inverto™

UNICABLE2™

Unicable II™

dCSS Technology - Introduction guide

Unicable II™ - Inverto's programmable ODU solutions

Inverto is a leader in single cable solutions since 2005, and a supplier of choice of ODU products for tier-1 satellite operators across the world.

The Unicable II™ is the 2nd generation of single cable distribution products, digital Channel Stacking supporting up to 32 user bands and based on the latest full-band capture technology.

Our Unicable II™ (dCSS) solutions are highly integrated, multi-user LNB's or Switches that run Inverto's Real-Time Engine, ensuring reliable and fast compliance with customers' target set top boxes or residential gateways. Contrary to other suppliers who solely rely on the IC vendor to provide the software, Inverto's R&D team has full control over the development of the software and hardware of its Unicable II LNB and Multiswitch products.

LNB and Multiswitch Solutions based on BRCM, MXL and ENTR dCSS ICs. and support either DYNAMIC mode (EN50607) or STATIC mode (a fixed grid of TP frequencies translated to IF frequencies).

Operating characteristics (eg dynamic/static mode, channel bandwidth/frequency, output power level etc.) are all programmable and can be configured and updated in the field using Inverto's programming device and PC software tool.

The products can be powered over a connected STB or by an AC/DC adapter over a power inserter in case the STB is unable to provide the necessary power.

Unicable II™ USB Programmer supplied with PC Windows configuration tool application.

Unicable II™ benefits

1. Software-based product configuration providing upgradable future-proof solutions and greater flexibility to address various installation scenarios.

2. Quick and simple upgrade of subscribers' homes from single-tuner single-room setup to multi-room multi-tuner setup (up to 32 tuners in total) using existing cables, reducing cost and time of upgrades.

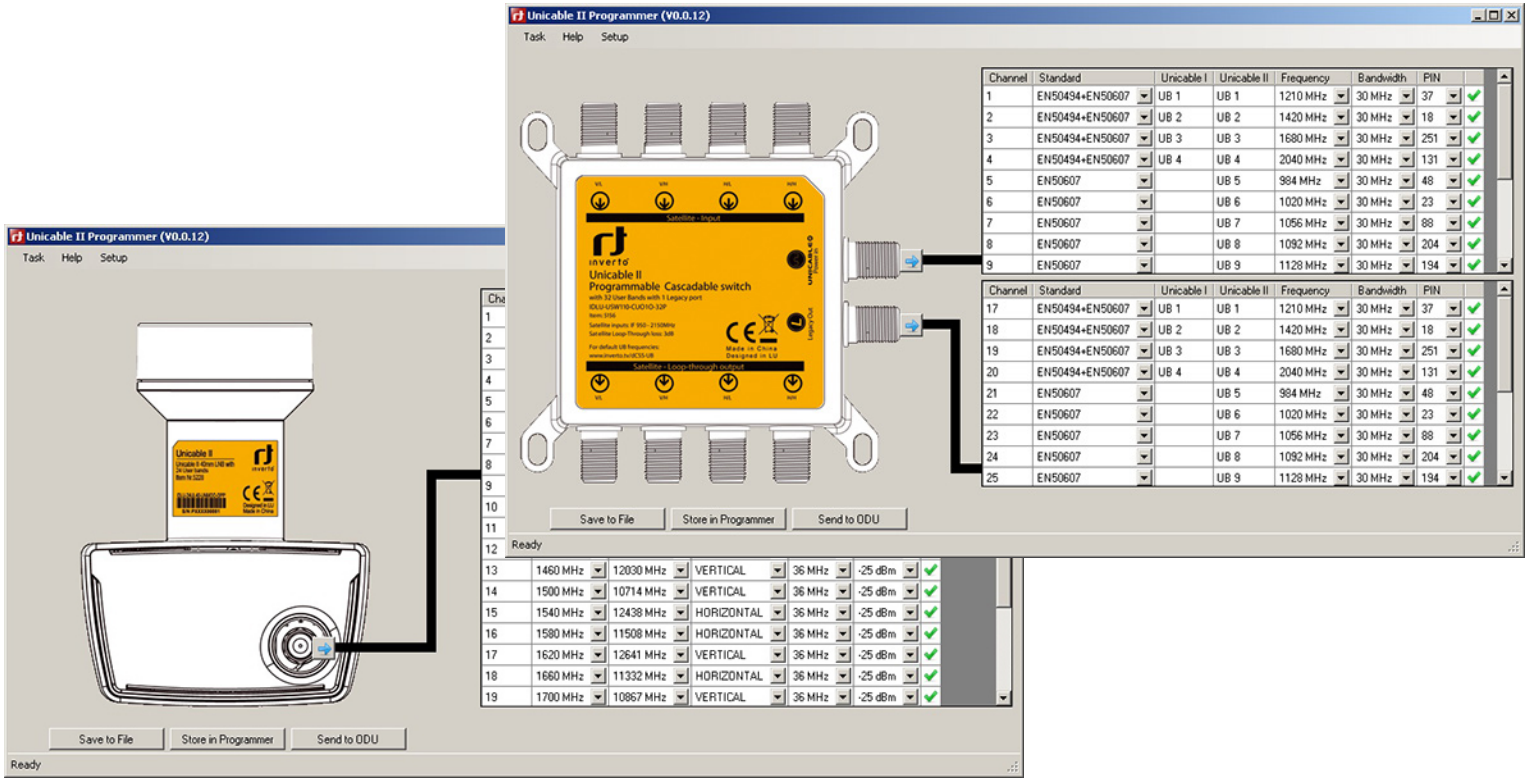
3. Programmable Static Mapping mode distributing up to 32 Transponders in SDU/MDU to unlimited number of receivers, reducing the number of cables and saving expensive multiswitches.

