HiDES **Easy HD Expressway!**

UT-100 USB DVB-T Modulator/Demodulator

UT-100 - Features

USB based modulator/demodulator with support for EN 300-744 DVB-T transmission and reception.
Powered from the USB bus, so no external power adapter is required
Full hardware modulation/demodulation, no host CPU computation required.

Modulator (Transmitter):

Direct digital conversion to 50~950MHz and 1200~1350 MHz for excellent signal quality
UT-100A/UT-100B/UT-100C support configurable bandwidth from 2MHz to 8 MHz.
(Note: UT-100D supports only receiving and does not support transmitting.)
Support only non-hierarchy mode
Programmable digital attenuator
Free Windows Stream Player
Free Windows and Linux SDK

Demodulator (Receiver):

UT-100A supports Worldwide Free to Air Digital Terrestrial (DVB-T) Receptions (5/ 6 / 7 / 8 MHz bandwidth)
UT-100B/UT-100D is a special custom version (supporting 2/3/4 MHz bandwidth) for amateur HAM TV reception.
(Note:UT-100C supports only transmitting and does not support receiving.)
Standard Windows DVB-T BDA driver provided
Windows Media Center compatible DVB-T TV tuner
Note: the receiver frequency range supported is 50~950MHz.

UART Data Demux

While working with BDAViewer+, UT-100 receiver supports UART data demux.
A typical application is to mux NMEA GPS info in the transmitted stream in the Tx end of a UAV, UT-100 decodes the stream, and feed the demux'ed NMEA GPS to Google earth to track the UAV.

UT-100 - Applications

DVB-T signal generator
Demonstrations
Research and development
Video Broadcast/Distribution
Digital Signage
Wireless Display
Hotel TV
Hospital TV
On-Board TV
Luxury Home Entertainment
Hotel Info TV
Trade Shows
Mall Info TV
Campus TV
In Stadium
Live Sports
Monitoring
Surveillance
Corporate TV
Industrial Monitoring
Amateur HAM TV

