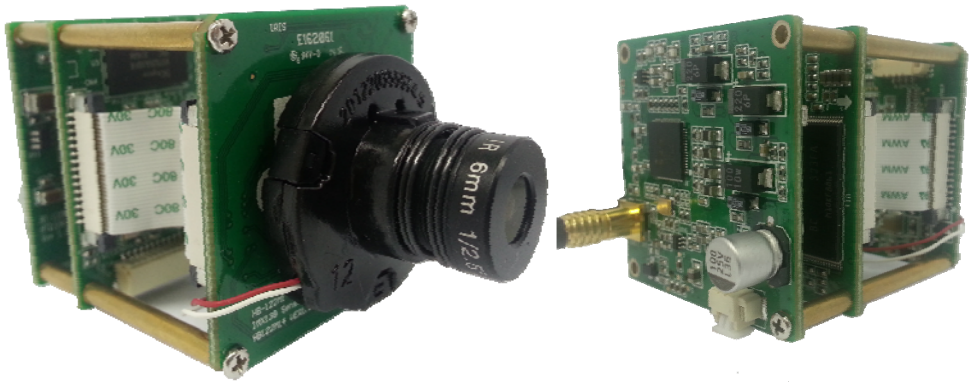
DC-103(1080P)/DC-102(720P) DTV CAM Bare bone



DTV CAM

DTV CAM is an all-new camera which outputs the captured HD video in digital TV signal. The core technology is based on open industrial standard EN 300-744 DVB-T, which can transmit compressed high-definition digital video over cable or air. All DVB-T compliant receivers, including SetTopBox, Digital TV, PC/NB USB DTV dongle, or DTV capture card can receive, watch and record the video from a DTV CAM without requiring any special adapter on each receiver nor deploying new cables, but using the existing standard antenna coaxial cable.

Features

Painless upgrade to full HD

Reuse existing coaxial cable deployment without any special requirement for cable & connecter. DVB-T signal is so robust that even a degraded and aged cable can be used to convey full HD signal perfectly.

Easy and friendly user experience

There is no lousy network IP configuration and no need to use a desktop or notebook PC. It's just as easy as watching TV programs with a TV set or SetTopBox.

Long Distance

Easily transmit 1080p/720p video over a single 5C2V/RG62 cable for at least 1000 meters long without adding any repeater.

For wireless applications, the line of sight transmission distance may reach

50~100 meters at 0dBm RF radiation power and up to several kilo meters at 30 dBm with an external PA. The real distance depends on the antenna design and receiver quality.

Daisy-Chain Connection (Bus-Topology)

Multiple DTV CAM's with different channel configurations can share a single cable. It can dramatically reduce the cable deployment cost and effort.

Mux multiple video streams

Support multiple video streams at the same time, for example 1080P/720P, D1, CIF, and JPG…

Real time protocol and Low latency

No frame drop in QEF (Quasi-Error-Free) condition, and low transmission latency

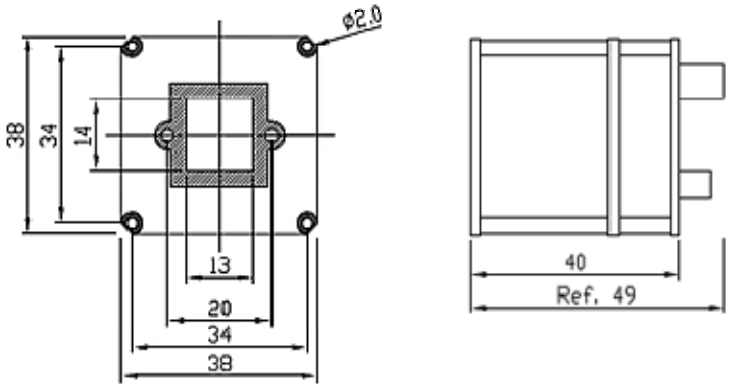
Standard 38mmx38mm form factor design

Compatible to standard bullet housings.

