FREQUENTLY ASKED QUESTIONS (FAQ’s) ON DIGITAL TERRESTRIAL TELEVISION (DTT) MIGRATION

The information on transition from analogue to digital terrestrial television broadcasting in Ghana has been structured into three (3) sections as follows:

(A) Digital Broadcasting Migration (Process):
1. What is migration from Analogue Television to Digital Television Broadcasting?
2. Why is digital broadcasting migration happening?
3. What are the Benefits to the consumer?
4. Why should Ghana migrate?
5. When would the migration take place in Ghana?
6. Are we on course?
7. How would it affect the individual?
8. Has digital migration been done anywhere?

(B) Digital Broadcasting Migration (Technology):
9. What is the difference between Analogue TV and Digital TV?
10. What is Digital Terrestrial Television (DTT)?
11. Will I need to buy a new TV to receive DTT?
12. What equipment will be required to receive digital television?
13. What is an integrated digital television receiver (idTV)?
14. What is a Set Top Box?
15. What is the cost of a Set Top Box?
16. Are there Set-Top Boxes in the market, and if so where? How do I establish if the Set Top Box is an approved one?
17. Will I need a new antenna to receive DTT?
18. What is the difference between terrestrial television and satellite television?
19. Do I need a Set Top Box to receive DTT if I have a DSTV or a Multi TV decoder?
20. If I have five TV Sets in my house, will I need five Set Top Boxes?
21. How do I establish if the Set Top Box is an approved one?
22. What is a High Definition television (HDTV)?
23. Do I need a High Definition TV for the switchover to DTT?
24. How does the SDTV compare to HDTV?
25. What is DVB-T2?

(C) Digital Broadcasting Migration (Reception Issues/ Consumer Concerns):
26. How is the Set Top Box installed?
27. Do I still need to use my TV aerial when I acquire a Set Top Box?
28. What happens if a consumer is unable to acquire a Set Top Box or a DVB-T2 digital TV at the time of digital switchover?
29. If I am a DSTV Subscriber, what do I need to do?
30. There is a variety of Flat screen TV sets on the market, how do I establish which ones are approved?
31. Should someone using a computer with TV card buy a Set Top Box?
32. Would there be any provision to restrict or block viewing of indecency in my house using the TV remote control?
33. Can my Set-Top Box receive DSTV programmes?
34. Can my flat screen TV receive the digital signal without the Set-Top Box?
35. If I have an integrated TV set or a Set-Top Box from America or Japan will it work with the platform?
36. I have connected my Set-Top Box but, I can only receive sound and pictures that freezes then disappears, what could be the problem?
37. Where can I contact if I need help?
(A) Digital Broadcasting Migration (Process):

1. **What is migration from Analogue Television to Digital Television Broadcasting?**
   Migration from analogue to digital broadcasting refers to the process in which television services operating on analogue networks are transferred to digital based transmission networks over a period of time. At the end of the process the analogue transmitters are switched off.

   The TV stations that are currently operating analogue networks are GTV, TV3, Metro TV, TV Africa, Crystal TV, Viasat 1, E-TV Ghana, Viasat-1, Net-2 TV, Top TV, UTV, Coastal TV, Cardinal TV, Light TV and Kantanka TV. All these stations would be transmitted in digital form in the migration.

2. **Why is digital broadcasting migration happening?**
   The world is migrating to digital to offer more programmes, more services, improved quality and to improve spectrum and energy efficiencies.

3. **What are the Benefits to the consumer?**
   - More stations on your TV
   - Crystall clear sound and pictures
   - Better TV reception
   - More programme information services

4. **Why should Ghana migrate?**
   Ghana and other members of the International Telecommunications Union (ITU) signed an agreement in Geneva in 2006, setting 17th June, 2015 as the deadline for all countries in Africa, Europe and Middle East as well as Russia to migrate to digital terrestrial television broadcasting technology in the Ultra High Frequency (UHF) Band. The Agreement set 17th June, 2020 as the deadline for the Very High Frequency (VHF) Band. It is, therefore, mandatory for Ghana and the other countries in the areas specified to migrate.

   Also, Ghana should migrate to ensure that broadcasting services are protected from interference from neighboring countries and to provide improved services.

   The migration would also bring the benefits of digital broadcasting to Ghanaian TV
viewers and broadcasters.

Finally the migration would result in the release of some valuable spectrum currently used for analogue TV broadcasting for the provision of mobile broadband services.

5. **When would the migration take place in Ghana?**
The roll out of Digital Terrestrial Television (DTT) platform for migration would happen in three (3) phases as follows:

- **Phase 1**: Greater Accra and Ashanti Regions by November 2015
- **Phase 2**: Volta, Northern, Upper East and Upper West Regions by January 2016.
- **Phase 3**: Western, Central, Eastern and Brong Ahafo Regions by April 2016.