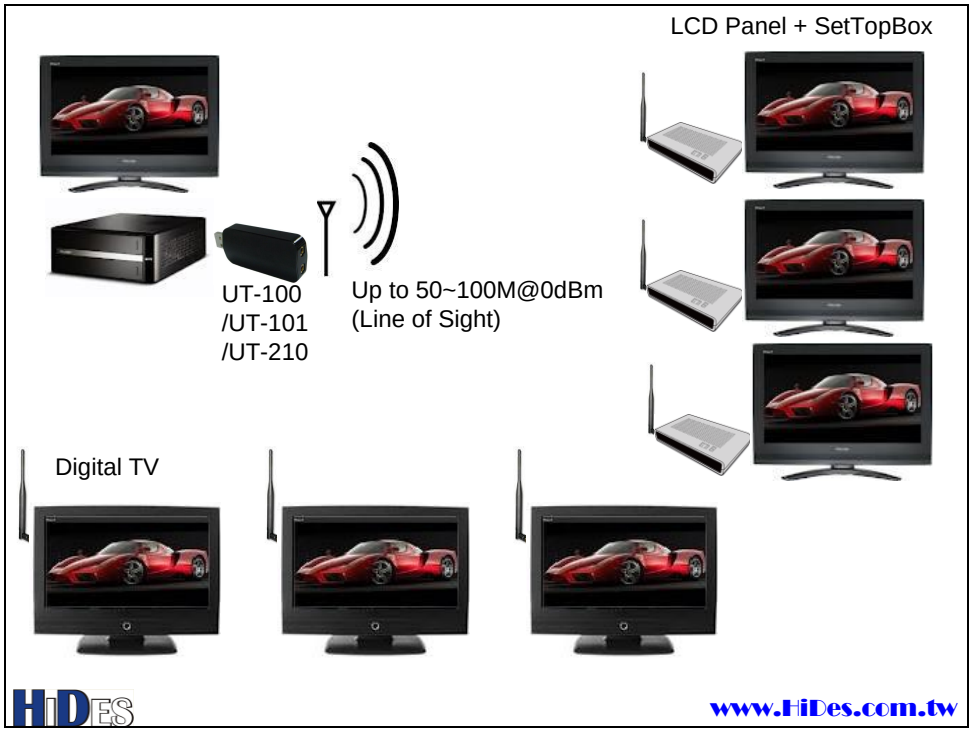
Host Requirements

- CPU: Intel, AMD, ARM, MIPS
- 128MB RAM of system memory or above
- Higher CPU and memory required if DVB-T audio/video decoding is needed
- One available USB2.0 or 1.1 port
  Note: USB 1.1 can only support 3~5 Mbps stream data rate.

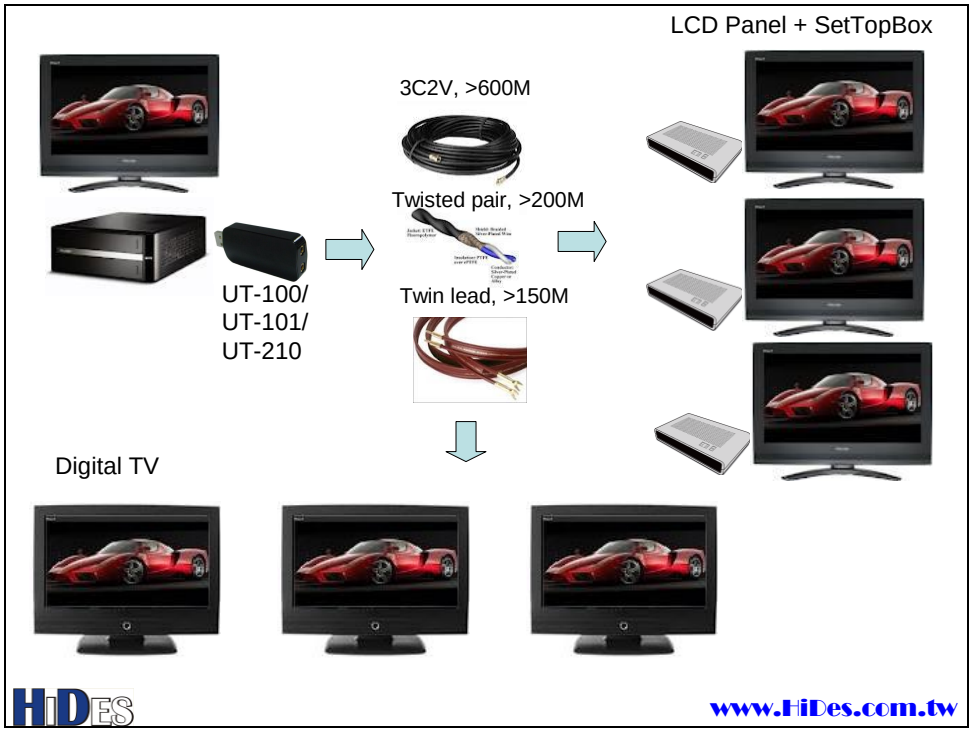
Parameter	Value		
RF connector	Two 75-Ω MCX (female) connecters, one for Tx and one for Rx		
Bandwidth	Transmitter	UT-100A	2/3/4/5/6/7/8 MHz
		UT-100B	2/3/4/5/6/7/8 MHz
		UT-100C	2/3/4/5/6/7/8 MHz
		UT-100D	n/a
	Receiver	UT-100A	5/6/7/8MHz
		UT-100B	2/3/4 MHz
		UT-100C	n/a
		UT-100D	2/3/4 MHz
FFT	2K, 8K		
Constellation	64QAM/16QAM/QPSK		
Code rate	1/2, 2/3, 3/4, 5/6, 7/8		
Guard interval	1/4, 1/8, 1/16 or 1/32		
Frequency range	Transmitter UT100A/B/C	50~950MHz and 1200~1350MHz step size 1KHz	
	Receiver UT100A/B/D	50~950MHz, step size 1KHz	
RF Output Level	50~950MHz , 0 dBm (108 dBuV) 1200-1350 MHz, -15~-18 dBm (90~92 dBuV)		
Digital Attenuator	Range:+6/-25dB* , Step size 1dB		
MER	50~950MHz, 35dB Typically 1200~1350MHz, 30dB Typically		
Spectrum Shoulder (Adjacent channel)	45dB		
Phase noise	<-92dBc @ 10kHz		
Carrier Suppression	>42dB		
USB port	USB 2.0 or USB 1.1		
Power	5V DC (USB Bus Power) 390mA (Tx and Rx) 170mA(Rx only) 340mA(Tx only)		
Dimensions (LxWxH)	75x 30 x 15mm		