4. Fully compliant with both EN50494 and the latest EN50607 standards.

Unicable II™ Programmer

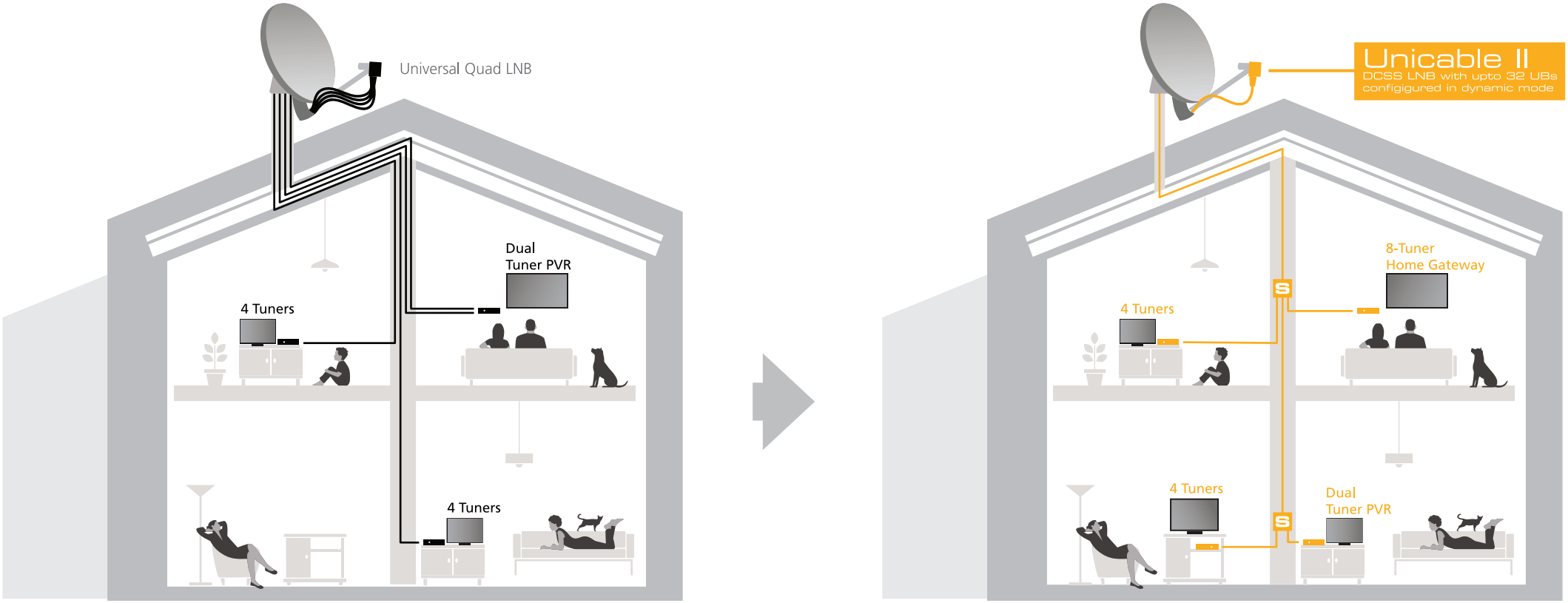
1. The configuration of Unicable2 ODU products is software-based. Inverto's Programmer allows users to modify and update product configuration according to the needs of their specific setup in the field.

2. An intuitive PC Windows application is provided together with the Programmer device allowing to customize product configuration and operating parameters eg UB frequencies and BW, Output power level, Operating mode (ie Static or Dynamic) and more.



