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APPLICATIONS PLAYBOOK

2025

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Broadcast, PEG or LA Content Delivery over Public Networks

Internet Backhaul

VividEdge SRT Ready encoders offer significant operational flexibility and cost savings over dedicated network infrastructure (direct fiber, MPLS or MetroE circuits).

VividEdge VL4500 products and VividCore ELLVIS9000 Gateways are part of a video streaming workflow that allows operators to extend live and on-demand video libraries to remote locations over public networks.

Beyond PEG and Leased Access program delivery, the video streaming workflow supports use cases such as off-air redundancy, affiliate content distribution, and remote broadcasting.

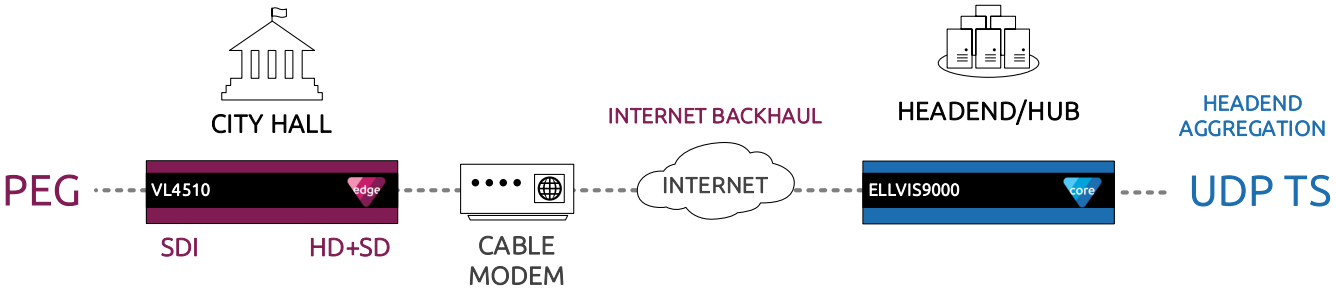
System Highlights

- Broadcast delivery over internet Protection from packet loss, bandwidth fluctuations, jitter and delay
- End-to-End AES encryption
- Error Recovery
- No Licenses
- No bandwidth service charge
- Single Vendor Solution

BOM

1 x VL4510 / VL4510H

1 x ELLVIS9000



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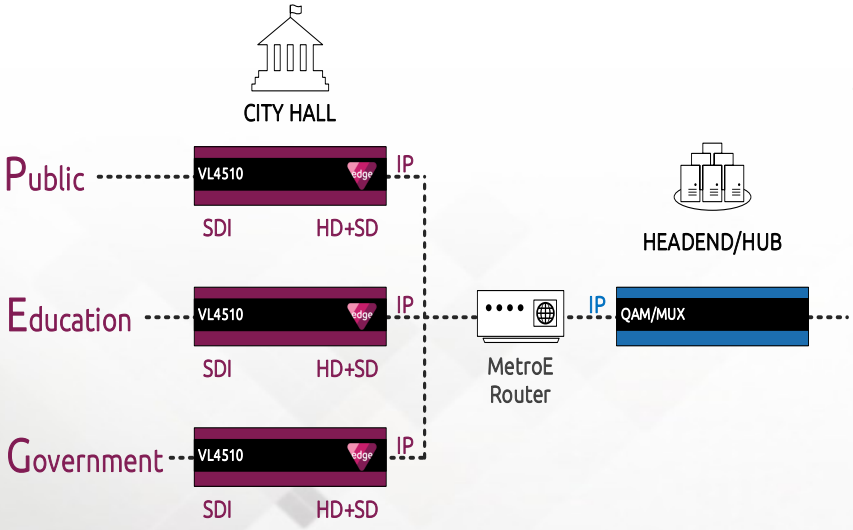
PEG Content Delivery over IP Network

Backhaul over GigE fiber or MetroE

The **VividEdge VL4500 Series** of products allows MSOs to replace legacy analog audio and video fiber transmitters with a cost-effective, HD-capable multi-channel encoder. This solution eliminates the need for fiber receivers, encoders, and groomers at the headend, thereby reducing rack space, power consumption, and heat dissipation.

The product enables encoding and transport of multiple CableLabs-compliant streams over GigE, providing a high-quality, cost-effective solution for most PEG and local insertion channel loading scenarios.

VL4510C provides both SDI and baseband audio/video input options.



System Highlights

- Located at the edge
- Standard GigE IP Interfaces
- High quality video codecs
- Web GUI
- Small form factor
- Low Power
- Multi-stream output
- MPEG Up/Down conversion
- AFD processing and resize
- SRT Inside
- CVBS, SDI, HDMI Inputs
- DASH / HLS

BOM

1 x VL4510 (C)

1 x SFP GigE or MetroE Router

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PEG Content Delivery over single Optical wavelength

ASI backhaul over single fiber or wavelength

VL4500 Series of products allows the MSO to replace the legacy analog audio and video fiber transmitters with cost effective HD capable multi-channel encoder.

