

Wisycom

Wireless Systems

WISYCOM
VOX INFRAGILIS

Technologies

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TRANSMITTER PLATFORM

- Ultrasonic protection ----------

- Multiband RF Tuning ----------


- Low battery consumption ----------

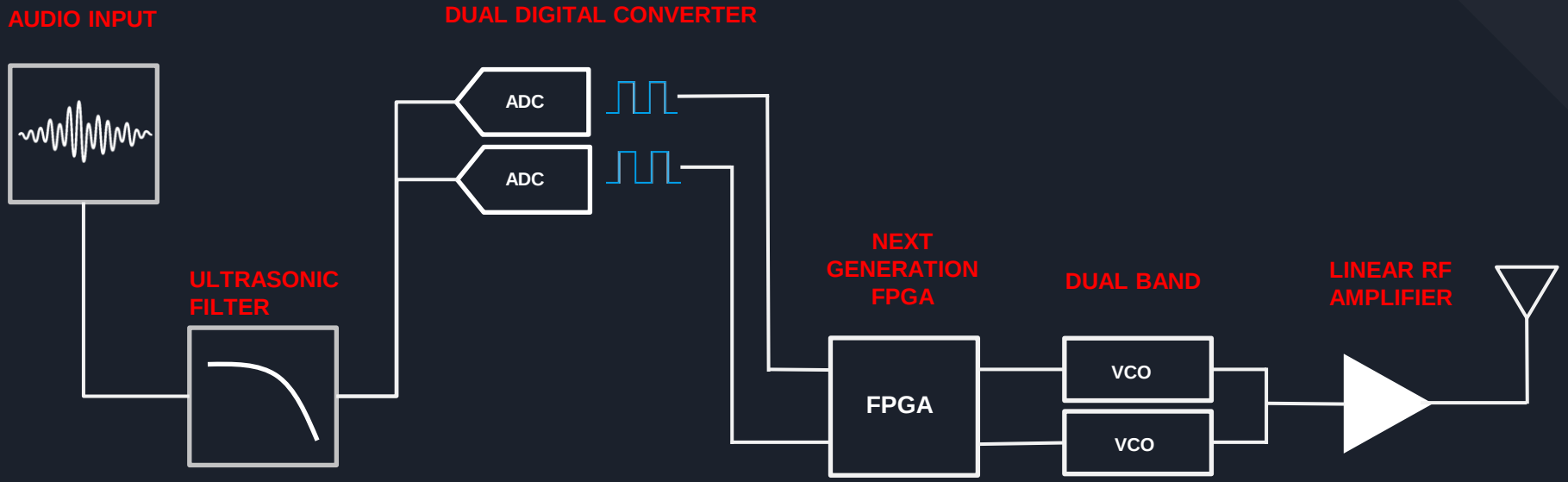
- LINEAR mode and Narrowband ----

- Bluetooth 5 & App compatibility ------

- Integrated 32bit recorder ----------


