KT&C INNOVATIVE
HIGH DEFINITION SURVEILLANCE

OMNI-IP
Scalable IP Solutions

Key Features

- Connect up to 16 IP cameras in any combination with no special licenses required
  - 'Hands Free' Plug-and-Play cameras on the 16 built-in PoE ports
  - Onvif or other supported IP cameras* (*See list of manufacturers/models)
  - Power cameras with up to 30W each (802.3at PoE) from a total of 200W built in PoE power
- Stream an aggregate bandwidth to the NVR of up to 80Mb/s from all connected cameras
  - Select camera resolutions up to 5MP
  - Set lower resolution/rate/image quality to meet application/installation requirements
- Local HDMI/VGA monitor displays at up to 1920x1080 and/or connect traditional analog/CVBS
  - Display different cameras/layouts on each monitor or duplicate display on HDMI & VGA outputs
  - Continue to view live HD video while reviewing playback on a separate HD monitor
  - Route event full screen pop-up to any monitor for simultaneous live, playback and aux/call views
  - Employ digital zoom in both live view and playback for expanded view of fine details
- Record based on schedule, motion, event/alarm or combinations
- Optional arming schedule for action/notifications and alarms (e.g. ignore on-camera motion from specific cameras during normal business hours)
- View, record and play main stream for detail, or sub-stream to conserve bandwidth and CPU resources
- Easy to use on-screen menus include digital zoom and instant playback of recent video
  - Operate using full 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
  - Play based on results of extensive event/alarm log search
  - Use "Smart Search" to define an area of interest; the NVR quickly reviews recorded video to list instances of motion in that area for review by the operator
- System automatically conserves resources by selecting sub-stream during multiple camera viewing
- User selectable viewing optimization for image detail of fluency of motion
- Choose up to 16Tb of internal HDD storage (optional mirroring), or record to external eSATA/NAS/SAN
- Back up recorded video to any network connected NAS or FTP
- Easy remote access: view NVR over Internet without programming router: built-in uPnP router NAT/port mapping forwards ports automatically (*Router must support/permit uPnP function)
- Your choice of IE, Chrome, Firefox or Safari browsers to view live or playback video, or to manage NVR
- Unique Channel 0 remote stream displays user defined multi-view in the bandwidth of a single channel
- Unique Virtual Host provides remote access to all IPC login menu based features and capabilities
- View multiple live/playback video streams on Android/iOS apps, or get HD viewing from tablet specific app
- Free Windows and MAC CMS Client for up to 64 live/16 playback views, manage and back up multiple sites
- Two way audio support (compatible camera required) from NVR, web screens and CMS
- Local alarm pre-channel inputs, 4 outputs and RS-485 control terminals
- Rack mountable 1.5U chassis (ears included)

KNR-p16Px16

16 Channel Plug & Play NVR

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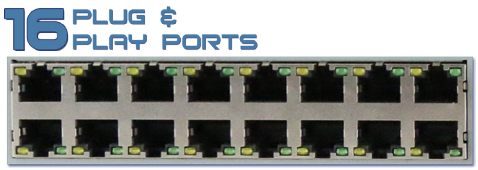

Plug & Play | PoE | up to 5 Megapixel | 30 FPS | Front Panel Controls

HDMI 1080p | VGA Main Monitor | CVBS Main / Spot | eSATA NAS SAN | uPnP Router Setup

IPC OSD Pass Thru | ONVIF | Remote Preview | Sub-Stream | 2 WAY AUDIO

Mirror Recording | Remote Backup | Digital Zoom | Smart Search | Arming Schedule

Bandwidth Optimization | FREE App IOS/ Android | FREE CMS | MAC Client | E-MAIL NOTIFICATION

