



NewTek

*TriCaster*TM

HD
PORTABLE
LIVE
PRODUCTION



NewTek *TriCaster*TM

**HD
LIVE**
TELEVISION TRUCK
SMALL ENOUGH TO
FIT IN A BACK PACK

High definition (HD), live, multi-camera video production no longer exists only in the realm of big television studios or giant production trucks with banks of monitors, miles of cables, tape machines, video recorders, video effects generators, titling stations, audio mixers and more. Today, all of that power, quality and potential exists in a 20-pound box small enough to fit in a backpack, with the flexibility for one person or a small team to deliver network-quality video. **TriCaster**TM makes it possible for you to broadcast, project, live stream or record full HD programming.

TriCaster is a high definition, network-quality portable live production solution. In one small box, you gain multi-channel HD switching, HD network-style virtual sets, HD titling, HD digital disk recording, audio mixing, HD editing, full HD streaming and more.

"I am now doing by myself what 22 people and a half million dollar control room did, thanks to NewTek TriCaster." – Leo Laporte, TWiT, Technology Journalist



Live video is a dominant force in our world, from the Internet and digital billboards to traditional television broadcasting. Everyone knows what television is supposed to look like. Viewers immediately recognize the difference between well-crafted, network-style programs and simple webcam streams. This is why producers and sponsors worldwide choose **TriCaster** productions, where they can achieve professional results that match their brand.

As the worldwide leader in portable live production, NewTek has empowered thousands of **TriCaster** users from major players like CBS Radio, ESPN X Games, Fox News, Fox Sports, MTV, NBA D-League, NHL, Sky News, TWiT, VH1 and WNBA to elementary schools, high school and college sports teams/leagues, local governments and more. Each of these organizations has used **TriCaster** portable live production to build their brands and extend their reach through the power of network-quality video, streamed live to the Web.

STREAM OR DIE

For the first time, the ability to produce and deliver live HD network-quality television is open to everyone. You no longer need a television network to broadcast. **TriCaster** is the studio. The Internet is the network.

As more viewers migrate to the Web, producers are seeing the value in developing unique content for live webcasts. Streaming with **TriCaster** can increase advertising inventory and sponsorship revenue by providing extended, alternative and simulcast programming, in addition to regular broadcasts. Further, live streaming allows producers and sponsors to reach a more diverse, global audience, or dive deeper into a hyper-local market.

Live streaming with **TriCaster** provides the ability to deepen the relationship with fans, viewers and listeners, by providing "behind the velvet rope access" and "back stage passes" to events and activities where public admission is not feasible.

"NewTek TriCaster is one of the pioneers of Internet streaming." – Richard Hart, ABC News

TRICASTER USERS



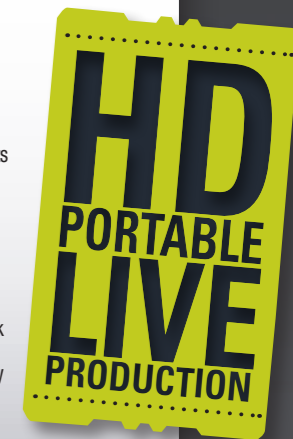
INTUITIVE INTERFACE



Images courtesy of the NBA D-League

"If you were impressed when manufacturers began putting home theatres in boxes, wait until you feast your eyes on NewTek TriCaster, which packs an entire live television production studio into a comparable cube of space." - Eliot Van Buskirk, WIRED

