KT&C **INNOVATIVE**
HIGH DEFINITION SURVEILLANCE

EZHD-TRF16 16 Ch + 2 OMNI IP* Bonus Ch
HD-TVI 1080p DVR, 1080p @ 480 FPS

Key Features

- Intelligent Video Inputs: connect 1080p/720p EZHD HD-TVI or 960H/SD analog to ANY input at any time
  - Reuse existing analog cameras or choose any mix of HD/SD on new systems
  - Upgrade any analog camera to megapixel at any time
  - Superlative HD resolution of 1080p Full HD or 720p HD for amazing image quality
  - Useful digital zoom on live view and playback
  - Field select 1080p or 720p, 30/25 Hz or 60/50 Hz
- Operation over 'almost any' wire
  - More than 1000 feet on standard RG59 coax
  - More than 1500 feet on RG6
  - More than 500 feet on UTP (one pair from a Cat5e cable, using optional KA-HDBAL1 balun pair).
- Display Live/Record 2.1 Megapixel 1920x1080 (1080p), 1 Megapixel 1280x960 (720p), 960x480 (WD1/960H), 704x480 (SD)
  - Real time recording on any/all channels at 1080p, 720p, WD1 or SD resolution
  - Playback any/all cameras at up to real time record rate
  - Independent configuration for each channel: resolution main/sub-stream, FPS, bit rate, image quality, etc.
- Up-the-cable control [UTC] to access compatible camera OSD menus from the DVR PTZ controls (local or remotely)
- Triple Technology Recording: Connect 2 additional IP cameras* (16+2) up to 1080p resolution without sacrificing BNC inputs
- H.264 Compression for efficient HDD utilization
  - Four internal hard drives for up to 24Tb of internal storage, plus eSATA port; (up to 8)
  - Up to 8 network disks (8 NAS disks, or 7 NAS disks +1 IP SAN disk)
  - Simultaneous high bandwidth recording plus sub-stream recording for reduced bandwidth remote viewing
  - Watermarking for validation of recorded video
  - Record scheduling per-camera, with HDD quotas, holidays, parameter change on alarm/event
- Unique Channel 0 remote stream displays user defined multi-view in the bandwidth of a single channel
- Pentaplex Operation (Simultaneous live, recording, playback, archiving and remote viewing)
- Easy router setup for remote access: uPnP/NAT automatically sets up port forwarding (router must support/allow uPnP)
- HDMI/VGA and CVBS monitor outputs for up to 1080p HD display detail; use either for main or spot/call functions
- User friendly GUI with graphical icons, visual indicators and multiple language support
  - Easy to use on-screen menus include digital zoom and instant playback of recent video
  - Operate using front panel controls, wheel mouse or included IR remote

- Quickly locate and review event video
  - Search by date/time, or preview images by pointing along a color coded timeline of record type
  - Tag video of interest for easy retrieval or export
  - Play based on results of extensive event/alarm log search
  - Use "Smart Search" to define an area of interest; the DVR quickly reviews recorded video to list instances of motion in that area for review by the operator
  - Use Video Content Analysis event detection on two BNC channel
    - Line crossing (with direction) up to four lines
    - Area intrusion (with loitering time) up to four areas
    - Rapid fast forward can scan quickly between VCA events, yet plays events at normal speed
- Digital Zoom with Virtual PTZ in Live & Playback
- Privacy masking (4 zones) to block observation of specific areas within the field of view
- Audio Inputs (5) and Outputs (2) for recording and/or two way audio
- Alarm inputs (16) and outputs (4) to interface with local hardware
- Ethernet interface for remote network viewing and control, and to connect IP cameras
- Multiple Control Inputs: local mouse/hand held IR remote controller (mouse included); web browser and CMS controls
- On-screen PTZ control via mouse or IR remote
- USB 2.0 ports on front and one on rear panel for video archive and mouse usage
- Free DDNS Service – static IP address is not required for reliable remote access
- IE, Chrome, Firefox and Safari browser Web clients
- Free Multi-Site Windows and MAC OMNI CMS can display up to 64 live/4 playback views
- Remote configuration support from built-in web interface and/or free OMNI CMS program
- Free iOS and Android apps:
  - Scroll though 16 display live views
  - Playback specific cameras by date/time plus easy slider control
  - Audio monitoring support
  - PTZ and relay control
  - Up to 16 camera views from HD tablets (HD app)

*ONLY OMNI-IP PnP IP Cameras are Supported for Bonus Channels
KT&C America reserves the right to make changes to improve our products at any time without notice; we are not responsible for misprints.