Housing option available from Hides,

General Camera Specifications:

Video	Image Sensor	DC-103	1/2.8" SONY Exmor CMOS 2 Megapixels Progressive image Sensor
		DC-102	1/2.8" SONY Exmor CMOS 1.3 Megapixels Progressive image Sensor
	Resolution	DC-103	2 Megapixel 1920 x 1080
		DC-102	1.3 Megapixel 1280 x 720
	Default Video Streams	DC-103	1920x1080x30P
		DC-102	1280x720x30P
	Video Compression	DC-103	H.264 up to 1920x1080x30P
		DC-102	H.264 up to 1280x720x30P
	Video Transmission Protocol		DVB-T EN-300 744
	Shutter Control		1/25 to 1/10,000 second，1/30 to 1/10,000 second
	Auto Gain Control		AUTO
	White Balance		AUTO
	Back Light Compensation		AUTO
	Day & Night		AUTO
	Scanning System		Progressive
	S/N Ratio		44dB
	Lens		Board Mount 6 mm
Audio	AAC (Optional)		
Power	Power Supply		DC 12V/AC 24V
	Power Consumption		TBD

Dimension	49mmx 38mm x 38mm (LxWxH, excluding lens and power adaptor) 
Weight	TBD
Operating Temperature	0° C to 40° C

DVB-T RF Transmitter Specifications:

Parameter	Value
RF connector	On-board: 1.0/2.3 DIN female 50-Ω External cable: SMA-type 50-Ω connecter
Bandwidth	1/2/3/4/5/6/7/8 MHz
FFT	2K, 8K
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	170 .. 950MHz *** Channel setting by UART Channel Configuration
RF Output Level	0 dBm (108 dBuV) Typically
Digital Attenuator	Range:+6/-25dB* , Step size 1dB
MER	35dB Typically
Spectrum Shoulder (Adjacent channel)	45dB
Phase noise	<-92dBc @ 10kHz
Carrier Suppression	>42dB

Specifications are subject to change without prior notice.

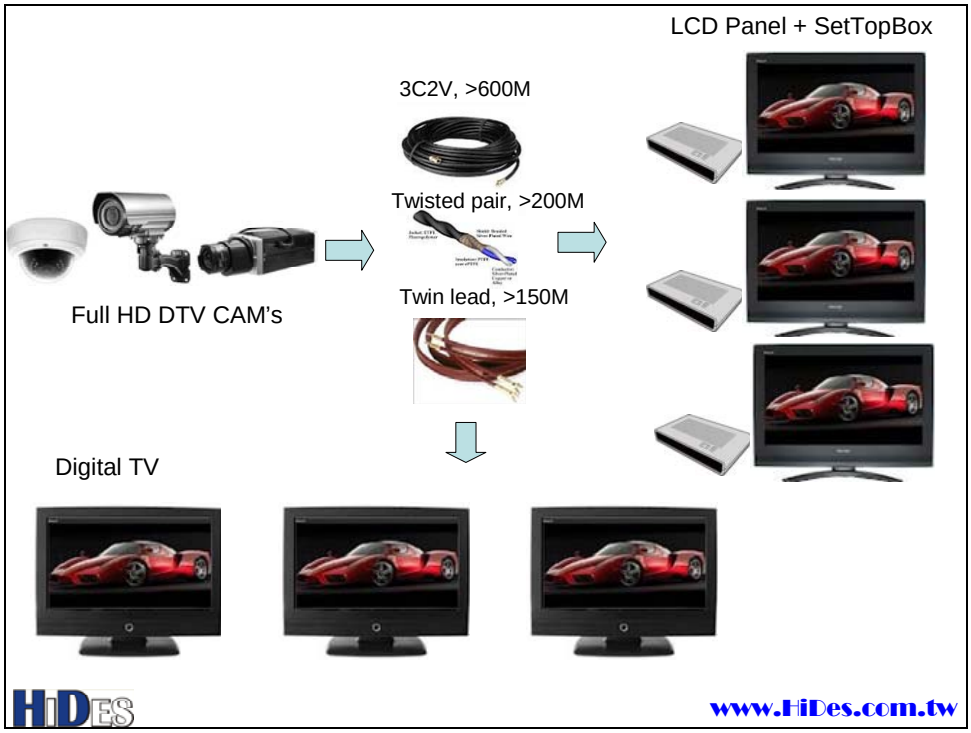
*: There could be MER loss in high gain/attenuation level.