- 1 **LIVE PRODUCTION INTERFACE** allows you to connect up to eight HD or standard definition (SD) cameras, digital or analog audio, and take your production live with the power to simultaneously broadcast, live stream, project and record.
- 2 **ON-SCREEN MONITORS** let you select shots with confidence. Full field rate displays include cameras, DDRs, still and title graphics, and network computer inputs (using proprietary NewTek iVGA™ technology). Multi-view monitoring options also allow you to select from additional monitor layouts and send all monitors to a second display to enlarge your workspace.
- 3 **PREVIEW AND PROGRAM MONITORS** show your current video output and the source that is up next. Preview titles or transitions on-screen and more.
- 4 **ONE-BUTTON INTERNET STREAMING** allows you to use Adobe® Flash® or Windows Media® to deliver a live stream directly to the Web, with simultaneous archive for later viewing. Most common streaming profiles are supported in resolutions up to industry-leading 720p.
- 5 **ONE-BUTTON RECORDING** captures your live productions at full resolution, preserving them as high-quality video and stream files.
- 6 **ADVANCED VIDEO SWITCHER** gives you total control over all 22 channels. Select a live video source on Preview, and use the on-screen T-bar or the optional TriCaster LC-11 control surface to transition easily from one source to another. Versatile production tools, such as Virtual Inputs and dual downstream keys, provide easy creation of dynamic overlays and graphics.
- 7 **VIRTUAL INPUTS** provide eight customizable sources to configure virtual sets, layer live elements, assign titles, set upstream picture-in-picture elements and more. You can mix effects and assign them to a single source on the fly, or save your settings as presets for quick and easy access during your production.
- 8 **VIDEO TRANSITIONS** add interest and impact to your live production. More than 200 broadcast-quality HD effects allow you to transition from one source to another and transition titles and inserts, on and off screen.
- 9 **HD LIVE VIRTUAL SETS** using proprietary NewTek LiveSet™ technology, allow you to achieve the look of expansive, professional sets within limited space. For every camera connected to this system, TriCaster virtual sets allow you to change each shot virtually. You can transition from close-up to medium, to medium-wide, to wide angle shots in real time, without moving the camera or changing the set in any way. Sets also include double box effects and options for stand-up and one or two presenters.
- 10 **DIGITAL MEDIA PLAYERS** include two DDRs for video playback, a titles bin, a stills store, and a sound player, making it easy to add video clips, music, images, and more to your production, as well as auto-insert clips captured during a live event, for immediate playback.
- 11 **AUDIO MIXING** gives you control over microphones, line inputs and clip playback levels. You can adjust individual audio sources (internal or external), introduce sources into your production manually or automatically, and adjust input trim levels for the best possible audio. TriCaster TCXD850 supports both AES and embedded SDI digital audio, as well as balanced XLR analog audio, for pristine sound.
- 12 **LIVE TITLES** give you the power to make your production look like a network broadcast. You can bring in graphics, titles and animated overlays to layer on your live video, and have the ability to lock a title or bug to a camera or Virtual Input, and set the in and out motion for each.



TriCaster TCXD850

INTRODUCING



NewTek TriCaster™ TCXD850



TriCaster TCXD850 is the latest addition to the NewTek HD portable live production family. This 4U rack mount system is suitable for desktop and portable live production and provides the highest quality, 32-bit floating point with YCbCrA 4:4:4:4 video processing. TriCaster TCXD850 supports high definition (HD) and standard definition (SD) video in resolutions up to 1080p, as well as live streaming in resolutions up to industry-leading 720p. Whether you operate on your own or work with a team, TriCaster TCXD850 is easy to use and provides the following benefits:

- 22-channel, 1080p native HD/SD switcher with eight external video inputs, two DDRs, two network inputs, titles, stills and eight virtual/mix channels
- 18 HD live virtual sets (using proprietary NewTek LiveSet™ technology) and advanced matte generation
- Five digital media players for video playback, titles, stills, music and sound
- Overlay with rotation, positioning and scaling in 3D, plus animated effects
- Two network inputs that deliver graphics from LiveText™ or displays from a PC or Mac® to the switcher or overlay channels (using proprietary NewTek iVGA™ technology)
- Multi-view monitoring of all switcher inputs at full field rate and color Waveform and Vectorscope displays to verify signal integrity

**HD
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- Audio support for any combination of embedded SDI, AES or balanced XLR audio inputs to bring in microphones, stereo or quad line level sources
- Audio mixing capabilities with audio follows video support and auxiliary routing to integrate into an external audio setup
- HDMI, DVI and VGA program output options that allow you to use a projector (IMAG) or other monitoring applications
- 50 hours of 1080i recording capacity that can be extended by using the four removable drive bays
- Three video output rows that enable you to output HD and SD video simultaneously



