

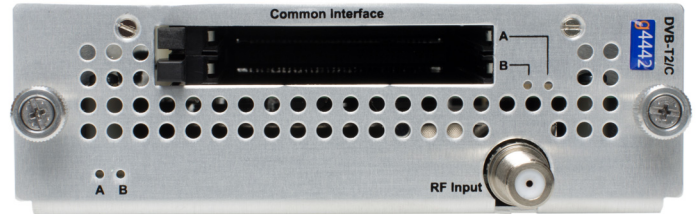
AvediaStream TVgateway g4442

Datasheet



The AvediaStream g4442 TVgateway receives content-protected live TV and radio from terrestrial RF sources and streams them across an IP network. With dual conditional access slots the g4442 descrambles and distributes encrypted and free to air channels across your IP network.

- Dual DVB-T/T2/C/C2 RF tuners per blade for free-to-air TV or radio channels
- Two DVB-CI CA slots for scrambled TV or radio channels
- Streams both SD and HD channels simultaneously
- Advanced filtering to create duplicate channels (eg language specific), control bandwidth or provide data services such as EPG or MHEG data
- High reliability, high performance embedded architecture
- Exterity 4th generation TVgateway technology gives improved RF performance, high reliability and low power consumption
- Future-proof IPTV technology with support for 4K/Ultra HD/HEVC broadcast streams



Technical Specification

AvediaStream TVgateway

Main Menu | **Status**

Check tuner status and view temperature and channel streaming information.

Tuner	Streaming	Multiplex	Lock	Signal Strength	Signal Quality	Cont Errs	UCB	Errs
Tuner A	●	#26 522 MHz (Channel 27) Central Scotland	●	85.8dBμV	36.0dB	0	0	0
Tuner B	●	#43 522 MHz (Channel 27) Central Scotland	●	86.8dBμV	36.0dB	0	0	0

Reset Error Counts

Tuner	Num	Name	Address	Type	SAP	Groups
A	1	BBC ONE Scot	udp://239.192.0.77.5000	TV	✓	all
A	2	BBC TWO Scot	udp://239.192.1.77.5000	TV	✓	all
A	7	BBC THREE	udp://239.192.2.77.5000	TV	✓	all
A	8	BBC ALBA	udp://239.192.9.77.5000	TV	✓	all
A	9	BBC FOUR	udp://239.192.5.77.5000	TV	✓	all
A	120	CBBC	udp://239.192.6.77.5000	TV	✓	all
A	121	CBeebies	udp://239.192.7.77.5000	TV	✓	all
A	130	BBC NEWS	udp://239.192.3.77.5000	TV	✓	all
A	131	BBC Parliament	udp://239.192.8.77.5000	TV	✓	all
A	200	BBC Red Button	udp://239.192.4.77.5000	TV	✓	all

- Multicast/unicast address selection (automatic or manual)
- Configure name, number and group membership per channel
- Fine-grained control over audio, subtitles and other channel metadata using advanced PID filtering:
 - Create custom SPTS streams containing elements from a channel
 - Filters on PSI data, table types and PID number
 - Unlimited number of PIDs filtered

Streaming

- Single program MPEG-2 transport streams (ISO/IEC 13818-1)
- RTP
- UDP
- IP multicast
- IP unicast
- IGMP Join Group for enhanced switch compatibility
- 500 Mbps total output streaming

Management

- Fully integrated with Exterity management tools
- Network administration via SSH, Telnet and SNMP
- HTTP web interface (supported browsers: Firefox, Internet Explorer and Chrome, check with support@exterity.com for version information)
- Serial RS232 Admin Port
- Event logging via Syslog (local and remote)
- Firmware upgrade via TFTP
- Configuration backup/restore via TFTP

Interfaces

- Two DVB-T/T2/C/C2 tuners (single 75 ohm F-type input connector)
- Two 802.3 10/100/1000BaseT Ethernet (RJ-45 chassis sockets, dual Ethernet features require AvediaStream c1210 chassis)
- Serial RS232 port for local administration (RJ-45 chassis socket)
- Two DVB-CI interfaces accept professional and commercial CAMs
- Supports Mediaguard, Viaccess, Irdeto, Conax decrypting and more

Channel Management

- Channel announcement via SAP/SDP
- Configurable DVB-T/T2/C/C2 scanning (basic and advanced)
- Stream specific channels from selected multiplexes

RF Input

Maximum data rate of 72Mbps per transport stream

Input frequency range: 42-1002 MHz

DVB-T (ETSI EN 300-744)

- Input sensitivity:
 - -79.6dBm (8K, 64 QAM, Code Rate 2/3)
- Signal modulation / coding:
 - FFT 2K, 8K
 - QPSK, 16QAM, 64QAM
- Code rate 1/2, 2/3, 3/4, 5/6, 7/8
- Guard interval 1/4, 1/8, 1/16, 1/32
- FEC: Reed Solomon & Viterbi
- Channel Bandwidth: 6 MHz, 7 MHz, 8 MHz

DVB-T2 (ETSI EN 302-755)

