

Explorer 8300 Series Digital Video Recorders Offer Standard, HD, and Multi-Room Capabilities



8300HD and 8300HD Multi-Room DVR Specifications

Additional HD Model Features	Description
DVR with a 80 GB or 160 GB Hard Drive (Larger hard drives are available. Contact your North American marketing manager for more information.)	The 160 GB model allows up to 90 hours* of SD programs or up to 20 hours* of HD programs to be recorded and stored using DVR functions Gives subscribers complete control over watching, pausing, rewinding, replaying, and fast forwarding live programs using the remote control <i>*The total program hours that can be stored depends upon the format and data rate of the programming source.</i>
Analog Component HDTV Outputs	Provides YPbPr outputs for quick and easy connection to most HDTV sets
YPbPr and Audio Left/Right Cable Kit	Provides connection from the HD analog video and audio outputs to the HDTV set
Optical Digital Audio Output	Supports optical interconnection with surround sound receivers (includes the encoding of analog audio)
MPEG-2 MP@HL High Definition Digital Video Decompression	Allows decompression and presentation of audio and video Delivers the following video resolutions: 1920 x 1080i 720 x 480p 1280 x 720p 720 x 480i
HDMI 1.0 Digital Audio/Video Output with HDCP Copy Protection	The High Definition Multimedia Interface (HDMI) provides uncompressed digital video and audio quality in a simple, user-friendly connector. HDMI, combined with HDCP (High-Bandwidth Digital Content Protection) provides the optimal, secure connection to an HDTV set that supports the HDMI with HDCP interface. HDMI is backward compatible with the DVI 1.0 with HDCP video interfaces on earlier versions of HDTVs.
Over 112 MB Total Memory	Flash: 512 KB Applications DRAM: 64 MB Media DRAM: 32 MB MPEG encoding: 16 MB of DRAM NVM: 8 KB
Optional Application Memory	Applications DRAM: 128MB

8300 Series Dimensions

Dimensions (all 8300 models)	Description	
Product Dimensions (WxDxH)	15.60 in. x 11.20 in. x 3.25 in.	(39.7 cm x 28.5 cm x 8.3 cm)
Product Weight	8.3 lbs	(3.8 kg)
Carton Dimensions (WxDxH)	18.00 in. x 14.00 in. x 6.12 in.	(45.8 cm x 35.6 cm x 15.6 cm)
Weight Including Packaging	11.6 lbs	(5.3 kg)

8300 Series Placement and Temperature Range

Placement	
Placement Requirement	Locate the 8300 with at least two inches of open space above and on each side to provide adequate cooling.
Temperature Range	
Room Temperature Range (Operating)	The 8300 should be installed in an environment where the air temperature surrounding the unit is between 40°F to 105°F (5C to 40C).

Explorer 8300 Series Digital Video Recorders Offer Standard, HD, and Multi-Room Capabilities



Ordering Information

Contact your Sales Representative for product availability in your area.

Part Number	Description	Availability
4003980	Explorer 8300 DVR with 80GB Hard Drive	Now
4007951	Explorer 8300 DVR with 80GB Hard Drive and Dual IEEE 1394 Ports	Now
4006190	Explorer 8300HD DVR with 160GB Hard Drive and HDMI	Discontinued*
4006781	Explorer 8300HD DVR with 160GB Hard Drive, HDMI, and Dual IEEE 1394 Ports	Now
4007317	Explorer 8300 Multi-Room DVR with 80GB Hard Drive	Now
4007950	Explorer 8300 Multi-Room DVR with 80GB Hard Drive and Dual IEEE 1394 Ports	Now
4003610	Explorer 8300HD Multi-Room DVR with 160GB Hard Drive and HDMI	Discontinued*
4006775	Explorer 8300HD Multi-Room DVR with 160GB Hard Drive, HDMI, and Dual IEEE 1394 Ports	Now
4008560	Explorer 8300 with 80GB Hard Drive and DOCSIS	Now
4008561	Explorer 8300HD with 160GB Hard Drive, HDMI, and DOCSIS	Discontinued*
4009287	Explorer 8300HD with 160GB Hard Drive, HDMI, DOCSIS, and Dual IEEE 1394 Ports	Now
4010581	Explorer 8300HD Multi-Room DVR with 160GB Hard Drive, HDMI, DOCSIS, and Dual IEEE-1394 Ports	Fourth Quarter, 2005
4011815	Explorer 8300HD DVR with 160GB Hard Drive, HDMI, DOCSIS, 128MB Application Memory, and Dual IEEE-1394 Ports	Fourth Quarter, 2005
4011816	Explorer 8300HD Multi-Room DVR with 160GB Hard Drive, HDMI, DOCSIS, 128MB Application Memory, and Dual IEEE-1394 Ports	Fourth Quarter, 2005

*As required by US Code of Federal Regulations, Title 47, §76.640 (www.gpoaccess.gov), these models are not produced or available after June 30, 2005.