That transport eliminates fiber receiver, encoder and groomer from the headend, thus way reducing rack space, power consumption and heat dissipation.

The product allows the encoding to ASI allows transporting multiple streams from studio to MSO headend over single fiber/wavelength

System Highlights

- Located at the edge
- ASI traffic, single fiber
- High quality video codecs
- Simple setup
- Small form factor
- Low Power
- Multi-channel Input per 1RU
- Multi-stream output
- Up/Down conversion
- ASI or IP output at the HE

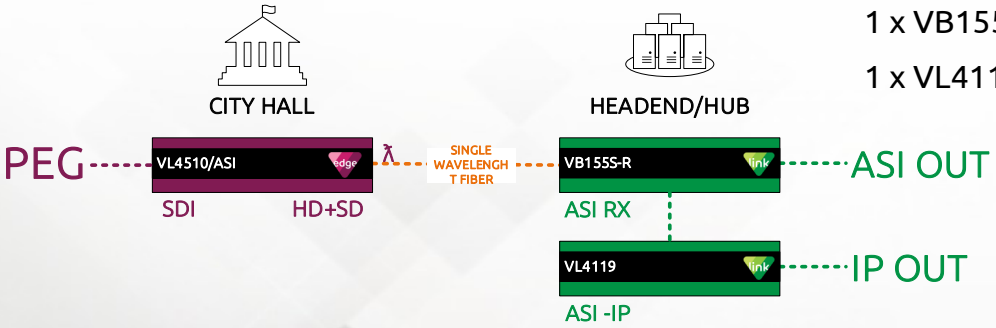
BOM

1 x VL4510 (C)

1 X VB155-TX

1 x VB155-RX

1 x VL4119 (optional for UDP/IP output)



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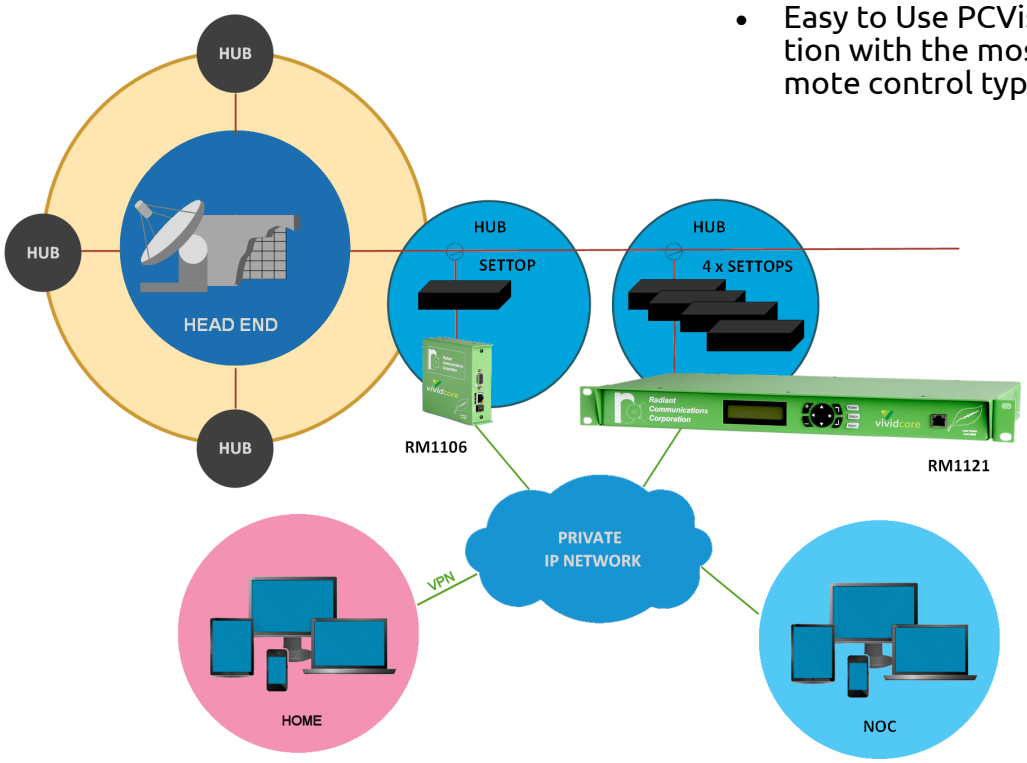
CATV Remote Monitoring System

Radiant Communications offers the first flexible and cost-effective solution of monitoring your entire channel lineup over your existing local area network (LAN).

