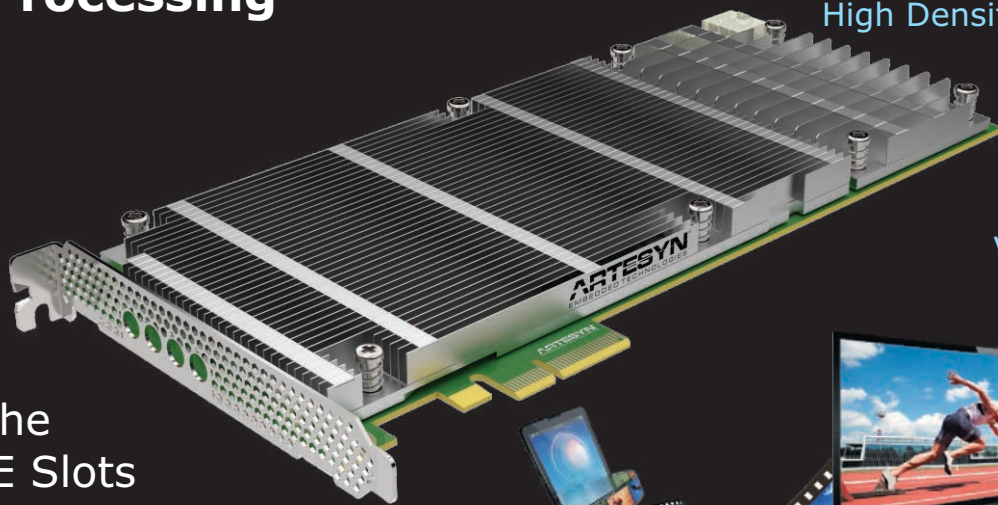




Artesyn - Intel - Vantrix Demonstrate **Dramatic Increase in Density and Decrease in Cost** for Video Processing

- Broadcast Post Production
- High Quality Video Distribution
- Playout Servers
- Media Networks
- High Density Streaming
- Transcoding
- Encoding
- HEVC
- OTT
- Cloud
- Virtualization
- Multiscreen
- 4K



Just fill the
free PCIE Slots
of your existing Servers
or Rack-mount PCs
with Video Accelerators



A single Cloud-ready
Accelerated Server for Broadcasters,
Communications Service Providers
and Host Media Processing OEM's
could replace up to 40 Servers
and COST A FRACTION TO RUN

*Talk to Artesyn
Architects
request a phone call
or meeting
see page 2*

Live Demo's: IBC Amsterdam, Inter BEE Tokyo, MWC Barcelona and NAB Las Vegas



Artesyn, Intel and Vantrix Demonstrate Dramatic Increase in Density and Decrease in Cost for Virtualized Video Processing

A single cloud-ready accelerated server for broadcasters and communications service providers could replace up to 40 servers and cost a fraction to run

Tokyo, Japan — At the International Broadcast Equipment Exhibition in Tokyo (Inter BEE 2014), Artesyn Embedded Technologies demonstrated a new video transcoding and media processing platform developed in collaboration with Intel and Vantrix to enable broadcast and communications service providers to deliver significantly more multiscreen content to users at a fraction of the cost.

The integrated Artesyn SharpStreamer™ hardware and Vantrix software solution enables significantly higher channel density at lower cost for virtualized ultra high-density media processing functions for multiscreen delivery, including encryption and adaptive bitrate (ABR) packaging. <http://vantrix.com/home/>

For example, a single accelerated server could replace up to 40 non-accelerated servers for a video-on-demand (VoD) over-the-top (OTT) content transcoding application, or up to 24 servers for a linear real-time broadcast ABR application. These substantial capital expenditure savings are matched by significantly reduced operating expenditure thanks to power consumption that has been estimated at between six and 10 percent of that required to run the same applications on non-accelerated servers.

The solution was demonstrated in the Artesyn Embedded Technologies booth at the Inter BEE event, Makuhari Messe, Chiba City, Japan.