Accessories

Part Number	Description
4006369	AllTouch® 8550 Universal Remote Control
1002048	HDMI to HDMI Cable
1002056	HDMI to DVI Cable (for use in connecting the HDMI port to older, DVI equipped HDTVs)
4004725	4-Port Splitter Isolation Module (SIM) for MR-DVR installations. For more information, refer to datasheet part number 7001717
4008261	Passive Isolation Module (IM) for MR-DVR installations. For more information, refer to datasheet part number 7007588
4011635	Inline Single Port Isolation Module for MR-DVR installations
749790	RGB adaptor and cables (for adapting Explorer HD set-tops to HDTV sets that are equipped with only RGB-type inputs) For more information refer to datasheet part number 752184.
4000633	Scientific-Atlanta Resident Application (SARA) DVR Software Installation CD (only order one CD for each headend)

Software

Part Number	Description
4000633	Scientific-Atlanta Resident Application (SARA) DVR Software Installation CD (only order one CD for each headend)
752351	DVR Software License (line item on Explorer 8300 DVR Purchase Order)



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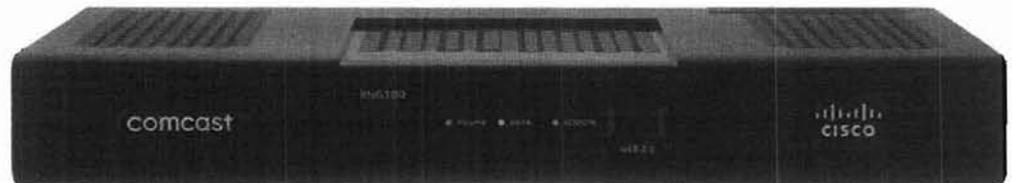
Part Number 7004920 Rev D
October 2005

Cisco Explorer RNG100 and RNG100N Digital-Only Interactive Set-Tops with Multi-Stream CableCARD Interface

Power, flexibility, and advanced security features highlight the Cisco® Explorer® RNG100 and RNG100N Digital-Only Interactive Set-Tops with Multi-Stream CableCARD™ (M-Card™) interface. Additionally, the RNG100N supports MoCA™ (Multimedia over Coax Alliance), which lets subscribers use their cable wiring for LAN connections.

Both set-tops support tru2way™ (formerly OCAP™) and separable security. Both set-tops also offer MPEG-4 (H.264) standard definition (SD) and high definition (HD) decoding with SD outputs, DOCSIS® 2.0 data capability, and an Ethernet interface for home networking.

Figure 1. RNG100 Front Panel (the RNG100N Front Panel is similar)



Features

Network Utilization Enhancements

- *1 GHz Tuning* lets cable operators expand network bandwidth to provide additional services such as VOD, tru2way, DOCSIS 2.0, and high speed data
- *MPEG-4 (H.264) Decoding* supports MPEG-4 compression technology, which provides better video quality at approximately half the data rate of MPEG-2
- *DOCSIS 2.0* provides greatly increased upstream throughput for future advanced services and provides a path for future IP video services (optional software)

OpenCable™ and Conventional Network Support

- *M-Card Interface* uses a Multi-Stream CableCARD (M-Card) for separable security
- *Axiom™ Middleware* supports OpenCable applications such as Service Navigators, Games, and future applications (optional)
- *DSG (DOCSIS Set-top Gateway)* provides a powerful standard transport mechanism for command and control signaling between a set-top and service provider network (optional)
- *DAVIC Receiver/Transmitter* allows IP-based, real-time, two-way communication between the set-top and service provider network for on-demand services (optional)

Home Networking Features

- *USB 2.0 Connection* enables a host connection to peripheral devices such as navigation controllers, network adapters, and memory media readers
- *Ethernet Connection* enables a connection to the home IP LAN for advanced services such as content sharing to the set-top from retail-purchased electronic devices
- *MoCA Connection* enables an IP LAN connection over coaxial cable, which minimizes the need for new wiring in the home (RNG100N)

Figure 2. RNG100 Front Panel (RNG100N Front Panel is similar)

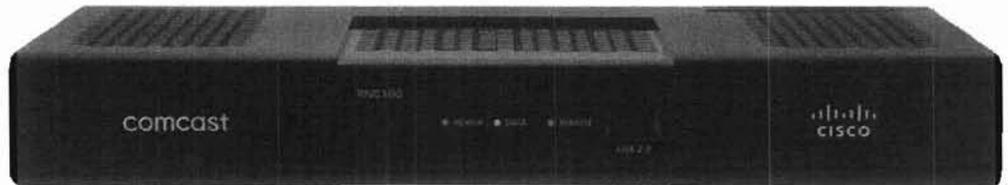


Table 1. Front Panel Features

Feature	Description
Connections	USB 2.0 Host, software controlled
Controls	IR Receiver, Power
Indicators	Power, Data, Remote (RNG100) Power, Data, Remote, Record (RNG100N)
Color	Black, white text
Branding	Cisco, model number, provision for service provider branding