The RM1121 can monitor up to four CATV boxes at remote hubs with multiple channel lineups. The RM1121 includes up to four IR blasters plus four video inputs. Although there are four inputs, only one input can be viewed at a time.

System Highlights

- MPEG-4 based video encoder
- Remotely monitor your entire channel lineup over private IP network
- Easily monitor multiple remote hub locations from anywhere on your network.
- Easy to Use PCVision Application with the most common remote control types in library.



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Advanced Video Monitoring Applications

EAS Reporting

The RM8000S and RM1100 system supports scheduled or event-triggered recordings of STB video output, IR control via web browser, and automatic reporting of ad queue events and EAS messages. A specific set of workflows allows the operator to export ad insertion, EAS, and time-scheduled verification clips and reports.

System Highlights

- Real Time Video Monitoring
- Workflows for EAS and Ad insertion, clip extraction and reporting

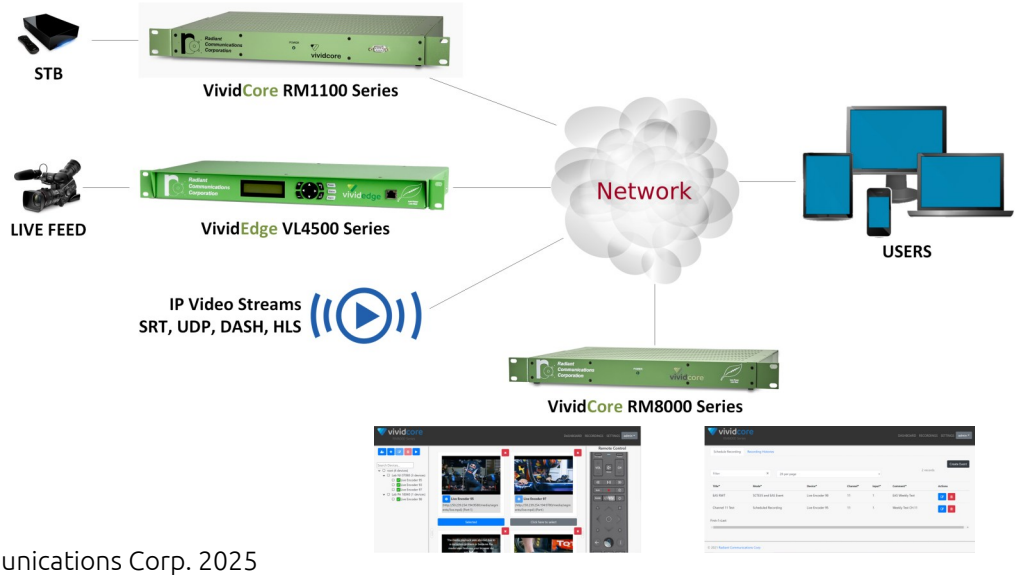
BOM

RM1121/06-HD Devices

Set Top Boxes

1 x RM8000

1 x RM8000 license per device



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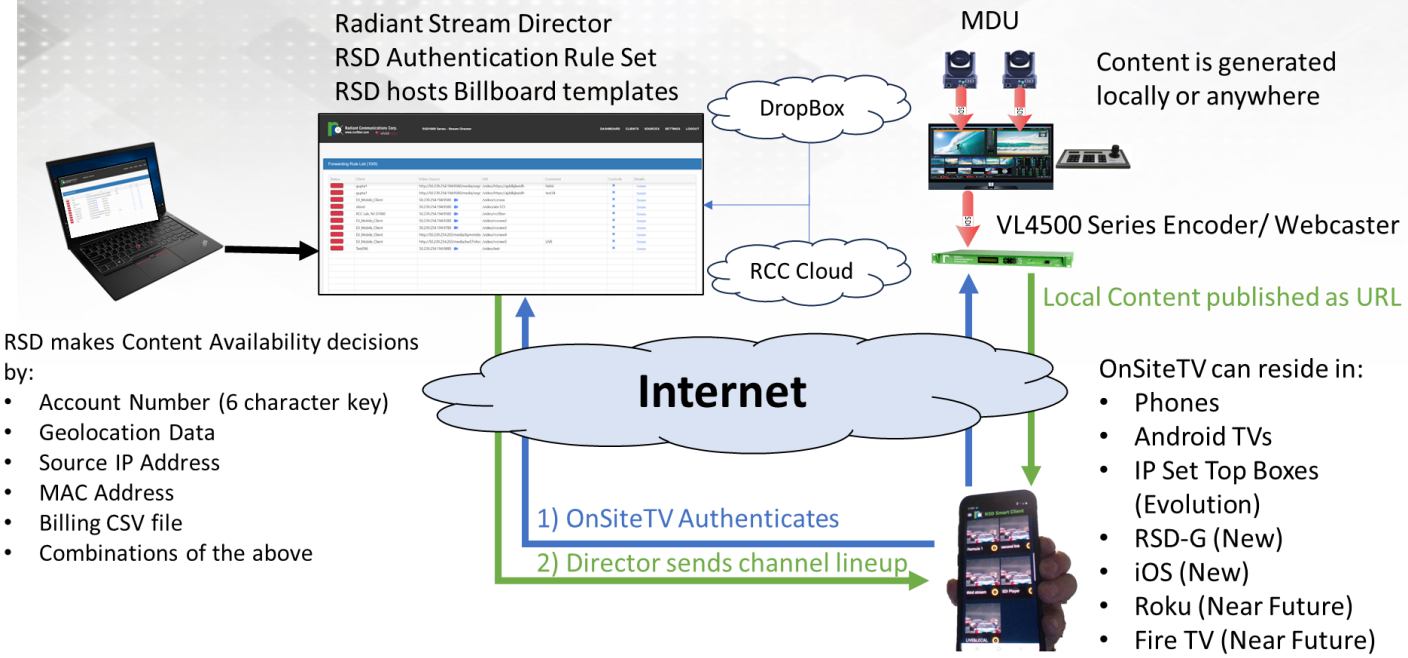
Radiant Stream Director



