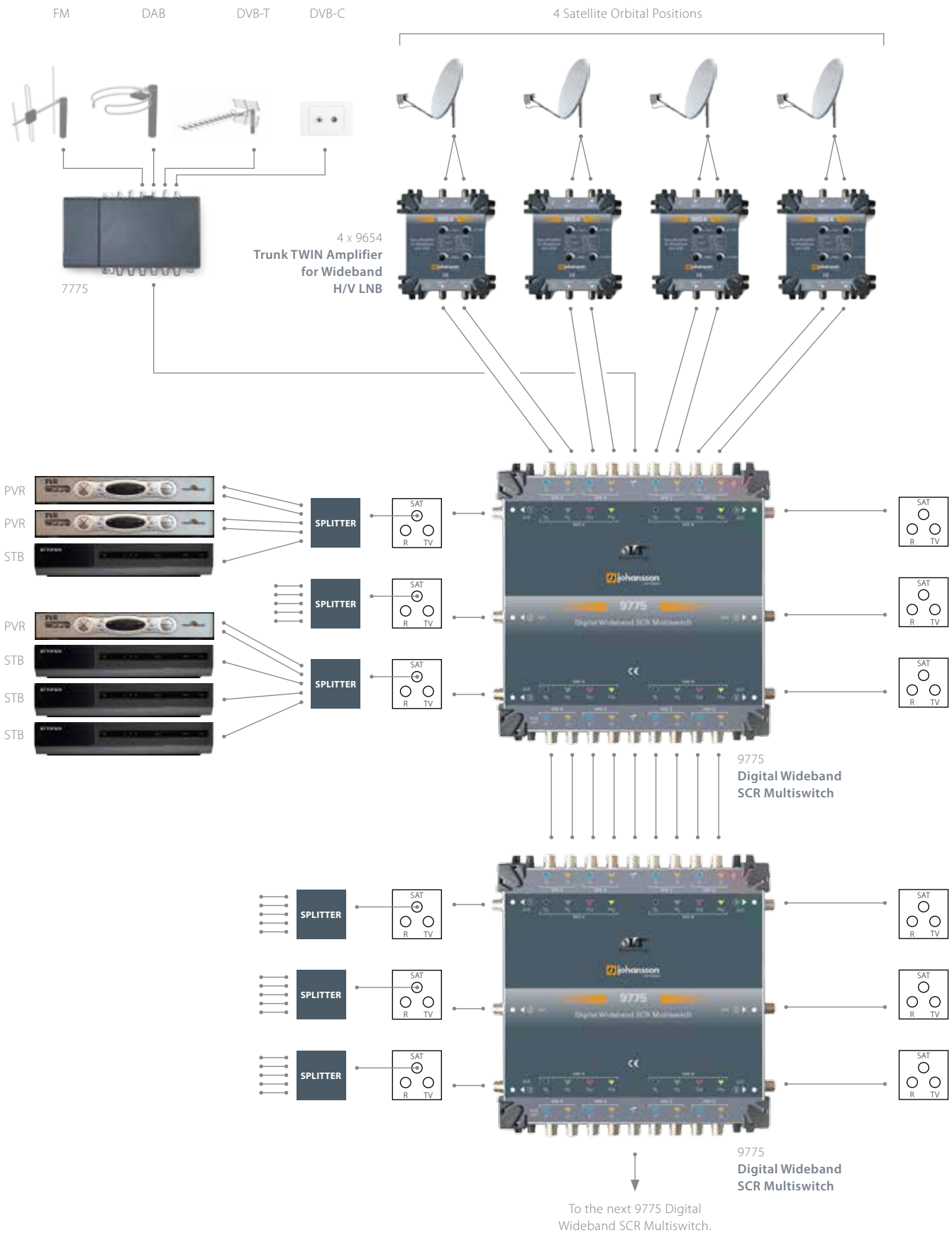
- 8 satellite wideband inputs
  - compatible with 4 wideband LNBs
  - compatible with 2 Quattro LNBs
- 6 SCR outputs with each 5 User Bands
- 1 wideband active or passive CATV or terrestrial input