OMNI EZ HD-T
Triple Technology Recording

KT&C INNOVATIVE
HIGH DEFINITION SURVEILLANCE

OMNI EZ HD-T
Triple Technology Recording

EZHD-TRF16
16 Ch + 2 OMNI IP* Bonus Ch
HD-TVI 1080p DVR, 1080p @ 480 FPS

Feature badges: Real-Time 1080p | 480 FPS | eSATA | HDMI Main Monitor | BNC Main Monitor | VGA Main Monitor | uPnP Router Setup | 5 Audio Inputs | 2 Audio Outputs | 2 WAY AUDIO | H.264 | OSD/UTC Up The Cable Control | E-MAIL NOTIFICATION | FREE APP IOS/Android | FREE CMS | FREE DDNS | FREE MAC Client | Privacy Mask | Digital Zoom | Dual Stream Record | Remote Backup | Remote Preview | Smart Search | Sub Stream | Water-marking | NAS SAN | Full Front Panel Controls | Jog Shuttle | VCA

Category		Specification
Intelligent Video Inputs	Analog EZHD/SD Inputs	16
	HD Video Resolutions	EZHD / HD-TVI 720p30(25), 720p60(50), 1080p30(25)
	Analog CVBS Video Input	Up to 960x480,720x480(NTSC); 960x576,720x576(PAL)
	Adaptive Ports	Input Format Auto Detection, EZHD/SD can be mixed in any combination, at any time
	Interface	BNC Connector; 1V p-p, 75Ω
	Privacy masking	4 areas programmable in OSD menu
	Additional IP Channels (up to 2-Megapixel)	2 OMNI-IP Plug-and-Play
	Total Cameras Supported	18
Video Output	Main HDMI & VGA	Full HD 1920×1080/60Hz; SXGA: 1280×1024/60Hz; 720P: 1280×720/60Hz; XGA: 1024×768/60Hz
	CVBS Analog BNC	NTSC 704x480 / PAL 704x576; 1V p-p, 75Ω
	Display Modes	1, 2x2, 1+5, 1+7, 3x3, 4x4 split; User Defined Sequence / Alarm Pop-up HDMI/VGA and/or CVBS may be configured as main or call/event monitor
Recording	Video Compression	Dual Stream: H.264 for Main Stream and Sub-stream
	Video Bitrate	32Kb/s~10Mb/s each channel
	Encoding	Main Stream: 1080p; 720p; WD1; 4CIF; VGA; CIF Sub Stream: WD1; 4CIF; CIF; QVGA; QCIF
	Frame Rate	Main Stream: 1/16 fps ~ Real time frame rate Sub Stream: 1/16 fps ~ Real time frame rate
	Quality	6 levels: Lowest/Lower/Low/Medium/Higher/Highest
	Mode	Continuous; Motion; Alarm; Motion or alarm, Motion + Alarm, VCA, None
	Motion Detection & VCA	Configurable per camera for area(s), sensitivity and arming schedule programmable by day of week and hour of day (two channel VCA)
	Schedule Period	Per day in 1 hour blocks; or 8 time periods per day, each with different record mode; plus holidays
	Pre- and Post- Event Recording	Pre-record 0~30 seconds; post record 5s~10 minutes
Playback	Synchronous Playback	16 channels
	Playback Resolution	1080p, 720p, WD1, 4CIF, VGA, CIF, QVGA, QCIF
	Search Type	Time/Date; Event (Alarm, Motion, VCA); Manual Tags; Smart Search for motion events from recorded video
	Capacity	Up to record rate
	Playback Controls	Play; Pause; Forward/Reverse; speed control for single~1.8~Vmax (256x); Slide bar with overview of record type and snapshot display from slider position, VCA based accelerated playback between normal play of VCA events
	Digital Zoom During Playback	Supported on Local Displays and CMS
Event & Alarm	Event Source	MD (Motion Detection), Video Loss, Video Tampering/Exceptions
	Event Action Schedule	Per day in 1 hour blocks; or 8 time periods per day, each with different record mode; plus holidays
	Event Action	Buzzer, E-mail, Alarm Full Screen Pop-up, Notify CMS Client, trigger alarm output
	MD Area	User selectable grid pattern 22x15 areas with adjustable per camera sensitivity
System Alarm	Alarm Source	HDD Error, HDD Full, LAN Fail/Address Conflict, Illegal login, Video Signal Exception/, Record/Capture exception
	Alarm Action	Buzzer, E-mail, Notify CMS Client (network permitting), trigger alarm output
Audio	Two-way audio	Audio input pass through to remote web or CMS client; remote audio from web or CMS client pass through to audio output
	Input	4 Inputs for record, 1 input for two way audio; RCA, 2V p-p, 1KΩ
	Output	2 Outputs; RCA, 2V p-p, 1KΩ
Network	Compression	Up to 64Kbps, G.711u
	Interface	1Gb/s 1000 Base-T Ethernet RJ-45
	Addressing	Static IP, DHCP, xDSL support
	NTP/DST	Supported; choice of time zone, NTP server, DST start/end/offset
	Protocols Supported	TCP/IP, PPPoE, DHCP, DNS, DDNS, NTP, SMTP, SNMP, NFS, iSCSI, UPnP™, HTTPS, KT&C Plug-and-Play (for connected IP Cameras), OMNI Utility Device Discovery
	NAT	uPnP router NAT/port mapping forwards ports automatically (*Router must support/permit uPnP function)
	Users	Up to 128 simultaneous connected users
	DDNS	Simple DDNS free service tracks WAN IP address and HTTP port