After the rollout of Free-to-Air (FTA) DTT services across the country, one year would be allowed for consumers to acquire digital TV receiving apparatus (i.e. Set-Top-Box decoders or integrated Digital TV sets) before the analogue television services are switched off to complete the migration.

6. **Are we on course?**
We missed the deadline for the UHF Band i.e. 17th June, 2015. However, with the three phase network roll out would ensure that we migrate ahead of the 17th June, 2020 deadline for the VHF band.

7. **How would digital broadcasting migration affect the individual?**
Analogue TV sets cannot receive digital TV signals directly. However, an intermediary device popularly called Set-Top Boxes (STBs) or decoders can be installed to enable TV viewers to watch digital TV services on their current analogue TV sets. Alternatively, integrated digital TV sets (iDTVs) could also be used to receive digital TV services.

Therefore, when digital TV services become available in your area, the individual or the household has to acquire a Set-Top Box to connect to their existing analogue TV in order to receive the TV services in digital form.

The alternative is to buy a digital television set which is able to receive digital signals directly from an antenna.
Both Set Top Box and integrated Digital TV should conform to Ghana’s DTT Receiver standard. Conformance to Ghana’s DTT standard is marked by the ‘Digital Ghana’ logo affixed on the receiver. The list of approved DTT receivers is published on the DTT Receivers Page on the website of the National Communications Authority (http://nca.org.gh/72/45/Digital-Switchover-Project.html)

8. Has digital migration been done anywhere?
The United States of America completed digital migration in 2009 and most countries in Europe completed digital migration by 2012. A few African countries including Rwanda and Tanzania have also migrated.

(B) Digital Broadcasting Migration (Technology):

9. What is the difference between Analogue TV and Digital TV?
Analogue and digital television differ in the way the information is carried from the transmitting end to the receiver. In simple terms, in analogue broadcasting the signal is in the form of a continuous wave, whereas digital is in the form of discrete bits of information.

In digital, the signal is encoded and can be compressed to allow for more channels to be broadcast. For instance, twenty channels in the standard format (standard definition format) can be provided in a single frequency allocation compared to only one channel provided in analogue mode.

10. What is Digital Terrestrial Television (DTT)?
Digital Terrestrial Television is a television broadcast over ground based digital
transmission systems and received within the coverage area with an antenna.

11. **Will I need to buy a new TV to receive DTT?**
You do not need to buy a new TV if you already have an analogue TV. With an existing analogue TV Set, you will need to buy an approved Set Top Box that complies with Ghana's DTT Receiver standard and has the ‘Digital Ghana’ conformance logo and you would be able to receive digital transmission.

Do ensure that the Set Top Box you buy has the ‘Digital Ghana’ conformance logo as indicated below:

![Digital Ghana HD Logo](image1.png) ![Digital Ghana SD Logo](image2.png)

**Figure 1:** HD Logo for receivers that supports both High Definition (HD) and Standard Definition (SD). Applies to both TV sets and STBs

**Figure 2:** SD Logo for receivers that supports only Standard Definition (SD). Applies only to STBs

12. **What equipment will be required to receive digital television?**
You either need an Integrated Digital Television (which has an inbuilt digital tuner) together with a UHF antenna or an analogue TV set together with a Set Top Box and a UHF antenna.

13. **What is an integrated digital television receiver (iDTV)?**
IDTV is a television set which contains all the components necessary to receive and display digital transmissions. Integrated digital television receivers have inbuilt digital TV tuners (for our case DVB-T2) and hence does not require a digital Set Top Box. Consumers should be careful not to make wrong choices thinking that all Flat screen TVs are iDTVs. Look for the ‘Digital Ghana’ conformance logo when buying an iDTV.

Again, remember that not all Flat screen TVs are iDTVs or are DTT compliant.

14. **What is a Set Top Box?**
A Set Top Box is a unit that receives the digital TV signal captured over the air by an antenna and decodes or converts the digital signal into a format that can be understood and displayed by an analogue TV.
15. What is the difference between terrestrial television and satellite television?
Terrestrial television is the television broadcast service where ground based television transmitters send out broadcast as radiowaves which are picked up by an antenna whereas satellite television broadcasts over satellite and picked up by a satellite dish.

16. Do I need a Set Top Box to receive DTT if I have a DSTV, myTV or a Multi TV decoder?
DSTV and Multi TV decoders are fed from satellite dishes and can only receive satellite transmission. You need a UHF antenna and a DTT Set Top Box to receive the digital terrestrial TV transmission. There would be Combo Set-Top Boxes that may support both satellite and terrestrial services. However, you will still require a dish antenna and UHF antenna to be connected to the combo STB.