		9775
Inputs	-	1 x Terrestrial 8 x Satellite
Outputs	-	6 outputs (up to 30 SCR tuners)
Frequency	MHz	Terr. / CATV: 5-1218 (DOCSIS 3.1 compatible) Sat. In: 290-2340
SCR channels (5 users/output)	MHz	Configurable between 1350 and 2150
Supported standards	-	EN50494/EN50607/BskyB
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	10
Dimensions	mm	220 x 220 x 50

Multiswitches & SCR

APPLICATION WITH WIDEBAND LNBs

NEW



Multiswitches & SCR

SCR MULTISWITCH

The new range of SCR multiswitches has arrived! In most installations, the cost of coaxial cables can take big proportions. By using the new range of Johansson SCR multiswitches, this cost can be divided by 3!

The devices have 4/8 or 16 satellite inputs and an LTE-protected passive terrestrial input. All outputs can operate in SCR mode (3 user bands/output) or in legacy mode. Thanks to the legacy support, the multiswitch can be used even if no SCR set-top boxes are installed yet, making it a very flexible solution.

OLT™ One-Liner Technology

UNICABLE

1 satellite position

9740 | 9742

- 4 satellite inputs and LTE protected passive terrestrial input
- ref. 9740: 4 outputs (up to 12 SCR tuners or 4 Legacy)
- ref. 9742: 8 outputs (up to 24 SCR tuners or 8 Legacy)
- wide range of satellite input levels (60 to 91 dBµV) ensures robust operation
- high output power (AGC controlled)
- supports auto-tuning of set-top boxes
- low trunk-loss (ideal for cascading several multiswitches)
- multistandard support: EN50494/Legacy/BSkyB (backwards compatible with old set-top boxes)
- DC input for LNB powering: use optional 9933/9933UK if needed
- automatic switchable from Legacy to SCR mode by using SCR set-top-box

		9740 | 9742	
Inputs	-	1 x Terrestrial 4 x Satellite	
Outputs	-	4 outputs (up to 12 SCR tuners or 4 Legacy)	8 outputs (up to 24 SCR tuners or 8 Legacy)
Frequency	MHz	Ter.: 5-790 (LTE protected) SAT: 950-2150	
SCR channels (3 users/output)	MHz	1280/1382/1484	
Supported standards	-	EN50494 / BSkyB / Legacy	
Max. input level SAT	dBµV	91	
Max. output level SAT	dBµV	SCR mode: 90 Legacy mode: 80	
Trunk loss (only sat.)	dB	Ter.: 3 SAT: 2	Ter.: 5 SAT: 2,5
Return loss in/out	dB	> 10	
Tap loss (Terrestrial)	dB	typ. 24	
LNB remote current	mA	500	
STB current	mA	180	
Operating temperature	°C	-20 to +50	
Dimensions	mm	122 x 158 x 50	202 x 158 x 50

Possible variants: see page 93

Multiswitches & SCR

SCR MULTISWITCH

OLT One-Liner Technology | UNICABLE | 2 satellite positions | EN 50607

9750 | 9752

- 8 satellite inputs (2 satellite positions) and LTE protected passive terrestrial input
- ref. 9750: 4 outputs (up to 12 SCR tuners or 4 Legacy)
- ref. 9752: 8 outputs (up to 24 SCR tuners or 8 Legacy)
- wide range of satellite input levels (70 to 100 dBµV) ensures robust operation
- high output power (AGC controlled)
- supports auto-tuning of set-top boxes
- low trunk-loss (ideal for cascading several multiswitches)
- multistandard support: EN50494/Legacy/EN50607/BSkyB (backwards compatible with old set-top boxes)
- DC input for LNB powering: use optional 9933/9933UK if needed
- automatic switchable from Legacy to SCR mode by using SCR set-top-box

