

EDGEWARE PRODUCT PORTFOLIO		
MGMT & CONTROL	TV System Manager	
	TV Analytics	
	Multitenancy	
ORIGIN SOFTWARE	TV Content Capture	
	TV Repackager	
	TV Ad Insertion	
	CDN Selector	
CDN SOFTWARE	TV Director	
	TV Delivery	
	Edge TV Repackager	
	TV Watermarker	
	Fast Channel Change	
PLATFORM OPTIONS	Public/private cloud	TV Server 4020/4080



HIGH DENSITY TV SERVERS OPTIMIZED FOR TV DELIVERY

The Edgeware TV servers are purpose-built for TV delivery. They are designed to efficiently combine different TV services and protocols on a single appliance. As an optimized platform for Edgeware’s TV CDN architecture, it enables service providers, broadcasters and content owners to offer a full range of IPTV and OTT TV services from one platform. Edgeware’s hardware accelerated TV Servers come with a pre-integrated OS and TV Delivery software for rapid “plug-and-play” installation.

ONE TV PLATFORM, MANY TV SERVICES

Edgeware’s TV Servers are purpose-built to cache and stream any mix of live and VOD content. It is a single TV server platform for both RTSP and HTTP/S TV delivery, offering both IPTV and OTT TV services.

Delivering multiple TV services from a single platform cuts cost and makes it easier and faster to grow your TV service offering. For example, the Edgeware TV Server platform is ideal if you are considering expanding your TV services from an IPTV model to and OTT TV model.

KEY FEATURES & BENEFITS

- ✓ Distributed, as opposed to centralized, streaming and caching massively reduces backhaul traffic
- ✓ Owning your own CDN allows greater control over the viewing quality, reducing buffering, delays and glitches
- ✓ Minimal power consumption and small footprint, only 1 RU, makes the TV Servers ideal to deploy anywhere in the network reaching a highly distributed TV CDN
- ✓ High reliability appliance, more than 10 years of mean time between failure (MTBF)
- ✓ Multicast to unicast conversion enabling personalized ad insertion
- ✓ Instant scalability through license keys enables up to 80 Gbps of TV streaming per server

RIGHT SIZED DEPLOYMENTS

The Edgeware TV Server is available in different versions enabling deployments with various capacity needs.

4020 can be deployed anywhere in a network, from the core to the deep edge, ingesting 4 Gbps and delivering 20 Gbps wirespeed or 64,000 concurrent sessions from a single half depth rack unit.

4080 provides a step-change in streaming density by ingesting 16 Gbps and delivering 80 Gbps wirespeed or 256,000 concurrent sessions from a single rack unit.

Delivering ten times the throughput of many generic servers, it further enhances the quality of viewing experience, delivers massive scale and lowers OPEX compared to conventional solutions.

4020/4080 COMMON FEATURES

APPLICATIONS
<ul style="list-style-type: none"> • Just in Time Repackaging to supported ABR formats • Just in Time Encryption • Multiscreen Video Delivery (HTTP ABR) • Network/Cloud DVR, incl. "recording in the past" • Catch-up TV • Pause live TV, Re-start TV • Live Webcast • Download • Video on Demand • Subscribed TV on Demand • UDP Retransmission • Dynamic Ad Insertion
STREAMING ENGINE
<ul style="list-style-type: none"> • Hardware accelerated • Guaranteed performance under all use cases • Jitter-free streaming • True PCR locking, supporting VBR
STREAMING FORMATS
<ul style="list-style-type: none"> • MPEG-2 • MPEG-4 AVC/H.264 • HEVC/H.265 • Microsoft® IIS Smooth Streaming (MSS) • Apple HTTP Live Streaming (HLS) • Dynamic Adaptive Streaming over HTTP (MPEG-DASH) • Progressive Download
STREAM BITRATES
<ul style="list-style-type: none"> • 96 kbps – 50 Mbps / stream • CBR, VBR
SECURITY AND INTEGRITY
<ul style="list-style-type: none"> • Hardware classification/denial of service filter • Ingress/Egress bandwidth control • VLAN traffic and control separation • Linux Iptables/Netfilter firewalling
STREAM CONTROL
<ul style="list-style-type: none"> • RTSP/SDP (RFC2326, RFC2327) <ul style="list-style-type: none"> • Single asset trick play • 100% concurrency guaranteed • HTTP/HTTPS <ul style="list-style-type: none"> • Partial download with seek (dragbar)
CONTENT UPLOAD
<ul style="list-style-type: none"> • FTP, HTTP • Convoy Control and Management Software • IP multicast ingest (Time Shift TV) • Automatic indexing for single asset trick play (RTSP)
MANAGEMENT AND CONTROL
<ul style="list-style-type: none"> • Origin and Convoy Management Software (optional) • Embedded Linux • SNMP v3 • syslog
REGULATORY
<ul style="list-style-type: none"> • FCC Part 15 • CE • UL/EN 60950-1 • RoHS • WEEE
OPTIONS
<ul style="list-style-type: none"> • 19" Rack mount brackets (Standard) • 23" Rack mount brackets • Front panel air filter (4020)