Radiant Stream Director is a new cloud based solution that delivers the new Radiant Onsite TV service to MDUs, Schools, Gated Communities, and many other applications.

RCC OnSite TV – Key Features

- **Custom Channels**: Create and configure up to six personalized content channels.
- **Live Streaming**: Broadcast high-quality live video content with minimal setup.
- **Web Integration**: Launch and display websites seamlessly within the app environment.
- **Digital Signage**: Present dynamic content for lobbies, events, retail, or corporate spaces.
- **YouTube Support**: Stream YouTube videos and channels natively inside the app.
- **Amazon Fire TV Availability**: Easily accessible via the Amazon Fire TV Store.
- **Versatile Deployment**: Use in corporate, residential, or mobile environments.
- **Unified Media Hub**: Combines entertainment, signage, and web content in one platform.
- **Crystal-Clear Playback**: Optimized for smooth, high-quality video performance.
- **Remote Flexibility**: Designed for on-the-go use—wherever life or business takes you.

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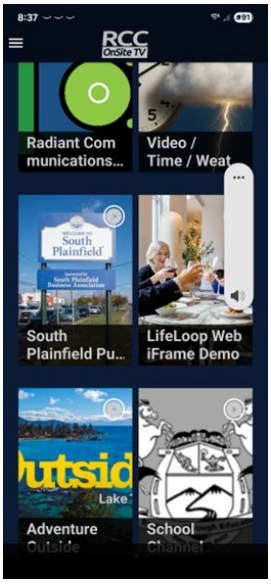
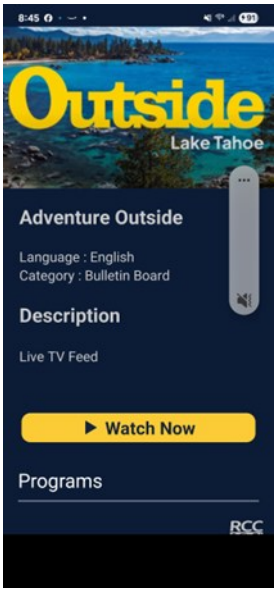
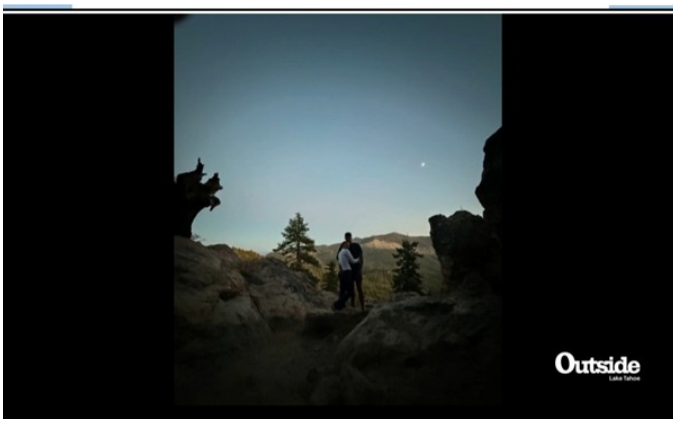
RCC OnSite TV Service







Radiant Stream Director is a new cloud based solution that delivers the new Radiant Onsite TV service to MDUs, Schools, Gated Communities, and many other applications.

RCC OnSite TV – Understanding the APP

- **Custom Meta Data**: Customize your channel descriptions via the content creation portal.
- **Live Streaming**: Broadcast high-quality live video content with minimal setup.
- **Subscription service : Go to www.rccfiber.com/rsd/ to subscribe.**
- **Channel Viewing Permissions:** Channel permissions rules define who gets to view what channels.