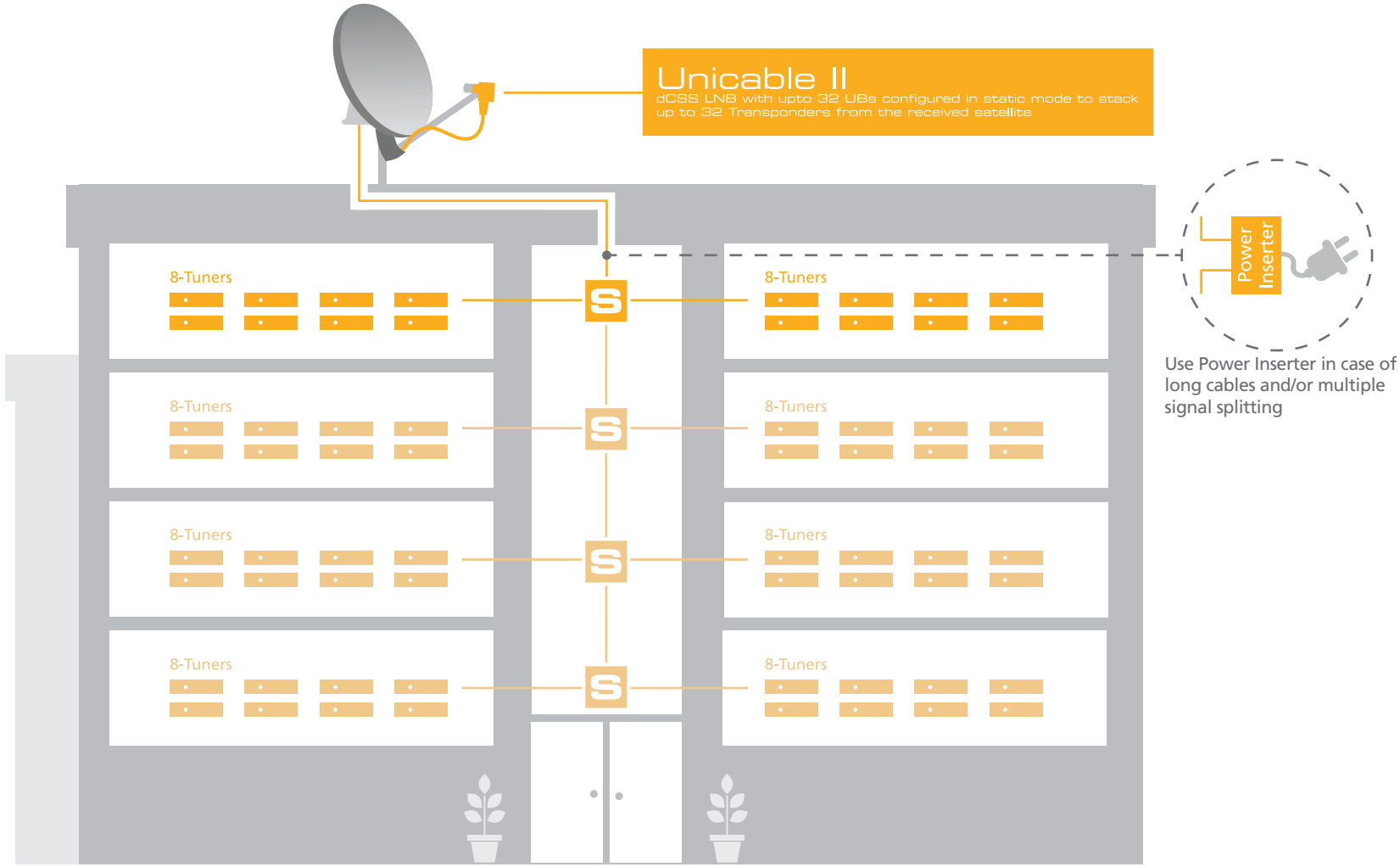
Upgrading existing installation in an SDU

Single household installation in dynamic mode – multi-tuner STBs (up to 32 tuners) connected over a single coax cable drop from the rooftop.



Cost effective MDU installation with up to 32 TPs

MDU/Hospitality installation in static mode – distribution of up to 32 TPs to any number of STBs connected over a single coax cable drop from the rooftop.