Note: There could be MER loss in high gain/attenuation level.

Digital Signage Application Scenario-Wireless

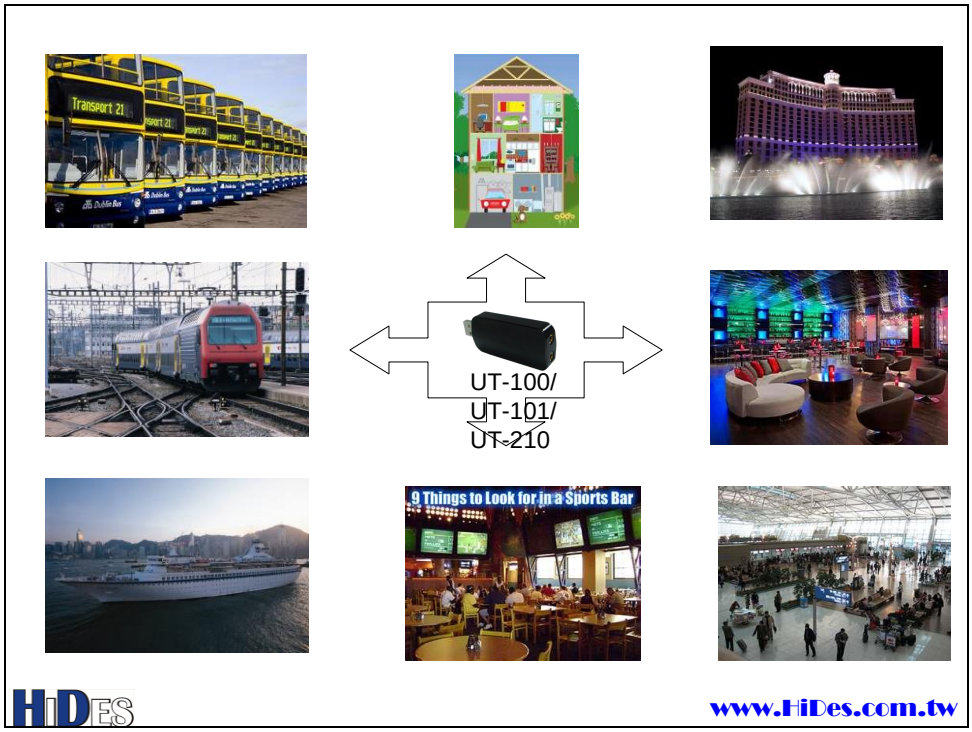


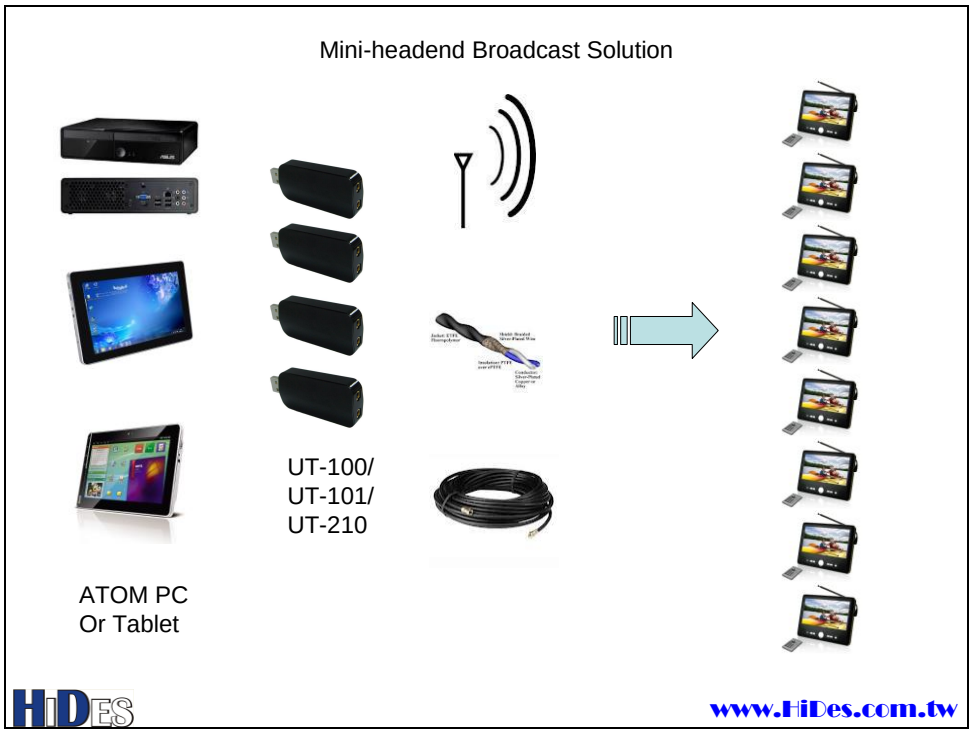
Digital Signage Application Scenario-Wired



