

DMNG RACK180

DIGITAL MOBILE NEWS GATHERING



ADVANCED HYBRID CONTRIBUTION VIDEO ENCODER



The DMNG RACK180 is an advanced hybrid contribution video encoder designed for installation in newsgathering vehicles.

Housed in a compact 1RU chassis, it incorporates the same hardware and software core as the industry-leading DMNG PRO180 and embeds 8 x 3G/4G modems and 1 x Wi-Fi modem. Its 8 x SMA antenna ports on its rear panel connect with two AVIWEST QUAD wideband external cellular antenna arrays that can be easily mounted on the roof of any vehicle. The QUAD antennas are designed to strengthen signal delivery in critical environments such as live reporting from crowded areas.

Thanks to AVIWEST's SafeStreams® technology and its intelligent bonding stack, the DMNG RACK180 expands the capabilities of newsgathering vehicles by taking advantage of both satellite and cellular networks in various scenarios:

- Broadcast live video or recorded files over bonded cellular networks
- Ensure the transmission resiliency by using bonded cellular connections as a seamless back-up to satellite when weather conditions or congested networks make the satellite bandwidth fluctuate
- Increase the overall transmission capacity by bonding all together satellite and cellular network connections

MAIN FUNCTIONS

LIVE & AUTO-RECORD

Send a live broadcast-quality video over bonded IP networks: Ethernet, Wi-Fi, 3G/4G, and satellite networks, such as BGAN, THURAYA and KA band. The Auto-record function allows recording a high quality video file while streaming live at lower resolution and bitrate.

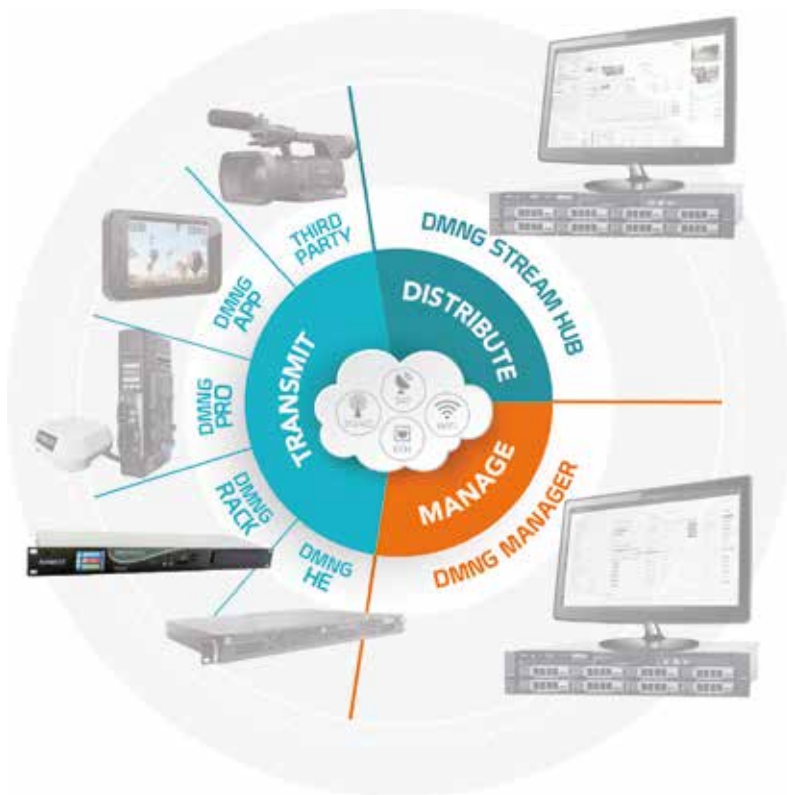
STORE & FORWARD

Record a high quality video file on the SD card. Forward any type of file from a mass-storage device (SD card or USB key) to the DMNG StreamHub receiver.

PROGRESSIVE STORE & FORWARD

Record a high quality video file and forward it progressively to the remote receiver while recording.

DMNG RACK180 SYSTEM OVERVIEW



USE CASES

LIVE OVER SATELLITE & CELLULAR NETWORKS

The DMNG RACK180 can stream over KA band and use cellular links as back-up or complementary connection. It enables starting streaming a live over cellular connections before switching to KA band once the satellite dish is pointed. This bonding mode also ensures the transmission reliability when the performance of the KA band decreases, particularly in case of bad weather conditions or of drop in bandwidth due to congested network.