		9750 | 9752	
Inputs	-	1 x Terrestrial 8 x Satellite (2 satellite positions)	
Outputs	-	4 outputs (up to 12 SCR tuners or 4 Legacy)	8 outputs (up to 24 SCR tuners or 8 Legacy)
Frequency	MHz	Ter.: 5-790 (LTE protected) SAT: 950-2150	
SCR channels (3 users/output)	MHz	1280/1382/1484	
Supported standards	-	EN50494 / BSkyB / Legacy / EN50607	
Max. input level SAT	dBµV	100	
Max. output level SAT	dBµV	SCR mode: 90 Legacy mode: 80	
Trunk loss (only sat.)	dB	Ter.: 3 SAT: 2	Ter.: 5 SAT: 2,5
Return loss in/out	dB	> 10	
Tap loss (Terrestrial)	dB	typ. 24	
LNB remote current	mA	500	
STB current	mA	235	
Operating temperature	°C	-20 to +50	
Dimensions	mm	222 x 222 x 50	

Possible variants: see page 93

Multiswitches & SCR

SCR MULTISWITCH

OLT One-Liner Technology | UNICABLE | 4 satellite positions | EN 50607

9760 | 9762

- 16 satellite inputs (4 satellite positions) and LTE protected passive terrestrial input
- ref. 9760: 4 outputs (up to 12 SCR tuners or 4 Legacy)
- ref. 9762: 8 outputs (up to 24 SCR tuners or 8 Legacy)
- wide range of satellite input levels (70 to 100 dBµV) ensures robust operation
- high output power (AGC controlled)
- supports auto-tuning of set-top boxes
- low trunk-loss (ideal for cascading several multiswitches)
- multistandard support: EN50494/EN50607/Legacy/BSkyB (backwards compatible with old set-top boxes)
- switches to select input mode when working in EN50494: A/A+B/A+C/A+D/Terrestrial Only (selectable for each output)
- DC input for LNB powering: use optional 9933/9933UK if needed
- automatic switchable from Legacy to SCR mode by using SCR set-top-box

		9760	9762
Inputs	-	1 x Terrestrial 16 x Satellite (4 satellite positions)	
Outputs	-	4 outputs (up to 12 SCR tuners or 4 Legacy)	8 outputs (up to 24 SCR tuners or 8 Legacy)
Frequency	MHz	Ter.: 5-790 (LTE protected) SAT: 950-2150	
SCR channels (3 users/output)	MHz	1280/1382/1484	
Supported standards	-	EN50494 / EN50607 / BSkyB / Legacy	
Max. input level SAT	dBµV	100	
Max. output level SAT	dBµV	SCR mode: 90 Legacy mode: 80	
Trunk loss (only sat.)	dB	Ter.: 3 SAT: 2	Ter.: 5 SAT: 2,5
Return loss in/out	dB	> 10	
Tap loss (Terrestrial)	dB	typ. 24	
LNB remote current	mA	500	
STB current	mA	250	
Operating temperature	°C	-20 to +50	
Dimensions	mm	350 x 222 x 50	

Possible variants: see page 93

Multiswitches & SCR

SCR MULTISWITCH

The 9730I is a 4 x 1 cascadable SCR multiswitch with 4 user bands, following the CENELEC EN50494 standard. The product is perfectly fitted for the markets with the user bands on frequencies 1210/1420/1680/2040 MHz.