Linsey Miller, director of marketing for server acceleration products, Artesyn Embedded Technologies, said: "Content service providers would prefer to use standard servers versus proprietary hardware for their video encoding and transcoding applications, but those standard servers today don't scale cost effectively to support ultra high densities with software-based video processing solutions. Our collaboration with Vantrix means service providers can combine Artesyn's SharpStreamer add-on card technology with market-leading video-processing, optimization, caching and analytics software from Vantrix to scale to meet higher densities on existing servers."

Jean Mayrand, president & CEO, Vantrix, said: "Network demand for video encoding/transcoding is rising continuously as user habits change to ever increasing multiscreen consumption. With Vantrix Media Platform and Artesyn's SharpStreamer technology, service providers now have a cloud-ready solution, with OpenStack integration and support for multiple virtual machines, to reach higher channel densities while preserving their server investment and no need to qualify new hardware."

The integrated hardware and software solution will be available from Artesyn as add-in acceleration cards, which could be used to retrofit customers existing server equipment, configured ready-to-develop servers or supported on third-party servers such as Dell, HP or any Rack-mount PC.

Huge Benefits by a Factor of 10 to 30+ for your Field-deployed Equipment and Next Projects

here is your competitive advantage

CAPEX - OPEX

- Divide by 10+ your Total Cost
- Divide by 10+ your Electricity Bill
- Divide by 30+ the used Space

Increase Drastically the Density in a Simple Way Today

A single Cloud-ready Accelerated Server for Broadcasters and Communications Service Providers could replace up to 40 Servers and cost a fraction to run

About Artesyn Embedded Technologies

Artesyn Embedded Technologies (formerly Motorola Computer Group and Force Computers) is a global leader in the design and manufacture of highly reliable embedded computing and power conversion solutions for a wide range of industries including communications, computing, medical, military, aerospace and industrial. For more than 40 years, customers have trusted Artesyn to help them accelerate time-to-market and reduce risk with cost-effective advanced network computing and power conversion solutions.

Artesyn has over 20,000 employees worldwide across nine engineering centers of excellence, 4 world-class manufacturing facilities & global sales and support offices.

Daniel Dierickx



Special Edition Artesyn Video Accelerators for Standard Servers and Rack-mount PCs

Featured Products:

SharpStreamer™ PCIE-7207 High-Density Video Accelerator

- The only standard server-based approach
 - No dedicated appliances
 - Higher H.264/AVC and H.265/HEVC transcoding density
- Powered by Intel & Vantrix Software
[Page 3 & 5](#)

SharpCaster™ PCIE-8205 Broadcast Video Accelerator

- All-in-one solution enables broadcast-quality video applications in standard servers.
- Powered by Magnum Semiconductor SoC & Software
[Page 3 & 4](#)