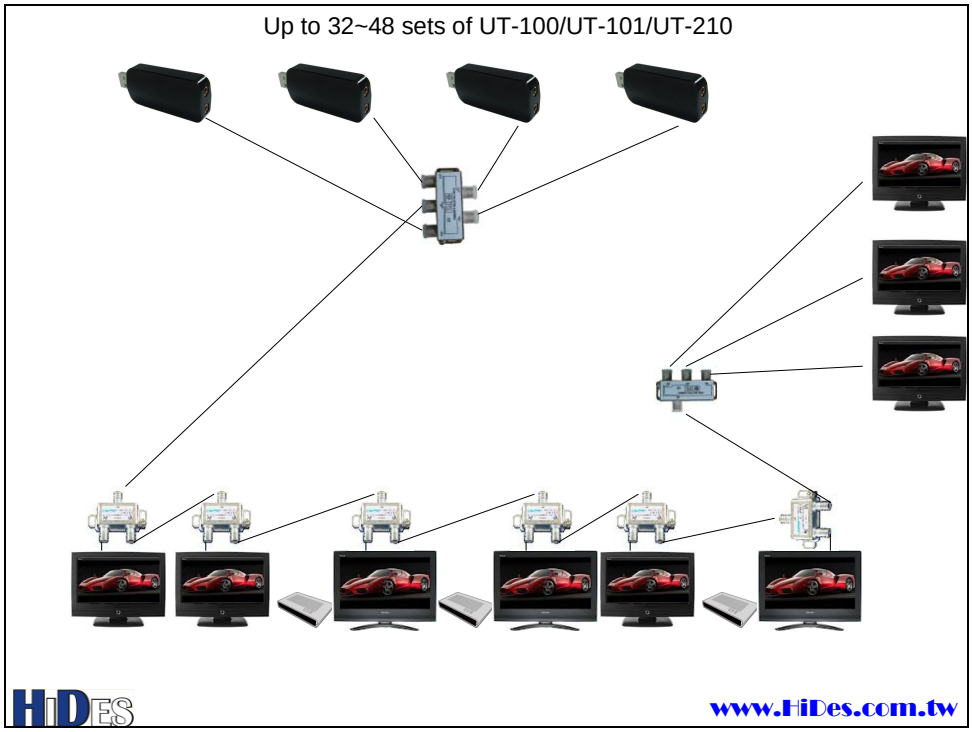
HiDES Easy HD Expressway!

Mini-headend full HD TV Broadcast System





System Deployment Example – Bus Topology



Demux GPS information in the mux'ed stream