



TriCaster TC1 live production system with TriCaster VMC 2S control panel

TriCaster® TC1 Ordering Guide

TriCaster TC1 Overview	2
TriCaster TC1 Product Highlights.....	3
TriCaster TC1 Key Features	3
TriCaster TC1 Technical Specifications.....	6
TriCaster TC1 Control Panels	9
Ordering Information	11

All information included in this Ordering Guide is subject to change without notice.

TriCaster TC1 Overview

NewTek TriCaster TC1 is the most comprehensive software driven live production system available today. With TC1, producers, publishers, and content creators like you can push forward with confidence, taking advantage of modern networking and computing technology with hundreds of future-ready capabilities. TC1 provides advanced production capabilities and future-ready IP workflows for you to produce more incredible content that viewers crave and deliver it whenever and wherever they watch.

No other solution is as capable and cost-effective for producing and delivering content that meets the needs of changing viewer habits. The agile software driven IP native technology and functionality of TC1 provides the capability, connectivity, and control you need to take on any production. TC1 empowers you to embrace new ideas, technologies, and platforms while leveraging your existing investments, but does not disrupt the workflows you know and trust, or force you to spend a large amount on new equipment and infrastructure to adapt to changing production business models that include aspects such as streaming media.

TriCaster TC1 Key Features

4K Ultra HD	Produce programs, performances, events and live sports in true 4K UHD (Ultra High Definition) resolution with support for native 2160p video at 60 frames per second. Unlike other products that promise 4K UHD, only TriCaster TC1 offers switching, streaming and recording of 4K UHD video without compromising the frame rate or the number of available inputs.
Multi-Source Video Mixing	With 36 source channels, including 16 external inputs, you can easily create compelling content using any combination of compatible video sources, including NDI®, 3G-SDI, HD-SDI and PTZ cameras, mobile devices, Skype TX video calls, computers, gaming systems, streaming media, video files, graphics, images, animations and more.
Built-In Video Servers	No recorders needed—just add your files with two built-in video servers for on-demand and automated playback, including auto-advancing playlists, on-cue instant replay, live-edited highlight reels, and much more. With responsive player controls, presets, real-time editing tools, selectable transitions, and playlist effects, you have everything needed to make magic from your stored media.
Skype TX Software Integration	Conduct a live Skype video call with any remote guest, anywhere in the world. TriCaster TC1 is the only video production system to feature direct Skype TX software integration. The studio-grade version of the popular app, Skype TX enhances the real-time interaction with broadcast-quality video and balanced audio, allowing you to present production-ready conversations, interviews, reports, and more—regardless of the caller’s device.
Recording and Replay	Capture all the angles, record multiple channels of full-resolution video to NDI®, QuickTime® or H.264 files. From archiving the master cut for your content library, to ingesting the raw camera footage for post-production, to caching production extras and presentation materials for on-demand—even capturing real-time highlights for instant replay—TriCaster TC1 easily handles the work of multiple professional decks without the added expense.
Dual-Channel Live Streaming	Stream live to your choice of new media platforms, including user-friendly presets for Facebook Live, Microsoft® Azure®, Periscope, Twitch, YouTube™ Live, and more. With two streaming encoders included, you can easily deliver platform-specific content, while opening up new sponsorship and revenue opportunities.
Social Media Integration	Share real-time updates and on-demand content across your social media accounts, uploading images and video directly to Facebook, Imgur, LinkedIn, Twitter, Vimeo, YouTube and more—complete with comments and hashtags. Plus, with integrated DataLink™, you can add posts and photos from your social networks in on-screen graphics for a truly interactive experience.
Next-Level Automation	Experience new levels of efficiency and productivity with a comprehensive macro automation system that allows you to record, store, edit, and automate