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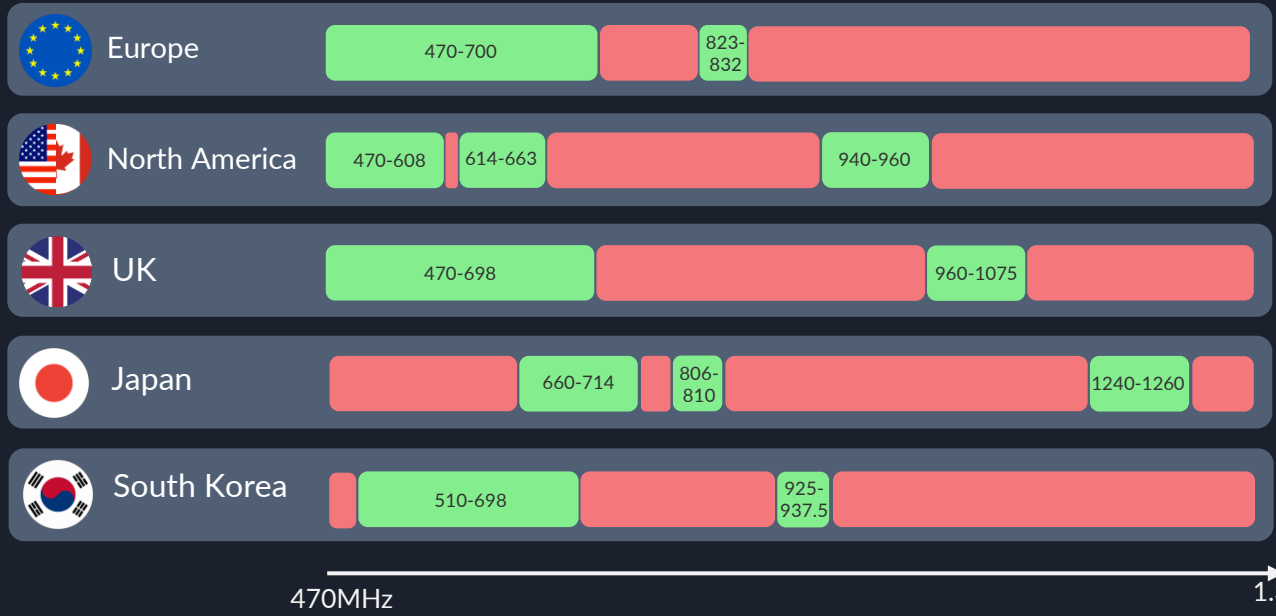
MTP6x Audio route



Multiband Transmission

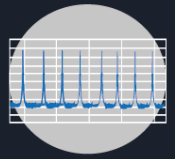
- **Dual VCO** to match receivers capabilities

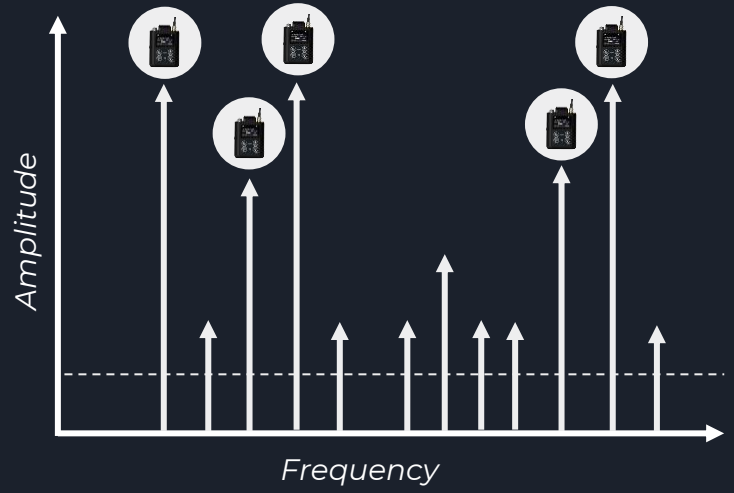


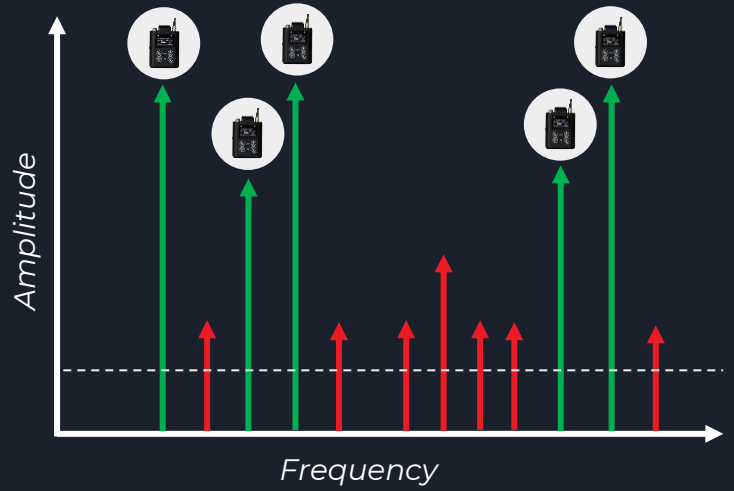


LINEAR Technology

- 1 carrier every 400KHz in Wideband and 200KHz in Narrowband
- 40 transmitters on a 8MHz TV Channel (30 on 6MHz TV channels)

