



NewStream

Multi-mode News Hub Transmission Platform

NewStream is a generation newsgathering platform capable of supporting multi-mode ENG and SNG operations.

Combining the power and flexibility of multiple transmission modes, NewStream maximises quality of service, enabling the delivery of highly reliable live news feeds under the most challenging of circumstances.

The system can seamlessly switch between Electronic and Satellite News Gathering modes. Presets automatically reconfigure the front panel OLED push button controls to match the selected operating mode:

- ENG Microwave
- KA/KU Satellite



The NewStream Advantage

Compact:

- Space-efficient 2RU x 19" EIA all-inclusive rack mount design for ENG and SNG control.

Backwards Compatibility:

- Use existing ENG Nycoil Assemblies configured for Type 'N,' connections.

Expandable:

- Purchase a NewStream system initially configured for ENG operation and then add SNG functionality at a later time.

Space Efficient ENG ODU:

- 2, 2/7 GHz mast-mounted single enclosure with built-in RF coaxial relay for omni-directional antenna selection.

HD/SD Broadcast Video Quality:

- User selectable MPEG-2 or H.264 (AVC) encoding available in 4:2:0 and 4:2:2 profiles.

SNG:

- DVB-S and DVB-S2 modulation with optional 10 MHz.

High RF Performance:

- High RF output linear broadband amplifiers that minimize out-of-band spectral interference.

Efficient Design:

- Mast-mounted ODUs provide antenna polarization switching via coax or multi-conductor and a RF relay to switch between a high gain and Omni-directional antenna.

Key Features

- User-Friendly Front Panel Control
- Backwards Compatibility
- MPEG-2 4:2:0/4:2:2 SD/ (HD opt.) Encoding
- H.264 AVC 4:2:0 HD/SD Encoding (4:2:2 opt.)
- Space Efficient 2 rack Unit

Typical Applications

- Electronic Newsgathering
- Satellite Newsgathering

Outdoor Unit (ODU) RF

ODU	ENG	SNG
-	Mast-mounted (single enclosure)	Optional: Roof-mounted NewSwift, Mantis
2-2.5 GHz	8 Watts (typ.) +/- 1dB @ QPSK, 64 QAM	N/A
6.4-7.1 GHz	5 Watts (typ.) +/- 1dB @ QPSK, 64 QAM	N/A
12.7-13.25 GHz	1.5 Watts (typ.) +/- 0.5 dB @ QPSK	N/A
UMTS	N/A	N/A
IDU to ODU Interconnection	RG-6/U minimum or better	LMR-400 or equivalent
Size and Weight	17.8 (W) x 25.4 (L) x 15.2 (H) cm (7" (W) x 10" (L) x 6" (H)) 7.2 kg (16 lbs.) max. @ 2/7 GHz	TBD
Temperature	-20° to +50°C	TBD

Indoor Unit (IDU)

	Rack-mount chassis, single
Operator Controls	(5) Programmable OLED (organic light-emitting diode) push-button switches, (2) rocker-style switches, (3) LED push-button switches, (1) On/Off push-button switch
Displays	(1) Capacitive color touch TFT 12.7 cm (5.0") diagonal 800 x 480 white LED backlight display (2) 16 x 2 segment mono-chromatic blue OLEDs
Presets	Up to 99 User configurable Presets 3 Operating Modes: Interview/Standard/ Mobility
Rear panel I/O	BNC - (ASI In, ASI Out, SDI In, CV in, 75 Ω audio, spare) Weidmuller - (analog audio 1L/1R, 2L/2R, digital audio D1, D2, MW ODU power, Ant.) Type 'N' (ODU 2/7 GHz or 2 GHz and 7 GHz legacy MTX ODUs) Type 'N' - (L-band Mod. & L-band Mon.) Miscellaneous- (1) SMA Wi-Fi, (3) RJ45 Ethernet, (1) 115 VAC IEC C14, (1) DB-9 data, (1) USB
Size and Weight	43.1 (W) x 41.1 (D) x 8.9 (H) CM (17.0" (W) x 16.2" (L) x 3.5" (H)) (2RUx 19" EIA standard rack-mount) 7.2 kg (16 lbs./45 kg)
Prime operating power	115/230 VAC, 2.0 A (typ)
Temperature	-10° to +40°C

Modulation

	COFDM (DVB-T)	DVB-S QPSK, DVB-S2 QPSK
Optional Modulations	LMS-T 10/20	DVB-S2 8PSK, 16/32 APSK
Video Input Formats	HD/SD-SDI	HD/SD-SDI
Video Resolutions	HD & SD	HD & SD
High Definition	1080i, 1080p, 720p	1080i, 1080p, 720p
Standard Definition	720 x 480i (NTSC) 720 x 576i (PAL)	720 x 480i (NTSC) 720 x 576i (PAL)

Video Encoding Profile

	MPEG-2 H.264 HD/SD, 4:2:2/4:2:0	MPEG-2, H.264 HD/SD, 4:2:2/4:2:0
HD Encoding Rate @ 4:2:2 (MPEG-2)	8.0 to 30 Mbps	8.0 to 80 Mbps
HD Encoding Rate @ 4:2:0 (MPEG-2)	8.0 to 30 Mbps	8.0 to 80 Mbps
SD Encoding Rate @ 4:2:2 (MPEG-2)	2.0 to 50 Mbps	2.0 to 50 Mbps
SD Encoding Rate @ 4:2:0 (MPEG-2)	1.5 to 15 Mbps	1.5 to 15 Mbps
HD Encoding Rate @ 4:2:2 (H.264)	1.5 to 20 Mbps	1.5 to 20 Mbps
HD Encoding Rate @ 4:2:0 (H.264)	1.5 to 20 Mbps	
SD Encoding Rate @ 4:2:2 (H.264)	1.5 to 15 Mbps	
SD Encoding Rate @ 4:2:0 (H.264)	1.5 to 15 Mbps	1.5 to 15 Mbps

Audio Encoding

	2-analog stereo/4-mono AES/EBU (44 to 4 pairs embedded in SDI)	2-analog stereo/4-mono AES/EBU (Up to 2 pairs embedded in SDI)
Audio Input (Analog)	+8 dBm (avg.) @ 600 Ω bal.	+8 dBm (avg.) @ 600 Ω bal.
THD @ 1 KHz TT	<.1% to +18 dBm max.	<.1% to +18 dBm max.
S/N (Signal to Noise)	>66 db RMS	>66 db RMS
Frequency Response	.03-18 KHz ± 1.0 dB	0.03-18 KHz ± 1.0 dB
AES Input (digital)	1.0 V P/P @ 75 Ω unbalanced	1.0 V P/P @ 75 Ω unbalanced