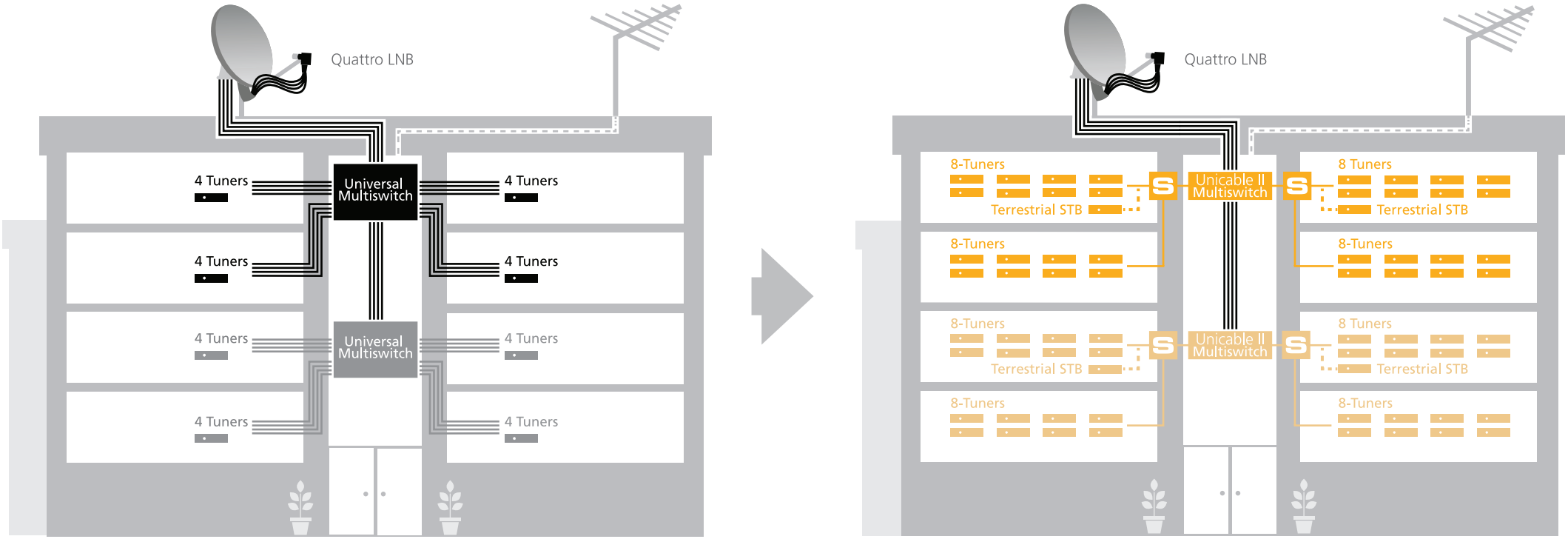


Each connected receiver can tune to any of the 32 transponders stacked by the LNB over its output port

Upgrading existing installation in an MDU

Upgrading existing MDU installations – dCSS multiswitches with up to 32 UBs in dynamic mode supporting multi-room or multi-tuner installations in apartments with a single coax cable drop.

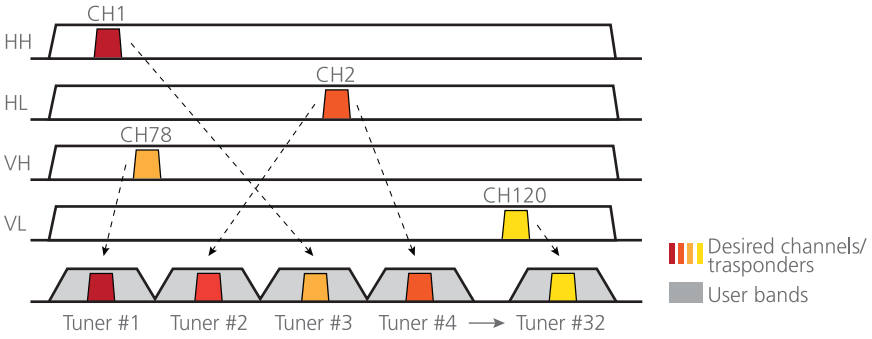
32 cables vs. 1 cable installation = 70% savings on installation cost / time

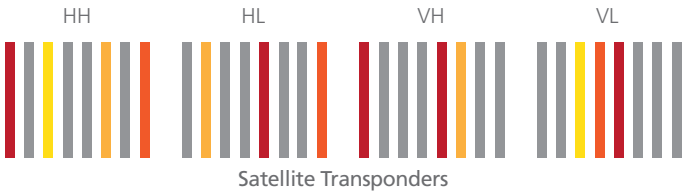


dCSS - Dynamic mode

Dynamic: Up to 32 STBs/tuners connected over a single coax can each access **any number of TPs** available on the received satellite. The STBs shall comply with EN50494/EN50607.