Figure 3. RNG100/RNG100N Back Panel

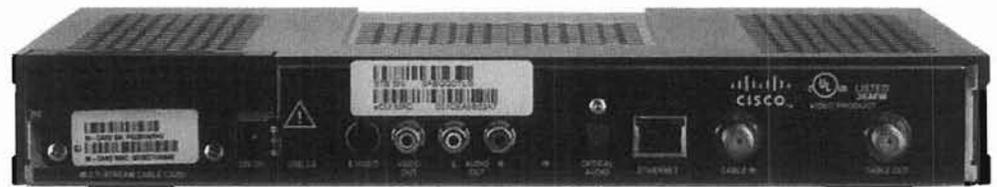


Table 2. Back Panel Connectors

Feature	Description
Connections In	<ul style="list-style-type: none"> • Cable In (RNG100) • Cable In with MoCA (RNG100N)
Connections Out	Cable Out, L/R Audio Out, Video Out, IR, Optical Audio, S-Video
Output Resolutions	720 x 480i 60 Hz, software controlled
Connections-Interactive	<ul style="list-style-type: none"> • Cable In, USB 2.0 Host, RJ-45 Ethernet, software controlled (RNG100) • Cable In with MoCA, USB 2.0 Host, RJ-45 Ethernet, software controlled (RNG100N)
Power Input	External DC Power
Labels	Back Panel: Serial Number, eCM MAC Address, M-Card Serial Number, MAC Address Bottom: Manufacturer, Model Number, Assembly P/N, Rev, Date, FCC, Patents, RSA, RF MAC Address

Specifications

Table 3. Product Specifications

Tuning and Decoding	
Tuning	QAM 64 or 256, In-Band 54 MHz–1 GHz, QPSK out-of-band (OOB) 70–130 MHz, DOCSIS 91–867 MHz, A/V in display
Video Decoders	MPEG-2 MP@ML, MP@HL (SD, 720 x 480i), MPEG-4 (H.264) up to HP@L4.0 (HD), VC1, Video Scaling
Audio Decoders	Dolby™ Digital to 5.1, MPEG-1 and MPEG-2, Dolby Digital+, AAC, AAC+, AC3, MP3
Conditional Access	Separable security with M-Card
Graphics Engine	16,000,000 colors, 720 x 480 resolution, simultaneous scale MPEG-2 video
DAVIC	FDC (Forward Data Channel) 1.54 Mbps QPSK, RDC (Reverse Data Channel) 1.54 Mbps QPSK, FAT QAM Channel Downstream, software controlled
DOCSIS	OOB and interaction via DOCSIS 2.0, DOCSIS Set-top Gateway, Baseline Privacy Interface, software controlled
Memory/Storage	
RAM	Minimum of 256 MB
Flash	Minimum of 128 MB
NVM	16 KB
Processors	
Application/CPU	700 MHz (approximately 1000 dMIPs)
DOCSIS	200 MHz CPU
Dimensions	
Product (HxWxD)	1.76 in. x 11.8 in. x 7.38 in. (4.5 cm x 30 cm x 18.7 cm)
Product Weight	2.0 lbs (0.9 kg)
Carton (HxWxD) (5 units per carton)	12.625 in. x 10.625 in. x 13.25 in. (32.1 cm x 27 cm x 33.7 cm)
Total Weight (5 units per carton)	19.4 lbs (8.8 kg)
Environment Specifications	
Placement	Locate with at least 2 inches of open space above and on each side
Room Temperature	32° to 105°F (0° to 40°C) during operation
Storage Temperature	14° to 158°F (-10° to 70°C)

Table 4. Accessories

In Carton		
	Power Cord, Quick Reference Guide	
Sold Separately		Part Number
	License, Axiom OCAP (tru2way) Middleware, non-DVR	4026954
	SARA Software License	4020466
	AT8560 AllTouch® Universal Remote Control	4016237
	RGB Adapter and Cables	749790
	IR Extender—12 ft	4022323

Ordering Information

Table 5. Ordering Information

Product Name	Description	Part Number
Cisco Explorer RNG100	Cisco Explorer RNG100 Digital-Only Interactive Set-Top with PowerKEY M-Card Interface	4023145
Cisco Explorer RNG100N	Cisco Explorer RNG100N Digital Only Interactive Set-Top with PowerKEY M-Card Interface and MoCA	4028197

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Service Provider Video Technology Group

1-800-722-2009 or 678-277-1120

www.scientificatlanta.com

Part Number 7013230 Rev A

November 2008

Cisco RNG150 and RNG150N Digital-Only High Definition Interactive Set-Tops with Multi-Stream CableCARD Interface

Power, flexibility, and advanced security features highlight the Cisco® RNG150 and RNG150N Digital-Only High Definition Interactive Set-Tops with Multi-Stream CableCARD™ (M-Card™) interface. Additionally, the RNG150N supports MoCA™ (Multimedia over Coax Alliance), which lets subscribers use their cable wiring for LAN connections.