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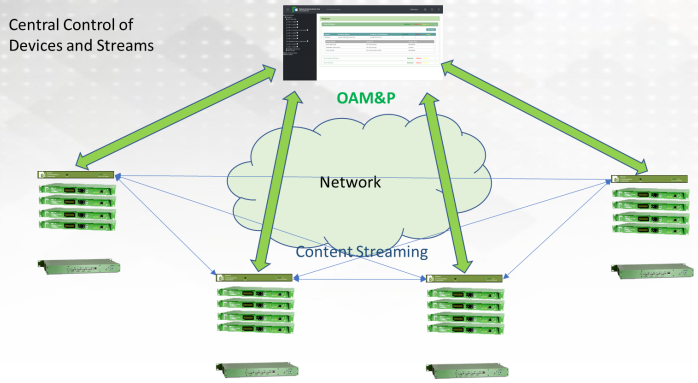
Intelligent Element Manager and Stream Provisioning

VCDMS—Video Content Distribution Management System



Radiant Communications' VividCore VCDMS (Video Content Delivery Management System) is a centralized administration, control, monitoring, stream directing, and publishing platform that provides service and content providers with powerful tools to manage large populations of VividEdge encoders and VividCore media gateways.

VCDMS – Video Content Distribution & Management System—Features:

- **Element Management System** — VCDMS serves as a centralized element management platform, enabling streamlined management and provisioning of devices such as MPEG encoders , SRT gateways, and Remote Monitoring Equipment .

- **Cloud-based Operations, Administration & Maintenance (OAM)** — As a cloud application, VCDMS delivers real-time OAM capabilities, facilitating continuous visibility and control over all devices in the ecosystem .

- **AI-enhanced Functionality** — The platform incorporates AI-driven features to bolster efficiency and automation in device management workflows

- **REST API Access** — VCDMS includes a REST API via its Element Manager, enabling integrations with external systems and automating workflows (e.g., provisioning, monitoring, alerts)

- **Cloud Application Advantages** — By being cloud-based, VCDMS promotes scalability, remote access, easy updates, and reduced reliance on on-prem infrastructure

- **Intelligent Preset Validation**— VCDMS can analyze encoder presets and automatically make corrections if needed.

- **Streamlined Configuration** — From provisioning new hardware to ongoing updates, VCDMS offers a unified platform to manage configurations, firmware, and system settings across all connected Radiant devices.

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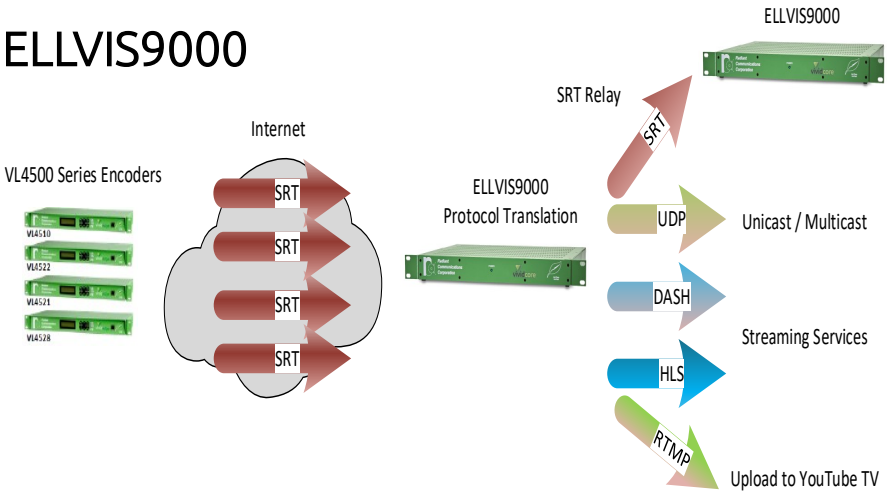
ELLVIS9000



The ELLVIS9000 Multi Protocol Gateways offer SRT aggregation, Protocol translation and Program Fanout capabilities.

ELLVIS9000 Gateway Can translate SRT streams to MPEG-DASH, HLS, UDP/IP, and CMAF among others. It provides integrated packaging and origin servers.