Streaming Video Inputs & Recording	
Maximum Number of IP Cameras	16
Number of built in PnP/PoE Switch Ports	16
Supported Live View/ Record Resolutions	5MP / 3MP / 1080P / UXGA / 720P / VGA / 4CIF / DCIF / 2CIF / CIF / QCIF
Sub-stream	Supported for recording, playback and live viewing
Audio streaming	Supported from audio capable cameras
Maxi FPS rate per cam (Live & Record)	30FPS Main stream; 30FPS Sub-stream Up to 480FPS total for 16 cameras
Maximum Record Streaming Video Input Bandwidth (all cameras combined)	80Mb/s
Recording Compression	Depends on IP Camera; typically H.264 for main stream, MJPEG for sub-stream
Recording Modes	Continuous, Motion, Alarm, Motion+Alarm, Motion or Alarm
Motion Detection	Camera Side, configurable from NVR for KNC-p3 Omni IP Series Cameras
Schedule Period	Per day in 1 hour blocks; or 8 time periods per day, each with different record mode;+holidays
Pre- and Post- Event Recording	Pre-record 0~30 seconds; post record 5s~10 minutes
Built in network switch port speed	10/100 Mb/s each port
KT&C Omni-IP 'hands free Plug and Play' Cameras Fully Supported	KNC-p3BR4IR, KNC-p3BR6IR, KNC-p3BR12IR, KNC-p3DR4IR, KNC-p3DR3IR,KNC-p3DR6IR, KNC-p3DR12IR, KNC-p3BR4XIR, KNC-p3BR6XIR, KNC-p3BR12XIR, KNC-p3TR4XIR, KNC-p3TR3XIR, KNC-p3TR6XIR, KNC-p3LR4IR, KNC-p3LR3IR, KNC-p3LR6IR, KNC-p3BR28V12IR, KNC-p3DR28V12IR
Third Party Cameras Supported (requires traditional configuration and setup)	Onvif; Acti, Arecont, Axis, Bosch, Brickcom, Canon, Hikvision, Hunt, Panasonic, Pelco, Samsung, Sanyo, Sony, Vivotek, Zavio
Local Live Presentation of Streaming Video/Audio	
Local Display Main Monitor Outputs	HDMI 60Hz: 1920×1080, 1600×1200, 1280×1024, 1280×720, 1024×768
	VGA 60Hz: 1920×1080P, 1600×1200, 1280×1024, 1280×720, 1024×768
	BNC/CVBS (1.0V p-p, 75 Ω) 704 × 480 (NTSC)
Camera Display Layouts	1, 2x2, 1+5, 1+7, 3x3, 4x4
Multiple Independent Monitors	HDMI and VGA monitors can be duplicates, or display independent live and/or playback screens with all cameras; CVBS is independent and can function as a call or auxiliary monitor
Automatic Stream Selection	Single camera view and 2x2 at main stream resolution; Automatic switching to sub-stream resolution in >4 cameo multi-view display to conserve CPU capacity and maintain parity between per-camera screen area and image size
Audio Output	2-ch Line Level, BNC (Linear, 600Ω), one synched to CVBS, one synched to VGA; HDMI audio on HDMI monitor output (requires audio equipped cameras)
Playback of Recorded Video/Audio	
Supported Playback Resolutions	5MP / 3MP / 1080P / UXGA / 720P / VGA / 4CIF / DCIF / 2CIF / CIF / QCIF
Local Display Playback Maximum Video Bandwidth (all cameras combined)	~32Mb/s nominal
Nominal Local Playback Capability	8 channels @ 1920x1080; 16 channels @ 1280x720 (based on average per channel bandwidth of ~4Mb/s@1080p and ~2Mb/s @ 720p) Reduced total bandwidth permits greater number of cameras to be played. (actual playback depends on decoding load which varies based on settings for recorded video bandwidth restrictions, resolution, image quality, FPS rate, compression efficiency, and complexity of pixel change in the scene)
Playback search modes	Time/Date; Alarm (motion or other source); Manual Tags; Smart Search for motion events from recorded video
Playback Controls	Play; Pause; Forward/Reverse; speed control for single~1.8~16X; Slide bar with overview of record type and snapshot display from slider position