Request more info

Datasheets
Exclusive Whitepapers

Talk to the Artesyn Experts

Ask for a Phone Call
Request a Meeting
and get Advance Information

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More in this issue

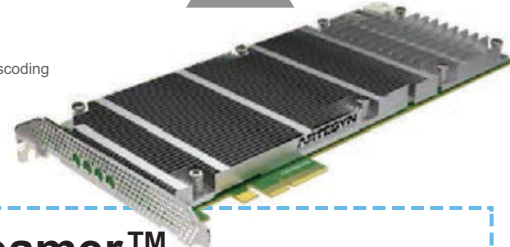
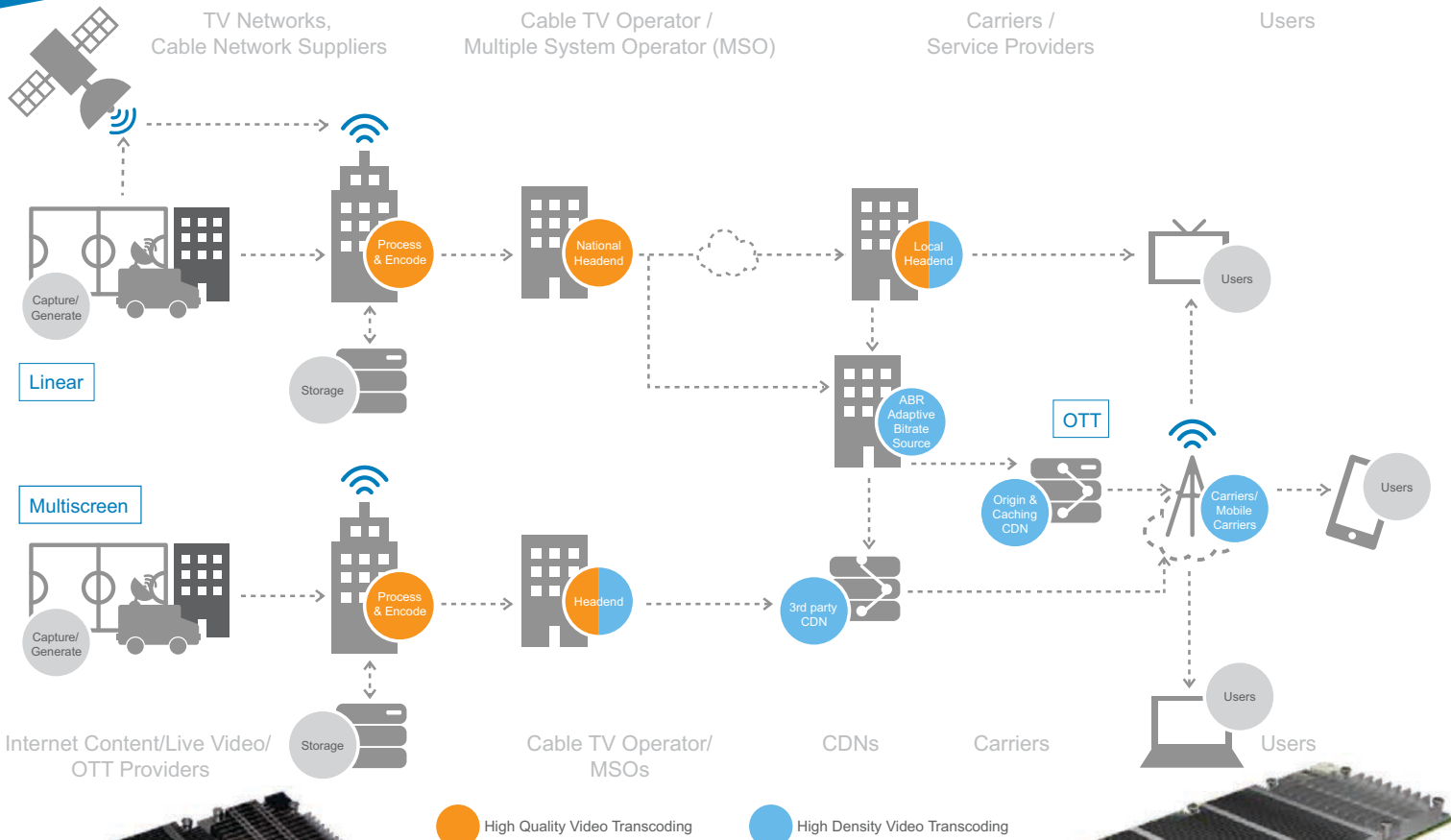
The Changing Broadcast Landscape
[Page 3](#)

SharpMedia™ PCIE-8120
Media Processing Accelerator
including WebRTC application
[Page 6](#)

Industry News

- AT&T First U.S. Carrier to Launch Commercial Support for WebRTC
 - BT agrees £12.5bn deal to buy EE to offer Quad-play
- [Page 6 & 7](#)

The Changing Broadcast Landscape



SharpCaster™

HIGH QUALITY VIDEO TRANSCODING/ENCODING

- Production Playout Server
- Primary Distribution Head End
- Secondary Distribution Linear and Multiscreen

Powered by:

Magmun Semiconductor SoC Technology & Software



SharpStreamer™

HIGH DENSITY VIDEO TRANSCODING

- Secondary Distribution Head End
- Multiscreen OTT Server
- Mobile Optimization

Powered by:

Intel® Latest Technology & SW and Vantrix Software



Details Page 4

Details Page 5

Artesyn Standard PCIE Add-on Cards for your Standard Servers

YouTube Video http://youtu.be/IE_joCa7wys

SharpCaster™ PCIE-8205

**Broadcast Video Accelerator
for Standard Servers like Dell, HP, any**



Live and VoD Streaming Applications - Industry Leading Video Quality

The Artesyn SharpCaster PCIE-8205 broadcast video accelerator delivers the **highest density solution with no compromise in video quality** for the most demanding broadcast application requirements. It is designed to meet the needs of MSOs (multi Service Operators) who must deploy new video services and subscriber features over their networks, with the right level of scalability and high video quality.

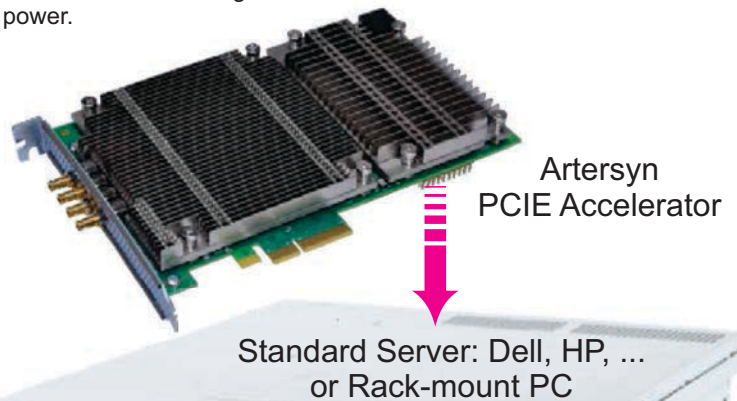
Compared to software-only solutions, the SharpCaster PCIE-8205 accelerator delivers scalability in terms of higher video quality versus channel density, less power and less server footprint. By using a standard off-the-shelf PCI Express form factor, the SharpCaster PCIE-8205 accelerator is easily deployable in off the shelf platforms, which can advance broadcast application development.

Through its use of the Magnum D7 Pro broadcast SoC technology, the SharpCaster PCIE-8205 accelerator delivers industry leading video quality and channel densities with software application stacks specifically designed to meet the most challenging requirements for each application in the contribution, production and distribution broadcast market segments.

Full support for the Magnum software application stacks and ProAPI, combined with support for SDI/ASI inputs and transport stream access across the PCIe interface allows broadcast OEMs to focus on delivering innovative software features in a standard server platform without compromising video quality, density and power.

The PCIE-8205 Board

- ❑ Full-height, half-length Encoder/Transcoder PCIe add-on card by Artesyn
- ❑ Compatible with 1RU & 2RU Servers
- ❑ Bare Metal Server Acceleration
- ❑ Powered by Magnum Semiconductor



All-in-one Solution Enables Broadcast-Quality Video Applications in Standard Servers

- ❑ Complete software & hardware encode and transcode solution for broadcast applications, including:
 - Main and multi-screen distribution
 - DSNG and live event contribution encoders with 10-bit 4:2:2 support
 - Ingest & play-out servers
- ❑ Up to 8 main-screen or 16 multi-screen ABR (Adaptive Bit Rate) HD transcodes per card
- ❑ Up to 4 main-screen or 16 multi-screen ABR HD encodes per card
- ❑ Up to 16xHD mobile device streams per card (64xHD per RU)
- ❑ Up to 8xHD or 32xSD local head-end main-screen feeds per card (32xHD/128xSD per RU)
- ❑ Up to 2xHD or 4xSD primary head-end high VQ feeds per card (8xHD/16xSD per RU)
- ❑ Ready to license for **Multi-channel Dolby Digital Pro, AAC-LC, HE-AAC and MPEG-1 Layer II audio support**
- ❑ Support for High Video Quality Features:
 - Motion Estimation
 - Real-life Video Coding
 - IDR, PTS and GoP aligned ABR support
 - Interlaced to progressive conversion
- ❑ MPEG-2 and H.264 encoding and transcoding
- ❑ ASI and SDI inputs bridge coax with all-IP infrastructure

