Handling Legacy QAM Video in a DAA World

Webinar

ATX

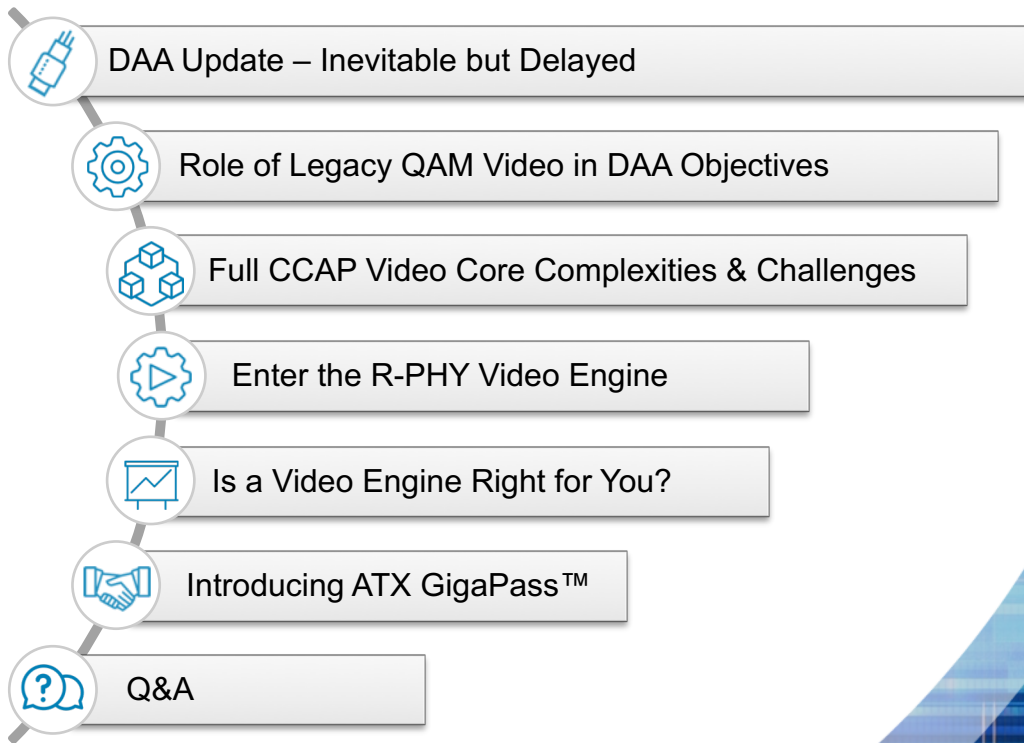# Presenters

Linas Underys
Vice President,
Media Gateways

Joe McGarvey
Senior Director,
Marketing

ATX

Agenda

DAA Update – Inevitable but Delayed

Role of Legacy QAM Video in DAA Objectives

Full CCAP Video Core Complexities & Challenges

Enter the R-PHY Video Engine

Is a Video Engine Right for You?

Introducing ATX GigaPass™

Q&A

DAA Status Update – Inevitable…

Analog to Digital

Converged Service Environment (All IP)

Higher Spectrum/ Bandwidth

Headend Virtualization

Stepping Stone to FTTX

Benjamin Franklin

"…but in this world, nothing can be said to be certain, except death and taxes."