Example: Total 120 TPs transmitted from the Satellite. Any of the 120 TPs can be received by each of the up to 32 STBs/tuners connected in the house.

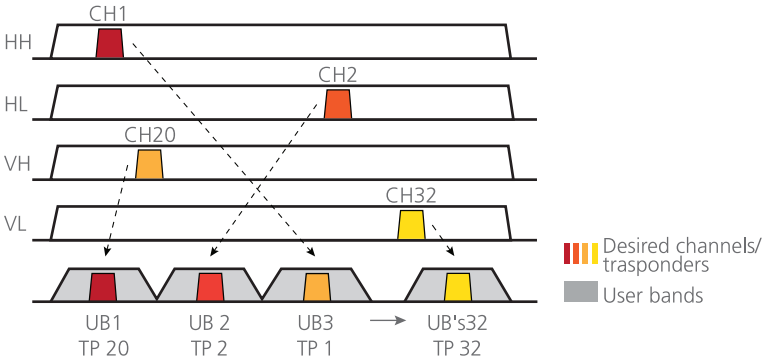


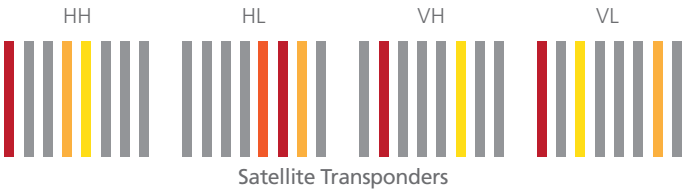


dCSS - Static mode

Static: Up to 32 TPs can be received by **any number** of STBs connected over a single coax.

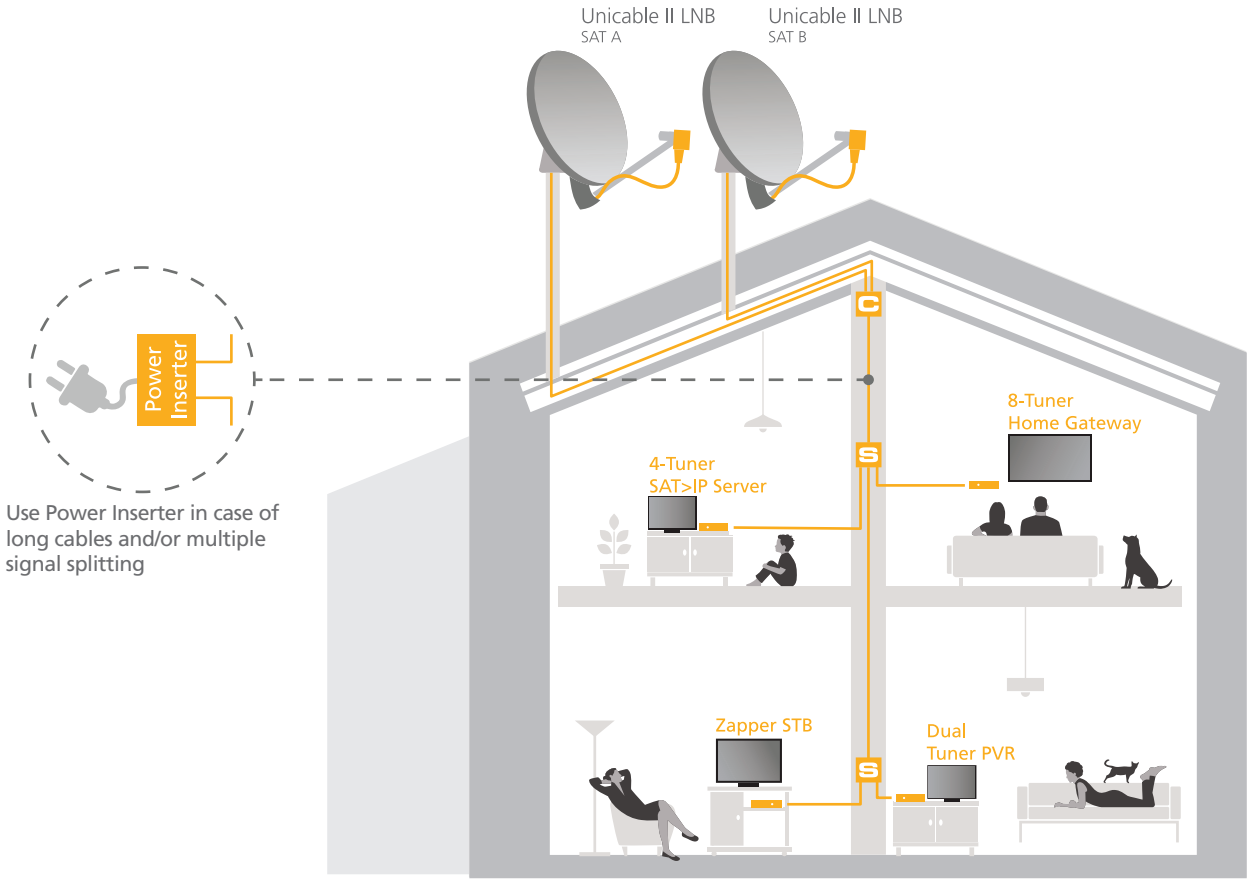
Example: A DTH Operator providing its service over 32 TPs. Any number of STBs (Legacy or Unicable) can be connected over a single coax drop , each having access to each of the 32 TPs.