Dimensions	19" W x 7.25" H x 21.5" D	Weight	42 lbs
Video Input	8 Simultaneous Inputs. Any Combination of: HD-SDI, HD Component, SD-SDI, SD Component, Y/C (BNC) or Composite. HD-SDI Video Conforms to SMPTE 292M and SD Video Conforms to SMPTE 259M and ITU-R BT.656.	Audio Input	8 x 2 Balanced XLR at Line and Mic Level 8 AES/EBU BNC Connectors 8 SDI Embedded Analog Audio Levels Conform to SMPTE RP-155 Phantom Power Option
Video Output ¹	3 HD/SD-SDI, 3 HD/SD Component, 3 Composite, 3 Y/C (BNC) HDMI Output, User Interface VGA/DVI Output, Aux VGA/DVI Output	Audio Output	4 Balanced XLR (Program Out) 4 Balanced XLR (Auxiliary Out) 2 AES/EBU (Program Out) 3 SDI Embedded (Program Out) 1 Stereo 1/4" Headphone Jack
Video Processing	32-Bit Floating Point, YCbCrA 4:4:4:4	Audio Processing	32-Bit Floating Point, 96 kHz, 4 Channels
Supported Formats	NTSC: 1080/30p, 1080/24p, 1080/60i, 720/60p, 720/30p, 720/24p, 480/60i (16:9 and 4:3) Multi-Standard (includes NTSC-J and PAL): 1080/25p, 1080/50i, 720/50p, 720/25p 576/25i (16:9 and 4:3)	Recording Capacity	~ 50 Hours 1080i ~ 155 Hours of 480i 4 Trayless SATA III Removable Drive Bays for Unlimited Recording and Backup Capability
Presets	Numerous Preset Bins (includes individual production sessions)	Mix HD/SD Sources	Yes
Video Ingest	1, 6-pin IEEE FireWire®	Tally	DB15 Connector for 8 PGM Row Tally Lights
iVGA™ Network Selections	2 Channels Dedicated to Separate iVGA™ Sources (select instantly from unlimited network sources)	Network Connection	1Gbit Connection for Network Inputs and Streaming Output
Virtual Set Support	18 HD Virtual Sets Included (using proprietary NewTek LiveSet™ technology)	Virtual/Mix Channel Overlay	1 per Channel, Upstream with Keying, Effects with Positioning, Scaling, Cropping, and 3D Rotation
Virtual/Mix Channels	8 Independent Channels with Presets	Main Overlay	2 Downstream Keys with Independent Effects with Keying, Positioning, Scaling, Cropping and 3D Rotation
Media Player	2 DDRs, Stills, Titles, Audio Player (all video sources provide output with alpha channel, for use in overlays, virtual sets, etc.)	On-Screen Preview Monitors	"All Sources," "Computer Sources," "Camera Inputs," "Preview and FX" or "Scopes with Switchable Input" (full-time, tabbed - all run at full field rate)
Projector Output	Yes - 16:9 and 4:3 Aspects	Projector Resolutions	Up to 1920 x 1200
Full HD 720p 16:9 Streaming	Yes	Live Webcasting	Adobe Flash and Windows Media Push/Pull
Waveform Monitor and Vectorscopes	Full Field Rate with Color Preview	Record to Disk	Simultaneous Recording of Full Resolution MPEG-2 and Archive of Web Stream
Integrated Character Generator	Yes	Nonlinear Editor	Yes
Playback File Formats	AVI, DV, M4V, MPEG-2, QuickTime, H264, HDV, JPG, PNG, PSD and More	Export Formats	AVI, DV, MPEG-2, Mobile Devices (iPhone®, iPad®, etc.), F4V, QuickTime and More
Form Factor	4U Rack Mount (with optional rails)	Redundant Power Supply	Yes
Drive Bays	4 Trayless SATA III Removable Drive Bays, with Hot Swap Support	Accessory Options	TriCaster LC-11, TimeWarp™ and LiveText™

¹ Both digital (SDI) and analog video output connectors are active at all times.