OLT One-Liner Technology · UNICABLE · 1 satellite positions · SKY ITALIA

9730I

- 4 satellite inputs
- compatible with CENELEC EN50494
- user band frequencies: 1210/1420/1680/2040 MHz
- DC power pass for LNB powering
- high output power (AGC controlled)
- supports auto-tuning of set-top boxes
- low trunk-loss (ideal for cascading several multiswitches)
- delivered with wall mounting tool

		9730I
Inputs	-	4 x satellite
Cascade outputs		4 x satellite
Frequency	MHz	SAT: 950-2150
Outputs	-	1 output (up to 4 tuners)
User bands	-	4
SCR channels	MHz	1210/1420/1680/2040
Supported standards	-	EN50494
Max. input level SAT	dBµV	95
Max. output level SAT	dBµV	90
Trunk loss	dB	< 1 dB
Return loss in/out	dB	> 12
LNB remote current	mA	500
STB current	mA	Max. 200
Operating temperature	°C	-20 to +50
Dimensions	mm	104 x 75 x 35

SCR POWER INSERTER

Blocks DC from STB, while forwarding DiSEqC from STB to the multiswitch.

9915

		9915
Frequency	MHz	5-2150
Insertion Loss	dB	1,5
Return loss in/out	dB	> 10
DC supply voltage	V	15
Output current	A	1 max. (fuse protected)
Dimensions	mm	90 x 40 x 23

Multiswitches & SCR

SCR MULTISWITCH

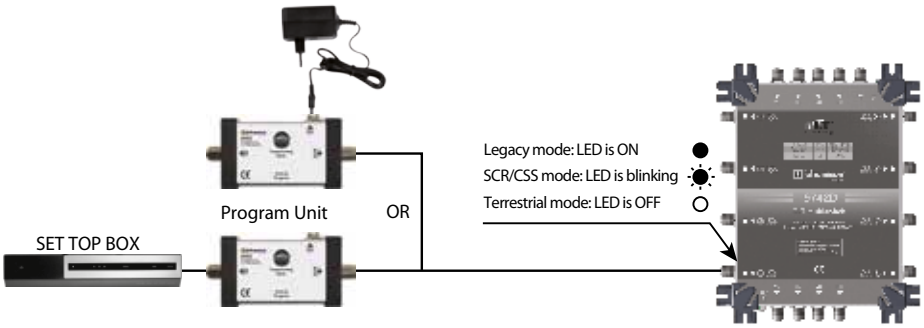
For the 9740 through 9762 SCR multiswitch range, we can offer the following variants:

D-VERSION

9740D | 9742D | 9750D | 9752D | 9760D | 9762D

- the differences with the standard version are:
  - no terrestrial trunkline
  - no BSkyB protocol supported
  - no automatic switching between Legacy and SCR mode. Instead, the mode has to be set manually with our programmer (ref. 9703)

Ref. 9703
Programmer for SCR/Legacy mode: works only with 9740D/9742D/9750D/9752D/9760D/9762D.



I-VERSION

9740 I | 9742 I | 9750 I | 9752 I | 9760 I | 9762 I

- the differences with the standard version are:
  - no BSkyB protocol supported
  - different user band frequencies: 1210/1420/1680 MHz