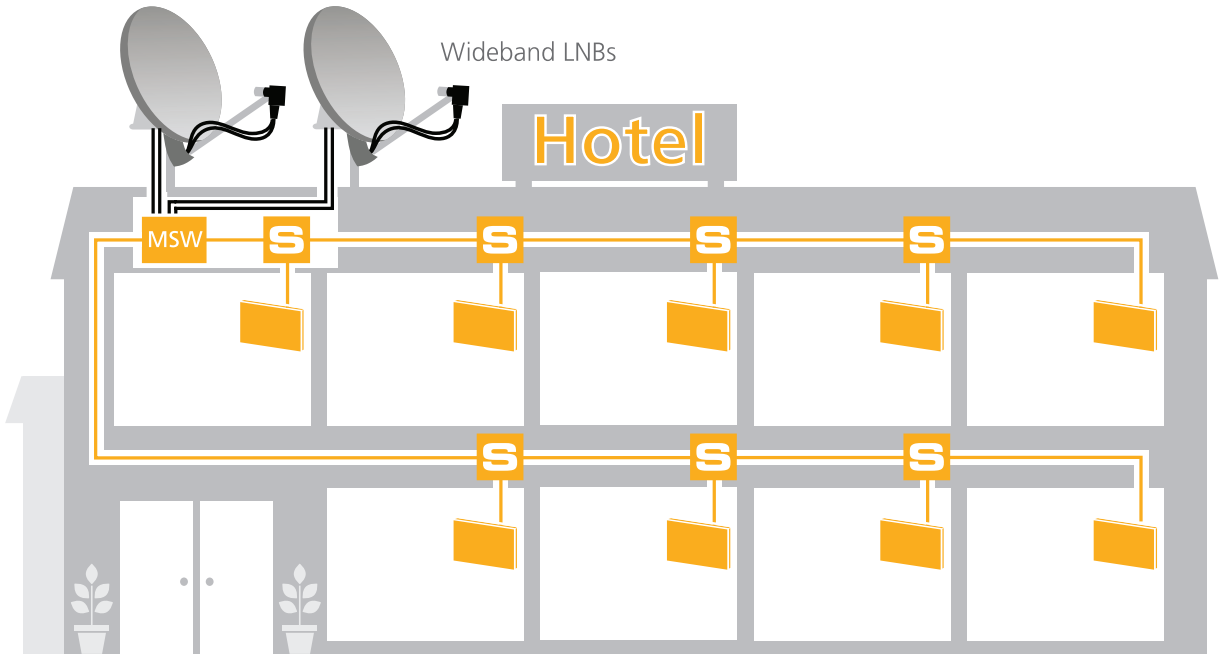
Additional scenarios - SDU with 2 satellite dishes

SDU with two satellite dishes, each mounted with a Unicable II LNB. The outputs of the LNBs are connected to a single output combiner and one cable enters into the house. Inside the house, the cable drop is split with unicable splitters to connect up to 32 tuners eg 2-tuner PVRs + 4-tuner SAT-IP Server + several zappers.