The RNG150 and RNG150N set-tops support tru2way™ (formerly OCAP™) and separable security. The set-tops also offer MPEG-4 (H.264) high-definition (HD) and standard-definition (SD) decoding with HD and SD outputs and DOCSIS® 2.0 data capability.

Figure 1. Cisco RNG150N Front Panel (image may vary from actual product and specification)



Features

Network Utilization Enhancements

- *1 GHz Tuning* enables cable operators to expand network bandwidth to provide additional services such as VOD, tru2way, DOCSIS 2.0, and high-speed data
- *MPEG-4 (H.264) Decoding* supports compression technology that provides better video quality at approximately half the data rate of MPEG-2
- *DOCSIS 2.0* provides greatly increased upstream throughput for future advanced services and provides a path for future IP video services (optional software)

OpenCable™ and Conventional Network Support

- *M-Card Interface* uses a Multi-Stream CableCARD (M-Card) for separable security
- *Axiom™ Middleware* supports OpenCable applications such as Service Navigators, Games, and other future tru2way applications (optional software)
- *DSG (DOCSIS Set-Top Gateway)* provides a powerful standard transport mechanism for command and control signaling between the set-top and service provider network (optional software)
- *DAVIC Receiver/Transmitter* allows IP-based, real-time, two-way communication between the set-top and service provider network for on-demand services (optional software)

Home Networking Features

- *USB 2.0 Connection* enables a host connection to peripheral devices such as navigation controllers, network adapters, and memory media readers
- *MoCA Connection* enables an IP LAN connection over coax cable, which minimizes the need for new wiring in the home (RNG150N)
- *Ethernet Connection* enables a connection to the home IP LAN for advanced services such as content sharing to the set-top from retail-purchased electronic devices

Figure 2. Cisco RNG150N Front Panel (image may vary from actual product and specification)



Table 1. Front Panel

Feature	Description
Connections	USB 2.0 Host, software controlled
Controls	IR Receiver, Power
Indicators	Power, Data, Remote (RNG150) Power, Data, Remote, Record (RNG150N)
Color	Black, white text
Branding	Comcast, model number, Cisco

Figure 3. Cisco RNG150N Back Panel (image may vary from actual product and specification)



Table 2. Back Panel

Feature	Description
Connections In	Cable In, Power (RNG150) Cable In with MoCA, Power (RNG150N)
Connections-Interactive	Cable In, USB 2.0 Host, RJ-45 Ethernet, software controlled (RNG150) Cable In with MoCA, USB 2.0 Host, RJ-45 Ethernet, software controlled (RNG150N)
Connections Out	HDMI™ (1.3) with CEC, IEEE 1394 (4-pin), L/R Audio, Baseband Video, YPbPr, IR, S-Video Out, Optical Audio Out, Coaxial Digital Audio Out
Output Resolutions	1920 x 1080i 60 Hz, 1920 x 1080p 30 Hz, 1920 x 1080p 24 Hz, 1280 x 720p 60 Hz, 720 x 480p 60 Hz, 720 x 480i 60 Hz, software controlled
Labels	Serial Number, eCM MAC Address, RF MAC Address, M-Card Serial Number, M-Card MAC Address