	<p>your favorite settings and custom command sequences. You can even choose to run macros manually from any combination of compatible control interfaces—or set TriCaster TC1 to perform actions automatically.</p>
Live Sound Experience	<p>Set the tone for your production with comprehensive audio integration, including a software-based audio mixer, support for digital, analog and network audio, professional DSPs, fader control, VU metering, Talk Back communication, and 4 x 4 x 4 channel routing to four audio mix outputs.</p>
Phenomenal Creative Elements	<p>With TriCaster TC1, you have the tools to turn every frame of video into an artistic masterpiece. Consider the screen a blank canvas and unleash your inner artist with multi-bus mix effects, zero-latency video re-entry, real-time animated titles, data-driven graphics, custom animated transitions, a full-motion composition engine, and more. Let your imagination run wild.</p>
Real-Time Monitoring and Multiviewers	<p>See everything happening during your production with fully adjustable single-screen or multi-screen monitoring. With three customizable multiviewers, configurable windows and workspace layouts, operator confidence monitors, visual indicators, scopes, and more, you can easily personalize the TriCaster TC1 environment to your preferences.</p>
Studio-Grade Video Tools	<p>Perfect your presentation with configurable color correction tools, 3D object positioning, and smooth-edge cropping. Apply picture-in-picture effects with optional borders. Use key and fill to produce new composite scenes from different foreground and background elements. Even map live video to moving props and set pieces with real-time motion tracking- and so much more.</p>
Spectacular Live Chromakeying	<p>Think outside the box with real-time keying so crisp and clean, your viewers will never believe it's green screen. With NewTek's powerful LiveMatte™ technology built into every source channel and M/E, you have 40 fully configurable keyers to create composite scenes from live video, graphics and virtual sets for reports, presentations, demonstrations, and more.</p>
World-Class Live Virtual Sets	<p>Save on studio and set expenses without sacrificing production value. With integrated LiveSet™ technology and more than 30 included set designs, TriCaster TC1 can transport your talent into professionally-designed virtual environments, complete with multiple angles, virtual camera movements, real-time reflections, specular highlights, animated lens flares and stunning augmented reality effects that blur the line between virtual and reality.</p>
Interconnected Workflows	<p>With native integration of NDI™, NewTek's innovative Network Device Interface technology, TriCaster TC1 connects to the most prolific IP-based workflow in the industry right out of the box, networking seamlessly with compatible products from hundreds of manufacturers and developers, including NewTek' solutions fro connectivity—the NC1 Studio I/O Module, the NC1 Studio Input Module, and NewTek Connect Pro software.</p>

Subject to change without notice.

TriCaster TC1 Technical Specifications

Video Input	16 x simultaneous external video inputs, supporting any combination of compatible sources in resolutions up to 4K UHD at frame rates up to 60fps (2160p 59.94)
Network Video Input	16 x IP video inputs via NDI™, resolution-independent, with support for key and fill
SDI Video Input¹	4 x 3G/HD/SD-SDI connections supporting video input in any combination of standard formats, resolutions, and frame rates ² <ul style="list-style-type: none"> • 1080p: 59.94, 50, 29.97, 25 • 1080i: 59.94, 50 • 720p: 59.94, 50, 29.97, 25 • 576i 50 • 480i 59.94 <p>¹ <i>Optionally supports up to 16 simultaneous 3G/HD/SD-SDI video inputs or quad-link 3G-SDI video inputs (4K UHD) via network integration with NewTek NCI conversion modules</i></p> <p>² <i>Available frame rates determined by session video standard (NTSC or PAL)</i></p>
PTZ	Support for up to 8 simultaneous Pan-Tilt-Zoom (PTZ) robotic cameras via serial and network protocols, including RS232, RS422 and IP, with integrated controls and preset system
Skype TX	Native support for up to 2 simultaneous Skype® video call inputs via Skype TX software integration, including tally and Talk Back communication
Video Output	Configurable for up to 4 independent video mix outputs, with simultaneous delivery via IP and SDI
Network Video Output	IP video output via NDI, optionally configurable for: <ul style="list-style-type: none"> • 4 x independent video mix outputs • 1 x 4K UHD video mix output
SDI Video Output	4 x 3G/HD/SD-SDI connections, optionally configurable for: <ul style="list-style-type: none"> • 4 x independent 3G/HD/SD video mix outputs • 1 x 4K UHD video mix output via 3G-SDI quad-link grouping
Stream Output	2 x resolution-independent streaming video outputs, independently configurable, with simultaneous stream archive
Multiviewer Output	3 x multiviewer outputs supporting standard display resolutions <ul style="list-style-type: none"> • 1 x DVI user interface with multiviewer • 1 x HDMI multiviewer • 1 x DisplayPort multiviewer
Mix/Effect Buses (M/E)	4 x M/E buses supporting video re-entry <ul style="list-style-type: none"> • 1 x Mix/Effect channel per bus with support for up to 4 sources • 4 x KEY layers per bus • 9 x memory slots per bus 1 x PREVIZ configuration and preview bus
DSK Channels	4 x DSK channels
Media	5 x media players <ul style="list-style-type: none"> • 2 x DDR • 2 x GFX • 1 x Sound 15 x media buffers <ul style="list-style-type: none"> • 10 x animation buffers • 5 x graphic buffers 30 x clip players (available for use as transitions or media depending on function)

