

A Guide for Over-the-Air Digital TV in Sint Maarten

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Bureau Telecommunications and Post St. Maarten



Retailer Guide for Over-the-Air Digital TV Broadcasts

This guide produced by the Bureau of Telecommunications and Post of St. Maarten is designed to help you and your store personnel prepare for the transition from over-the-air (OTA) analog TV broadcasts to OTA digital TV broadcasts. In this guide we will provide you with essential information about the OTA digital TV system that has been adopted by the Bureau of Telecommunications and Post (BT&P), the types of receivers required to tune into the new broadcasts, and ways in which you can help your customers make informed decisions about new equipment to receive the clear pictures and sound that digital TV delivers.

The first section of this guide is for store owners and managers. It will provide you with some practical and technical information about the broadcasts, the types of TVs and other tuners that receive the broadcasts, and how you can find these new TVs and receivers for your stores. You'll also find a table that lists some TVs that work with the new system.

The second section is written to help you and the people who work in your store guide customers in making the right buying decisions when purchasing a new TV, set-top box (STB) or other type of OTA digital receiver. Here we offer you a simple explanation you can share with your customers on how to receive the new digital broadcasts. At the end is a Frequently Asked Questions (FAQ) section that anticipates some questions consumers may have when buying a new TV or other receiver.



Overview of the OTA Digital TV System

St. Maarten adopted the most widely deployed OTA digital TV transmission standard, Digital Video Broadcast – Terrestrial (DVB-T), for the transition to digital TV. This is important to know as receivers must be compatible with the DVB-T standard to receive the digital TV signals. DVB-T is a member of the DVB family of transmission technologies that bring digital satellite, cable and terrestrial transmissions to millions of digital TVs, STBs and other receivers around the world.

Although DVB-T is deployed in several world regions, the greatest numbers of DVB-T broadcasts occur in Europe. Closer to home, DVB-T is used by broadcasters in several South American and Caribbean countries. The technology has been widely used and optimized over a period of more than 12 years.



Within the DVB-T transmission standard there are a set of technical specifications that are important to know so consumers get the right receivers. Below is list of those key specifications:

- MPEG-2 video coding. MPEG-2 is a standard video compression technology that is used for digital video TV services and devices all over the world. Current OTA digital TV broadcasts in St. Maarten use this type of video compression. Some TVs and other receivers also include the MPEG-4 AVC video compression standard, which is the second-generation technology after MPEG-2. To date, all TVs and STBs that can play back programs encoded in MPEG-4 AVC can also play back programs encoded with the MPEG-2 standard.
- Analogue video and audio (Left & Right) using RCA connection (Composite AV - yellow, red, white) between STB and TV can be used for older TV sets without HDMI input.
- Antenna specifications. VHF and UHF antennas will work in most locations. Because the DVB-T system operates in the UHF band, a VHF antenna that is a long distance from the transmitter site may not receive the signal. In this case, (directional) UHF and/or an amplified antenna may be required. Although many of your customers will find they can receive the signal with an indoor antenna, there may be some instances where an outdoor antenna will be needed.
- Frequency range: (UHF) 470-698 MHz. Most digital receivers on the market today will tune up to 862 MHz. However, cut-off at 698 MHz is mandatory for STBs due to the Digital Dividend for new mobile applications.
- The STB shall be either FCC or CE approved in order to comply with local regulations.

On the island, there are broadcasters on the French side that are broadcasting OTA digital signals, as well as WTN on the Dutch side. Some broadcasters continue to transmit analog programs in the NTSC format.

There will be a transition period for other broadcasters to start broadcasting in the new digital format before they must stop broadcasting their analog channels. This gives broadcasters time to install the new broadcast equipment, make technical changes to their programs, and test the new system. For now, existing broadcasters that transmit a digital channel will continue to provide the analog channel so all residents will be able to watch all current free-to-air local channels with existing TVs or new TVs. Once the analog broadcasts cease, proposed to occur in January 2013, residents must have a DVB-T receiver to get local OTA channels.