BOM

Up to 40 x VL4510/VL4510H encoders

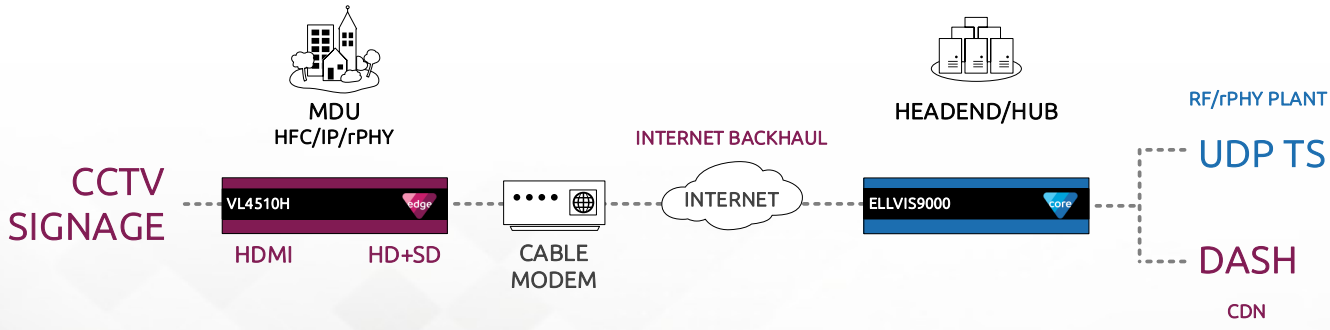
Up to 40 x Cable Modems, 1x /encoder

1 x ELLVIS9000

40 x ELLVIS9000-1 Stream licenses

System Highlights

- Content carried as OTT web service
- Utilizes existing web-based infrastructure
- Simple setup
- Small form factor
- Low Power
- Rugged Design
- Manageable by VCDMS



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HFC Local Video Insertion

In HFC system the local insertion is done at the edge right after the HFC node. If local video program is being inserted into an existing QAM, RF notch filer must be deployed in conjunction with VividEdge encoder.

BOM

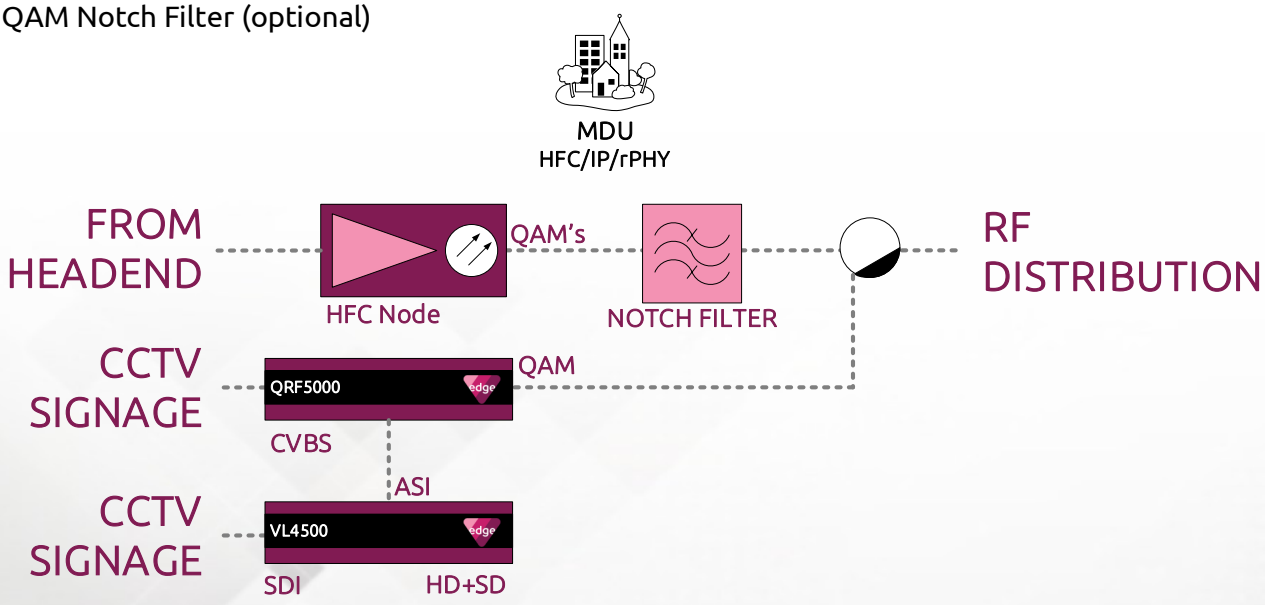
1 x VL4500HQ or VL4510Q

1 x DC

2 x QAM Notch Filter (optional)

System Highlights

- Located at the edge
- QAM 64/256 Output
- High RF output level
- Simple setup
- Small form factor
- Low Power
- Multi-channel Input per 1RU
- Rugged Design



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Fiber Deep Local Video Insertion

Local insertion for a small service group served by a single node can be done in a same manner as HFC system. For larger properties that are being serviced by multiple nodes, insertion can be done at the output on each node via multiple VividEdge encoders or by single unit at the fiber demarcation point in the property, by inserting a new QAM on an empty wavelength.