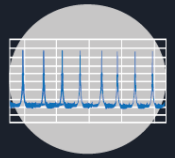


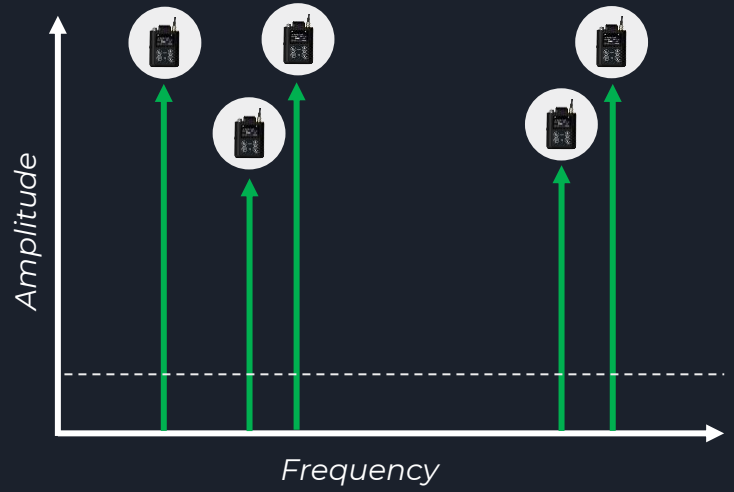


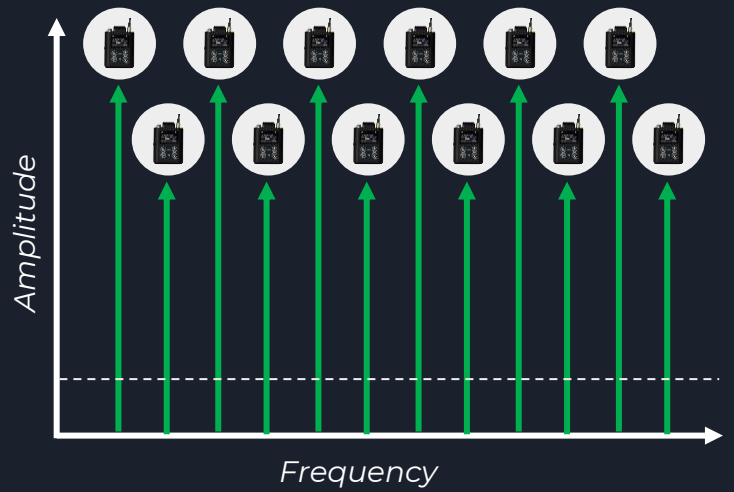


LINEAR Technology

- 1 carrier every 400KHz in Wideband and 200KHz in Narrowband
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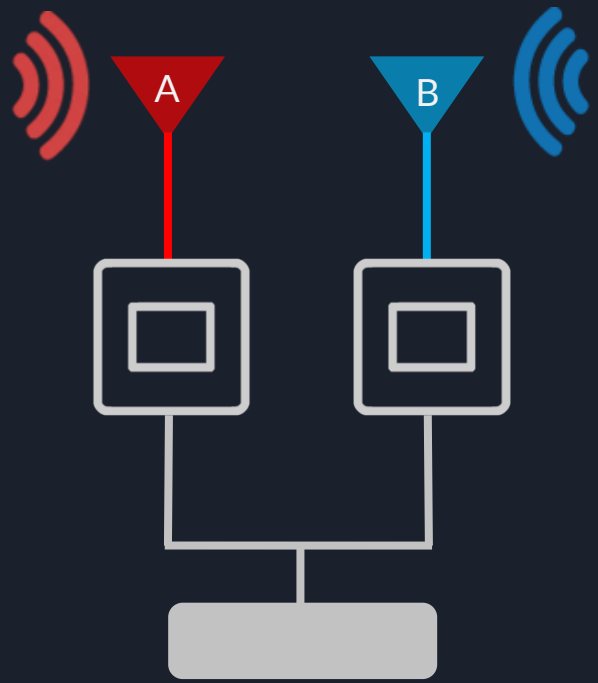
RECEIVER & DISTRIBUTION PLATFORM