- ✓ HD rows output HD-SDI and HD Component
- ✓ SD rows can be configured as "SDI + Component" or "SDI + Composite + Y/C"

FOR LIVE PRODUCTIONS:

- ✓ Output Row 1 and 2 run at the session resolution
- ✓ Output Row 3 always provides an SD output, which can either be 16:9 or 4:3 aspect

FOR POST PRODUCTIONS:

- ✓ For HD projects, all outputs are HD. Output consists of 3 HD-SDI and 3 HD Component
- ✓ For SD projects, output consists of 3 SD-SDI connections, 1 SD Component, 2 Composite and 2 Y/C

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE



NewTek TriCaster™ TCXD300



TriCaster TCXD300 is a high definition, network-quality portable live production solution. In one small box, you have multi-channel HD switching, HD network-style virtual sets, HD titling, HD digital disk recording, audio mixing, HD editing, full HD streaming and more. This compact system is easy to set up, and delivers the following benefits:

- 13-channel HD/SD switcher with three external video inputs, DDR, network input, titles, stills and five virtual/mix channels
- Support for HD and SD video in resolutions up to 1080i and live streaming in resolutions up to industry-leading 720p.
- 15 HD live virtual sets (using proprietary NewTek LiveSet™ technology) and advanced matte generation
- Integrated media players for video playback, titles, stills, music and sound

- Network input that delivers graphics from LiveText™ or displays from a PC or Mac® to the switcher or overlay channels (using proprietary NewTek iVGA™ technology)
- Audio mixing capabilities and audio follows video support and auxiliary routing to integrate into an external audio setup
- Multi-view monitor option for enlarging your workspace and enhancing production control with forward/reverse options and speed controls
- HD transitions with forward/reverse options and speed controls

*"TriCaster allows us to compete immediately with the best visuals and the best sound."
- Peter Himmelman, "Furious World", Emmy® and GRAMMY®-nominated composer and performer*

*"Last year, before TriCaster, we produced about 50 live events. This year, with TriCaster we've done over 600."
- Chuck Muncie, KadyTV former San Diego Chargers Pro Bowl running back*

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Price	\$14,995 Multi-standard US\$17,995	Weight	20 lbs
Dimensions	17.5" D x 8.5" H x 10.4" W	Recording Capacity	~ 20 Hours 1080i ~ 60 Hours 480i
Video Input	3 Simultaneous Inputs. Any combination of: HD-SDI, HD Component, SD-SDI, SD Component, Y/C (BNC) or Composite	Audio Input	2 Balanced Combination XLR/Phone Jacks 2 x 4 Balanced Phone Jacks 3 x 2 AES/EBU BNC Connectors 3 x SDI Embedded Phantom Power Option
Video Output ¹	3 HD/SD-SDI 3 HD/SD-Component User Interface VGA/DVI Output Aux VGA/DVI Output	Audio Output	4 Balanced Phone Jacks (Program Out) 4 Balanced Phone Jacks (Auxiliary Out) 2 AES/EBU (Program Out) 2 AES/EBU (Auxiliary Out) 3 SDI Embedded 1 Stereo Headphone Jack
Video Processing	32-Bit Floating Point, YCbCrA 4:4:4:4	Audio Quality	32-Bit Floating Point, 48 kHz, 4 Channels
Supported Formats	NTSC: 1080/30i, 720/60p, 480/60i (16:9 and 4:3) Multi-Standard (includes NTSC-J and PAL): 1080/25i, 720/50p, 576/25i (4:3 and 16:9)	Mix HD/SD Sources	Yes
Presets	Numerous Preset Bins (includes individual production sessions)	Tally	3 Tally Light Connections (Program, Preview and both)
Video Ingest	1, 6-pin IEEE FireWire®	16:9 Video Support	Yes
iVGA™ Network Selections	1 Dedicated Channel (select instantly from unlimited network sources)	Network Connection	1Gbit Connection for Network Inputs and Streaming Output
Virtual Set Support	15 HD Virtual Sets Included (using proprietary NewTek LiveSet™ technology)	Virtual/Mix Channels	5 Independent Channels with Presets
Virtual/Mix Channel Overlay	1 per Channel, Upstream with Keying and Effects with Positioning and Scaling	Main Overlay	2 Downstream Keys with Independent Effects with Keying, Positioning, Scaling and Cropping
On-Screen Preview Monitors	"All Sources," "Preview and FX" or "Scopes with Preview" (full-time, tabbed)	Integrated Character Generator	Yes
Projector Output	16:9 and 4:3 Aspects	Projector Resolutions	Up to 1920 x 1200
Full HD 720p 16:9 Streaming	Yes	Live Webcasting	Adobe Flash and Windows Media Push/Pull
Media Player	DDR, Stills, Titles (with Alpha Channel Assignable to Downstream Key)	Record to Disk	Simultaneous Recording of Full Resolution MPEG-2 and Archive of Web Stream
Waveform Monitor	Yes	Vectorscope	Yes
Nonlinear Editor	Yes	Render Outputs	AVI, DV, MPEG-2, QuickTime, MP4 and More
Playback File Formats	AVI, DV, MPEG-2, QuickTime, HDV, JPG, PNG and More	Accessory Options	TriCaster LC-11, LiveText™, and TimeWarp™ (with Rev.2)