**MORE
see
Page 2**

Powered by Magnum Semiconductor

The PCIE-8205 is powered by Magnum Semiconductor D7Pro state of the art encoder/transcoder SoC with Software

More: <http://www.magnumsemi.com/home.html>



SharpStreamer™ PCIE-7207

High-Density Video Accelerator for Standard Servers like Dell, HP, any



High Density Video Transcoding - Streaming

The Artesyn SharpStreamer™ PCIE-7207 high-density video accelerator enables service provider networks to offer video transcoding services quickly and dynamically. As an add-on card, the SharpStreamer PCIE-7207 offers quick and scalable integration with existing and standard server architectures to meet the demands of ISPs and MSOs who want to use existing servers and cloud infrastructure to support new video transcoding services.

With a focus on the high-density and low power demands of video streaming applications such as OTT streaming servers, mobile network optimization, video conferencing and broadcast equipment, Artesyn employs multiple Intel i7 and GPU accelerated devices in a small and scalable PCI Express card footprint that is easily deployable in off the shelf platforms. Each SharpStreamer PCIE-7207 is capable of up to 72 streams of 1080p H.264 transcodes, or 8 streams of 1080p H.265/HEVC transcodes.

Compared to dedicated appliances the SharpStreamer solution is more easily deployable, portable, and does not constrain operators to only one type of equipment to monetize OTT streaming content. It also offers network scalability for increased subscribers to pay as you go adding more cards and density from small to large servers as needed. Compared to software-only solutions, the SharpStreamer PCIE-7207 requires far fewer servers and much less operational cost to power video transcoding services.

The SharpStreamer PCIE-7207 is equipped with a Software Development Kit comprised of the Intel® Media SDK runtime files with Intel® HD Graphics' fixed-function hardware acceleration, monitoring and processor subsystem O/S and management tools for easy integration with server host processing environments.

Off-the-Shelf High-Density Video Transcoding Accelerator Card

- ❑ Offering the only server-based approach.
- ❑ No dedicated appliances.
- ❑ Higher H.264/AVC and H.265/HEVC transcoding density.

Hardware

Each SharpStreamer™ PCIE-7207 card supports four Core i7 processor subsystems.

Each subsystem communicates with the host server over their own Gigabit Ethernet link and supports 8GB of DDR3-1600 dual channel memory for a total of 32GB for the entire card.

The SharpStreamer PCIE-7207 card uses power from both the PCI express slot and an on-board auxiliary power connector. The card has been designed to integrate into today's industry leading NEBS- ready platforms.

MAIN CHIPSET**

- ❑ 4 Intel Dual Core i7-5650U Processors 2.2 GHz

PROCESSOR GRAPHICS

- ❑ Intel Iris™ Graphics (GT3) / HD Graphics 6000
 - Graphics Base Frequency 300 MHz
 - Graphic Max Dynamic Frequency 1.0 GHz