- True diversity 
- Multiband RF Tuning 

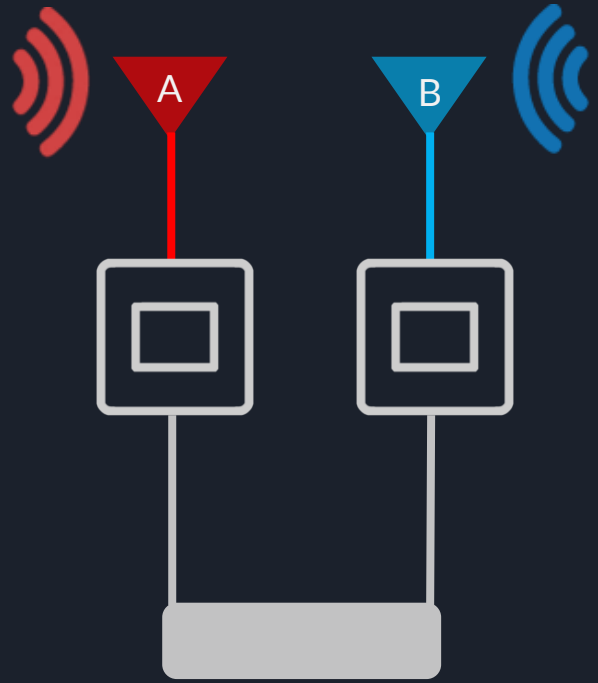
- Multicompanding system 

- Wideband and Narrowband 
- Bluetooth 5 & App compatibility 
- RF over Fiber 
- Smart Antenna remote control 

