

Wireless SmartWi PayTV in Every Room

Who isn't familiar with this problem? The PayTV card is installed in the receiver in the living room yet here you are now in the evening looking to watch that one movie in your bedroom. Or maybe it's Junior complaining that he can't watch PayTV in his own room. Up until now there were three more or less practical solutions to this problem: either you routed coax cable throughout the house thereby building your own little cable network or you used small transmitters that sent the signal to every room. The problem with these solutions is still the same: only one channel can be received on every TV. For the more desperate viewers there is still the third option: setting up multiple PayTV subscriptions. For most users though, this is not a realistic alternative.

Engineers at the Danish company SmartWi thought that there had to be a better way and ultimately came up with a viable and simple solution. The PayTV card is inserted into an external card reader that also doubles as a transmitter. In the receiver are inserted special SmartCards that also act as receivers themselves. If you want to watch a PayTV channel, the necessary key is requested from the reception card via the receiver. The card transmits the request to the card reader con-

taining the original card and receives the valid keys transmitted back from the card reader in only milliseconds. And there you have it! The PayTV channel can be received! The whole thing functions not only with just one or two cards but rather can work with as many as seven receiver cards at the same time (five of which are active). The system operates in the 868-915 MHz range. The manufacturer specifies a reception range of over 15 meters in enclosed rooms. In open air there was no data although distances of up to 150 meters may not be out of the question.

Every-day Use

The card reader itself is a small, inconspicuous black box on which you will find nothing more than a USB port as well as a card slot and a status LED. The USB interface serves to upload new firmware but is also the source of power for the card reader. If you would prefer not to continuously use a PC as the source of power for the card reader, the manufacturer has also included an external power supply in the package that is also connected to the card reader via the USB port.

Before the box can be put into service, the receiver cards must first be programmed on the Card Splitter. There's a simple reason for

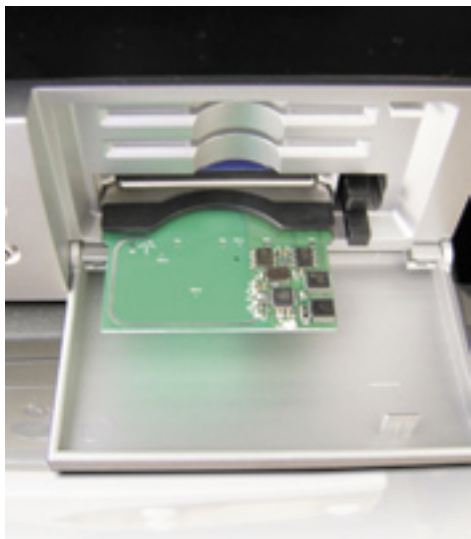
this: cards that don't belong to the system a) can't be accessed and therefore b) can't cause any damage. It will also prevent your next-door neighbor from accessing your network. By momentarily inserting the card in the card reader and the reception card in the receiver.

For our test we used a standard Viaccess Adult channel SmartCard. This card was recognized by the card reader without any difficulties and even the decryption using two Topfield receivers in separate rooms with one Viaccess CI module functioned perfectly. The 15-meter range specified by the manufacturer was not overestimated. Our tests showed that reception was even possible in a second floor room. According to the manufacturer, up to seven reception cards can be used, five of them at the same time. Up to four different channels can be received at the same time but since our test unit only came with three reception cards, we could only test three different channels simultaneously. Problem-free operation in one of the supported CI modules (at the moment Viaccess, Seca, Mediaguard and Conax) was possible in every CI receiver. Things didn't look as good with integrated card readers though. In most cases they were supported, however the card splitter did not function nearly as reliably as with CI modules.

At the moment the manufacturer supports the Seca, Mediaguard (1&2), Conax and



Viaccess (1&2.x) encryption systems. Other encryption systems are in the planning stages so that we can hopefully look forward to support for Irdeto, Nagravision and perhaps even NDS Videoguard although this one is not 100% certain. The included instruction booklet contains all of the necessary information in a clear and concise manner. Operation is so easy that you almost can't do anything wrong. A discussion and support forum is also available on the manufacturer's homepage should you run into an unusual problem.



Expert conclusion



The connection between card reader and reception card functioned error-free even over longer distances. This makes connection between multiple receivers and the central transmitter inside the home easily possible. There is also no need to worry about unauthorized access. The workmanship of the card reader and reception cards is very good.



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Unfortunately, not all encryption systems are supported at the moment. Boxes with integrated card readers also have some difficulties handling the reception cards. A software update should be able to take care of this problem.

TECHNICAL

DATA

Manufacturer	SmartWi, Denmark
Fax	+45 86406622
E-Mail	http://www.smartwi.net/contactus.htm
Model	Wireless SmartWi
Function	Cardsplitter with wireless transmission capabilities
Transmission Frequency	868-915 MHz
Transmission Range	Indoors >15m, Outdoors n/a
Maximum Number of Receivers	7 (5 active)
Maximal Simultaneous Channels	4
Power Consumption	Master max. 100mA, Clients max. 50mA
Firmware Upgrade Ability	yes
Dimensions	90x57x23mm