17. If I have five TV Sets in my house, will I need five Set Top Boxes?
This will depend on how you would want to operate the TV Sets. It is possible to feed all sets from one Set Top Box but they will all show the same programme that is selected. For the TV Set to show different programmes, each TV Set should be connected to a separate Set Top Box.

18. How do I establish if the Set Top Box is an approved one?
Look out for the ‘Digital Ghana’ conformance Logo which certifies approved receiving systems.

The logos are:

Figure 1: HD Logo for receivers that supports both High Definition (HD) and Standard Definition (SD). Applies to both TV sets and STBs
Figure 2: SD Logo for receivers that supports only Standard Definition (SD). Applies only to STBs
19. **What is a High Definition television (HDTV)?**
High Definition Television (HDTV) is a television whose display resolution is higher than that of standard definition TV, offering high picture resolution and enhanced sound quality.

20. **Do I need a High Definition (HD) TV for the switchover to DTT?**
No. The existing analogue TV stations would be transmitting in Standard Definition (SD). However, the Ghana DTT Receiver standard makes it mandatory for all integrated digital TV sets to support High Definition. The Set-Top Box may support only SD or both SD and HD.

21. **How does the SDTV compare to HDTV?**
The difference can be seen based on the content. HDTV provides a sharper and more detailed picture/video than SDTV, because in HDTV, more lines and pixels are used to scan the picture.

22. **What is DVB-T2?**
DVB-T2 is an abbreviation for Digital Video Broadcasting – Second Generation Terrestrial. It is the enhancement of the television standard DVB-T2, used for the digital TV broadcast transmission in Africa, Europe and Middle East. It is a suitable system for carrying more SDTV, HDTV, mobile TV and other multimedia signals on the terrestrial TV channel.

**(C) Digital Broadcasting Migration (Reception Issues/ Consumer Concerns):**

23. **What is the cost of a Set Top Box?**
The Set-Top Box market is liberalized as far as it conforms to the national DTT Receiver specification. The prices would be competitively set by the market.

24. **Are there Set Top Boxes in the market, and if so where? How do I establish if the Set Top Box is an approved one?**
Yes, there are. Kindly visit the link below on the website of the National Communications Authority for the list of approved DTT receivers: [http://nca.org.gh/72/45/Digital-Switchover-Project.html](http://nca.org.gh/72/45/Digital-Switchover-Project.html)
25. **Will I need a new antenna to receive DTT?**
To receive DTT, one needs a UHF antenna. Satellite dishes are not required. In most cases, existing UHF antennas currently used to receive analogue TV will be adequate to receive digital television transmissions so long as they are in good condition and are properly installed. They work better if installed on the rooftop where obstruction is limited.

26. **How is the Set Top Box installed?**
Setting up a Set-Top Box is a simple process similar to connecting a DVD player to your TV Set. Just follow the instructions given in the user manual and enjoy digital services.

27. **Do I still need to use my TV aerial when I acquire a Set Top Box?**
Yes, you still need an antenna in order to be able to capture the digital TV signal in the air. The cable from the antenna will need to be plugged into the Set Top Box for it to receive the DTT signal. Since DTT will be rolled out in the UHF band, viewers who have been using VHF TV antenna will need to acquire a UHF antenna and point it in the direction of the DTT transmitter in order to obtain a clear signal.

Information shall be provided on continual basis regarding which direction viewers in particular areas need to point their antenna in order to receive good signal, as the service becomes available in those areas.

28. **What happens if a consumer is unable to acquire a Set Top Box or a DVB-T2 digital TV at the time of digital switchover?**
After digital switchover, analogue transmitters will be switched off and analogue sets would be unable to receive television programmes without a Set Top Box. Therefore
if a consumer is unable to acquire a Set Top Box or an integrated digital TV he/she cannot access TV programmes.

29. **If I am a DSTV or myTVSubscriber, what do I need to do?**
As a DSTV or myTVSubscriber you have a DSTV or myTV satellite dish and a DSTV or myTVdecoder duly installed. And you should have a valid subscription to view DSTV or myTV programmes on your TV set.

In the case of DTT, you need a certified digital set top box and a UHF TV aerial. The aerial should be connected to the STB and the STB connected to the same TV set to which your DSTV or myTV decoder is connected to or another. You would not be able to view the two at the same time if the two decoders are connected to the same TV Set. You would have to switch between the services using the input button on your TV remote control. On some TV remote controls, the input button is labeled ‘SOURCE’.

30. **There is a variety of Flat screen TV sets on the market, how do I establish which ones are approved?**
Approved Flat screen TV sets would be identified with the ‘Digital Ghana’ Logo in the various shops. Look out for the conformance Logo that certifies an approved TV Set. Once again, remember that not all Flat screen TVs are iDTVs or are DTT compliant.