4020 SPECIFICS

BANDWIDTH AND SESSIONS
<ul style="list-style-type: none"> • 20 Gbps output streaming (sustained, licensed range 2-20 Gbps) • Max 64,000 fully concurrent sessions, e.g. <ul style="list-style-type: none"> • up to 64,000 streams @ 300 kbps • up to 8,000 streams @ 2.5 Mbps • up to 2,500 streams @ 8.0 Mbps
LIVE TV INGEST
<ul style="list-style-type: none"> • Total Ingest bandwidth: 2 Gbps sustained (4 Gbps peak) • Up to 1024 channels • Direct snooping of UDP multicast • Remote scheduling of recordings
CONTENT STORAGE (CACHE) – SOLID STATE
<ul style="list-style-type: none"> • 1–48 TB NAND Flash, e.g. <ul style="list-style-type: none"> • 180,000 h of video @ 600 kbps (e.g. mobile web TV) • 44,000 h of video @ 2.5 Mbps (SDTV) • 24,000 h @ 4.5 Mbps (e.g. ABR, 300 kbps, 600 kbps, 1.2 Mbps, 2.4 Mbps all profiles in cache) • 14,000 h of video @ 8 Mbps (HDTV)
STREAMING / LINE INTERFACES
<ul style="list-style-type: none"> • 2 x 10 Gigabit Ethernet (10GbE) SFP+ • 2 x 1 Gigabit Ethernet (1GbE) RJ45 • 802.1Q VLAN
CONTROL PORTS
<ul style="list-style-type: none"> • 2 x 10/100/1000BASE-T, RJ45 • 802.1Q VLAN • USB • RS-232, 9-pin D-Sub • Control also possible over streaming interfaces
POWER AND HEAT
<ul style="list-style-type: none"> • 100 W peak power consumption full configuration, max load • Heat flow rate: 340 BTU/h
POWER CONNECTIONS
<ul style="list-style-type: none"> • -48 VDC or 100-240 VAC 50/60 Hz (factory option) • Dual redundant power supplies
PHYSICAL DIMENSIONS
<ul style="list-style-type: none"> • 1RU/19" • Height: 44 mm (1.73") • Width: 448 mm (17.64") • Depth: 250 mm (9.84") • Weight: 5.1-6.0 kg (11.2-13.2 lbs)
ENVIRONMENTAL
<p>Operating:</p> <ul style="list-style-type: none"> • 0 to 50° C (32 to 122° F) • 30 – 90% RH (non-condensing) <p>Storage:</p> <ul style="list-style-type: none"> • -20 to 70° C (-4 to 158° F) • 10 – 90% RH (non-condensing) <p>Air flow:</p> <ul style="list-style-type: none"> • 8 fans, high reliability. 4+4 redundancy • Front to rear air flow • Individual fan monitoring • Temperature monitoring

4080 SPECIFICS

BANDWIDTH AND SESSIONS
<ul style="list-style-type: none"> • 80 Gbps output streaming (sustained, licensed range 20-80 Gbps) • Max 256,000 fully concurrent sessions, e.g. <ul style="list-style-type: none"> • up to 256,000 streams @ 300 kbps • up to 32,000 streams @ 2.5 Mbps • up to 10,000 streams @ 8.0 Mbps
LIVE TV INGEST
<ul style="list-style-type: none"> • Total ingest bandwidth: Up to 8 Gbps sustained (16 Gbps peak) • Up to 4096 channels • Direct snooping of UDP multicast • Remote scheduling of recordings
CONTENT STORAGE (CACHE) – SOLID STATE
<ul style="list-style-type: none"> • 8–64 TB NAND Flash, e.g. <ul style="list-style-type: none"> • 242,000 h of video @ 600 kbps (e.g. mobile web TV) • 58,000 h of video @ 2.5 Mbps (SDTV) • 32,400 h @ 4.5 Mbps (e.g. ABR, 300 kbps, 600 kbps, 1.2 Mbps, 2.4 Mbps all profiles in cache) • 18,200 h of video @ 8 Mbps (HDTV)
STREAMING / LINE INTERFACES
<ul style="list-style-type: none"> • 8 x 10 Gigabit Ethernet (10GbE) SFP+ • 802.1Q VLAN
CONTROL PORTS
<ul style="list-style-type: none"> • 8 x 10/100/1000BASE-T, RJ45 • 802.1Q VLAN • USB • 4 x RS-232, RJ45 • Control also possible over streaming interfaces
POWER AND HEAT
<ul style="list-style-type: none"> • 400 W peak power consumption full configuration, max load • Heat flow rate: 1360 BTU/h
POWER CONNECTIONS
<ul style="list-style-type: none"> • 100-240 VAC 50/60 Hz • Dual redundant power supplies
PHYSICAL DIMENSIONS
<ul style="list-style-type: none"> • 1RU/19" • Height: 44 mm (1.73") • Width: 448 mm (17.64") • Depth: 600 mm (23.62") • Weight: 12.7 kg (28.00 lbs)
ENVIRONMENTAL
<p>Operating:</p> <ul style="list-style-type: none"> • 0 to 40° C (32 to 104° F) • 30 – 90% RH (non-condensing) <p>Storage:</p> <ul style="list-style-type: none"> • -20 to 70° C (-4 to 158° F) • 10 – 90% RH (non-condensing) <p>Air flow:</p> <ul style="list-style-type: none"> • 8 fans, high reliability. 4+4 redundancy • Front to rear air flow • Individual fan monitoring • Temperature monitoring