

# g4542 RF Gateway

Dual DVB-T/T2, C/C2, dual DVB-CI



The g4542 RF Gateway receives content-protected live TV and radio from terrestrial RF sources and streams them across an IP network. With dual conditional access slots the g4542 descrambles and distributes encrypted and free to air channels across your IP network.

## 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 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

## Streaming

- Single program MPEG-2 transport streams (ISO/IEC 13818-1)
- RTP
- UDP
- SRT
- IP multicast
- IP unicast
- 500 Mbps total (input and output) streaming

## Channel Management

- Channel announcement via SAP/SDP
- Configurable DVB-T/T2/C/C2 scanning (basic & advanced)
- Stream specific channels from selected multiplexes
- Multicast/unicast address selection (automatic/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

## Features & Benefits

- Two 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
- Any stream codec and resolution support
- Advanced filtering to create duplicate channels (e.g. language specific), control bandwidth or provide data services such as EPG or MHEG data
- 5th generation RF Gateway technology delivers high reliability and optimised low power consumption
- Supports optional SRT, AES and 5x IP input for greater platform flexibility

## Management

- Configurable using management tools:
  - Admin level management using Avedia Server Site Manager
  - HTTP/HTTPS device web interface; recommended browser: Chrome®
- RESTful API
- Serial RS232 Admin Port
- Event logging via Syslog (local and remote)
- Firmware upgrade
- Configuration backup/restore

## 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

- Linux-based

## Network

- Linux dual IPv4/IPv6 stack
- DHCP/DHCPv6 or Static IP addressing
- VLAN support for Admin and Streaming network segregation
- 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), HTTPS (RFC 2818), Syslog (RFC 3164), NTP (RFC 1305), SAP (RFC 2974), SDP (RFC 4566), RTP (RFC 3550), SSDP, SNMP (v1, v2c RFC 1901), IPv6 (RFC 8200), DHCPv6 (RFC 8415), SLAAC (RFC 4862), MLD (v2) (RFC 3810), NDP (RFC 4861), SRT (Caller & Listener)

## Regulatory

- CE:
  - IEC 62368-1: 2018
  - EN55032:2015
  - EN55035:2017
  - EN61000-3-2: 2019
  - EN61000-3-3: 2013 +A1: 2019
- UL/CSA:
  - UL62368-1:2019
  - CSA C22.2 No. 62368-1:2019
- FCC:
  - 47CFR:2011 Part 15, Sub Part B
  - ANSI C63-4:2014
- Australia/New Zealand:
  - AS/NZS 62368:2018

## Physical Format

- Modular hot-swap blade
  - c1101 Chassis (2 inputs)
  - c1103 Chassis (up to 6 inputs)
  - c1210 Chassis (up to 20 inputs)

## Environment

- Operating Temperature: 0°C ~ 40°C (32°F ~ 104°F)
- Operating Relative Humidity: 10% ~ 90% (non-condensing)

## Dimensions

- L: 275mm x W: 130mm x H: 40mm; weight 0.5kg

## Power

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

## MTBF

- Calculated to MIL-HDBK-217F, Notice 2: 51684 hours (5.9 years)

## In the Box

- g4542, dual DVB-T/T2/DVB-C/C2 gateway with dual DVB-CI slots
- Product Safety Brochure (hard copy)

## Ordering Information (P/N)

- 18521 - g4542 - 2 tuner DVB-T2/C2 and dual DVB-CI
- 18397 - e38xx/g45xx - License – SRT
- 18956 - e38xx/g45xx - License – AES
- 18949 - g45xx - License – CAM sharing
- 19017 - g45xx - License – 5x IP input
- 19186 - g45xx - License – 10x IP input