31. **Should someone using a computer with TV card buy a Set Top Box?**
If you are using a TV card to receive programmes from the existing TV stations, it means that the TV card has an analogue TV tuner. In this regard, you will not be able to receive digital signal on your computer. What you need then is a DVB T2 MPEG4 TV tuner card (together with the relevant software) otherwise if you have to continue using your current analogue TV card, then you will need to have a Set Top Box as well (to convert the digital signal into analogue for your card to understand) in order to receive the digital signal on your computer.

32. **Would there be any provision to restrict or block viewing of indecency in my house using the TV remote control?**
Set Top Boxes include parental control in which case certain channels can be programmed to be accessible only by inputting a password using the remote control.
33. Can my DTT set-top box receive DSTV programmes?
No. The Set-Top Box only receives TV programmes transmitted from the digital terrestrial transmitters. DSTV programmes are received from satellite, hence you need a DSTV decoder and satellite dish.

34. Can my flat screen TV receive the digital signal without the Set-Top Box?
The flat screen TV would receive only if it is an integrated TV receiver with an inbuilt digital decoder that complies with Ghana’s DTT Receiver specification. As mentioned earlier, not all Flat screen TVs are iDTVs or are DTT compliant.

35. If I have an integrated TV set or a set-top box from America or Japan will it work with the platform?
No. It is not likely to work. The Ghana Digital platform is a DVB-T2 system. The ATSC system from America and ISDBT system from Japan are not compatible with it.

36. I have connected my Set-Top Box, but I can only receive sound and pictures that freezes then disappears, what could be the problem?
The level of the digital signal you are receiving is very low. You may need to improve your antenna system by using a booster or increasing the height of the antenna and ensuring it is pointing in the correct direction where the digital signal is being transmitted from.

37. Where can I contact if I need help?
A secretariat to specifically deal with consumer queries regarding digital broadcasting has been established at NCA and can be reached by telephone, email, or face to face visits. All enquiries shall be promptly addressed.

   Telephone: 0302 771701 / 030 7011419
   Email: info@nca.org.gh or complaints@nca.org.gh

A major consumer education (through print, electronic media, road shows, etc.) is to be launched to run in tandem with the roll out of the digital TV network. The necessary budgets have been secured and campaigns will commence once other related logistics are finalized. Campaigns would be intensified in sync with the pace of digital network roll out.
Greater Accra and Ashanti Regions by November 2015
Volta, Northern, Upper East and Upper West Regions by January 2016
Western, Central, Eastern and Brong Ahafo Regions by April 2016
For Further Enquiries Contact:

• National Communications Authority,
  1st Rangoon Close,
  P.O. Box CT 1568, Cantonments, Accra
  Tel: 030 – 701 – 1419
  E-mail: complaints@nca.org.gh
  Website: www.nca.org.gh

Or the Nearest NCA Offices in the following Regional Areas

• Bolgatanga Office
  National Communications Authority,
  H/No ZB 70, Zorbisi Estates
  Private Mail Bag, Bolgatanga,
  Upper East Region
  Tel: +233 - (0)382 - 021141
  E-mail: complaints.bolgatanga@nca.org.gh

• Ho Office
  National Communications Authority,
  H/No A6/29, Stadium Road
  P. O. Box HP1576, Ho,
  Volta Region
  Tel: +233 - (0)36-2026375/2026339
  E-Mail: complaints.ho@nca.org.gh

• Koforidua Office
  National Communications Authority,
  Nico Annan’s Plaza
  Private Mail Bag, Koforidua,
  Eastern Region
  Tel: +233 - (0)03420- 28378/ 28380/ 28382
  E-Mail: complaints.koforidua@nca.org.gh

• Kumasi Office
  National Communications Authority,
  H/No 99, Adum
  P.O. Box KS 10768, Kumasi,
  Ashanti Region, Ghana
  Tel: + 233(0)3220-20014/ (0)3220-20018/
  (0)3220-20019
  E-Mail: complaints.kumasi@nca.org.gh

• Sunyani Office
  National Communications Authority,
  Plot No 83/D Peakwase
  P. O. Box SY125, Sunyani,
  BrongAhafo Region
  Tel: 233(0)352-027564
  E-Mail: complaints.sunyani@nca.org.gh

• Takoradi Office
  National Communications Authority,
  Chapel Hill
  P.O. Box SL 409, Sekondi,
  Western Region, Ghana
  Tel: +233 (0)3120-28073/ (0)3120-28049
  Fax: +233 (0)3120-28063
  E-Mail: complaints.takoradi@nca.org.gh

• Tamale Office
  National Communications Authority,
  Watherson Residential Area
  P.O. Box TL 1590, Tamale,
  Northern Region, Ghana
  Tel: + 233-(0)37-2028105/ (0)37-0208104
  E-Mail: complaints.tamale@nca.org.gh