- Input sensitivity:
 - -78.1dBm (8K, 64 QAM, Code Rate 2/3, DTG 104)
 - -78.2dBm
 - (32K, 256 QAM, Code Rate 3/5, DTG 106)
 - -76.3dBm
 - (32K, 256 QAM, Code Rate 2/3, DTG 109)
- Signal modulation / coding:
 - FFT 1K, 2K, 4K, 8K, 16K, 32K
 - QPSK, 16QAM, 64QAM, 256 QAM
- Code rate 1/2, 3/5, 2/3, 3/4, 4/5, 5/6
- Guard interval 1/4, 19/256, 1/8, 19/128, 1/16, 1/32, 1/128
- FEC: BCH & LDPC
- Channel Bandwidth:
 - 1.712 MHz, 5 MHz, 6 MHz, 7 MHz, 8 MHz

DVB-C (ETSI EN 300-429)

- Input sensitivity:
 - -79.6dBm (64 QAM, Code Rate 2/3)
- Signal modulation / coding:
 - 16QAM, 32QAM, 64QAM, 128QAM, 256 QAM
- Channel Bandwidth:
 - 8 MHz
- FEC: Reed Solomon & Viterbi
- Symbol Rates: 1.8 – 7.2 Msym/s
- Roll off: 0.15

DVB-C2 (ETSI EN 302-769)

- Input sensitivity:
 - -76.3dBm (1024 QAM, Code Rate 3/4)
- Signal modulation / coding:
 - 16QAM, 64QAM, 256 QAM, 1024QAM, 4096QAM
- Code rate: 2/3, 3/4, 4/5, 5/6, 8/9, 9/10
- Guard interval: 1/64, 1/128
- Channel Bandwidth: 6MHz, 8 MHz
- FEC: BCH & LDPC
- Symbol Rates: 1.8 – 7.2 Msym/s
- Roll off: 0.15

System

- CPU: Dual core Power Architecture e500v2 1.2Ghz
- RAM: 1GB
- Flash: 528MB (for firmware and configuration)
- OS: Linux 3.8

Network

- Linux IPv4 stack
- DHCP or Static IP addressing
- Two IEEE 802.3u 10/100/1000Mbps MDIX Ethernet Interfaces
- Ethernet redundancy - automatic switching to secondary Ethernet if network failure occurs (c1210 chassis required)

Protocols

IP (RFC 791), UDP (RFC 768), TCP (RFC 793), ARP (RFC 826), DNS (RFC 1035), DHCP (RFC 2131), ICMP (RFC 792), IGMP v3 (RFC 3376), TFTP (RFC 1350), HTTP (RFC 2616), Telnet (RFC 318) Syslog (RFC 3164), NTP (RFC 1305), SAP (RFC 2974), SDP (RFC 4566), RTP (RFC 3550), SNMP (v1, v2c RFC 1901)

Regulatory

CE:

- IEC 60950-1:2005 (Second Edition), Am 1: 2009
- EN 60950-1:2006+A11:2009+A12:2011
- EN55022:2010; EN55024:2010
- EN61000-3-2: 2006 +A1: 2009 + A2: 2009
- EN61000-3-3: 2008; EN61000-4-2: 2009
- EN61000-4-3: 2006 + A1: 2007 + A2: 2010
- EN61000-4-4: 2004 + A1: 2010
- EN61000-4-5: 2006; EN61000-4-6: 2009
- EN61000-4-11: 2004

FCC:

- 47CFR: 2008 Part 15, Sub Part B; ANSI C63-4: 20033

Physical Format

Modular hot-swap blade for Exterity chassis

- AvediaStream c1101 providing 2 inputs
- AvediaStream c1103 providing up to 6 inputs
- AvediaStream c1110 providing up to 20 inputs
- AvediaStream c1210 providing up to 20 inputs

Dimensions

- L: 275mm x W: 130mm x H: 40mm

Weight

- 0.5kg

Power

- DC 24V: 14W Typical, 20W Maximum

Environment

- Operating: 0 ...+40°C / +32 ... +104°F
- Storage: -20 ...+70°C / -4 ... +158°F
- Operating and storage Relative Humidity: 10-90% (non-condensing)

MTBF

Calculated to MIL-HDBK-217F, Notice 2: 59457 hours (6.8 years)

TVgateway Comparison Table

AvediaStream TV Gateways													
	g4190	g4310	g4315	g4330	g4340	g4345	g4370	g4410	g4412	g4415-SM	g4418	g4442	g4448
DVB-C/C2					✓	✓						✓	✓
DVB-C2												✓	✓
DVB-T				✓	✓	✓						✓	✓
DVB-T2					✓	✓						✓	✓
DVB-S		✓	✓					✓	✓	✓	✓		
DVB-S2		✓	✓					✓	✓	✓	✓		
ATSC							✓						
Clear QAM							✓						
ASI	✓												
SecureMedia encryption										✓			
Tuners	1	2	2	2	2	2	2	2	2	2	8	2	8
CA Slots			2			2			2	2		2	

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Leading IPTV Delivery



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