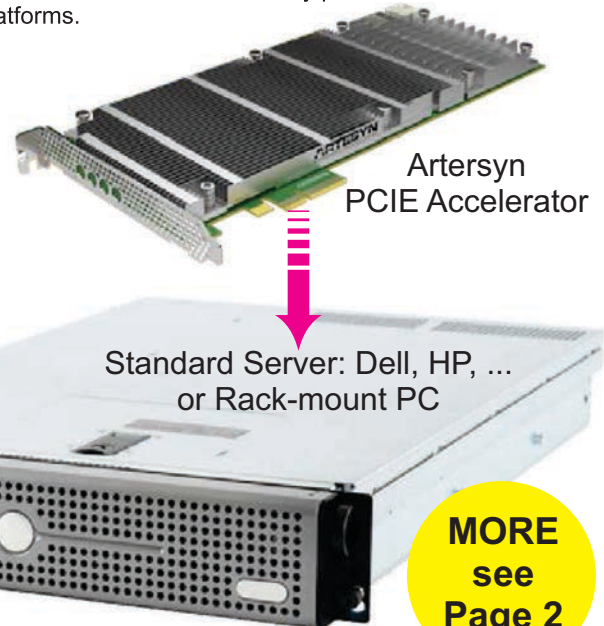
MEMORY

- ❑ 32 GB Dual Channel DDR3-1600
 - 8 GB per Processor Subsystem

HOST INTERFACES

- ❑ 4 MicroSD slots
- ❑ 4 MicroSD slots
- ❑ PCI express x4 Gen 2.0
 - Intel i350 Quad Gigabit Ethernet Controller

**Please note these values are subject to change



Typical DEMO Overview Multiscreen Video Transcoding on Standard Servers with Vantrix Media Platform for multiscreen media processing

- ❑ Featuring Artesyn SharpStreamer full-height, 3/4-length video transcoder PCIe add-on card for multi-screen and HEVC applications
- ❑ Adds scalable video transcoding acceleration to standard servers that exist in the cloud, with 6X achievable density compared to adding servers
- ❑ Vantrix Media Platform for multiscreen media processing, with the Live and VoD transcoder modules <http://vantrix.com/home/>
- ❑ Main Features & Benefits:
 - Up to 36 simultaneous HD H.264 transcode streams
 - Video resizing and tiling for 4K screen optimization
 - 4K video packaging into HLS format for live streaming
 - Preserves server investment while increasing density



Media Processing Accelerator PCI Express Board & 2U Appliance Platform

Now supports Opus (used by WebRTC)
and SILK (used by Skype) audio codecs

ARTESYN[™]
EMBEDDED TECHNOLOGIES

SharpMedia Platform and its SharpMedia PCIe-8120 acceleration boards are particularly suited to the following applications:

- Session border controllers (adding voice or video transcode)
- Media gateways
- Media servers/media resource function
- Video/content optimization (transcode and transrating)
- WebRTC voice applications
- Interactive voice and video response systems

SharpMedia[™] PCIe-8120 PCI Express Media Processing Accelerator

- Single slot full length full height PCI express card with x4 interface
- High performance media processing core based on power-efficient DSPs
- Optional 2 x GbE ports (RJ45) with NAT function for direct network attachment providing server offload
- Comprehensive voice and video processing firmware and programmers interface
- Support for 720p and 1080p video conferencing
- Designed for NEBS Level 3 and ETSI telecom standards compliance when used in a suitable Carrier Grade enclosure
- Now supports Opus (used by WebRTC) and SILK (used by Skype) audio codecs

The Artesyn SharpMedia[™] PCIe-8120 media processing accelerator enables high density voice and video processing to be integrated into a rack mounted server or other network appliances that have full size PCI express slots.

Voice & Video Streaming is becoming more pervasive as customer demand for media consumption continues to rise, and the diversity of media sources, network conditions and individual consumption devices proliferate. Using traditional Intel[®] Xeon[®] server architectures, power and efficiency soon become a limitation when scaling to high channel density mediastream transcoding.

SharpMedia[™] 2U Appliance Platform

- 2U NEBS Server with single Intel[®] Xeon[®] E5-2609 2.50 GHz or dual Xeon[®] E5-2640 2.00 GHz configurations
- Up to 64GB dual channel DDR3-1333 memory
- 500 GB storage memory
- Dual 10 gigabit and dual gigabit ports
- 1100W AC or DC power supply options
- Configurable for up to four single slot full length full height PCI express cards with x4 interface
- High performance media processing core based on power-efficient DSPs
- Comprehensive voice and video processing firmware and programmers interface included
- Support for 720p and 1080p video conferencing
- Designed for NEBS Level 3 and ETSI telecom standards compliance

Powered by OCTASIC DSPs

The PCIe-8120 is powered by OCTASIC High performance media processing core based on power-efficient DSPs

More: <http://www.octasic.com/>

WebRTC

skype[™]

opus

SILK[™]



MORE
see
Page 2

octasic

AT&T to Become First U.S. Carrier to Launch Commercial Support for WebRTC



LAS VEGAS, Jan. 5, 2015 – At the 2015 AT&T Developer Summit today, AT&T1 announced that it will be the first US carrier to launch commercial support for Web Real-Time Communications (WebRTC) via its AT&T Enhanced WebRTC API. The WebRTC standard, which is already enabled on more than a billion browsers, allows voice and video calling between browsers without the need to install any software or plugins.

