

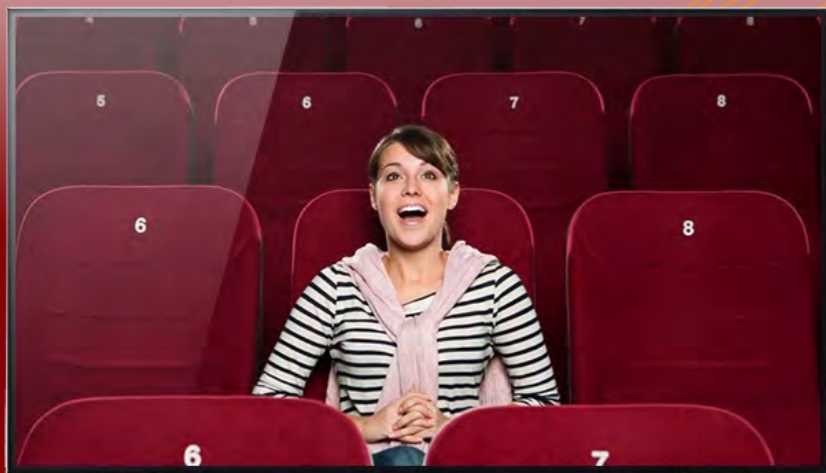


# Broadband Telephone & TV

Via Sanuk System's telephone network you can make and receive cheap phone calls to the rest of the world. The telephone can be used for internal and optionally external calls with cheap rates to the whole world. It is also possible to call to your telephones via toll-free numbers in many countries. Each phone has a unique extension number. You can call other phones in the area on their extension numbers free of charge.

It is possible to call your extension from an ordinary phone via an automatic exchange. The person calling the exchange will be asked to press your extension number to connect the call.

As of today Sanuk Systems has direct numbers from Sweden, Norway and Finland. It is also possible to get a personal direct-dial number of your choice for your extension.



**GrandBlue**  
resort & beachclub

**LOTUSWELL**  
Resort

# Multimedia solution for compounds, condo complexes and hotels

Sanuk Systems provide a business grade internet connection in Mae Phim and Hua Hin where we scale the speed to fit the users. Business grade means that we can route the outgoing connection to get the best performance. We can also provide a "stand alone" solution for compounds, condo complexes and hotels outside our base areas.

For foreigners in Thailand the speed of internet is of the essence. Many need to be in contact with their jobs, follow TV shows, listening to radio and read news. The speed from Thailand can vary and is seldom constant.

## Why is the internet slow and what can I do about it?

At first we have to look at the physical options for sending information to and from Europe from Thailand. If you access international websites, keep in mind that the signals must travel with the speed of light from Thailand to the destination and back again for each page. This causes a delay which to Europe and America is between 0.25-0.35 seconds depending on destination and route. As a normal server sends 64 KB data before waiting for an acknowledgement from the client, you can therefore receive a maximum of  $64 / 0.25 = 256$  KB per second. This easily adds up to several seconds when you for instance open a newspaper with many pictures on the front page.

So it is the distance, not your line capacity that is the reason behind that it is physically impossible to transfer data from other continents faster than  $256 \times 8 / 1024 = 2$  Mbps.

Modern browsers can use simultaneous streams and thus give you higher speed. Note that there must be available streams as the speed is dependent on the total use of available international bandwidth from your provider. Look at it like a freeway with many lanes. If you are alone you can use the whole road and drive very fast. The more cars (users) that comes on, the slower it gets. If you and 9 others in your compound are streaming the same channel live TV, each in their own box, the compound is using 10 streams instead of sharing one stream. It is a significant difference in bandwidth use.

Sanuk Systems scalable solution fits areas from 25 houses up to condo complexes or resorts with hundreds of users with functions such as Internet, IPTV,

streamed TV, IP telephony, CCTV and more. Through our TV portal we provide around 60 international TV channels in many languages that are shared among the users. There are a number of devices that can be attached and used in the local network, from CCTV cameras to private hard drives and other HDMI devices. Your compound own the network and everything within is distributed at a speed of 1 Gigabit per second (= 1000 Mbps)

The TV portal, developed by Sanuk Systems, runs in a local TV box connected by cable or Wi-Fi. The box allows you to play media from your local USB disk and also connect your sound system through the S/PDIF connection. The remote can also be configured to control other devices.

Owning your own network gives you full control over the connections, not a bunch of cables everywhere and you can distribute your own packages locally. With Sanuk Systems media solution you do not have to share connection with hundreds of others and will be routed the fastest way out of Thailand. The local options are also a big advantage. You can have CCTV cameras that are available for the members or to show on your website. You can share media within your private networks, distribute information in your local TV channel and more.

As of lately, Sanuk Systems has installed a private network for 170 homes at Lotuswell resort in Hua Hin, as well as a complete network for the brand new GrandBlue Resort and Condo in Mae Phim.



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