Specifications

Table 3. Product Specifications

Specifications	
Tuning and Decoding	
Tuning	QAM 64 or 256, In-Band 54 MHz–1 GHz, QPSK out-of-band (OOB) 70–130 MHz, DOCSIS 91–867 MHz, A/V in display, MoCA 1.0–1.5 GHz
Video Decoders	MPEG-2 MP@ML, MP@HL (SD, 720 x 480i), MPEG-4 (H.264) up to HP@L4.0 (HD), VC1, Video Scaling, software controlled
Audio Decoders	Dolby™ Digital to 5.1, MPEG-1 and MPEG-2, Dolby Digital+, AAC, AAC+, AC3, MP3
Conditional Access	Separable security with M-Card
Graphics Engine	Up to 960 x 540 resolution, 32 bit (16 million) color
DAVIC	FDC (Forward Data Channel) 1.54 Mbps QPSK, RDC (Reverse Data Channel) 1.54 Mbps QPSK, FAT QAM Channel Downstream, software controlled
DOCSIS	OOB and interaction via DOCSIS 2.0, DOCSIS Set-Top Gateway, Baseline Privacy Interface, software controlled
Memory/Storage	
RAM	Minimum of 128 MB
Flash	Minimum of 32 MB
NVM	Minimum of 16 KB
Processors	
Application/CPU	700 MHz (approximately 1000 dMIPs)
DOCSIS	333 MHz CPU
Network	400 MHz CPU
Dimensions	
Product (HxWxD)	2.25 in. x 13.75 in. x 9 in. (5.7 cm x 34.9 cm x 22.9 cm)
Product Weight	4.0 lbs (1.6 kg)
Carton (HxWxD)	Carton of 5 units = 16.5 in. x 11.25 in. x 16.5 in. (41.9 cm x 28.6 cm x 41.9 cm)
Total Weight	Carton of 5 units = 24.0 lbs (10.9 kg)
Environment Specifications	
Placement	Locate with at least 2 inches of open space above and on each side
Room Temperature	32° to 105°F (0° to 40°C) during operation
Storage Temperature	14° to 158°F (-10° to 70°C)

Table 4. Accessories

Specifications		
In Carton		
	Power Cord, Quick Reference Guide	
Sold Separately		Part Number
	License, Axiom OCAP (tru2way) Middleware, non-DVR	4026954
	SARA Software License	4020466
	RGB Adapter and Cables	749790
	IR Extender – 12 ft (3.65 m)	1004648
	USB IR Extender – 12 ft (3.65 m)	1001807
	USB IR Extender – 25 ft (7.32 m)	4006725
	Low Pass Filter, MoCA Model LPF 001	4023444
	HDMI Cable—9.8 ft	1002048

Ordering Information

Table 5. Ordering Information

Model	Description	Part Number
Cisco RNG150N	RNG150N Digital-Only High Definition Interactive Set-Top with Multi-Stream CableCARD Interface and MoCA	4029909
Cisco RNG150	RNG150 Digital-Only High Definition Interactive Set-Top with Multi-Stream CableCARD Interface	4025492

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Part Number 7014599 Rev B
May 2009



TDC575D Vegas Digital Video Recorder

TECHNICAL SPECIFICATION



The All Digital Solution

The TDC575D Vegas is a powerful and cost effective Dual Tuner Personal Video Recorder (PVR) for the North American Cable Industry. The TDC575D combines innovative styling, powerful processing, and new technology to deliver a high level of set-top box performance as cable networks transition to digital simulcast.

Features

The TDC575D is a flexibly designed set-top that allows a cable operator to choose from a range of powerful features.

- All digital tuning with MPEG-2 decoding
- Powerful MIPS processor
- Flexible memory options
- Flexible internal hard drive options
- External hard drive expansion through SATA connectivity
- Integrated DOCSIS 1.1 cable modem connectivity
- DSG and Legacy (StarvueII/DVS-178) signalling support
- Legacy conditional access
- Powerful connectivity options

Software

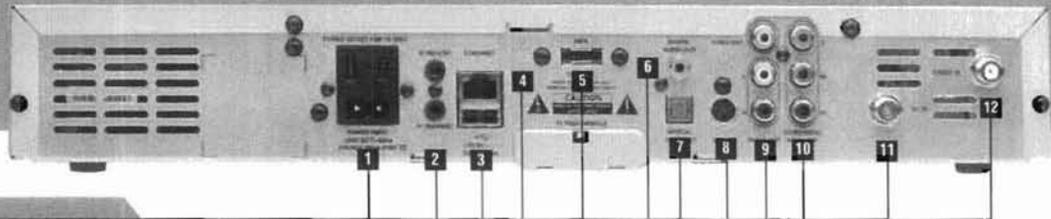
The TDC575D supports multiple software stacks that allow seamless integration into existing Motorola, OCAP, and future networks. Pace is one of the few set-top developers that has unique experience designing, developing, and deploying for the incumbent North American cable markets.

Pace has now applied that experience into the creation of a common software platform that offers unparalleled flexibility called EngineWare. EngineWare supports the operation of legacy applications such as TVGUIDE, VOD, Gaming, and others as well as supports future applications such as Cable Labs OCAP environments.

There are three distinct software layers:

- DDK Layer – a Device Driver Kit that allows for an abstraction from silicon hardware, drivers, and operating system.
- Engine Core – this is the main logic driving the set-top box. Leveraging a groundbreaking modular design, this core application provides all the functionality necessary to drive an advanced interactive set-top box with PVR functionality.
- SDK Layer – also known as the Skin Layer. This layer allows for an Open Application Environment that supports today's legacy APIs and OCAP API implementations.