The AT&T Enhanced WebRTC API is now available in an open beta program and offers several enhancements to the basic WebRTC standard. The first enhancement is that Enhanced WebRTC communications can now extend to land lines and mobile numbers, not just P2P or browser-to-browser sessions. This is valuable for developers and customers and will spur growth by eliminating a key barrier to adoption. A second enhancement is the ability for developers to programmatically enable Caller ID for WebRTC communications through the use of their end user's AT&T mobile number, for calls placed from WebRTC-enabled browsers. Lastly, developers now can enable end users to move or transfer a call starting on a PC, MAC or tablet to a smartphone.

Top Telco News

Back to the future « Quad-play »

BT agrees £12.5bn deal to buy EE

By Total Telecom staff - Thursday 05 February 2015

Orange and Deutsche Telekom agree definitive terms on sale of UK mobile unit to create a major converged player.

BT, Orange and Deutsche Telekom said on Thursday they have agreed definitive terms on a deal that will see the former UK incumbent buy 100% of the EE mobile business for £12.5 billion, paving the way for the French and German telecoms giants to exit the UK mobile market and for BT to redefine itself as a provider of converged fixed and mobile services.

BT said the consideration for EE will be payable as a combination of cash and new BT ordinary shares issued to both Deutsche Telekom and Orange. The German incumbent noted that it would become the largest shareholder in BT with a stake of around 12% upon closing of the transaction. Orange said it would receive £3.4 billion in cash and a 4% stake in the combined BT/EE entity, although like Deutsche Telekom it noted that the final amounts of cash received would be subject to customary adjustments at the time of closing, expected to take place before the end of March 2016.

"This is a major milestone for BT as it will allow us to accelerate our mobility plans and increase our investment in them. The UK's leading 4G network will now dovetail with the UK's biggest fibre network, helping to create the leading converged communications provider in the UK," said BT CEO Gavin Patterson.

Deutsche Telekom noted that the business combination would make BT the number one on the UK market as an integrated provider of fixed network and mobile communications.

In the 2013/14 financial year (to 31st March), the company generated revenue of £18.3 billion and an adjusted EBITDA of £6.1 billion. EE currently has more than 30 million customers and in 2014 generated revenue of £6.3 billion with an adjusted EBITDA of £1.6 billion. The business combination with EE is expected to create synergies with a net present value of £4.6 billion (after integration costs) in areas such as sales, marketing, administration, and cross- and up-selling in connection with integrated products combining mobile, fixed-network services, and TV.

Rupert Wood, principal analyst at Analysys Mason, noted that the deal is a much quicker but much more expensive way for BT to gain customer share in the mobile market than its previous MVNO and femtocell approach. "BT gets a good brand and a great network, and we'd expect to see some rebranding," Wood commented.

It's not yet clear what BT will do about its existing plan to build a small cell network to serve mobile needs within the home: "BT will need to iron out the details of converging its planned 'inside-out', MVNO/4G/WiFi hybrid service with EE's mainstream 4G LTE network," noted Peter Briggs, senior analyst at Current Analysis.

The deal has some far reaching implications not just for the UK market but also for the general trend in Europe towards offering quad-play or converged fixed and mobile services.

"The big operators are divesting mobile-only plays," said Wood. "Turn 180 degrees, and you see the latest example of a phenomenon across Europe. The sale of EE is the last stage in major multinational operators Deutsche Telekom and Orange divesting their stakes in mobile-only operators. Telefonica has done the same (and O2 UK is likely to be sold), and Vodafone has been busily buying up fixed operators. Vodafone UK is likely to re-enter the fixed market this month, but its moves in other European markets have been dramatic."