**: All the above configurable settings can also be set by PC tool kit with return channel card (optional).

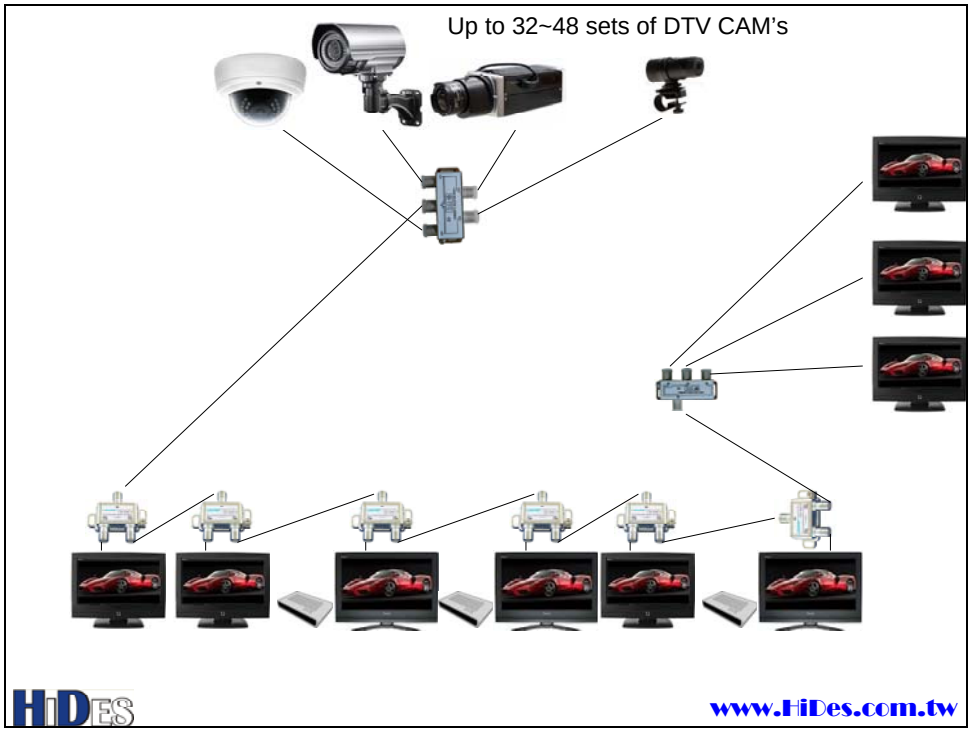
***: Special edition available for 1.2G (1200~1350MHz) band support

DTV CAM Application Scenario-FPV

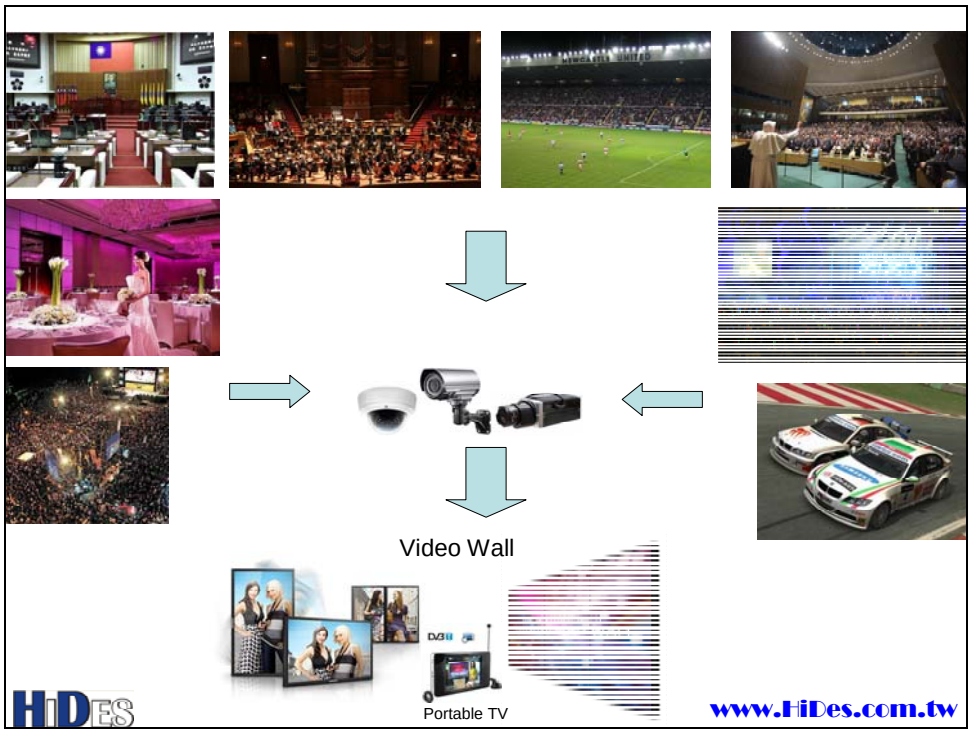
DTV CAM Application Scenario-Wired



System Deployment Example – Bus Topology



DTV CAM Application – Live Video Broadcast



Mobile DTV CAM Application –Live Video Monitor FPV/FPU