>> TDC575D
Digital Video
Recorder



Rear panel connections include the following:

- 1 1. Switched Power Supply
- 2 2. IR Receive and IR Transmit
- 3 3. Dual USB Ports
- 4 4. Ethernet Port
- 5 5. SATA Port
- 6 6. 5.1 Dolby Digital Electrical Output
- 7 7. 5.1 Dolby Digital Optical Output
- 8 8. S-Video Output
- 9 9. Composite Video Output
- 10 10. Component Video Output
- 11 11. RF Output – To TV, channel 3 or 4
- 12 12. RF Input – SCTE Compliant F-Connector

For more information on the TDC575D or any other Pace products you can visit our website www.pacemicro.com/products



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GENERAL SPECIFICATION

SYSTEM/MEMORY CONFIGURATION

250 MIPS System Processor
85 MIPS Graphics Processor
16MB FLASH (Option to fit up to 64MB)
64MB SDRAM (Option to fit up to 128MB)

RF INTERFACES

2x MPEG In-band, 54MHz-864MHz Tuner with QAM 64/256 decoding
1x OOB, 70-130MHz Agile Tuner with QPSK decoding (Including support for 104.2 MHz)
1x RF Return, 5-42MHz, QAM/QPSK Modulator (Compliant with Starvuel/DVS178, SCTE 55-1)
RF Bypass (Internal)

DOCSIS CABLE MODEM

1x DOCSIS in-band, 54-864MHz Tuner with QAM 64/256 decoding
DOCSIS 1.1 Cable modem
DSG data and MPEG2 content decoding
OpenCable DSG Support

VIDEO

MPEG-2 MP@ML
ATSC Compliant Video
VHF Output on CH3 or CH4 (Default Channel 3)
Composite Video
Component Video
S-Video

AUDIO

Dolby Digital Down-mix
Left/Right Audio Output (RCA Phono)
SPDIF Optical Audio Output
Dolby Digital Electrical Audio Output

DATA PORTS

Ethernet, SATA, USB

CONDITIONAL ACCESS

Motorola DigiCypher II
7816 Smartcard slot
Triple DES descrambling engine for Media-server client support

GRAPHICS

640 x 480 16 Bit Per Pixel Graphics, 256 Levels

STANDARDS

MPEG-2
SCTE 20 2001
EIA608B Analog VBI Processing and Pass Through
EIA708B

[This specification is subject to improvement and change without notice]

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TDC577X Vegas

ALL-DIGITAL, DUAL TUNER, SD DVR
SET-TOP BOX WITH CABLECARD™ INTERFACE

General Specification



STANDARD DEFINITION DUAL TUNER TECHNOLOGY FOR THE HOME

The TDC577X Vegas set-top box is a powerful, yet flexible, SD DVR solution ready for wide scale deployment in the North American cable industry.

The Vegas is designed for your digital simulcast system. It is the new choice in all-digital CableCARD support for the SD DVR market with its M-Card compatibility.

The advanced connectivity options including component video output produce the best quality picture, raising the standard for SD DVR set-top technology.

The Legacy Out of Band supports current network architecture with DSG support for future network development.

KEY FEATURES:

- Standard Definition decode
- Dual Video Tuners allowing two channels to be watched and recorded
- Fully comprehensive and advanced connectivity including component video output
- Multistream CableCARD (M-Card) support
- External Serial ATA drive support
- DOCSIS™ 1.1 integrated cable modem
- Rear panel USB 1.1 port
- Multiple front panel LED indicators showing record, play, message and power status
- RF output



EPG SCREENS



TDC577X

RF INTERFACES:

- 2 x MPEG In-band, 54-864MHz Tuner with QAM 64/256 decoding
- 1 x OOB, 70-130MHz Agile Tuner with QPSK decoding
- 1 x RF Return, 5-42MHz, QAM/QPSK Modulator
- RF Bypass (Internal)

AUDIO VIDEO OUTPUT:

- Composite Video
- VHF Output on CH3 or CH4
- Dolby Digital S/PDIF electrical and optical output
- Dolby Digital decode/down mix to stereo, output on RCAs

FRONT PANEL:

- LED indicators: Message, Bypass, Power, IR, Record, Record, Play

SYSTEM PROCESSOR / MEMORY:

- Minimum 250 Dhrystone MIPS Processor
- 16MB FLASH as standard, 32 & 64MB FLASH available
- 64MB DDR SDRAM

CONDITIONAL ACCESS:

- Multistream CableCARD (M-Card)

PACE SOFTWARE:

- Pace EngineWare™ software V1.0 and STT driver code

SET-UP AND DIAGNOSTICS:

- Diagnostic screens for on site installation and debug
- Display Configuration menu system

SOFTWARE UPDATE MECHANISM:

- OOB Software Download Mechanism

ACCESSORIES:

- Consumer User Manual and safety information sheet
- Power Lead (2m Polarised 2 Pin IEC)

For more information on the TDC577X or any other Pace product please visit our website www.pace.com/products

