

AvediaStream TVgateways



Datasheet (avstr-g4415-sm)

AvediaStream g4415-sm

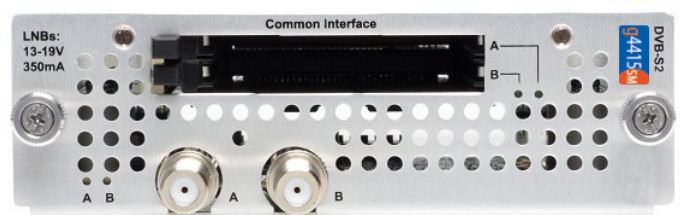
Create

The AvediaStream g4415-sm TVgateway captures content-protected live TV and radio from satellite sources and streams it securely across an IP network. With dual conditional access slots and built-in SecureMedia encryption the g4415-sm meets the most stringent content protection requirements and delivers high value and Broadcaster premium channels across your IP network.

- Stream scrambled and free-to-air DVB-S/S2 TV or radio
- Match TV provider's conditional access encryption requirements with two DVB-CI CA slots for scrambled channels
- Continue content protection across the LAN with the built-in SecureMedia encryptor
- Stream both SD and HD channels simultaneously
- Use advanced filtering to create duplicate channels (eg language specific), control bandwidth or provide data services such as EPG or MHEG data
- Exterity 4th generation TVgateway technology gives high reliability and low power consumption
- Future-proof IPTV technology with support for 4K/ Ultra HD/HEVC broadcast streams

The screenshot shows the AvediaStream TVgateway web interface. The top navigation bar includes 'Main Menu' and 'Status'. The 'Status' section displays 'Tuner Status' with two tuners (A and B) showing their respective frequencies, multiplexes, and signal strength/quality metrics. Below this is a 'Channels' table listing various channels and their streaming addresses.

| Tuner | Num | Name | Address | Type | SAP | Groups | SM Band |
|-------|-----|-----------------------------|--------------------------|-------|-----|--------|---------|
| A | 0 | Alhurra HD 500 | udp://239.192.5.47:5000 | TV | ✓ | all | |
| A | 0 | VOA Radio 102 (HB53-56) | udp://239.192.6.47:5000 | Radio | ✓ | all | |
| A | 0 | VOA Radio 101 (HB51-52) | udp://239.192.8.47:5000 | Radio | ✓ | all | |
| A | 0 | VOA Radio 103 (HB55-56) | udp://239.192.9.47:5000 | Radio | ✓ | all | |
| A | 0 | VOA Music Mix 104 (HB57-60) | udp://239.192.10.47:5000 | Radio | ✓ | all | |
| B | 0 | Channel 4 | udp://239.192.64.47:5000 | TV | ✓ | all | |
| B | 0 | Film4 | udp://239.192.70.47:5000 | TV | ✓ | all | |
| B | 0 | Film4 +1 | udp://239.192.71.47:5000 | TV | ✓ | all | |



Technical Specification

Interfaces

- Two DVB-S/S2 tuners (dual 75 ohm F-type input connectors)
- 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)

Streaming

- Single program MPEG-2 transport streams (ISO/IEC 13818-1)
- RTP
- UDP
- IP multicast
- IP unicast
- IGMP Join Group for enhanced switch compatibility
- Streaming output up to 500 Mbps free to air or 120Mbps encrypted

Channel Management

- Channel announcement via SAP/SDP
- Configurable DVB-S/S2 scanning (basic and advanced modes)
- Stream specific channels from selected multiplexes
- 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

Management

- Fully integrated with Exterity management tools
- Network administration via SSH 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

RF Input

- Input connector: two 75 ohm F-type
- Tuning range: 950 to 2150 MHz
- Input level: -25 dBm to -65 dBm
- Maximum data rate: 72Mbps per transport stream

Signal Modulation / Coding:

- DVB-S (ETSI EN 300 421 Broadcast services)
 - Modulation: QPSK: 1/2, 2/3, 3/4, 5/6, 7/8
 - Symbol rates: 1 to 45 MSymbols/s
 - FEC: Reed Solomon & Viterbi
 - Roll off: 0.35

DVB-S2 (ETSI EN 302 307 Broadcast services)

- Modulation: QPSK: 1/4, 1/3, 2/5, 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10
- 8PSK: 3/5, 2/3, 3/4, 5/6, 8/9, 9/10
- Symbol rates: 1 to 45 MSymbols/s

- FEC: LDPC & BCH
- Roll off: 0.2, 0.25, 0.35

Diseq: 1.0, 1.1, 1.2

- LNB supply: 350mA per RF input with Short circuit protection
- LNB Voltage: 13 or 18v

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), 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 + Am 2:2013
- EN 60950-1:2006 + A11:2009 + A1:2010 + A12:2011 + A2:2013
- EN55022:2010
- EN55024:2010
- EN61000-3-2: 2006 + A1: 2009 + A2: 2009
- EN61000-3-3: 2008

UL/CSA/FCC:

- UL60950-1/CSA C22.2 No. 60950-1, Second Edition. Rev. October 14, 2014
- 47CFR:2011 Part 15, Sub Part B
- ANSI C63-4:2003

Physical Format

Modular hot-swap blade for Exterity chassis

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

Dimensions

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

Weight

- 0.55kg

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

| | g4190 | g4310 | g4330 | g4340 | g4370 | g4410 | g4412 | g4415 -SM | g4415 -LK | g4418 | g4442 | g4448 | UCT xQIP (US) |
|--------------------|-------|-------|-------|-------|-------|-------|-------|---------------|---------------|-------|-------|-------|------------------------|
| DVB-C | | | | ✓ | | | | | | | ✓ | ✓ | |
| DVB-C2 | | | | | | | | | | | ✓ | ✓ | |
| DVB-T | | | ✓ | ✓ | | | | | | | ✓ | ✓ | |
| DVB-T2 | | | | ✓ | | | | | | | ✓ | ✓ | |
| DVB-S | | ✓ | | | | ✓ | ✓ | ✓ | ✓ | ✓ | | | |
| DVB-S2 | | ✓ | | | | ✓ | ✓ | ✓ | ✓ | ✓ | | | |
| ATSC | | | | | ✓ | | | | | | | | |
| Clear QAM | | | | | ✓ | | | | | | | | ✓ |
| Encrypted QAM | | | | | | | | | | | | | ✓ |
| ASI | ✓ | | | | | | | | | | | | |
| Content Protection | | | | | | | | Secure Media® | Samsung LYNK™ | | | | |
| Tuners | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 8 | 2 | 8 | 6-60 |
| CAM card slots | | | | | | | 2 | 2 | 2 | | 2 | | 1-10 Cable CARDS |