LIVE OVER SATELLITE

The DMNG RACK is compatible with the major portable satellite uplink solutions such as Inmarsat BGAN, Thuraya or KA band. It can also feed any kind of satellite modulator thanks to its MPEG-2 TS ASI output.

LIVE OVER BONDED IP NETWORKS

The DMNG RACK180 has 8 internal 3G or 4G modems, an internal Wi-Fi modem plus 2 Ethernet ports to stream a live video over bonded IP networks to a DMNG StreamHub. Combined with two QUAD wideband cellular antenna arrays, the DMNG RACK180 can stream live footage even in critical conditions such as from crowded areas.

LIVE TO ANY CDN

The DMNG system supports the needed protocols to stream a live high definition video directly to the Web or through any CDN (Content Delivery Network) or video streaming service platform.

DMNG RACK180 MAIN SPECIFICATIONS

MAIN FUNCTIONS	<ul style="list-style-type: none"> • Live & Auto-record • Store & Forward • Progressive Store and Forward 	VIDEO COMPRESSION	<ul style="list-style-type: none"> • H.264/AVC Main/High Profile level 4 • 1080p/1080i/720p/576i/480i @ 60/59.94/50/30/29.97/25 fps • Bitrates: 100 Kbps to 20 Mbps • CBR / Capped VBR / VBR • Simultaneous Live & Auto-record at different bitrates
OTHER FUNCTIONS	<ul style="list-style-type: none"> • IFB return channel • Tally Light • Geolocation • IP Bridge 	AUDIO COMPRESSION	<ul style="list-style-type: none"> • AAC-LC/HE-AAC v2 ; 24 to 256 Kbps • MPEG-1 Layer II; 32 to 384 Kbps • Dual mono / Stereo
VIDEO INPUTS	<ul style="list-style-type: none"> • HD/SD-SDI embedded audio (BNC) • Composite video (BNC) • Analog Audio L&R (BNC) • HDMI (1.3) 	ADVANCED FEATURES	<ul style="list-style-type: none"> • Dual Encoding (Live & Auto-record) • HD & SD downscaling • Forward Error Correction (FEC) • AES Encryption (256-bit)
NETWORK INTERFACES	<ul style="list-style-type: none"> • 8 x 3G/4G-LTE build-in modems • 8 x SMA connectors for 2 AVIWEST QUAD antennas • 1 built-in Wi-Fi modem (client and access point modes) • 2 external USB 2.0 ports • Dual Gigabit Ethernet interfaces (LAN, WAN, BGAN, Thuraya & KA Band Satellite) 	OPERATIONAL MODES	<ul style="list-style-type: none"> • Dynamic video resolution • Glass-to-glass latency: down to 1 sec • Preset profiles & manual modes
OTHER INTERFACES	<ul style="list-style-type: none"> • ASI-TS out (BNC) • USB 2.0 (Forward, etc.) • SD card slot • Stereo mini jack (3.5mm) in & out (IFB) • Expansion port (RS232, RS485) • Ethernet 	MONITORING & CONFIGURATION	<ul style="list-style-type: none"> • User-friendly touchscreen • On screen video preview • Remote configuration from Web GUI (any devices) • Remote control from receiver (DMNG StreamHub) • Remote control from manager (DMNG Manager) • Remote control from smartphones (DMNG Remote)
NETWORKING PROTOCOLS	<ul style="list-style-type: none"> • RTP Unicast streaming • RTP Multicast streaming (IGMP) • MPEG-2 Transport Stream over UDP/IP • RTMP, RTSP, HLS, TS/IP (DMNG StreamHub) 	POWER SUPPLY	<ul style="list-style-type: none"> • Dual 12-24V input XLR 4 pins - Hot swap • Average power consumption: 30W • Max power consumption: 42W
		PHYSICAL	<ul style="list-style-type: none"> • 1RU, Width: 19", Depth: 112 mm / 4.4 in • Weight (Kg/Lb): 2 / 4.4 • Operating temperatures: -10°C to +50°C