[This specification is subject to improvement and change without notice]

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BRINGING TECHNOLOGY HOME
www.pace.com





Pace RNG110 Specification

Pace RNG110 URS

RF Interfaces

- 1 x In-band, 54MHz-1GHz Video Tuner (with QAM 64/256 decoding)
- 1 x In-band, 54MHz-1GHz DOCSIS Tuner (including support for MPEG-2 transport at DOCSIS interleaving rates)
- 1 x OOB, 70-130MHz Agile Tuner with QPSK decoding (Including support for 104.2 MHz)
- 1 x RF Return, 5-42MHz, QAM/QPSK Modulator (Compliant with Starvue II/DVS178/SCTE 55-1)

DOCSIS Cable Modem

- DOCSIS 2.0 Cable modem
- Advanced DSG Support

Audio Video Input / Output

- MPEG-2 MP@ML and MP@HL ATSC A/54 Decode up to 1080p30
- MPEG-4 MP@ML and MP@HL ATSC A/54 Decode up to 1080p30
- HDMI Audio / Video Out with HDCP copy protection
- Component (Y Pb Pr), Composite Video RCA outputs
- Native, 480i, 480p, 720p, 1080i and 1080p30 scaling modes
- Simultaneous HD output via HDMI and Y Pb Pr outputs with HD video downscaled to SD on CVBS output
- Independent scaling of video/graphics on HD and SD outputs
- Support for Zoom, Stretch, Crop
- Constrained image support if CCI flag set on Component video outputs and HDMI if HDCP not in effect
- Macrovision copy protection capability v7.1 including support for Component video output
- 5.1 Dolby Digital optical output
- AC-3 Matrix surround down mix to Stereo L/R RCA outputs

System Processor / Memory

- 800 Dhrystone MIPS Processor for system and application use
- 32 MByte FLASH memory
- 256 MByte SDRAM (Unified MPEG Decode/Graphics/system run from RAM) as standard
- 256 Kbyte Non-volatile managed Flash storage area with random byte wise access

Graphics

- 16 / 32 Bit Per Pixel, 960x540 and 854x480 resolution
- Scaled graphics presented on HDMI, Y Pb Pr, CVBS outputs simultaneously.

Front Panel

- 4 LED indicators: Power, IR Receive, HD, Data



IR and Protocols supported

GI and XMP Receive Standard Remote code set
Front panel IR Receiver
External IR Receiver Tether port via 3.5mm jack

Digital Interfaces

1x IEEE 1394 6 pin port (SCTE 26 2001) with DTLA 5C support
1x USB 2.0 port
1x Ethernet Port

Conditional Access

Multistream CableCARD™ (M-Card)
CableCARD located behind flush cover panel secured by cross-head screw

Key Standards and Reference Specifications

EIA-708-B Closed Captioning
SCTE18 (EIA-208) Emergency Alert Systems

Software

Pace EngineWare™ software V3.0 and STT driver code

Set-up and Diagnostics

Diagnostic screens for on site installation and debug
SNMP support for remote diagnostics
Display Configuration menu system

Accessories

Consumer Quick Start Guide
External Power Supply



Pace RNG110 RF Out Specification

Pace RNG110 URS

RF Interfaces

- 1 x In-band, 54MHz-1GHz Video Tuner (with QAM 64/256 decoding)
- 1 x In-band, 54MHz-1GHz DOCSIS Tuner (including support for MPEG-2 transport at DOCSIS interleaving rates)
- 1 x OOB, 70-130MHz Agile Tuner with QPSK decoding (Including support for 104.2 MHz)
- 1 x RF Return, 5-42MHz, QAM/QPSK Modulator (Compliant with Starvue II/DVS178/SCTE 55-1)

DOCSIS Cable Modem

- DOCSIS 2.0 Cable modem
- Advanced DSG Support

Audio Video Input / Output

- MPEG-2 MP@ML and MP@HL ATSC A/54 Decode up to 1080p30
- MPEG-4 MP@ML and MP@HL ATSC A/54 Decode up to 1080p30
- HDMI Audio / Video Out with HDCP copy protection
- Component (Y Pb Pr), Composite Video RCA outputs
- Native, 480i, 480p, 720p, 1080i and 1080p30 scaling modes
- Simultaneous HD output via HDMI and Y Pb Pr outputs with HD video downscaled to SD on CVBS output
- Independent scaling of video/graphics on HD and SD outputs
- Support for Zoom, Stretch, Crop
- Constrained image support if CCI flag set on Component video outputs and HDMI if HDCP not in effect
- Macrovision copy protection capability v7.1 including support for Component video output
- 5.1 Dolby Digital optical output
- AC-3 Matrix surround down mix to Stereo L/R RCA outputs
- VHF Output on CH3 or CH4 ('F' Connector, default channel 3)

System Processor / Memory

- 800 Dhrystone MIPS Processor for system and application use
- 32 MByte FLASH memory
- 256 MByte SDRAM (Unified MPEG Decode/Graphics/system run from RAM) as standard
- 256 Kbyte Non-volatile managed Flash storage area with random byte wise access

Graphics

- 16 / 32 Bit Per Pixel, 960x540 and 854x480 resolution
- Scaled graphics presented on HDMI, Y Pb Pr, CVBS outputs simultaneously.

