technicolor

FEEL THE WONDER

Spectrum201
for Charter Communications
Advanced Cable Digital Video Recorder

| CABLE | DATA | VIDEO |

Enjoy all your SD and HD entertainment on your terms. The Spectrum201 combines cable broadcast and broadband TV services, High Definition video, and Digital Video Recording (DVR) - all in one device.

■ Cable Broadcast TV

The Spectrum201 offers a wide array of programming choices including both Standard Definition (SD) and High Definition (HD) channels and a program guide to help discover, search and choose content. It also gives various parental control options to manage the flow of programming into the home.

Technicolor's HD video products provide a powerful, flexible platform that enables customers to capitalize on existing infrastructure while providing the capability of supporting a migration to IP Video in the future.

The Spectrum201 is capable of allocating up to 4 QAM demodulators for video capture providing a main display while simultaneously recording up to 3 additional programs and supporting multiple additional outlets.

■ DOCSIS 3.0 Cable Modem

With its embedded DOCSIS 3.0 certified cable modem with 16 x 4 channel bonding, the Spectrum201 allows for data speed of up to 640 Mbps downstream and 160 Mbps upstream. When sharing QAM input between video and data services, up to 12 QAM demodulators support DOCSIS 3.0 functionality such as DOCSIS Set-Top Gateway (DSG), Metadata, or Video over DOCSIS.

■ High Definition Video

The Spectrum201 supports HD broadcast services in up to 1080p/60 image quality video using the MPEG-4 and MPEG-2 compression standards.

■ Digital Video Recording Services

With the ability to pause live TV, view and record multiple shows simultaneously; and rewind, fast-forward, and pause-recorded content, the audience can customize and enjoy their favorite programming at their convenience. The Spectrum201 supports 3.5 inch Hard Disk Drives (HDD) with capacity of up to 1 TerraByte (TB).

■ Proven and Reliable Conditional Access

Supporting VideoGuard Server - Downloadable Conditional Access System (VGS-DCAS) and PowerKEY® Conditional Access System (CAS), the Spectrum201 provides proven and reliable content security solutions to help minimize piracy and reduce costs.

PowerKEY has been successfully deployed in 300 systems and over 70 million set-top box units around the world. It uses secure processors and three different encryption levels. The PowerKEY system is compliant with MPEG and DVB standards and can accommodate multiple CAS configurations through DVB Simulcrypt.

Features at a Glance

- Embedded 16x4 DOCSIS 3.0 data modem with shared video and DOCSIS QAMs
- MPEG-2 and MPEG-4 HD 1080p/60 video decode and display
- 1-port Fast Ethernet
- Built-in 3.5" Hard Disk Drive (1 TB capacity)
- CPU at 3000 DMIPS
- Supports downloadable Cisco VideoGuard CAS
- Embedded PowerKEY® CA
- 2 highspeed USB 2.0 master ports
- ZigBee RF4CE remote control
- Power management compliancy with VA v3.0 Tier 2

HDMI HIGH-DEFINITION MULTIMEDIA INTERFACE

DOLBY AUDIO

CL CableLabs® CERTIFIED

HI-SPEED USB CERTIFIED

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Technical Specifications

Cable channel interface

- DOCSIS 3.0 front end | DOCSIS 3.0 Certified, backwards compatible with DOCSIS 2.0
  16 bonded downstream, 4 bonded upstream channels
- Video QAM demodulators | Up to 4
- Modulation | 16, 32, 64, 128 and 256 QAM (ITU-T J83 Annex A)
  64 QAM, 256 QAM (ITU-T J.83 Annex B)
- Digital input frequency range
  54 - 1002 MHz
- Maximum downstream rates | 686 Mbps (theoretical, 16 x 42.88 Mbps)
- Maximum upstream rates | 131 Mbps (theoretical, 4 x 32.78 Mbps)

Video decoder

- Video decoding formats | MPEG-4 H.264/AVC
  MPEG-2 up to Main Profile @ High Level
- Video output resolution | Up to 1080p/60, 10-bits
- Aspect ratio | 4:3, 16:9 Pan & Scan, letterbox
- Video scaling | Variable

Audio decoder

- Audio decoding formats | AC3 Dolby® Digital, Dolby Digital Plus™
  Dolby MS11 multistream decoding
  MPEG-1 Audio Layer I, II
      (mono, dual channel, joint stereo, stereo)
  MPEG-2 Audio Layer II backward compatible modes
  MP3, AAC-HE, AAC-LC

System resources

- Processor | Dual-thread CPU (3000 DMIPS)
- RAM | 1 GB DDR3
- Flash Memory | 512 MB NAND
- Hard Disk drive | 3.5-inch SATA HDD (1 TB capacity)

Software

- Middleware solutions | Zodiac
  RP/Axiom
- DRM and CAS | NCAS
  VideoGuard Server - Downloadable
      Conditional Access System (VGS-DCAS)
  Embedded PowerKEY® CA

Remote control

- IR remote control | Carrier frequencies | 38 kHz, 56 kHz modulation
  Protocols | XMP-1, SA protocol
- RF remote control | ZigBee RF4CE

Front panel

- LEDs | Record LED
- Buttons | 1 single-colour back-lit power/standby button
  1 single-colour back-lit Capsense menu button
  5 single-colour back-lit Capsense navigation butttons
      (up, down, left, right, circle)
  Reset button
- USB | 1 USB 2.0 master port
- IR remote control detector

Back panel

- Cable input | 1 F-type connector, external threaded
- HDMI output | 1 HDMI 1.4 type A port with HDCP 2.0
- Digital audio output | 1 S/PDIF TOSLINK port
- Analog audio output | 2 RCA stereo audio jacks (left, right)
- USB | 1 USB 2.0 master port (high power: 1.2 A @ 5 V)
- Ethernet | 1 10/100 Base-T Ethernet LAN port
- Power input | 1 DC jack

General specifications

- Dimensions | 320 x 51 x 200 mm (12.60 x 2.01 x 7.87 in.)
- Power supply | 12 VDC, 3.0 A external PSU
- PSU input voltage | 90 - 132 VAC, 60 Hz (switched mode power supply)
- Operating temperature | 0 - 40 °C (32 - 104 °F)
- Operating humidity | 5 - 95 % RH non-condensing
- Storage temperature | -20 - 60 °C (-4 - 140 °F)

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