Multiswitches & SCR

SMART SPLITTER

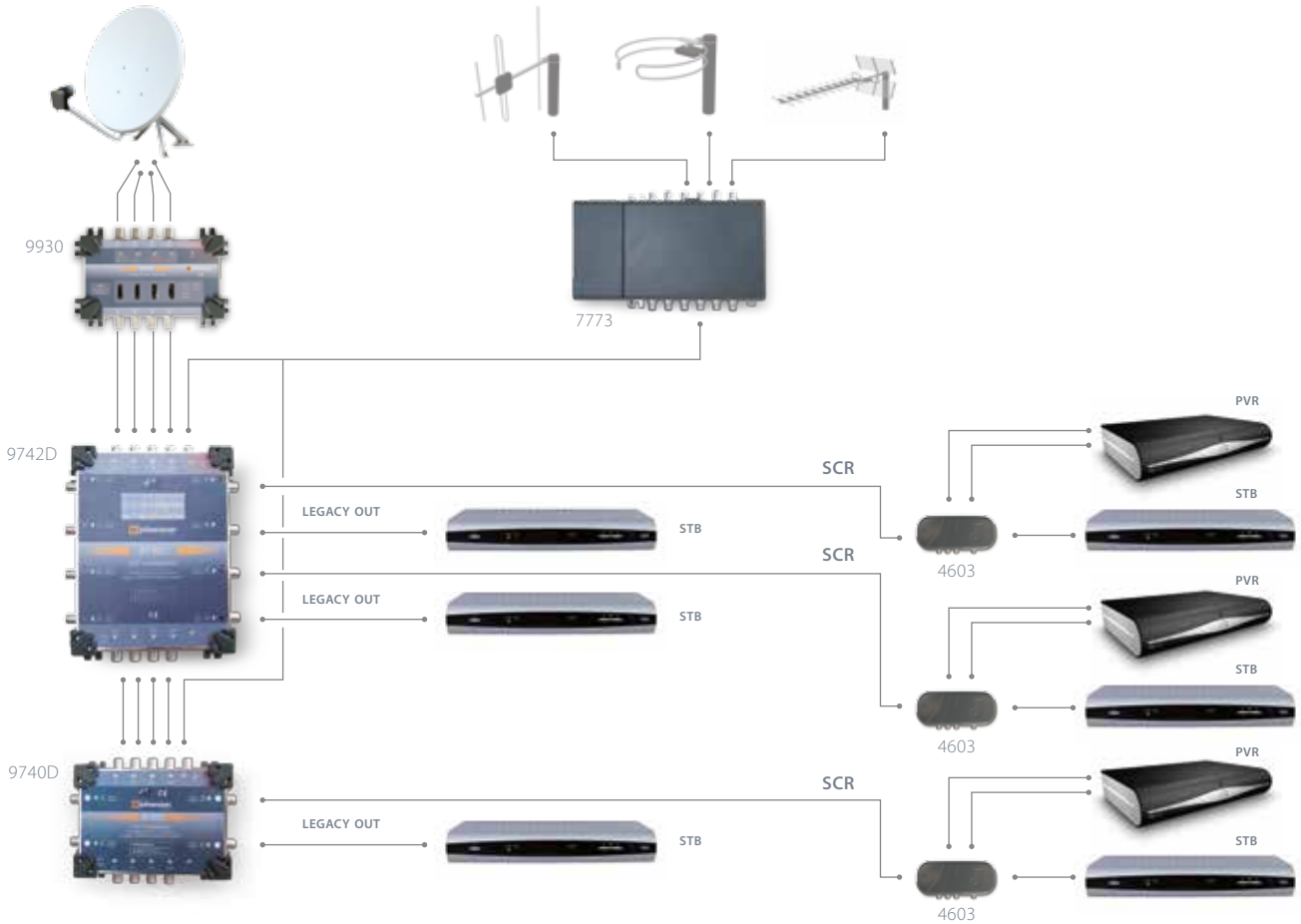
Standard splitters can give collisions when two commands come at the same time or when one of the set-top boxes uses a permanent high voltage. A smart splitter captures the commands of the different set-top boxes and serializes them to guarantee no collisions happen.

OLT™ One-Liner Technology

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



Multiswitches & SCR

MULTI BAND CONVERTER (STACKER-DESTACKER)

NEW

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. Thanks to the built-in attenuator with adjustment, it is protected against high input signals, avoiding saturation of the device.