HD NETWORK-STYLE VIRTUAL SETS

Live virtual sets are no longer complicated or expensive. With LiveSet™ virtual set technology, you can achieve the look of a sophisticated studio setting in a small space, without the need for complex external equipment. Virtual Inputs make it easy to pre-assign your saved **TriCaster** set effects. With lights, a simple camera setup, and a green or blue backdrop, your on-camera talent can be placed in any one of the included HD virtual sets.

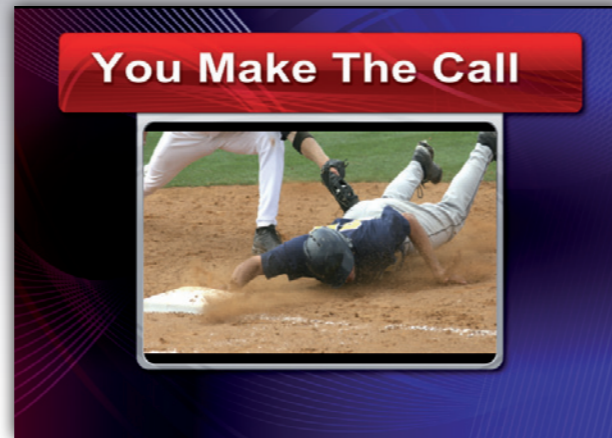
- Set designs include two-person and stand-up for versatility
- Double box effects are included for most virtual sets
- Animate zoom option provides smooth live zoom, from shot to shot
- Adjust zoom speed with slow, medium and fast presets, or manually set the speed
- Easily resize, position and rotate camera inputs (camera never needs to be physically repositioned or adjusted)
- Each Virtual Input provides an overlay channel for an additional layer of effects
- Add video, graphics and branding to virtual monitors in the live virtual sets
- Professional sets designed with Emmy® Award-winning NewTek LightWave 3D® with reflections and refractions for complete realism



"Just because it's the Internet, it doesn't have to be compromised. TriCaster delivers the professionalism we require."
- Robin Ruzan, *The Room Live*, actress/comedian/writer, credits include "SNL," and "Curb Your Enthusiasm"

HD TITLES AND GRAPHICS

Great-looking titles and graphics significantly enhance any project. *TriCaster* titling allows you to easily create and update titles and graphics on-the-fly, during your live production. Multiple channels of overlays and the ability to pre-assign individual transitions to any source, make it fast and simple to create sophisticated graphics.