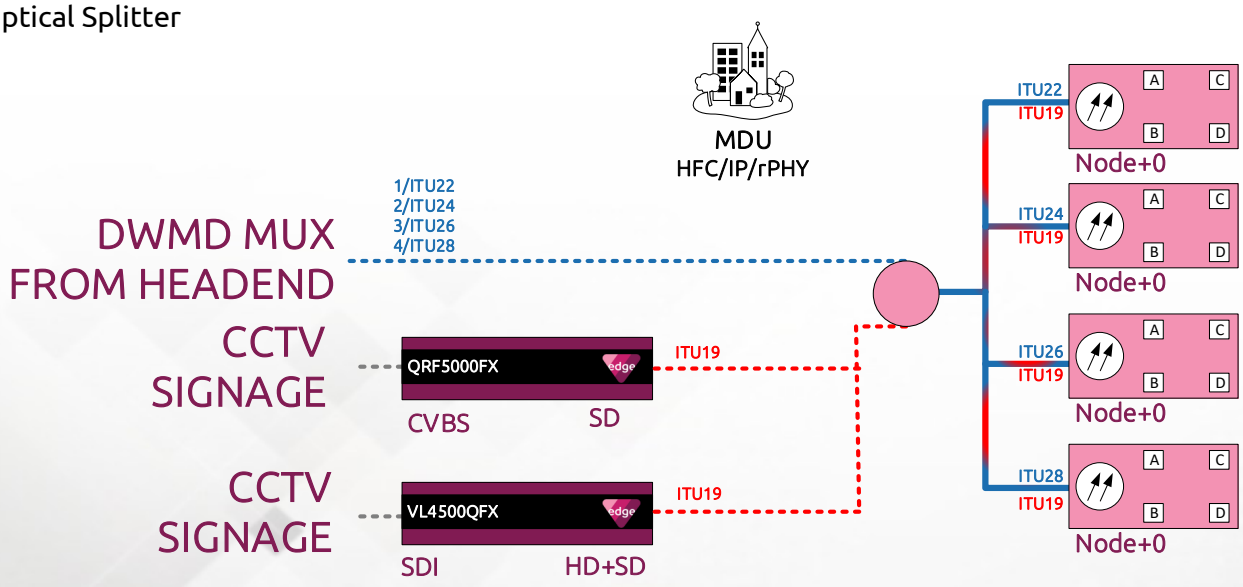
BOM

1 x VL4500HQFX

1 x Optical Splitter

System Highlights

- Located at the edge
- QAM 64/256 Output
- High OMI
- Simple setup
- Small form factor
- Low Power
- Multi-channel Input per 1RU
- Rugged Design



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RFoG Local Video Insertion

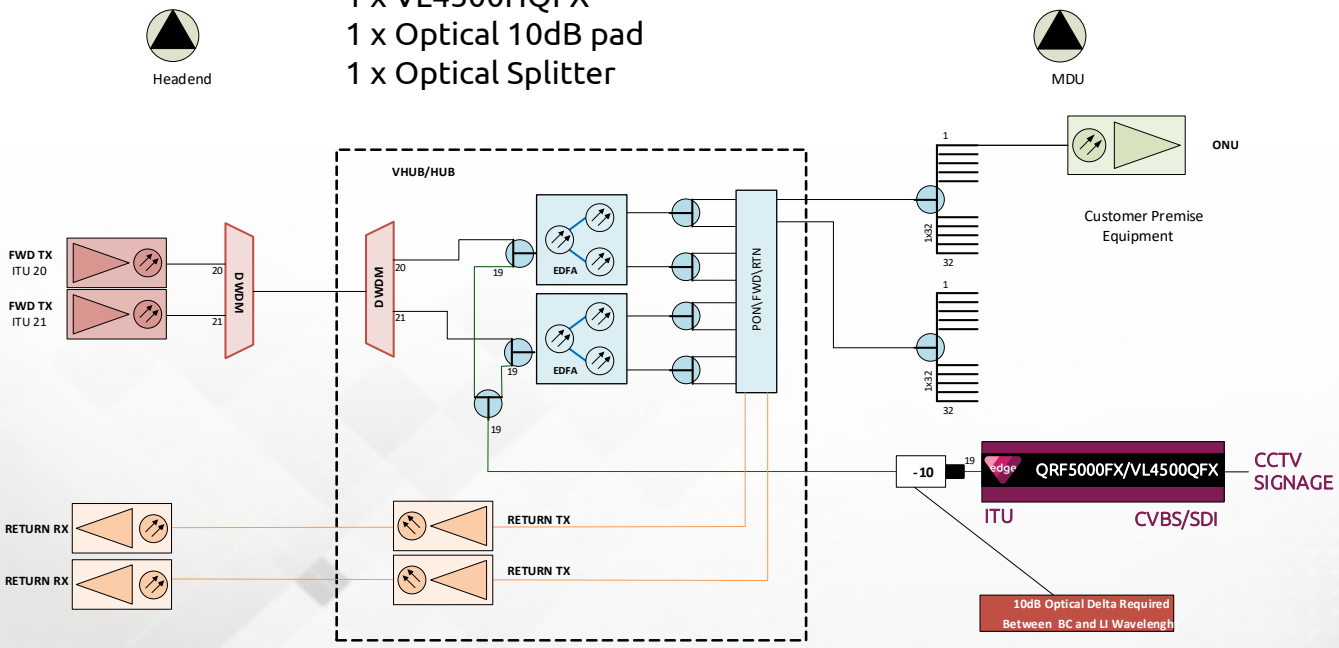
RF over glass (RFoG) is an economical migration to FTTH while still utilizing the same Headend equipment and analog optics used for HFC delivery, and the services are provision same way as on traditional HFC network. It's a perfect solution for fiber planned communities that require fiber to the home. The local video insertion is done on the input of the node/vhub that feeds the customer ONU devices.

