NITEK®

Distributed IPTV over Existing Coax

White Paper

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Privately distributed IPTV systems (such as in hotels, health care facilities or college campuses) continue to grow in popularity by empowering organizations large and small to deliver live and recorded video, on a scheduled or on-demand basis, to computers, televisions and mobile devices while hosting hospitality-specific added features and programing.

The biggest obstacle most property managers are faced with when implementing IP-based video and TV distribution systems is the cost associated with re-cabling. Most existing television distribution systems were implemented using standard RF equipment and coaxial cables.

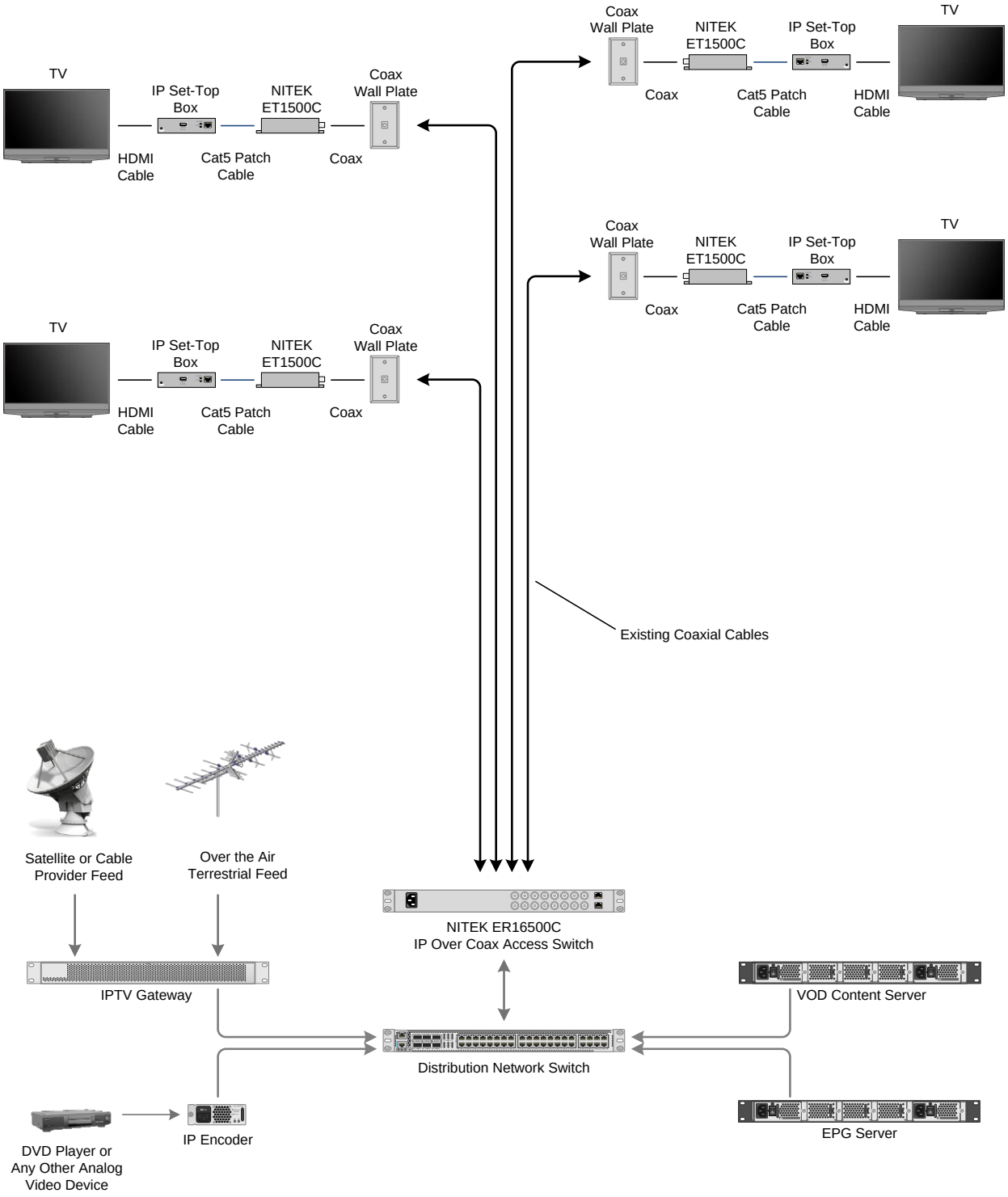
IPTV is sensitive to packet loss and delays if the streamed data is unreliable. IPTV has strict minimum speed requirements in order to facilitate the right number of frames per second to deliver fluid, uninterrupted video images. This means that limited connection speed and available bandwidth for a large IPTV system can reduce the service quality being delivered.

In an effort to minimize re-cabling cost many have attempted streaming IPTV across wireless networks which has proven to be troublesome; not only due to bandwidth limitations, but also due to issues with multipath and reflections of the RF signal carrying the IP data packets. An IPTV stream is sensitive to packets arriving at the right time and in the right order.

To overcome the cost and challenges associated with upgrading cable infrastructures for properties wired with coaxial cable, Nitek's Etherstretch technology has emerged enabling distribution of IP content over traditional coaxial cables. Etherstretch is a system engineered to deliver 100mbps of Ethernet connectivity up to 500 meters (1,640 feet). Providing extended distances and fast Ethernet capabilities, Etherstretch products have become the optimum solution for providing distributed IPTV throughout facilities.

As shown in the design illustration, the head-end device (ER16500C) is equipped with a Gigabit network switch that simply replaces an IPTV access switch in a standard system design. The ER16500C will connect each remote set top box or standard network device using the previously installed coaxial cable. An ET1500C will be placed at each monitoring device to convert the coaxial cable to a 10/100 network connection.

The Etherstretch solution seamlessly transforms a legacy cable infrastructure into a high speed data network to support digital distribution of IPTV or any other IP data without compromise. To find out more about Nitek's award winning Etherstretch solution or any of our other video and data transmission devices, please visit us on the web at www.nitek.net or contact us at (800) 528-4343.


TV
IP Set-Top Box
NITEK ET1500C
Coax Wall Plate
HDMI Cable
Cat5 Patch Cable
Coax
TV
IP Set-Top Box
NITEK ET1500C
Coax Wall Plate
HDMI Cable
Cat5 Patch Cable
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Coax Wall Plate
HDMI Cable
Cat5 Patch Cable
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TV
IP Set-Top Box
NITEK ET1500C
Coax Wall Plate
HDMI Cable
Cat5 Patch Cable
Coax
Existing Coaxial Cables
Satellite or Cable Provider Feed
Over the Air Terrestrial Feed
NITEK ER16500C
IP Over Coax Access Switch
IPTV Gateway
VOD Content Server
Distribution Network Switch
DVD Player or Any Other Analog Video Device
IP Encoder
EPG Server