True Diversity Technology



Antenna diversity

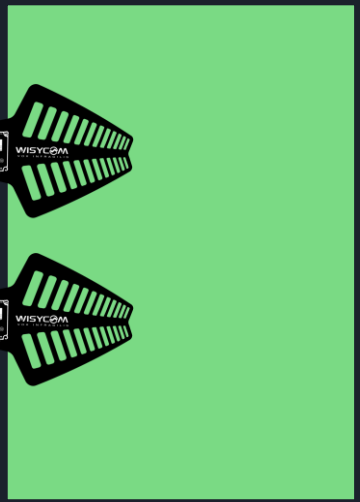


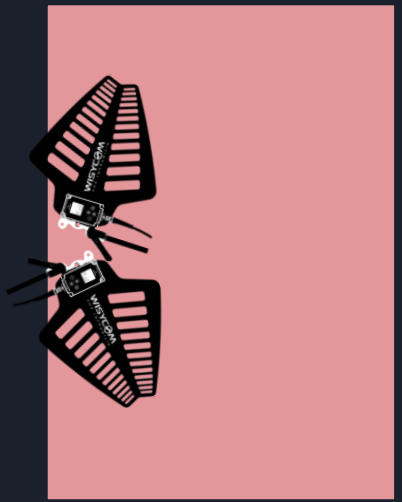
True diversity

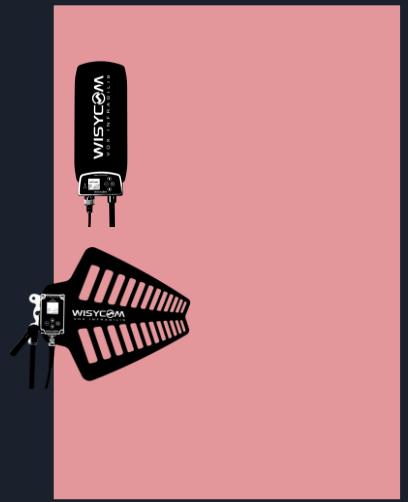
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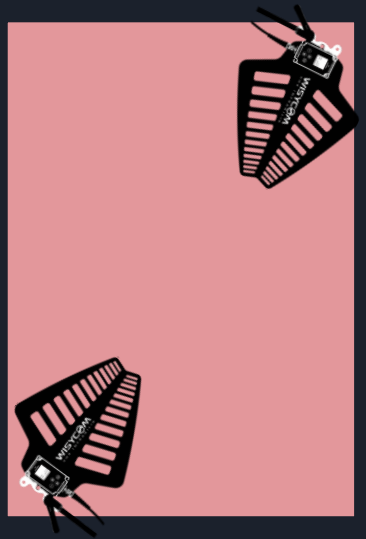
True Diversity Technology











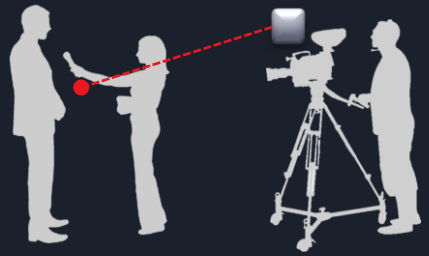
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Positioning Technology

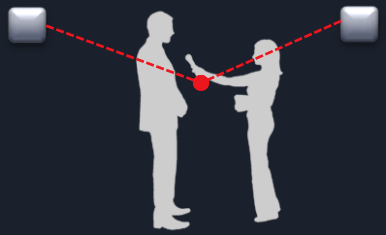
- **Connection-less Communication** (Data broadcast) to deliver secure control even in the most crowded environment since the same information is constantly broadcasted several time per second along with positioning (Angle of Arrival) → Extreme Time diversity (10 fold)
- **Real time position** for advanced management and audio space image DSP reconstruction
- **BlueTooth 5 long range** has about 2 times point-to-point coverage vs Wifi

Bluetooth 5
Long Range

ENG-EFP
Auto scan, deploy and setup



STUDIO
Complete control and real time positioning



THEATRE
Automated controls based on position and immersive sound compatibility



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Portable Transmitters

Wisycom Microphone Systems Overview - MTP60

MTP60 Multi-Band Bodypack Transmitter

- Multi-Band* (470MHz - 1160MHz)
- Bluetooth App Control
- Built-In 32 Bit Float Recorder
  - 100mW max power
  - Intermodulation free (LINEAR)





Wisycom Microphone Systems Overview - MTP61

MTP61 Miniature Bodypack Transmitter



- Multi-Band (470MHz - 1160MHz)
- Bluetooth App Control
- Built-In 32 Bit Float Recorder
- 100mW max power
- Intermodulation free (LINEAR)

Wisycom Microphone Systems Overview – LBC61

Docking Station

- 4 Bodypack slots & 4 Battery slots
- USB and Ethernet monitor and control ports
- Timecode I/O connectors
- 8 batteries charge in approx. 2hours



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MTH410 Wideband Handheld Transmitter



- Wideband Operation - 470MHz - 663MHz*
- Linear Transmit Technology at L20mW output
- NB / WB Switching
- Ultrasonic Audio Filtering
- Thread adapters to many popular capsules
- Native DPA4018VL (MCM306L) threaded capsule

DPA MICROPHONES

MTB40 Wideband Plug-On Transmitter

- Wideband Operation - 470MHz - 663MHz*
- Linear Transmit Technology at L20mW output
- NB / WB Switching
- Ultrasonic Audio Filtering
- Built-In 48V Phantom Power