Keyers	<p>Integrated LiveMatte™ chroma and luma keying technology on all source channels and M/E buses</p> <ul style="list-style-type: none"> • 16 x input keyers • 4 x media player keyers • 4 x M/E keyers • 1 x PREVIZ keyer • 15 x buffer keyers
COMPs	<p>Integrated video composition engine on the switcher and each M/E bus to create, store, and apply layer configurations and DVE-style motion sequences</p> <ul style="list-style-type: none"> • 16 x configurable COMP presets per bus
Virtual Sets	Integrated LiveSet™ technology with 30+ live virtual sets and box effects included
DataLink	Integrated DataLink™ technology enabling real-time, automated data input from internal and external sources, including webpages, spreadsheets, scoreboards, databases, RSS feeds, watch files, XML, CSV, ASCII and more
Macros	<p>Record, store, edit and automate commands and user-configured operation sequences</p> <ul style="list-style-type: none"> • Attach to control panel buttons, keyboard shortcuts, hotspots, MIDI and X-keys® buttons or GPI triggers • Attach to internal events and state changes, including audio, media playback, tally and specific switcher actions • Supports control via web-based interface
Recording	<p>8 x configurable video recording channels</p> <ul style="list-style-type: none"> • 8 x NDI® recordings (scalable to higher number with Premium Access) • 4 x QuickTime® IsoCorder™ archival video recorders (XDCAM HD compatible, 4:2:2 encoding, 24-bit audio, with timecode)³ • 2 x H.264 IsoCorder™ distribution video recorders (multiple profiles) • 1 x MP3 audio recorder <p>³ <i>QuickTime Player not required for playback in common NLE applications</i></p>
Storage	<p>2 x 3TB internal drive</p> <ul style="list-style-type: none"> • Capacity varies by format, resolution and file specification • Supports recording to external storage via USB 3.0 and eSATA • Supports shared storage integration and third-party partner solutions
Grab	Grab full-resolution, deinterlaced still images from external video sources and outputs
Export	Export video and image files to social media, FTP, local or external volumes, and network servers, with optional transcoding
Audio Mixer	Integrated multi-channel audio mixer with support for quad-channel audio, DSPs and 4x4x4 audio input routing
Local Audio Input	<p>4 x SDI embedded</p> <p>1 x Balanced XLR stereo pair (Line)</p> <p>3 x Balanced 1/4" stereo pairs (Line)</p>
Local Audio Output	<p>4 x SDI embedded</p> <p>1 x Balanced XLR stereo pair</p> <p>1 x Balanced 1/4" stereo pair</p> <p>1 x Stereo 1/4" (phones)</p>
Network Audio	<ul style="list-style-type: none"> • Native support for network audio input and output via NDI • Embedded audio supported for all NDI input and output video signals • Integrated support⁴ for Dante™ networking protocol from Audinate® • Support for AES67 protocol via compatible WDM audio drivers⁵ <p>⁴ <i>Requires Dante Virtual Soundcard license from Audinate (sold separately)</i></p> <p>⁵ <i>Requires third-party virtual sound card license (sold separately)</i></p>
Supported Media File Formats	<p>Import, store, and play back multimedia files, with optional transcoding, including:</p> <ul style="list-style-type: none"> • Video: AVI, DV, DVCPPro, DVCPProHD, FLV, F4V, H.263, H.264, MOV, MKV, MJPEG, MPEG, MP4, WMV, WebM, and more • Image: PSD, PNG, TGA, BMP, JPEG, JPEG-XR, JPEG2000, EXR, RAW, TIF, WebP, and more