System Highlights

- Located at the edge
- QAM 64/256 Output
- High OMI
- Simple setup
- Small form factor
- Low Power
- Multi-channel Input per 1RU
- Rugged Design

BOM

1 x VL4500HQFX
1 x Optical 10dB pad
1 x Optical Splitter



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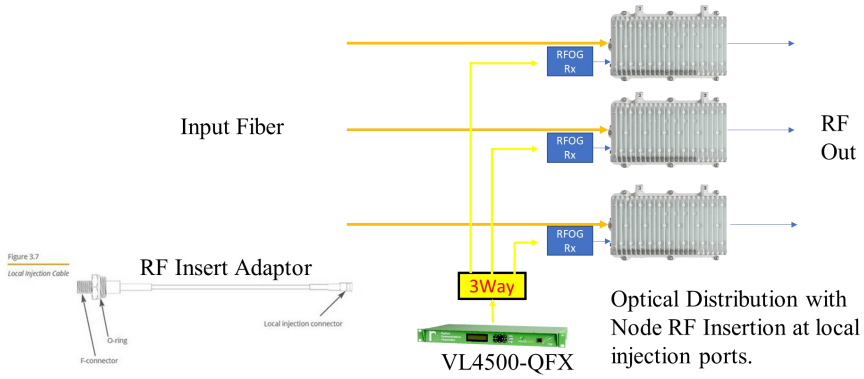
RemotePhy Insertion

The challenge preserving Local Channel Insertion during RemotePhy upgrades is the addition of nodes to the new distribution design. One way to deal with this is to use the local RF insertion port on the RF distribution board. In an upgrade from RFoG to RPhy, One fiber is reused to move the optical QAM /ITU signal to a point at which it can be re -distributed to all of the new nodes. RFoG ONU receivers are used to demodulate the RF QAM from the ITU carrier. The QAM is then inserted into the RF distribution board of the new RPhy node.

System Highlights

- Re-use of the VL4522QFX
- Re-use of fiber used by the RFoG design.
-

RPHY Alternative / Optical Distribution of LCI QAM



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Point to Point Fiber Transport

- Broadcast Quality Fiber Links
- Medium and Short Haul Baseband Video
- SMPTE 310, ASI, SD SDI, HD SDI and 3G HD SDI Video
- Scalable Multichannel Systems Over Single Fiber
- Card Cage Systems, Rack mount and Modular Units
- CWDM and DWMDM optical transmission
- Custom Made Ultra-mux Solutions – Anything to Fiber

AV Sources
RF Sources
SDI/ASI Sources
DATA

Fiber
Delivery

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Fiber Passive Devices

CWDM, DWDM, WDM, Couplers, Add/Drop Modules

Scalable Channel Counts

High Density Channel Counts

Low Insertion Loss

High Isolation

Low Return Loss

Standard and Custom Packaging Options

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Fiber Interconnect Products

- Wall 12, 24, 48 and 96 port splice centers
- Rack 12, 24, 48 and 96 port splice centers

Wall 12 Series

- Lockable Trunk Compartment for Demarcation Point
- Stackable
- Heavy Duty All Metal Cabinet
- Secured with an installed lock with 2 keys

Rack 12 Series

- Front & rear access panels provide immediate access to the Patch Panel
- Unit can be configured for 19” or 23” mounting cabinets
- Heavy duty all metal patch panel with multi step paint processing

HMXL Series FTTH PON MDU Wall Patch

- 48/96 Parking Ports
- Blown Fiber Rear Entry
- Lockable Heavy Duty All Metal Cabinet
- Hook and loop fastener management panels

WPS Series PON Indoor Wall Patch Panel

- Two Chambers Isolate Trunk & Distribution Cables
- Covered rear entry slot for air blown fiber
- Lockable Heavy duty 16 awg steel patch panel with multi step paint processing

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