Category		Specification
Security	User IDs	"admin", plus multiple configurable login IDs
	User Levels	All rights for "admin"; Per camera per user rights assignment for Operator and User levels
	User Privilege Control	Local and remote access to Live views, audio, recording, playback, menus, PTZ, alarms, copy, logs, upgrade, reboot
Storage & Clip copy	HDD Storage	4 SATA HDD up to 6Tb each
	eSATA	One, on rear panel (up to 8)
	NAS/SAN	up to 8 network disks (8 NAS disks, or 7 NAS disks +1 IP SAN disk)
	Copy Type	Multi-Channel or Single Channel File
	Copy Device	USB 2.0 Drive (3 ports)
	S.M.A.R.T.	Temperature, duration, error rates, bad sector detection, and more
Serial & I/O	USB 2.0 Ports	Two front, one rear for mouse and data I/O
	Serial Port	1 RS-232C (future use)
	RS-485	One; selectable speed and bit pattern; multiple protocols (Pelco P, Pelco D, others)
	Inputs	16 alarm inputs
	Outputs	4 alarm outputs
	Keyboard	Input for external control keyboard
	Up the Cable Control	Multiple protocols, can be sent out of any BNC port to compatible cameras
User Controls	Local Controls	Front Panel camera, function and navigation buttons; IR Remote; Mouse
Software	Web Viewer	Live view, playback and configuration via IE, Chrome, Firefox, Safari (with free plug-in/extension installed)
	User Rights Control	Per user-per camera for multiple functions
	Mobile Viewer	iOS and Android supported ; live 16 camera views; 4 camera playback; snapshots from live or play; copy clips/record to smartphone; audio support; PTZ control. HD version of app, optimized for tablets, displays up to 16 live view cameras
	CMS	Free PC and MAC Clients support multiple device viewing, playback (with digital zoom) and configuration; user rights per camera; E-map support; live view up to 64 cameras in 4:3 and 48 cameras in 16:9; up to 16 cameras in playback
	Event Logging	Multiple types: alarm, exception, operation, information; dozens of sub-types within each major type
	Firmware Upgrade	From USB or remotely
	Backup/Restore Configuration	From USB or remotely
General	Dimension (W x H x D)	17.5" x 15.3" x 2.7" | 445 × 390 × 70mm
	Chassis Type	19" rack-mountable 1.5U chassis
	Weight without HDDs	11 lb. / 5Kg
	Operating Temp	14°F~131°F (-10°C~55°C)
	Operating Humidity	10% ~ 90%
	Voltage	100~240 VAC 47~63Hz
	Power	Up to 55W
	Certifications	FCC, CE, RoHS