TVs, STBs and Other Receivers

There are several ways in which viewers can receive the new digital channels. All require a new device (STB, TV, or PC tuner). To tune into the new digital channels, viewers can attach a DVB-T STB to their existing televisions. When purchasing a new television, however, viewers will want a TV set that can tune into both the analog channels and the digital channels. Because the local system works with a combination of NTSC analog transmissions and DVB-T digital transmissions, you will want to make this combination set available to your customers.

There are dozens of DVB-T STBs available on the market that will simply tune into the digital channels and display on an existing TV set. They are made by large and small STB suppliers such as Sagem, Samsung, ADB, and many others.

The table on the next page is a list of the some of the TV sets that will work with the local system.

Compliant Digital TVs

Compliant Digital TVs and Receivers			
Receiver	Suggested Retail (USD)	Main Features	Contact Information
IDTVs			
Guangzhou Souxin Appliances			
Guangzhou Souxin Appliances SX-2258	N/A	32-inch LCD TV, Full HD, HDMI	http://gzsouxin.en.alibaba.com

Hongdi Trade Co.			
Hongdi Trade Co. Seven Series Plasma	N/A	42-,46-, 50-, 63-inch plasma screen size available, 1 HDMI, 1 USB	http://hongdi2009.en.made-in-china.com

Huiguan Digital Technology			
Huiguan Digital Technology LC1618 Series	Wholesale: \$95/unit (1,950 unit min. order)	16-inch LCD TV	http://www.huiguan-kj.com
Huiguan Digital Technology LC3218A	Wholesale: \$279 (500 unit min order)	32-inch LCD TV (also available in 20-31-inch sizes),HDMI built to order	

LG			
LG 42LV4500	\$1,270	42-inch LED, 1HDMI, 1 USB	www.lg.com/tw
LG 47LV4500	\$1,790	47-inch LED, HDMI, 1 USB	
LG 55LW5700	\$3,200	55-inch LED, 3D, 4 HDMI, 1 USB	
LG 65LW6500	\$6,500	65-inch LED, 3D 4HDMI, 1 USB	
LG 47LW5700	\$2,280	47-inch LED, 3D, 4 HDMI, 1 USB	
LG 42LW5700	\$1,986	42-inch LED, 3D, 4HDMI, 1 USB	
LG 55LV5500	\$1,400	55-inch LED, HDMI, 1 USB	
LG 32LK330	\$350	32-inch LCD, HDMI, 1 USB	
LG 32LK450	\$399	32-inch LCD, HDMI, 1 USB	
LG 32LV2500	\$429	32-inch LED, 2 HDMI, 1 USB	
LG 32LV3500	\$649	32-inch LED, HDMI, USB	

Compliant Digital TVs and Receivers			
Receiver	Suggested Retail (USD)	Main Features	Contact Information
IDTVs			
LG			
LG 37LK450	\$539	37-inch LCD, HDMI, 1 USB	www.lg.com/tw
LG 37LV3500	\$812	37-inch LED, 2 HDMI, 1 USB	
LG 42LK450	\$630	42-inch LCD, 1 HDMI, 1 USB	
LG 42LV3500	\$975	42-inch LED, 1 HDMI, 1 USB	
LG 32LE4300	\$649	32-inch LED, 3 HDMI, 1 USB	
LG 42LE4300	\$1,008	42-inch LED, 3 HDMI, 1 USB	
LG 47LE4500	\$1,628	47-inch LED, 3 HDMI, 1 USB	
LG 55LE4500	\$2,117	55-inch LED, 3 HDMI, 1 USB	
LG 22LE5300	\$323	22-inch LED, 2 HDMI, 1 USB	
LG 26LE5300	\$486	26-inch LED, 2 HDMI, 1 USB	
LG 42LE8500	\$1,856	42-inch LED, 1 HDMI, 1 USB	
LG 47LD650	\$1,562	47-inch LCD, 1 HDMI, 1 USB	
LG 47LE8500	\$2,933	47-inch LED, 1 HDMI, 1 USB	
LG 55LD650	\$1,987	55-inch LCD, 1 HDMI, 1 USB	
LG 32LE5500	\$812	32-inch LED, 1 HDMI, 1 USB	
LG 42LE5500	\$1,138	42-inch LED, 1 HDMI, 1 USB	
LG 55LE5500	\$2,443	55-inch LED, 1 HDMI, 1 USB	