Front Panel

- 4 LED indicators: Power, IR Receive, HD, Data



IR and Protocols supported

GI and XMP Receive Standard Remote code set
Front panel IR Receiver
External IR Receiver Tether port via 3.5mm jack

Digital Interfaces

1x IEEE 1394 6 pin port (SCTE 26 2001) with DTLA 5C support
1x USB 2.0 port
1x Ethernet Port

Conditional Access

Multistream CableCARD™ (M-Card)
CableCARD located behind flush cover panel secured by cross-head screw

Key Standards and Reference Specifications

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Software

Pace EngineWare™ software V3.0 and STT driver code

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Consumer Quick Start Guide
External Power Supply



tru2way[®] HD STB
RNG150



Cable Operators are upgrading their HFC networks to support all digital and tru2way[®] architectures. Advanced technologies such as DSG, DOCSIS[™] 3.0 and IPv6 are being deployed in order to make these HFC networks more scalable, flexible and efficient.

Samsung RNG150 all digital HD Set-Top boxes support tru2way[®] architectures with the advanced features required by next generation networks. With features like Multi-stream CableCARD[™] interface, 1 GHz tuning, DOCSIS[™]/DSG support and MPEG-4 AVC, the RNG150 can help operators get the most out of their network investments.

SAMSUNG

tru2way[®] HD STB

SAMSUNG Cable Set-top Box RNG150



Features

tru2way[®] Architecture

- CableCARD™ Host Interface
- Fully compliant with OCAP™ 1.0.1
- Advanced DOCSIS™ Set-top Gateway (ADSG) mode

Better video quality

- Digital noise reduction and image enhancement
- 2D and Enhanced 2D Graphics
- Low power consumption

High efficiency of Network utilization

- MPEG-4 AVC/H.264 decoding supports better compression rate than MPEG-2
- Digital QAM tuning up to 1GHz RF spectrum

Contemporary Style Design

- Simple and Sleek Front Panel
- Small footprint to go with today's flat panel displays



Specifications

Product Specifications

Item	Description
CPU	1,000 DMIPS RISC processor
Memory	512MB DDR2 DRAM, 64MB FLASH, 32KB EEPROM
RTOS	Embedded Linux
Middleware	OCAP™ 1.0.1
CableCARD	Multi-Stream CableCARD™
Network I/F	DOCSIS™ 2.0 Cable Modem supporting 2-channel bonding In-band Tuner: 54MHz to 1GHz, Receiving 64 or 256 QAM DOCSIS™ Tuner: 88MHz to 1GHz, Receiving 64 or 256 QAM
I/O Interface	Ethernet(10/100 Base-T) 1 Port USB 2.0 host 2 Port IEEE1394 HDMI NTSC-M RCA 1 Port Component Video Output (Y/Pb/Pr) RCA Stereo Audio (L/R) Output Optical/Coaxial S/PDIF Audio Output
Graphics	2D & Enhanced 2D Graphic Engine
MPEG decoding	MPEG4 AVC/H.264, HP@Level 4.1 Decoding MPEG4 AVC/H.264, HP & MP@Level 3.1 Decoding MPEG2 MP@HL Decoding MPEG1 Layer 1/2/3 Audio Decoding Dolby Digital & Dolby Digital Plus AAC LC, AAC LC + SBR Level2, AAC HE Level 2 & 4
Copy Protection	OpenCable™ POD Copy Protection HDCP, DTCP, DTCP-IP
Dimensions	270 x 200 x 45 mm 1,100g (net dimension) 288 x 249 x 115 mm 1,800g (1 unit Box)

Front Panel Specifications

Item	Description
IR	IR Receiver
Buttons	Power/Standby
Indicators	Power/Standby REMOTE, DATA
I/O Interface	USB 2.0 Host
Color	Black paint

Rear Panel Specifications

Item	Description
RF Input	F-type Female
AV Out	NTSC-M RCA (CVBS), S-Video, Component (Y/Pb/Pr) Video, HDMI, 2 S/PDIF (Optical, Coaxial)
I/O Interface	USB 2.0 Host, IEEE 1394 RJ-45 Ethernet (10/100 Base-T)
CableCARD	Multi-Stream CableCARD™
Power	DC 12V

* The information in this publication is subject to change without notice.

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