…but Delayed

Analysis Paralysis

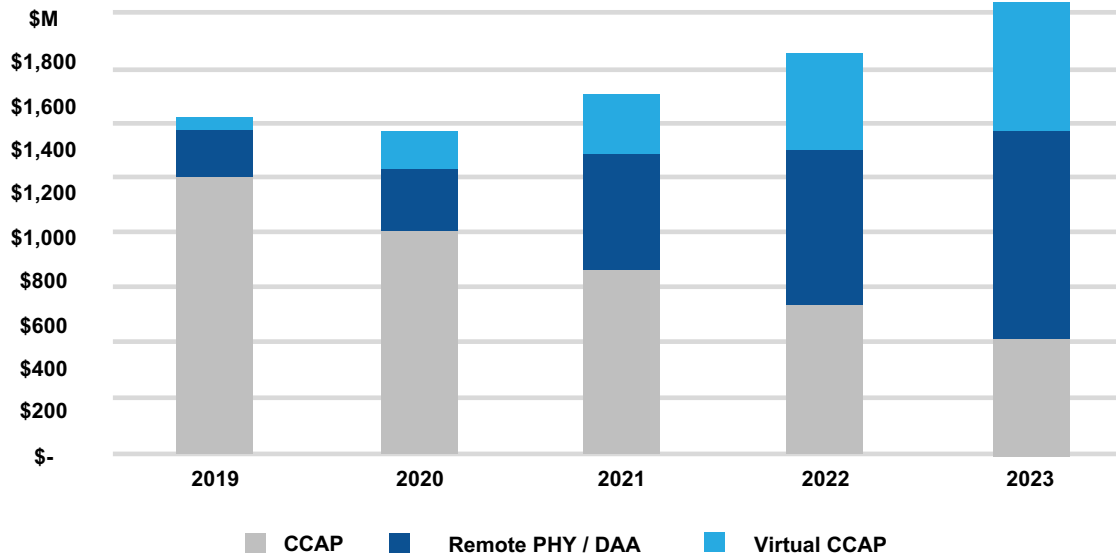**Technology/Architecture Choices**

Vendor Disruptions

Regrettable Spend
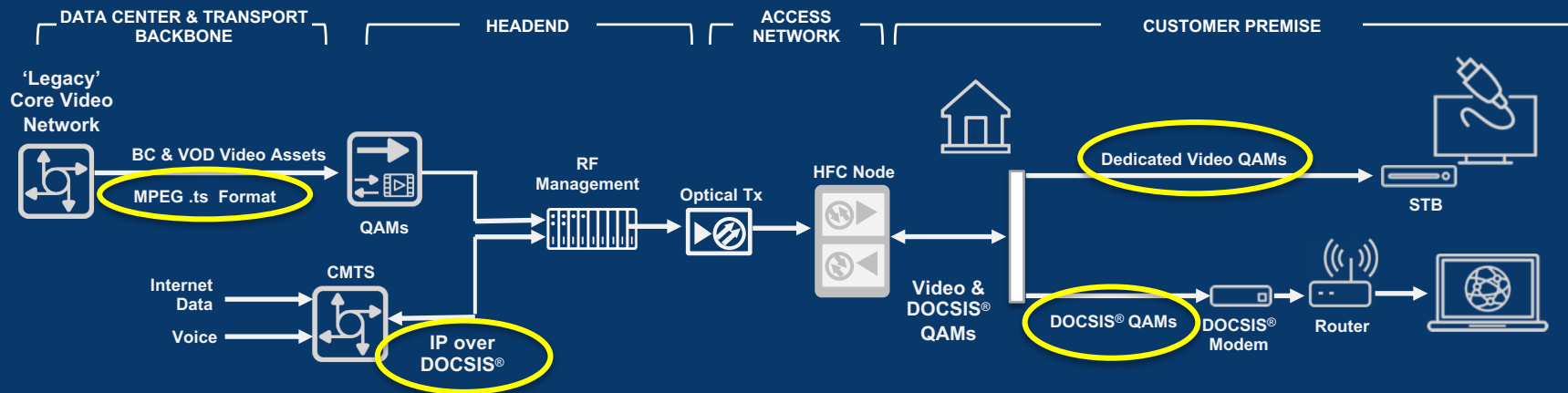
Looking Forward
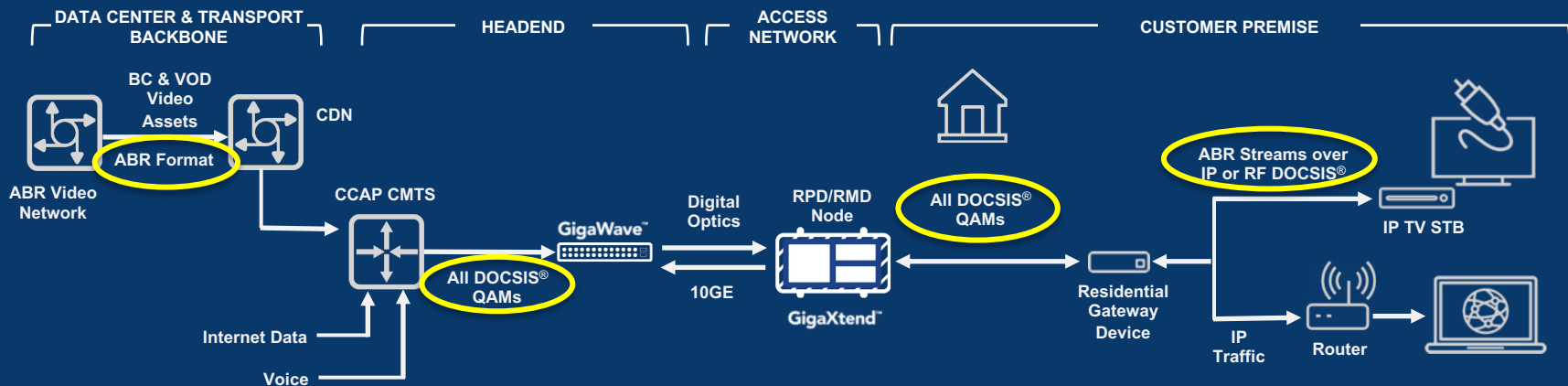