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Portable Receivers

Wisycom Microphone Systems Overview - MCR54

- 4 Channel True-Diversity receiver
- Multi-band operation - 470MHz - 1160MHz
- Next Gen Multiband front-end filtering:
  - High Q electronically tunable 32MHz filter in UHF (470-798 MHz)
  - Narrowband Saw filters
- Multiple brand compatibility
- Monitor and control through Wisycom Manager and Wisycom App
- Automatic Scan & Deploy
- Ultrafast Spectrum Scan



Wisycom Microphone Systems Overview - MCR54-DUAL

- 2 Channel True-Diversity receiver
- Multi-band operation - 470MHz - 1160MHz
- Next Gen Multiband front-end filtering:
  - Double front end filter electronically tunable (470-798 MHz)
  - Narrowband Saw filters
- Multiple brand compatibility
- Monitor and control through Wisycom Manager and Wisycom App
- Automatic Scan & Deploy
- Ultrafast Spectrum Scan



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MRK16 platform

MRK16-Receiver Symphony system



- Up to 16 true-diversity receiver channels (4 x MCR54)
- Multi-band operation - 470MHz - 1160MHz
- 4 Redundant power supplies: 2 DC inputs and 2 POE++ inputs.
- Monitor and control through Wisycom Manager



MRK16-Receiver Support System

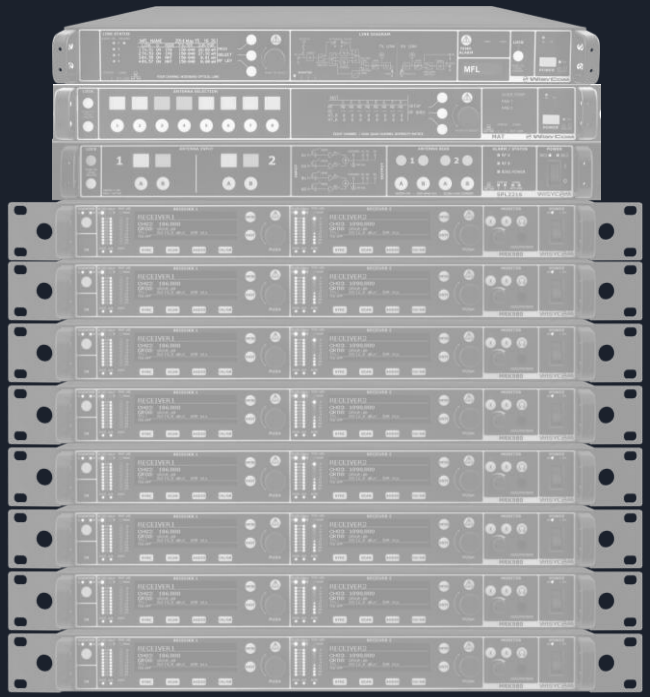


- Class 1 Bluetooth Control for Symphony Transmitters
- RF over Fiber slot in card (SC/APC)
- Data over Fiber connector (LC/PC)
- Dante & AES Digital outputs
- Smart antennas remote control
- Cascade outputs to connect up to 64 channels



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THE “ALL IN ONE” SOLUTION





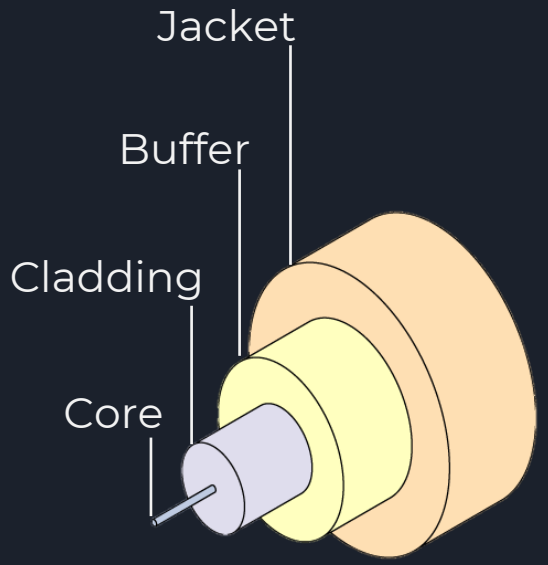
EX3 & BFLTx - RF over Fiber



- 2x RF over Fiber Inputs
- SCP/APC single mode fiber connector
- 0.4dB/Km RF loss over fibre
- Optional slot in card

