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FEEL THE WONDER



Spectrum101 for Charter Communications

Advanced Cable Set-Top Box

CABLE

DATA

VIDEO

Enjoy all your SD and HD entertainment on your terms. The Spectrum101 combines cable broadcast and broadband TV services, High Definition video, and optional time shifting - all in one device.

■ Cable Broadcast TV

The Spectrum101 offers a wide array of programming choices including both SD and 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.

■ DOCSIS 3.0 Cable Modem

With its embedded DOCSIS 3.0 certified cable modem with 16 x 4 channel bonding it 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 Spectrum101 supports High Definition broadcast services in up to 1080p/60 image quality video using the MPEG-4 and MPEG-2 compression standards.

■ Time Shifting Service (optional)

Using the time-shifting feature, audience can enjoy the viewing of their favorite content after the live broadcasting. When supplied with a SD card, the embedded card reader allows to buffer and time shift live content.

■ Proven and Reliable Conditional Access

Supporting VideoGuard Server - Downloadable Conditional Access System (VGS-DCAS) and PowerKEY® Conditional Access System (CAS), the Spectrum101 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
- CPU at 3000 DMIPS
- Supports downloadable Cisco VideoGuard CAS
- Embedded PowerKEY® CA
- 1 SD card reader
- 2 highspeed USB 2.0 master ports
- ZigBee RF4CE remote control
- Power management compliancy with VA v3.0 Tier 2



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Technical Specifications

Cable channel interface

■ DOCSIS 3.0 front end	DOCSIS 3.0 Certified, backwards compatible with DOCSIS2.0 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
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System resources

■ Processor	Dual-thread CPU (3000 DMIPS)
■ RAM	1 GB DDR3
■ Flash Memory	512 MB NAND

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 buttons (up, down, left, right, circle) Reset button
■ USB	1 USB 2.0 master port
■ IR remote control detector	

Side panel

■ Memory card reader	SD/MMC push-push slot
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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	210 x 46 x 150 mm (8.27 x 1.81 x 5.91 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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