Professional Engineering Corporation

Your Ideas our Technology

EXPERTISE SUMMARY

- Architecture definition and development of customized boards
- PCB layout and signal integrity analysis
- Radio frequency solutions and Software Defined Radio boards (automotive applications)
- Communication stack implementation for wired and wireless systems (FSK, OFDM, SC-OFDM)
- Terrestrial and Satellite broadcasting (DVB-T, DVB-T2, DVB-S and DVB-S2 receiver boards)
- Satellite return link in S, C, Ku, Ka bands (ESSA, QS-CDMA transmitter boards)
- Specialized in clock recovery from any data stream with up to 30ppb accuracy
- HDL for signal processing and TLC systems (VHDL / Verilog) on FPGA and ASIC, integration of third party IPs
- I/O boards for railways and industrial applications
- Motor control boards for automation and industrial applications
- HMI system development based on the HTML5 standard
- Firmware for, DSP, µC and µP
- Mini-Kernel, real time operating systems, embedded Linux and uClinux
- Audio/Video and image processing (H.264, MPEG4, AAC)
- Audio/Video analog and digital interfaces management

Proven Experience for your Business

Build your electronic systems

with our design services

MORE INFORMATION AND DOCUMENTATION AT: www.dwave.it

This box allows three specific usage:

1- BASIC: simply use your existing coaxial cable to carry the ethernet data, coming from / going to, other devices like PC, SWITCH, etc… Connect your RJ45 connector to Port1 and the coax on Port2.

2- ENHANCED+: in addition to the BASIC functionnality you can connect, on Port3, the DVBS/S2 signal coming from your LNB or SET- TOP BOX. In this case your COAX cable is carring the data from/to ETH 100 and the DVBS/S2 signal.

3- ENHANCED ++: in addition, you can connet DC IN plug on Port4 (48 VIN) in order to provide supply over the COAX cable on Port2. Otherwise you can connect a plug on Port5 in order to receive Supply voltage from the COAX cable to Port5.

The three mode, BASIC, ENANCHED+ and ENANCHED++ can be used individually, or two of the three, as you prefer.

Ports Description

Port #	Description
Port1- ETH100 baseTx	Bidirectional 100 baseTx signal
Port2- COAX	Coaxial to Set TOP box
Port3(+1) - DVB-S/S2	DVB-S/S2 signal coming from LNB
Port4(++)- DC_IN	Supply the LNB
Port5 (++)- DC_OUT	Supply from LNB

Technical Specificatios

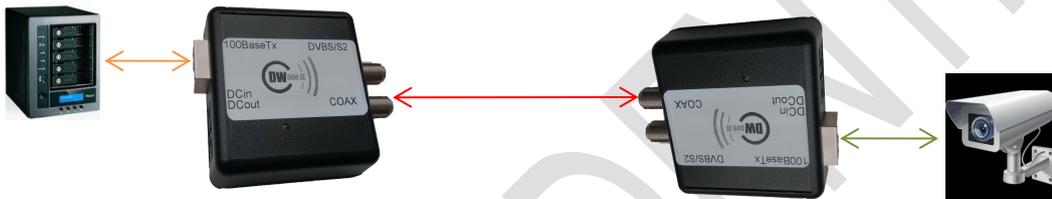|	
Op. Temp.	-40 +85°C
Cable length	Transmission distance of up to 250 meters (850 feet). It works only with point to point connection. It will not work if there is a splitter between the two EoC adapters
Power consumption	No need to provide power supply. Can carry up to 0.5A 48V_DC
Box Dimension	59 x 59 x 29mm (connector excluded)
Supported Standard	100BaseTx, DVB-S/S2
Applications	Great for migrating analog video surveillance systems to IP camera based systems. Passive adapter for Ethernet transmission over a coaxial cable. Great for building a 100Mbps home network over existing in-house coax cabling. Low cost and easy to install.

Ethernet Over Coax++
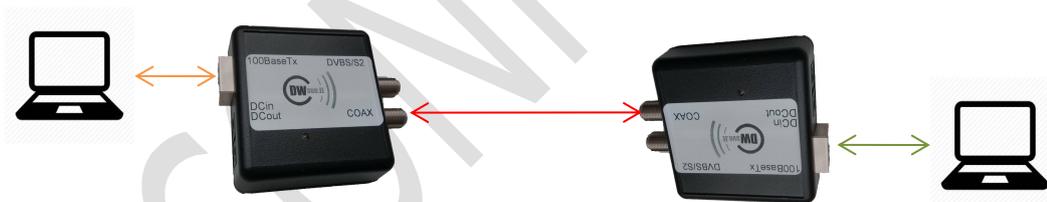# EoC++

Here below the most common uses case:

USES CASE #1:

⟷	- ETH 100Mbit LAN cable
⟷	- COAX cable max 250mt.
⟶	- Connection from/to LNB /DVBS-S2 sat decoder.
⟶	Power supply cable

USES CASE #2:

USES CASE #3:

USES CASE #4:

Set-top box (STB)

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