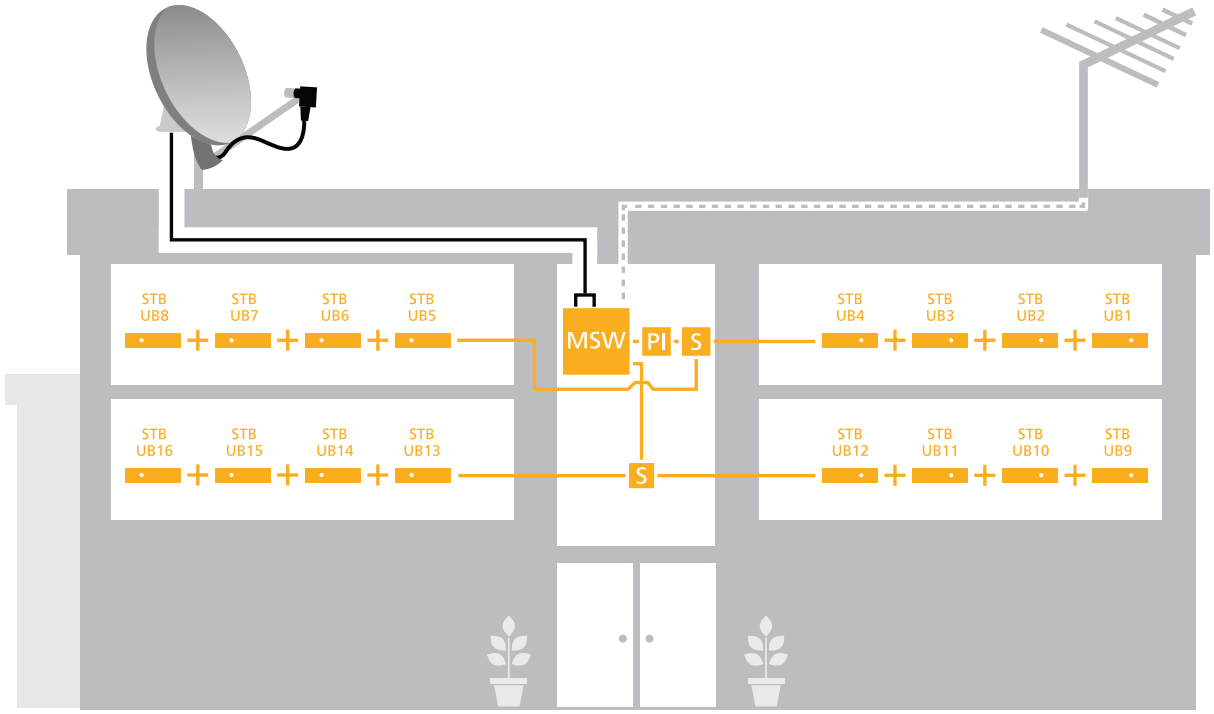
Additional scenarios - Hospitality

A hotel offering a 30 TP bouquet from two satellites. There are two satellite dishes, each with a wide-band LNB, the LNBs are connected to a dual output Unicable II switch feeding each floor with a single cable drop. The TV bouquet is distributed to each room through common Unicable splitters.



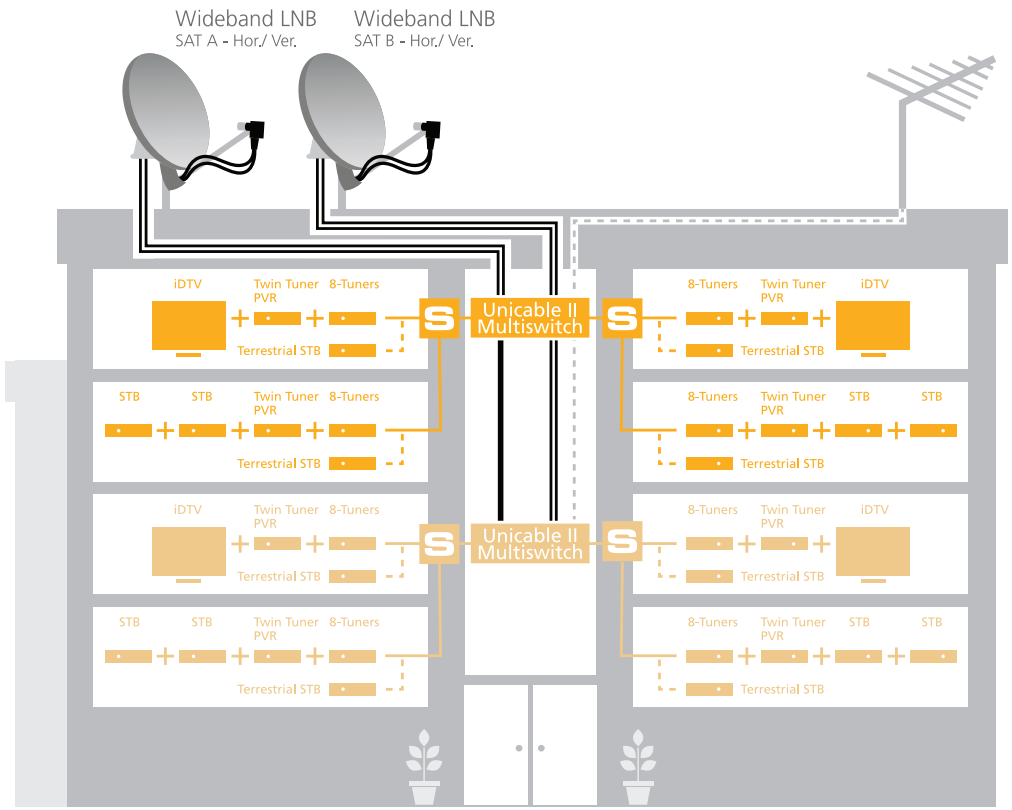
Cost-effective distribution to 16 Unicable I (EN50494) STBs