Global Cable Access Spend

Source: Dell'Oro July 2019 Report

Virtual CCAP + Remote PHY/DAA
>50% CAGR

Legend: CCAP | Remote PHY / DAA | Virtual CCAP

MSO Video Transport Network Evolution

DATA CENTER & TRANSPORT BACKBONE

HEADEND

ACCESS NETWORK

CUSTOMER PREMISE

'Legacy' Core Video Network

BC & VOD Video Assets

MPEG .ts Format

QAMs

Internet Data

Voice

CMTS

IP over DOCSIS®

RF Management

Optical Tx

HFC Node

Video & DOCSIS® QAMs

Dedicated Video QAMs

STB

DOCSIS® QAMs

DOCSIS® Modem

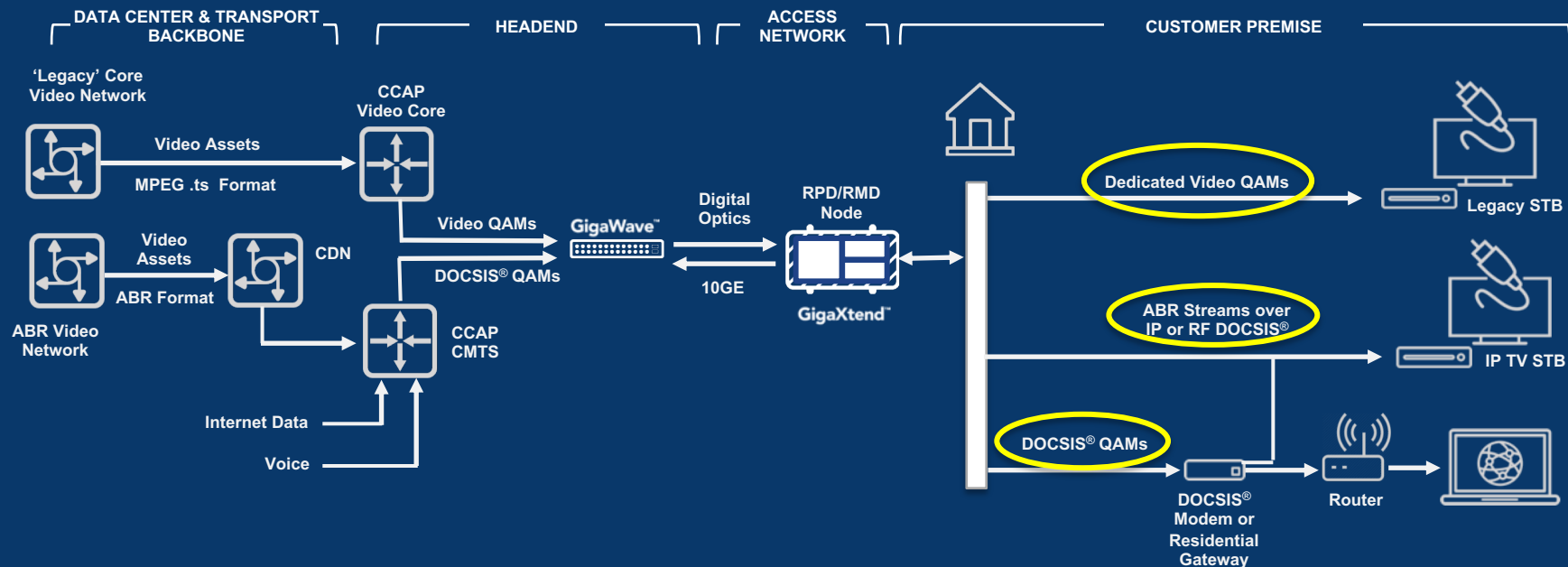Router

Ideal DAA Network End State

Ideal DAA Network End State

Why wouldn't MSOs migrate directly to an all-IPTV network?
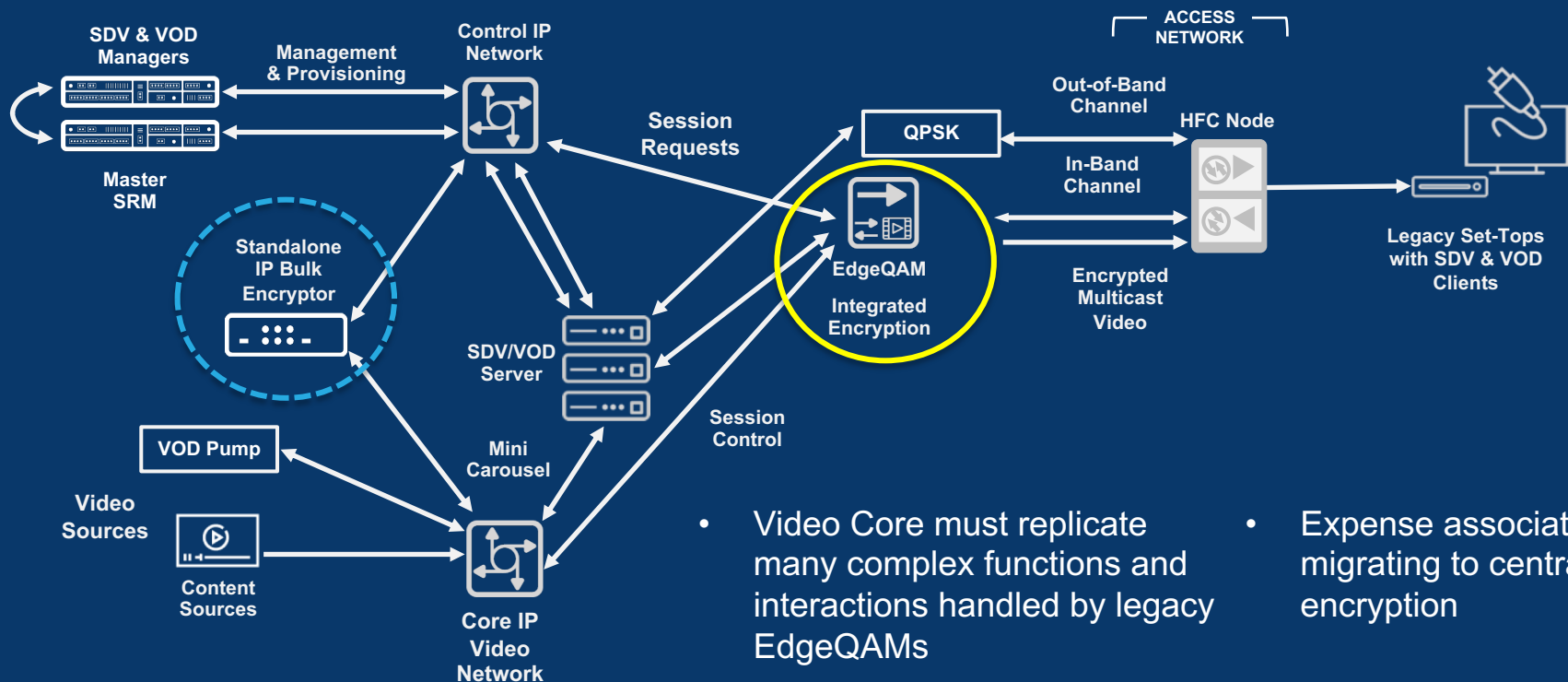
Many challenges include:

- Significant field work required to upgrade nodes with RPDs/RMDs

- Deployed base of legacy QAM video only STBs need to be replaced

DAA Network with Hybrid Video Delivery

DATA CENTER & TRANSPORT BACKBONE

HEADEND

ACCESS NETWORK

CUSTOMER PREMISE

'Legacy' Core Video Network

Video Assets

MPEG .ts Format

CCAP Video Core

Video QAMs

GigaWave™

Digital Optics

10GE

RPD/RMD Node

GigaXtend™

Dedicated Video QAMs

Legacy STB

Video Assets

ABR Format

CDN

DOCSIS® QAMs

ABR Streams over IP or RF DOCSIS®

IP TV STB

ABR Video Network

CCAP CMTS

Internet Data

Voice

DOCSIS® QAMs

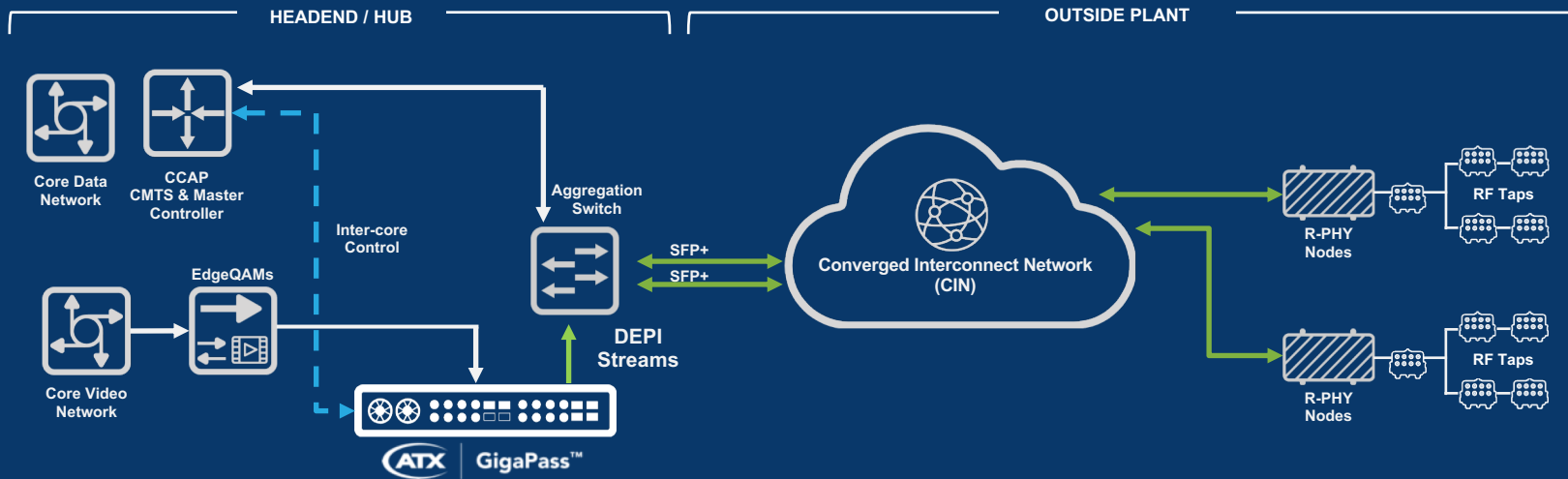DOCSIS® Modem or Residential Gateway

Router

ATX

Full CCAP Video Core Complexities

- Video Core must replicate many complex functions and interactions handled by legacy EdgeQAMs