Tonight's Lineup	
Adams	Pitcher
Hurt	Catcher
Lara	Shortstop
Blahut	Left Field
Driggers	Center Field
Berrie	Right Field



Geraldo Jones
Star Player

- Overlay channels of upstream and downstream keying provide multiple layers of graphics and titles
- Titles and graphics can be easily resized, repositioned and rotated to suit your needs
- Title templates can be updated live
- Easily change font, font size and add bold, italic or underline
- Add pictures to title templates for total customization
- Spell check assures that titles are accurate

Lectures	
Ms. Lara	English
Mr. Adams	History
Mr. Nassour	Economics
Ms. Todd	Science

Pep Rally

GO YELLOWJACKETS



"TriCaster brings a whole new professionalism to the Web; it makes it easy for anyone to do live production."
- Mike Rotman, director, Kevin Pollak Chat Show

BLAZING-FAST HD EDITING

Prepare video content for your live production with NewTek's resolution-independent video editor designed to work quickly and efficiently on any project.

- Mix both HD and SD on the same timeline in real-time, for complete flexibility
- Provides real-time, up and down conversion
- Offers real-time 3D position, size and rotation
- Delivers real-time, interpolated slow motion
- Instantly playback sequenced images for quick review

- Storyboard and timeline views are linked so that you can review your progress in the most suitable form
- Clip inherit provides instant replacement of selected clips
- Unlimited project undo lets you retrace every action
- Animated titling provides complex motion graphics



"TriCaster TCXD300 handled I/O and mixing so well and was so simple to operate that, even as a rank beginner, I was able to focus on the art of the edit rather than making the equipment work. And that, my friends, is the sign of a great piece of gear." - Jan Ozer, EventDVLive

TRICASTER ADD-ONS

"TriCaster is an exceptionally well-designed and constructed portable multi-camera production system." - TV Technology



ON YOUR OWN OR WITH A TEAM BOOST YOUR LIVE PRODUCTION POWER

"We call it a truck in a box. The advent of the NewTek TriCaster changes the format of how the entire country can access content either online or on TV." - Shawn H. Smith, vice president of business development and chief marketing officer, NBA Development League



LC-11



LC-11 hardware offers a physical connection to each input during your live presentation. Large, backlit, easy-to-read buttons enable quick transition from one source to the next, along with zoom control for live virtual sets. **LC-11** eliminates the need to use a keyboard or mouse, and provides the flexibility to add members to the production team.



TimeWarp™

TimeWarp™ brings slow motion replay to your fingertips. Connected to your TriCaster, **TimeWarp** allows you to select, mark and playback clips at various motion speeds. Expand your team with a TimeWarp operator, and amaze your audience with instant replay. With **TimeWarp**, you can take your sports and event production to a whole new level.



"[NewTek TriCaster] put us right in the mix of the live action and you can't do that from a production truck, even if you could park it on the side of a mountain." - Kate Nelligan programming producer, Global X Events and Development for ESPN

LT LiveText™



LiveText™ is HD remote titling and graphics software that runs independently on a computer that is networked with **TriCaster**, during a live production. This allows the director to keep an eye on the action, and the graphics operator to focus on titles. Use the integrated **DataLink™** to update scores, times or changing information during

fast-paced, live productions. Whether preparing a large number of titles in pre-production or making last-minute changes during the show, **LiveText** makes your production run fast and smooth.

"We've always wanted to do Web streaming and it's always been difficult - now we've discovered NewTek TriCaster and it's incredible."
- Geoff Petruilis, director, internet operations, 96.3 KSCS Radio



SD
PORTABLE
LIVE
PRODUCTION



NewTek *TriCaster*[™] BROADCAST

TriCaster BROADCAST[™] with SDI support, delivers efficiency and reliability. With audio embedded in the video signal, you can depend on a fast, professional setup.

TriCaster BROADCAST makes it possible for you to deliver network-quality programs to video, projector and the Web. The full range of professional tools includes six camera inputs, live virtual sets, double box effects and much more.



NewTek *TriCaster*[™] STUDIO

TriCaster STUDIO[™] is a live production workhorse that offers the ability to switch six cameras and includes real-time key generation, live titling, audio mixing, live streaming, virtual sets and more.

With *TriCaster STUDIO* you have the power of a live television truck in one simple-to-use portable system.





NewTek TriCaster™

FOR A COMPREHENSIVE OVERVIEW VISIT: WWW.NEWTEK.COM/TRICASTER



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