The Unicable II multiswitch (item 5294) is backward compatible provides for a cost effective distribution of satellite TV to first-generation Unicable I STBs. The Unicable I standard (EN50494) supports up to 8 UBs and with the two output ports of the Unicable II multiswitch, up to 16 Unicable I STBs can be connected. In this way, existing older generation receivers can be utilized while the distribution infrastructure is future proof.

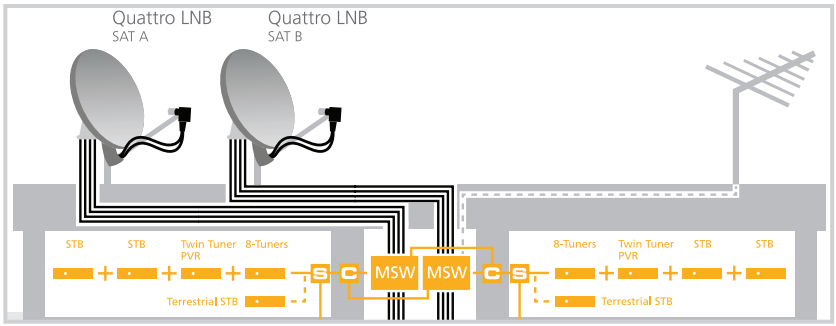


Additional scenarios - MDU with wideband LNBs

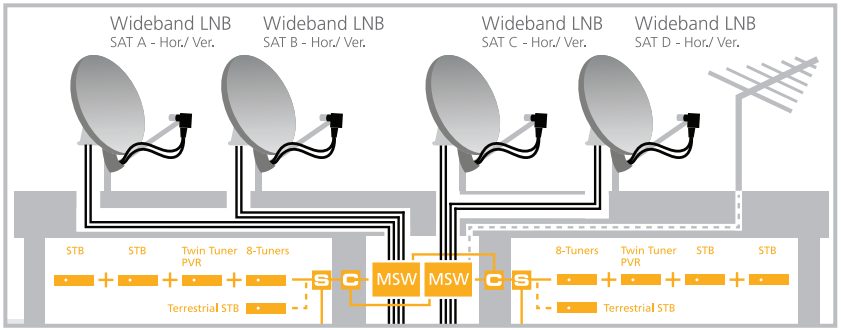
Two Satellite building installation with wideband LNBs and Unicable II switches, each supporting 4 apartments with up to 8 tuners per apartment:



Two satellite feeds (Quattro LNBs) connected to two Unicable2 switches in a daisy chain setup:



Four satellite feeds (Wideband LNBs) connected to two Unicable2 switches in a daisy chain setup:



C = Combiner S = Splitter MSW = Unicable II Multiswitch

Product range

24UB Single output LNB model
IDLU-24UL40-UNMOO-OPP
Item 5228

32UB Single output LNB model
IDLU-32UL40-UNBOO-OPP
Item 5278

32UB Dual-output switch* with 1x Sat Universal Quattro or 2x Sat Wideband LNB inputs, 1 Terr. input
IDLU-UWT110-CU010-32P
Item 5294
Dimensions: 110.50 X 113.50 X 20.80

32UB Dual-output switch with Terr. input*
IDLU-UST110-CUO1O-32P
Item 5151
Dimensions: 110.50 X 113.50 X 20.80

Unicable II™ Programmer
IDLU-PROG01-OOOOO-OPP
Item 5273
Dimensions: 77.31 X 95.31 X 21.90

32UB Dual-output switch* with 1x Sat Universal Quattro or 2x Sat Wideband LNB inputs
IDLU-USW110-CUO1O-32P
Item 5156
Dimensions: 94.50 X 94.50 X 19

*One output can be either Legacy or Unicable.

For purpose of brevity, some product descriptions in this sheet remain at platform level and may not be referred to as detailed datasheets of the products. Inverto Digital Labs reserves the right to amend, omit or add products, product-lines, and / or features without notice. As product specifications may change without notice, always contact Inverto to obtain the latest product specification sheets.

For further details contact: **sales@inverto.tv**

 Tel. +352 264 367 1 Fax. +352 264 313 68

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