9645 KIT

- 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

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 adapter 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 VAtC coaxial cable	

* Sat.: -35 dBc/IM3
** Optional power adaptor: ref. 2452 (24 Vdc)

Multiswitches & SCR

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

		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

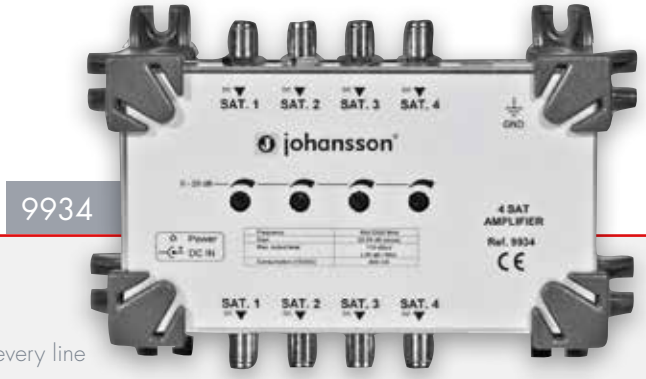
- compatible with:
  - 9740D/9742D/9750D/9752D/9760D/9762D
  - 9934/9935

9933

		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

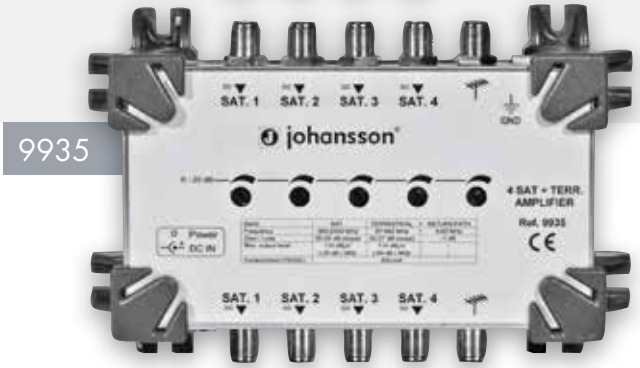
Multiswitches & SCR

SATELLITE IF AMPLIFIERS



9934

- separate adjustment for sloped gain and slope on every line
- DC input for powering trunk line amplifiers & LNB



9935

NEW Compatible with Wideband LNBs

9654

		9934	9935	NEW 9654
Inputs	-	4 SAT	4 SAT + 1 TERR	2 SAT
Outputs	-	4	5	2
Frequency range	MHz	950-2300	Sat.: 950-2300 MHz Terr.: 5-65 MHz + 87 -862 MHz	290-2340
Gain	dB	20-25 dB (sloped)	Sat.: 20-25 dB(sloped) Terr.: 87-862 MHz - 20 -27 dB (sloped) return path: - 1 dB	30
Noise figure	dB	5	Sat.: 5 dB - Terr.: 6 dB	5
Gain adjustment	dB	20	Sat.: 20 dB - Terr.: 20 dB	15
Slope adjustment	dB	-	-	15
Max. Output level	-	110 dBµV (-35 dB/IM3)	Sat.:110 dBµV (-35 dB/IM3) Terr.: RP: passive 87-862 MHz: 114 dBµV (-54 dB/IM3)	110 dbµV (-35 dB/IM3)
Consumption	-	400 mA from 15 VDC external power supply or input/output	500 mA from 15 VDC external power supply or input/output	200 mA from 15 VDC external power supply or input/output
Dimensions	mm	158 x 102 x 51	158 x 102 x 51	177 x 133 x 51