Panasonic			
Panasonic TX-P50C10	N/A	50-inch plasma; full HD, 2 HDMI	

Compliant Digital TVs and Receivers			
Receiver	Suggested Retail (USD)	Main Features	Contact Information
IDTVs			
Samsung			
Samsung UA60D8000YM	\$4,898	60-inch LCD, 3D, 4 HDMI 1.4, 3 USB,	www.samsung.com/tw
Samsung UA55D8000YM	\$3,275	55-inch LCD, 3D, 4 HDMI 1.4, 3 USB	
Samsung UA46D8000YM	\$2,000~ \$3,200	46-inch LCD, 3D, 4 HDMI 1.4, 3 USB,	
Samsung UA55D6600WM	\$2,000~ \$3,200	55-inch LCD, 3D, 4 HDMI 1.4, 3 USB	
Samsung UA46D6600WM	\$2,000~ \$3,200	46-inch LCD, 4HDMI, 3 USB,	
Samsung UA46D6400UM	\$1,000~ \$2,000	46-inch LCD, 4HDMI, 3 USB,	
Samsung UA40D6400UM	\$1,000~ \$2,000	40-inch LCD, 4HDMI, 3 USB	
Samsung UA55D6000SM	\$1,000~ \$2,000	55-inch LCD, 4HDMI, 3 USB	
Samsung UA46D6000SM	\$1,000~ \$2,000	46-inch LCD, 4HDMI, 3 USB,	
Samsung UA40D6000SM	\$1,000~ \$2,000	40-inch LCD, 3D, 4 HDMI, 3 USB	
Samsung UA32D6000SM	\$1,000~ \$2,000	32-inch, 3D, 4 HDMI, 3 USB	
Samsung UA40D5550RM	\$1,000~ \$2,000	40-inch, 4 HDMI, 2 USB	
Samsung UA32D5550RM	>\$1,000	32-inch, 4 HDMI, 2 USB	
Samsung LA40C650L1M	\$1,000~ \$2,000	40-inch LCD, 4 HDMI, 2 USB	

Sharp			
Sharp AQUOS LC-60LX1T	N/A	60-inch LED, 3D, HDMI, USB	www.sharp-scot.com.tw
Sharp AQUOS LC-52LX1T	N/A	52-inch LED, 4 HDMI, USB	
Sharp AQUOS LC-46LX1T	N/A	46-inch LED, 4 HDMI, USB	
Sharp AQUOS LC-40LX1T	N/A	40-inch LED, HDMI, USB	
Sharp AQUOS LC-46AE6T	N/A	46-inch LCD, 3 HDMI, USB	
Sharp LC-60XF3DT	\$4,250	60-inch LED, 3D, 4 HDMI, USB	