	<ul style="list-style-type: none"> • Audio: AIFF, MP3, WAV, and more
Monitoring	Support for up to 3 multiviewer displays with configurable workspaces and viewports
Signal Monitoring	Integrated waveform and vectorscope, full field rate with digital calibration, color preview and support for ITU-R Rec. 709
Processing	Video: Floating Point YCbCr +A 4:4:4:4 Audio: Floating Point, 96 kHz
Throughput Latency	~1.0-1.5 frames
A/V Standards	<ul style="list-style-type: none"> • 4K UHD video conforms to SMPTE 2036 (UHDTV1 using Square Division Quad Split) • 3G-SDI video conforms to SMPTE 424M (Level A) • HD-SDI video conforms to SMPTE 292M • SD video conforms to SMPTE 259M and ITU-R BT.656 • Analog audio levels conform to SMPTE RP-155
Tally	Support for hardware tally via HD15 GPI connector, network tally via NDI, and Blackmagic Design® SDI tally standard
Genlock	Genlock input supporting SD (Bi-level) or HD (Tri-level) reference signals
GPI	Supports GPI signals via JLCooper Electronics eBox GPI interface
MIDI	Support for standard MIDI protocol enabling third-party device control
System Drive	120GB SSD
NIC	2 x 1 Gigabit NIC
System Physical	<p>TriCaster TC1</p> 2RU chassis with 400W PSU and multi-tiered hardware and software fail-safe <ul style="list-style-type: none"> • 19.0 x 3.5 x 19.57 in (48.3 x 8.9 x 49.7 cm) with rack ears attached <p>TriCaster TC1 (Redundant Power Option)</p> 3RU chassis with 500W redundant PSU and multi-tiered hardware and software fail-safe <ul style="list-style-type: none"> • 19.0 x 5.25 x 19.57 in (48.3 x 13.34 x 49.7 cm) with rack ears attached

Subject to change without notice.

TriCaster TC1 Control Panels

With TriCaster TC1, you have your choice of companion control panels to suit your workflow, environment, and budget. The TriCaster VMC 2S and TC1SP control panels are expertly engineered to combine the comprehensive functionality, precision controls, premium hardware mechanics, and ergonomic design that operators need, with modern styling that appeals to clients and executives.

	TriCaster VMC 2S Control Panel	TriCaster TC1SP Control Panel
Stripes	2 x panel stripes	1.5 x panel stripes
Source Buttons	64 x crosspoints per stripe (16 buttons with 4 delegate banks)	14 x switcher source buttons 11 x M/E source buttons
Joystick	1 x multi-mode joystick (3-axis)	1 x multi-mode joystick (3-axis)
T-Bar	2 x multi-mode T-Bars	1 x multi-mode T-Bar
Connectivity	1 Gigabit NIC	USB
Physical	TriCaster VMC1 2S chassis with 25W PSU 35.7 x 11.96 x 5.00 in (90.7 x 30.4 x 12.7 cm)	TriCaster TC1SP chassis 23.5 x 2.5 x 11.6 (59.7 x 6.4 x 29.5 cm)



TriCaster VMC 2S control panel



TriCaster TC1SP control panel

Panel appearance subject to change without notice.

NewTek TriCaster TC1 Backplane (2RU)



Subject to change without notice.