- Expense associated with migrating to centralized encryption

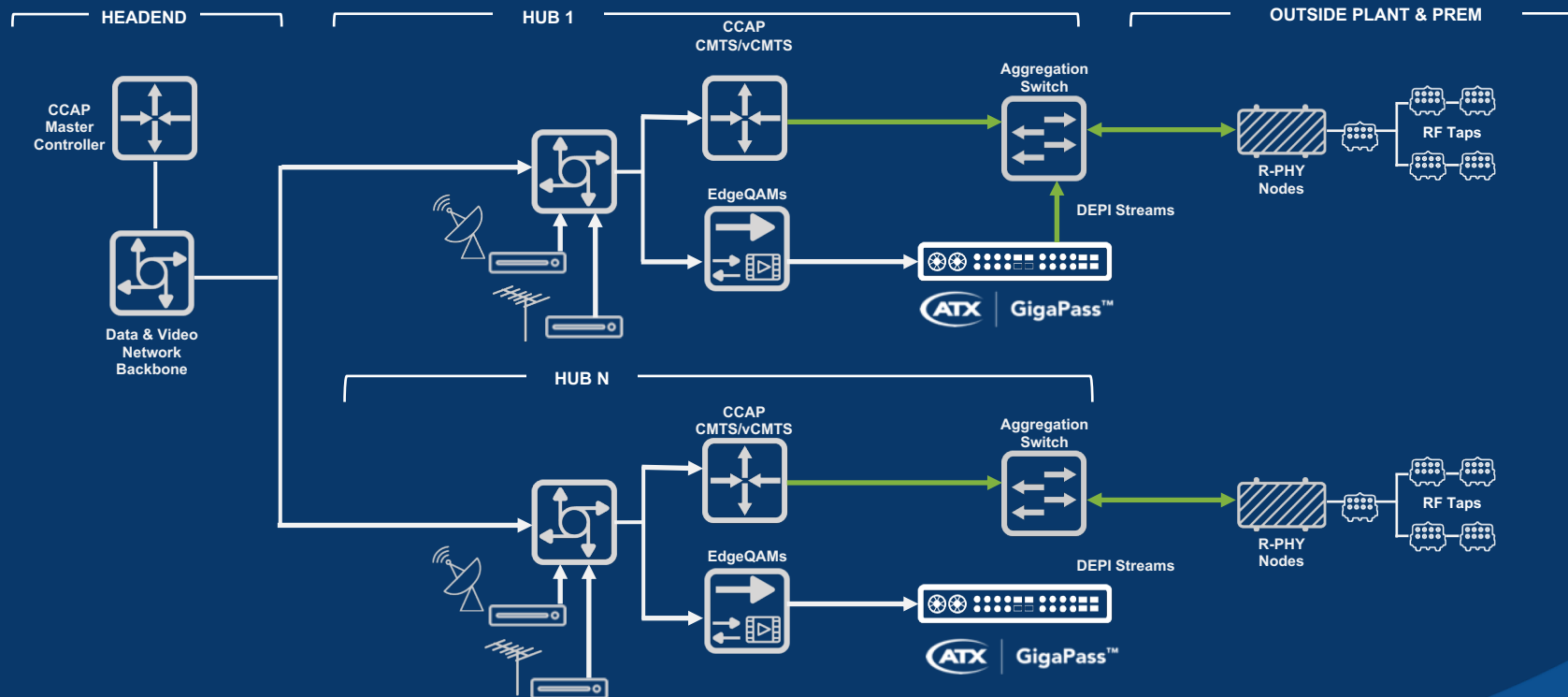- CAS support mismatches or gaps may exist in certain Video Cores

Enter the R-PHY Video Engine

HEADEND / HUB — OUTSIDE PLANT

Core Data Network
CCAP CMTS & Master Controller
Inter-core Control
EdgeQAMs
Core Video Network
Aggregation Switch
SFP+
SFP+
DEPI Streams
Converged Interconnect Network (CIN)
R-PHY Nodes
RF Taps
R-PHY Nodes
RF Taps
ATX | GigaPass™