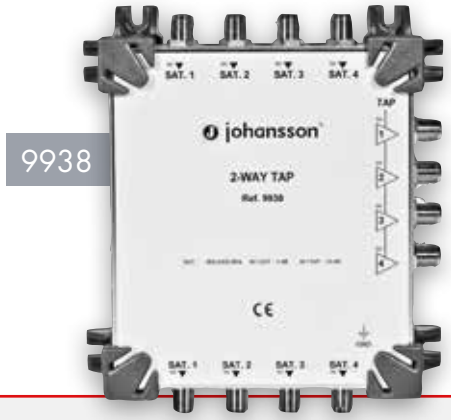
Multiswitches & SCR

SATELLITE SPLITTER

- 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

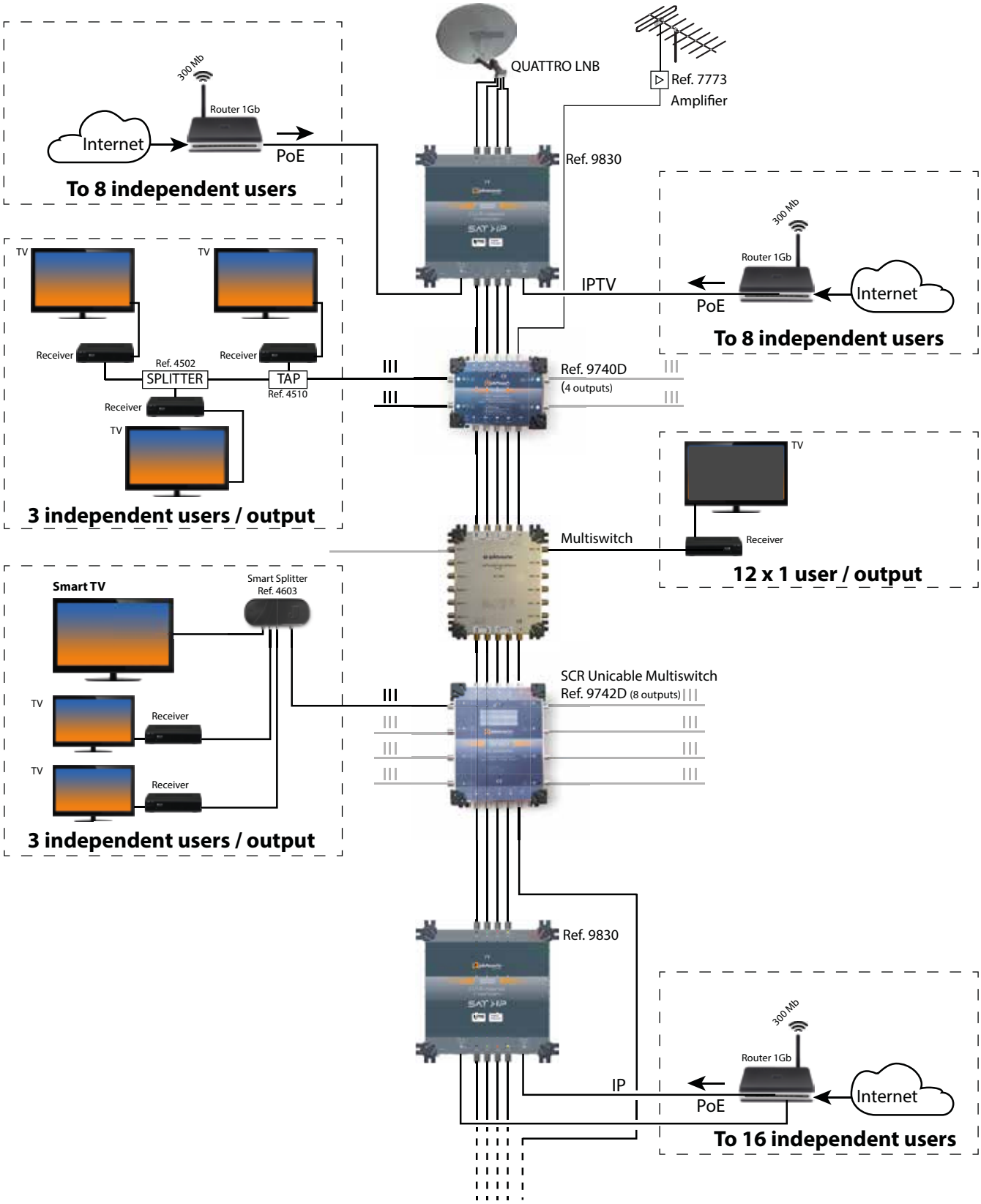


- 2-way satellite tap
- terrestrial input/output (ref. 9939)
- DC power pass
- loss: 10 dB (tap loss) / 1 dB (through loss)