Compliant Digital TVs and Receivers			
Receiver	Suggested Retail (USD)	Main Features	Contact Information
IDTVs			
Sony			
Sony KDL-46EX727	\$1,273	46-inch LED LCD, 4 HDMI, 1 USB	www.sony.com.co
Sony KDL-32EX727	\$815	32-inch LED LCD, 4 HDMI, 1 USB	
Sony KDL-40EX527	\$856	40-inch LED LCD, 4 HDMI, 1 USB	
Sony KDL-32EX527	\$662	32-inch LED LCD, 4 HDMI, 1 USB	
Sony KDL-32EX427	\$560	32-inch LED LCD, 4 HDMI, 1 USB	
Sony KDL-40CX527	\$763	40-inch LCD, 4 HDMI, 1 USB	
Sony KDL-22BX327	\$305	22-inch LCD, 4 HDMI, 1 USB	
Sony KDL-32BX327	\$407	32-inch LCD, 4 HDMI, 1 USB	
Sony KDL-32BX328	N/A	32-inch LCD, 4 HDMI, 1 USB	
Sony KDL-32BX427	\$458	32-inch LCD, 4 HDMI, 1 USB	
Sony KDL-32CX527	\$560	32-inch LCD, 4 HDMI, 1 USB	
Sony KDL-32EX727	\$825	32-inch LCD, 4 HDMI, 1 USB	
Sony KDL-40BX427	\$610	40-inch LCD, 4 HDMI, 1 USB	
Sony KDL-40NX727	\$1,273	40-inch LCD Edge LED, 4 HDMI 1 USB	
Sony KDL-46EX527	\$1,121	46-inch LCD Edge LED, 4 HDMI, 1 USB	
Sony KDL-46NX727	\$1,782	46-inch LCD Edge LED, Full HD, DLNA network, USB, media player	
Sony KDL-55EX727	\$2,550	55-inch LCD Edge LED, Full HD, DLNA, USB, media player	

Compliant Digital TVs and Receivers			
Receiver	Suggested Retail (USD)	Main Features	Contact Information
IDTVs			
Viewsonic			
Viewsonic VT4250	\$730	42-inch LED, 3 HDMI, 2 USB	www.viewsonic.com.tw
Viewsonic VT2230	\$255	22-inch LCD, 1 HDMI	
Viewsonic VT4276-NT	\$783	42-inch LCD, 2 HDMI, 1 USB	
Viewsonic VT3276-NT	\$589	31.5-inch LCD, 2 HDMI, 1 USB	
Viewsonic VT3776-NT	\$771	37-inch LCD, 2 HDMI, 1 USB	
Viewsonic VT3745-NT	\$594	37-inch LCD, 2 HDMI, 1 USB	
Viewsonic VT3245-NT	\$490	31.5-inch LCD, 2 HDMI, 1 USB	
Viewsonic VT3252	N/A	32-inch LCD, 4 HDMI, 1 USB	
Viewsonic VT3250	\$486	32-inch LED, 3 HDMI, 2 USB	
Viewsonic VT3235	\$466	32-inch LED, 2 HDMI, 2 USB	
Viewsonic VT4235	\$747	42-inch LED, 2 HDMI, 2 USB	

Retail prices are shown in USD. Some of these prices have been converted from other currencies.

The table below lists some distributors that service the Caribbean.

Distributors		
Name	URL	Phone Number
Brooke Distributors	http://brookedist.com/index.asp	800-275-8792
D&H Distributing	www.dandh.com	800-340-1001
Jair Corporation	www.jaircorp.com	305-594-7361
Jahm International	www.jham.com	305-591-5800
New Age Inc.	www.newageinc.com	800-947-5974
Precision Trading	www.precisiontrading.com	305-592-4500
SED International	www.sedonline.com	800-444-8962
Suma Distributors	www.sumadistributors.com	305-470-9429



Helping Customers Prepare for New Digital TV Broadcasts

Because TV viewers have been used to the current TV system for many years, most will need guidance when deciding on what kind of equipment to buy to receive OTA digital channels. Here are the basic and simple facts that consumers should know. Below this explanation is a FAQ section that provides more detailed information.

- The BT&P has adopted a new TV standard that allows you to view local TV channels in high-quality digital pictures and sound. Some broadcasters are already making the digital channels available and others are preparing to make them available soon.
- To receive the new OTA digital channels, viewers must acquire a new receiver. It can be a STB that connects to an existing TV or it can be a new TV that has an integrated DVB-T receiver inside. All compatible STBs and TVs will have a visible DVB-T logo.
- To receive both analog and digital channels on a new TV set, viewers will need a TV that has both an analog (NTSC) and digital TV (DVB-T) receiver built inside the TV set.
- Viewers can continue to watch all existing OTA TV channels with their existing equipment until local broadcasters stop analog broadcast in the future.