Briggs commented that the acquisition will produce service and synergy opportunities that EE would have struggled to achieve alone, although he added that BT will need to quickly identify, retain and grow those BT/EE "customer households".

"We can expect to see a proliferation of quad-play offers from existing quad-play providers Virgin Media and TalkTalk, soon to be joined by new players Vodafone and Sky," Briggs added.

[See also full article](#) from Total Telecom (05 February 2015) including all links

Events

[ISE - Integrated Systems Europe](#)

RAI Amsterdam, Netherlands
10-12 February, 2015

[embeddedworld](#)

Nuremberg, Germany
24-26 February 2015

[Mobile World Congress](#)

Barcelona, Spain
02-05 March 2015

[MPLS SDN World and NFV & SDN Summit 2015](#)

Marriott RG Paris, France
17-20 March 2015

[IoT Nexus Connectivity](#)

Royal Garden Hotel, London, UK
24-25 March 2015

[5G - NGMN Industry Conference & Expo](#)

Kap Europa, Frankfurt, Germany
24-25 March 2015

[Monetising OTT and Mobile Content](#)

Kensington Close Hotel, London, UK
25-27 March 2015

[NAB Show Las Vegas](#)

Convention Center, Nevada, USA
11-16 April 2015

[M2M WORLD CONGRESS](#)

Grand Connaught Rooms, London, UK
28-29 April 2015

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About Artesyn Embedded Technologies

- 40 Years Customer Satisfaction
- 20,000 Employees Worldwide
- 9 Engineering Centers of Excellence
- 5 World-class Manufacturing Facilities
- Global sales and Support Offices

Artesyn Embedded Technologies is a global leader in the design and manufacture of highly reliable embedded computing solutions for a wide range of industries including communications, broadcast, military, aerospace and industrial automation.

Building on the acquired heritage of industry leaders such as Motorola Computer Group and Force Computers, Artesyn is a recognized leading provider of advanced network computing solutions ranging from application-ready platforms, single board computers, enclosures, blades and modules to enabling software and professional services.

For more than 40 years, customers have trusted Artesyn to help them accelerate time-to-market, reduce risk and shift development efforts to the deployment of new, value-add features and services that build market share.

Artesyn has over 20,000 employees worldwide across nine engineering centers of excellence, five world-class manufacturing facilities, and global sales and support offices.

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<https://www.artesyn.com/computing/products/category/pcie-server-accelerators>

About Arrow OCS OEM Computing Solutions (OCS)

- 30+ Years OEM Integration Experience
- 7 Integration Centers Worldwide
- 16,500 Employees Worldwide
- Global: 460+ Locations in 58 Countries

Arrow OEM Computing Solutions (OCS) partners with the world's leading suppliers to help you integrate the very latest technologies and create breakthrough products with speed and efficiency.

Arrow OCS guides you through each step of the design engineering process with local sales support and technical consultation, enabling you to deliver what you want, where you want it. Our experience, expertise and global logistics will bring it all together for you - so you can make your next product integration a resounding success.

Arrow Electronics is a global provider of products, services and solutions to industrial and commercial users of electronic components and enterprise computing solutions. Arrow serves as a supply channel partner for over 100,000 original equipment manufacturers, contract manufacturers and commercial customers through a global network of more than 460 locations in 58 countries. A Fortune 150 company with 16,500 employees worldwide, Arrow brings technology solutions to a breadth of markets, including broadcast, telecommunications, information systems, embedded computing, transportation, medical, industrial and consumer electronics. Arrow provides specialized services and expertise across the product life cycle. Arrow does this by connecting customers to the right technology at the right place at the right time and at the right price. Arrow provides extraordinary value to customers and suppliers - the best technology companies in the world - and connects them through the company's industry-leading services.

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- Technical Support
- 7 Integration Centers Worldwide
- Global Supply Chain Services
- Financial Services
- ... and more