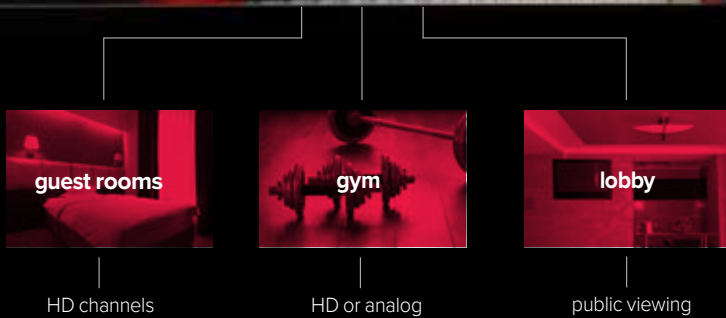


one small box – one big breakthrough



A brilliant new solution for the hospitality industry, the revolutionary SMARTBOX is designed for your entire property portfolio, delivering energy efficiency and flexibility while requiring less space.



### scalable

Smart and slightly bigger than a microwave.

Powerful enough to support any size property, the compact SMARTBOX converts up to 96 satellite-delivered TV channels into any in-hotel distribution network, including coaxial, ethernet and fiber. Simultaneously deliver HD into every guest room, encrypted channels into the lobby and HD or analog signals into the gym—all without complex wiring or bulky racks. The chassis is small enough to be wall-mounted.

### manageable

Enterprise-grade TV service management system.

SMARTBOX has integrated a wireless modem that connects to DISH's secure private backbone network. DISH system integrators will use the network for real-time system health monitoring and remote management. Hotel management can view a service dashboard to keep their guests up to date on TV services.

### adaptable

Install today. Thrive tomorrow.

SMARTBOX'S fluid technology is designed to evolve as the industry changes. The system can be easily reconfigured to meet future property expansions, system developments and network innovations with just the switch of a blade. The possibilities are virtually limitless.

### reliable

Guests will never know if a component fails.

SMARTBOX has been designed with Enterprise-grade components to reduce the likelihood of mechanical issues. Should mechanical issues occur, SMARTBOX'S 24/7 backups allow service to continue without disrupting your guests' TV experience.

### total cost of ownership

Economical meets energy efficient.

SMARTBOX requires less than 300 watts of power for a 40-channel HD lineup, consuming 90% less power than the current platform. The system also operates in temperatures up to 122°F, eliminating the need for expensive cooling systems.

Savings valid as of 2/24/14.



SMARTBOX priced

**50%**  
below satellite  
competition

consumes

**90%**  
less power than  
current platform\*

\* All comparisons as of 09/01/2014.

For more information, write us at [smartbox@dish.com](mailto:smartbox@dish.com)



**chassis**

Dimensions (H x W x D)	8.7 x 17.6 x 15.8
Line Voltage	90-264 VAC, 47-64 Hz
Power Consumption	MAX 1200W
Operating Temperature	0-50° C
Satellite Receiver Blade	1 to 12 blades
ATSC Receiver Blade	0 to 3 blades
QAM16/48/96 Blade	0 to 4 blades
NTSC Analog Blade	0 to 5 blades
Frequency Range	950-2150 MHz (Stacked LNB)
Input Level per Carrier	-65 to -25 dBm
Input Level Max. Aggregate	-25dBm
Return Loss	>15 dB
Impedance	75Ω
Connectors (4)	f-female
Connections (4)	RJ-45, GbE, Full Duplex, Auto-Neg
Addressing	Multicast
Transport Protocol	UDP/IP
Transport Format	SPTS
IP Management	HTTPS, TR-069
Local User Interface	Web Browser
Connector	SMA
Impedance	50Ω
RF Sensitivity	-105 dBm (Typical)
Maximum Output	+24 dBm (Typical)
CDMA EV-DO Rev A	800/1900 MHz - 3.1 Mb/s (forward link), 1.8 Mb/s (reverse link)
SMS	MT/MO PDU / Text mode

**satellite receiver blade**

Dimensions (H x W x D)	7.5 x 0.9 x 14.5
Power Consumption	30W (Typical)
Satellite Channels	8 transponders and/or 8 services
Modulation Rates	DVB-S: 1 to 45 Msps 1/2, 2/3, 3/4, 5/6, 7/8 DVB-S2: 5 to 33 Msps QPSK (S2): 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10 8PSK (S2): 3/5, 2/3, 3/4, 5/6, 8/9, 9/10 Turbo FEC: 2 to 30 Msps QPSK (Turbo): 1/2, 2/3, 3/4, 5/6, 7/8 8PSK (Turbo): 2/3, 3/4, 4/5, 5/6, 8/9
Acquisition Range	±5 MHz
Tuner Step Size	100 kHz

**QAM16/48/96 blade**

Dimensions (H x W x D)	7.5 x 0.9 x 14.0
Power Consumption	25W (Typical) 50W (Typical) 50W (Typical)
Output Connector	F-Female
Output Frequency	54-1002 MHz
QAM Carriers	16 48 96
Modulation	ITU-T J.83 Annex A (256QAM) ITU-T J.83B Annex B (256QAM)
QAM Symbol Rate	2.0 to 7.0 Msps
Output Channel Width	2.24 to 8.05 MHz
Interleaving	128/1 Annex B, 12/17 Annex A
Channel Plans	EIA, HRC, IRC, Manual
Output Frequency Accuracy	125 Hz
Baud Rate Accuracy	<10 ppm
Output Level	45 dBmV per channel effective pre-combined output power
Output Attenuation	0-10 dB (0.5 dB step)
Output Level Flatness	(54-864 MHz) ±1 dB, (54-1002 MHz) ±2 dB
Spurious	> 60 dBc (in 4MHz)
Output Impedance	75Ω
Output Return Loss	>11 dB

**NTSC analog blade**

Dimensions (H x W x D)	7.5 x 0.9 x 14.0
Power Consumption	70W (Typical)
Connector	F-Female
Maximum Number of NTSC Channels	24 video with monaural audio
Bandwidth per Channel	6 MHz
Frequency Range	120 to 552 MHz, 24 continuous channels
Band Plan	STD
Output Level 24 NTSC Channels	45 dBmV equivalent
Output Adjust Range	10 dB
Attenuation Steps Increment	0.5 dB
Output Impedance	75Ω
Output Return Loss In-Band	> 11 dB 120 to 552 MHz
RF Flatness Response	±1 dB 120 to 552 MHz
Carrier Frequency Stability	5 kHz Std channel
Audio/Video Ratio	15 ±5 dB

**ATSC receiver blade**

Dimensions (H x W x D)	7.5 x 0.9 x 14.0
Power Consumption	20W (Typical)
Connector	F-Female
ATSC Services	8 services from 8 carriers
Frequency Range	50-1002 MHz
Input Level Per Carrier	-83 to -5 dBm
Return Loss	>15 dB
Impedance	75Ω