		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

Multiswitches & SCR

APPLICATION



Multiswitches & SCR

ADDITIONAL PRODUCTS

MULTISWITCH

4+1

4 outputs		Sat.	Ter.
9940	cascadable	-20 dB	-25 dB
9941	cascadable	-15 dB	-20 dB
9942	cascadable	-10 dB	-15 dB
9943	end unit	-5 dB	-15 dB
9943A	stand-alone	End unit ref. 9943 + Power supply ref. 9933 • UK version: ref. 9943A UK	
6 outputs		Sat.	Ter.
9944	cascadable	-20 dB	-25 dB
9945	cascadable	-15 dB	-20 dB
9946	cascadable	-10 dB	-15 dB
9947	end unit	-5 dB	-15 dB
9947A	stand-alone	End unit ref. 9947 + Power supply ref. 9933 • UK version: ref. 9947A UK	
8 outputs		Sat.	Ter.
9948	cascadable	-20 dB	-25 dB
9949	cascadable	-15 dB	-20 dB
9950	cascadable	-10 dB	-20 dB
9951	end unit	-5 dB	-20 dB
9951A	stand-alone	End unit ref. 9951 + Power supply ref. 9933 • UK version: ref. 9951A UK	
12 outputs		Sat.	Ter.
9952	cascadable	-20 dB	-25 dB
9953	cascadable	-15 dB	-20 dB
9954	cascadable	-10 dB	-20 dB
9955	end unit	-5 dB	-20 dB
9955A	stand-alone	End unit ref. 9955 + Power supply ref. 9933 • UK version: ref. 9955A UK	
16 outputs		Sat.	Ter.
9956	cascadable	-20 dB	-25 dB
9957	cascadable	-15 dB	-25 dB
9958	cascadable	-10 dB	-25 dB
9959	end unit	-5 dB	-25 dB
9959A	stand-alone	End unit ref. 9959 + Power supply ref. 9933 • UK version: ref. 9959A UK	

8+1

4 outputs		Sat.	Ter.
9970	cascadable	-20 dB	-25 dB
9971	cascadable	-15 dB	-20 dB
9972	cascadable	-10 dB	-15 dB
9973	end unit	-5 dB	-15 dB
9973A	stand-alone	End unit ref. 9973 + Power supply ref. 9933 • UK version: ref. 9973A UK	
6 outputs		Sat.	Ter.
9974	cascadable	-20 dB	-25 dB
9975	cascadable	-15 dB	-20 dB
9976	cascadable	-10 dB	-15 dB
9977	end unit	-5 dB	-15 dB
9977A	stand-alone	End unit ref. 9977 + Power supply ref. 9933 • UK version: ref. 9977A UK	
8 outputs		Sat.	Ter.
9978	cascadable	-20 dB	-25 dB
9979	cascadable	-15 dB	-20 dB
9980	cascadable	-10 dB	-20 dB
9981	end unit	-5 dB	-20 dB
9981A	stand-alone	End unit ref. 9981 + Power supply ref. 9933 • UK version: ref. 9981A UK	
12 outputs		Sat.	Ter.
9982	cascadable	-20 dB	-25 dB
9983	cascadable	-15 dB	-20 dB
9984	cascadable	-10 dB	-20 dB
9985	end unit	-5 dB	-20 dB
9985A	stand-alone	End unit ref. 9985 + Power supply ref. 9933 • UK version: ref. 9985A UK	
16 outputs		Sat.	Ter.
9986	cascadable	-20 dB	-25 dB
9987	cascadable	-15 dB	-25 dB
9988	cascadable	-10 dB	-25 dB
9989	end unit	-5 dB	-25 dB
9989A	stand-alone	End unit ref. 9951 + Power supply ref. 9933 • UK version: ref. 9989A UK	

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

For more information please send an e-mail to sales@unitrongroup.com or visit our website www.unitrongroup.com.

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