Frequently Asked Questions (FAQ)

Q. How do I get the new OTA digital channels?

A. Because the digital channels use different technology than that of the current analog channels, you will need a new receiver (STB or TV) to get the digital channels. You will also need an antenna attached to your new STB or TV.

Q. Why should I want to get the OTA digital channels?

A. Digital TV offers much sharper pictures and sound than is possible with analog TV. Because more picture and sound “information” can be squeezed into a single channel, the TV set displays the picture in a higher resolution resulting in clearer pictures similar to that of DVDs or Blu-ray discs. When broadcasters use all of their capacity to transmit a digital program, viewers with HD receivers and displays get the highest-resolution sound and picture available.

With digital, a broadcaster may also choose to broadcast more than one channel in the same amount of space that it is now using for its analog channel. Eventually, viewers may have access to a greater number of channels.

There are some important differences between how the TV receives a digital signal and how it receives an analog signal. With analog TV you may receive some channels that don't display as clear of a picture as others, but you can still watch these channels if you don't mind some picture degradation (snowy picture, ghosting and noisy audio). You won't see or hear these things when you receive a digital channel. But, if your antenna isn't powerful enough, or you are far away from the TV transmitter, you may experience a "cliff effect." Because digital TV speaks the precise language of ones and zeros, your TV/STB won't tune into the station if the signal isn't strong enough. In other words, in those cases there will be no picture, or there may be a picture but it may eventually "fall off the cliff" if the signal fades. In most cases this problem can be solved with a more robust antenna. Antennas are available at your local retailer.

Q. Will I be able to watch *all* of my favorite local TV programs?

A. Yes. TV stations that send out a digital channel are showing all the same programs at the same time as on their analog channel. For TV stations that haven't started a new digital channel, nothing has changed and their programs remain the same. If you have a new digital receiver the only difference you will notice is that some channels will have improved pictures and sound, and you may have some new channels you didn't have before getting the new receiver.

Q. Do I have to buy a new TV or a set-top box?

A. For now, you only need to buy a new DVB-T TV or STB if you want to receive the digital channels. You can continue to watch all your TV channels with your existing TV because all broadcasters are continuing to transmit their programs on their analog channel. But in the distant future the broadcasters will stop transmitting their programs with analog technology and will only broadcast digitally. If you want to keep watching all your local TV channels, you will need a new DVB-T digital TV or STB when that happens.

Q. What do I do if I want to watch the digital channels and the analog channels?

A. You have two choices. You can purchase a STB that receives the digital channels and connect it to your existing TV, which already receives all the analog channels. Or, you can buy a new digital TV that can receive the analog (NTSC) and digital (DVB-T) channels. For this option, no STB is required.

Q. How much will a digital STB, TV or other receivers cost?

A. A digital STB that connects to your existing TV will cost anywhere from about (US) \$50 to \$150 for a box with extra features.

IDTV costs will vary based on the size and type of the display, the brand, and other features such as HD or 3D capability. Prices can be as low as about \$250 and as high as about \$2,000.

There are also aftermarket PC tuners that will work with the new TV system and cost as little as about \$60 and as much as \$200 and can be connected to a PC with a USB port and sufficient processing power.

Q. If I'm now getting my TV channels using an antenna, do I need to buy a new antenna to get the digital channels? If I do need a new antenna, how do I know what I need?

A. In most cases an existing outdoor antenna will receive the digital channels and you won't need to replace the antenna. If you are a long way from the transmitter site it's possible that you may need to replace your existing antenna. In that case, a (directional) UHF antenna may be the best choice to make.

Digital channels can be received on indoor antennas, as well. As with outdoor antennas, your existing indoor antenna may work, but if you are having reception difficulties a roof top (directional) UHF antenna may be necessary.

A variety of antennas with different features and technology can be found on the market, including (adjustable) active gain antennas for indoor and outdoor use.

Q. How do I hook up my digital STB?

A. Connecting your digital STB is relatively simple, but each hook-up will be different depending upon which kind of STB you buy. All will come with instructions on how to connect the box to your TV and retail store personnel can also advise you on installation.