Digital Zoom During Playback	Supported on Local Displays and CMS
Local Hard Drives and Other Storage	
Number of Internal Hard Drives	Up to 4 SATA HDD; up to 4TB each for 16TB maximum
Mirror Recording	Can clone pairs of disks
S.M.A.R.T	With extensive statistics, alarms, on demand tests and reporting
Optional DVD-RW	Replaces 2 HDD, limiting internal storage to 8TB maximum
External HDD	one eSATA Interface
Record to	HDD, eSATA, NAS or SAN
Archive to	USB, HDD, eSATA, NAS or SAN
Local Plug and Play Camera Network Support	
Integral PoE Switch	16 Ports 10/100 Mb/s
Camera Network Security	Option to enable pass though access from LAN/WAN to cameras, or to isolate camera network from LAN/WAN for increased security
PoE Type	802.3at Max 30W per port
Total Power Budget	200W all ports
PnP Network Support	Integral DHCP function with address-per-port initial assignment Internal bridge can forward connections from LAN/WAN network port to individual IPC for remote access to IPC OSD detail config menus (Using KT&C KNC-p3 Omni-IP Series cams connected to internal PnP PoE switch ports)
Remote Viewing and Local/Remote Configuration	
Built in Web Server Interface	Live view, playback and configuration via IE, Chrome, Firefox, Safari (with free plug-in/extension installed)
CMS	PC and MAC Client supports 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
Mobile Apps	iOS and Android supported ; live 1 & 4 camera views; single camera playback; snapshots from live or play; copy clips/record to smartphone; audio support; PTZ control. HD version of app, optimized for tablets, is available
User Rights Control	Per user-per camera for multiple functions
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	For NVR settings and for IP Camera settings; from USB or remotely
Network and Other Interfaces	
LAN/WAN Network Port	One 10/100/1000Mb/s RJ-45 port
Connection of non-PnP IP cameras	Supported
Remote Monitoring Output Max Bandwidth	240Mb/s
Maximum number of remote connections	128
DST/NTP	Supported; choice of time zone, NTP server, DST start/end/offset
Port Mapping/uPnP	Automatic port forwarding/redirection using uPnP on routers with this capability
Serial Interfaces	1xRS-232 DB9; 1xRS-485; 1xKeyboard controller input
USB 2.0 Interfaces	2 front; 1 rear
Audio Input	1 BNC
Alarm Inputs	16
Alarm Outputs	4 single pole
General Mechanical and Environmental	
Power Input	100~240VAC, up to 300W max. continuous/450W peak, 50~60Hz; USA Power Cord
Continuous Power Consumption	Up to 40W for NVR; up to 200W for PoE
Operating Temperature	14°F ~ 131°F (-10°C ~ +55°C)
Operating Humidity Range	10% ~ 90%
Cooling Fan	1, in power supply
Size	1.5U Rack mountable chassis (rack ears provided) 17.52" x 15.35" x 2.76" (445 x 390 x 70mm)
Weight (without hard drives or ODD)	8.8 lb./4 Kg allow ~1.4 lb. per HDD
Certifications	FCC, CE, RoHS

KT&C America, Inc. reserves the right to make changes to improve our products at any time without notice; we are not responsible for misprints.

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Ordering Information

KNR-p16Px16/1TB: 16 Ch PnP, 1 TB | **KNR-p16Px16/2TB:** 16 Ch PnP, 2 TB
KNR-p16Px16/4TB: 16 Ch PnP, 4 TB | **KNR-p16Px16/6TB:** 16 Ch PnP, 6 TB
KNR-p16Px16/8TB: 16 Ch PnP, 8 TB | **KNR-p16Px16/12TB:** 16 Ch PnP, 12 TB | **KNR-p16Px16/16TB:** 16 Ch PnP, 16 TB