✓ Enables reuse of equipment and back office ecosystems

✓ Mitigates against encryption mismatches

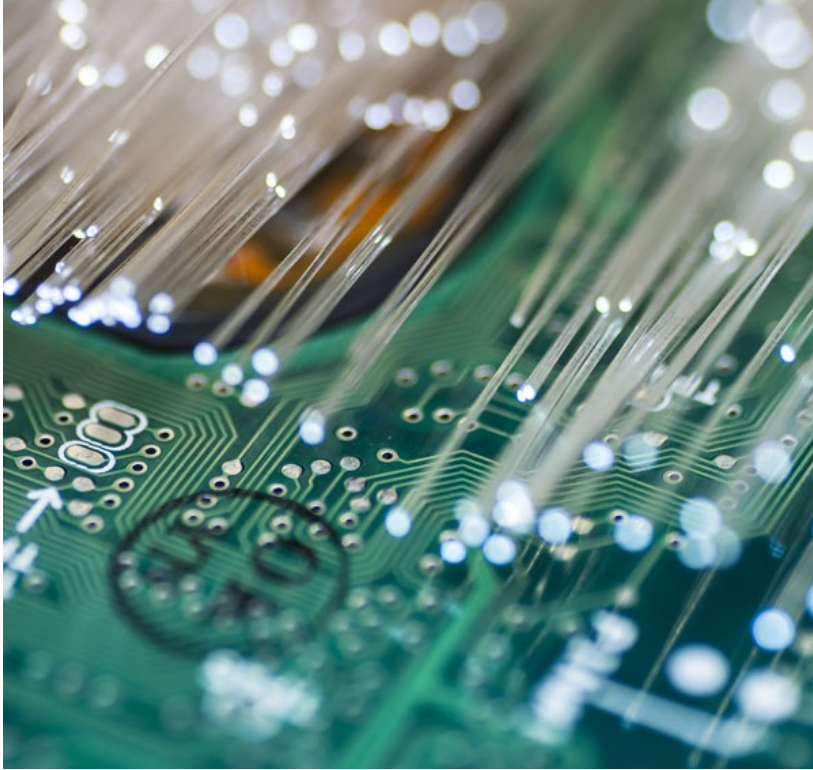✓ Accelerates DAA deployments

Video Engine – Additional Application

Maintaining a Distributed Legacy Video Network

Video Engine vs Full CCAP Video Core

	Video Engine	Full CCAP Video Core
Implementation and Deployment	✓ Very simple add-on to existing workflows. Enables continued use of existing infrastructure	✗ Complex requiring migration and re-configuration of many video workflow functions
Encryption Compatibility	✓ "Transparently" maintains existing encryption in use	✗ Not ubiquitously supported among all DAA vendors or requires centralizing encryption function
Price Point	✓ Low base price ✓ Scales evenly for additional capacity	✗ High base price ✓ "Per stream" price improves at large scale
Hardware Efficiency	✗ Less efficient given maintenance of existing eQAMs	✓ Efficiencies gained from decommissioning legacy eQAMs

Is a Video Engine Right for Your DAA Plans?

Do you anticipate migrating all your video subscribers to IPTV-capable STBs in the next several years and are you looking for the simplest and most cost-effective means of maintaining legacy QAM video in the interim?

Is there a potential mismatch between your CCAP solution vendor preference and your deployed legacy video CAS/encryption?

Are you currently reliant on a distributed legacy QAM video architecture?

ATX GigaPass – Key Features

- ✓ Total capacity of up to 320 processed QAMs in 1RU
- ✓ Output video multiplexes in DEPI or IP
- ✓ Flexibility to purchase and populate with 1 to 4 cards per chassis
- ✓ Support for tuning QAM Annex A, B & C mode carriers
- ✓ Redundant AC or DC power supplies
  - ✓ Redundancy support – cards are hot-swappable and operate completely independently with no shared common resources or points of failure

ATX GigaPass – Key Features

Operational Flexibility

✓ Tune, demodulate and convert up to 80 QAMs on a single card

✓ Supports multiple selectable operating modes to accommodate various broadcast and narrowcast architectures

- Broadcast-80 mode: Single RF input, up to 80 QAMs processed

- Broadcast-40 mode: 2 RF inputs, up to 40 QAMs processed each

- Narrowcast mode: Up to 5 RF inputs of up to 16 QAMs each

✓ 2 x 1/10 Gbps SFP-based IP output ports per card (for output and management)

The 2050 Project

A strategic game plan for the long-term evolution of your HFC network

Download the white paper at:
https://atx.com/the-2050-project-part-i/