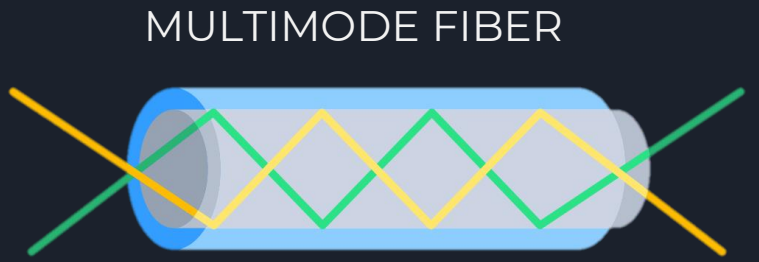
Singlemode optical fiber

- The core: made in silica even if often people refers to it with the term “glass”, it’s the light carrying part (9µm)
- The cladding: provides the difference in reflective index which allows and define the light reflection inside the core (125µm)
- The buffer: usually made by one or more layers of polymer, protects the core and the cladding from mechanical and environmental damages which may affect the fiber patch performances. The coating doesn’t affect the light propagation in any way, but it protects it. (250µm)
- The Jacket: is the most external and resistant shell to protect the patch.



Singlemode VS Multimode

- MULTIMODE: light is carried in many rays called modes, this affect the dispersion which is much worst compared the Singlemode patch and loss is higher. The core may vary by 62.5µm to 50µm, where the cladding is always 125µm.

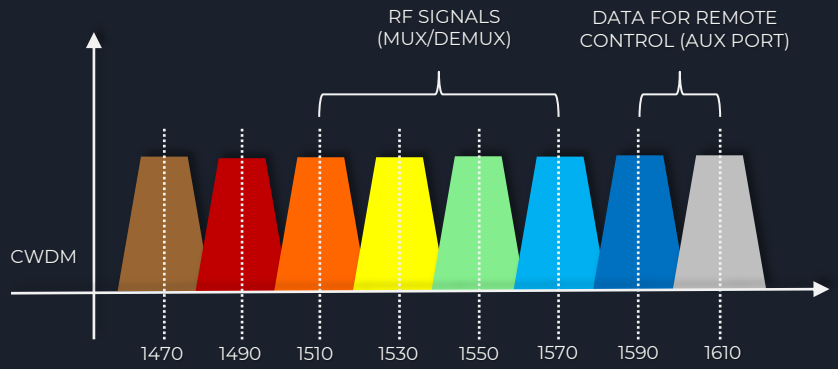


- SINGLEMODE: mount a narrow core of 9µm, it has a very low power dispersion and is ideal for wideband operation. Because of it's smalle core, it's slightly more delicate than the Multimode.



CWDM Technology

Wisycom MFL units have the possibility of installing a multiplexer (CWDM) which can transport RF and Data simultaneously in both directions. This solution is essential when the user needs to run his signals on on single fiber cable instead of multiple patches and is commonly used on some specific installations where the antenna and the MFL are positioned far away and a remtoe network point is then highly reccomended, not just for Wisycom gears (e.g. Intercom devices).





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Fiber VS Coaxial



COAXIAL CABLE

- Loss: 10dB/100m (depending on cable)
- Heavy to carry
- Power: can carry power up to watts
- Noise: thermal noise -174dBm/Hz (@ 50 Ohm x 25°)



OPTICAL FIBER

- Loss: 0,4dB/Km
- Very light
- Power: can not carry RF power (i.e. needs a remote amplifier)
- Noise: NF 15dB higher

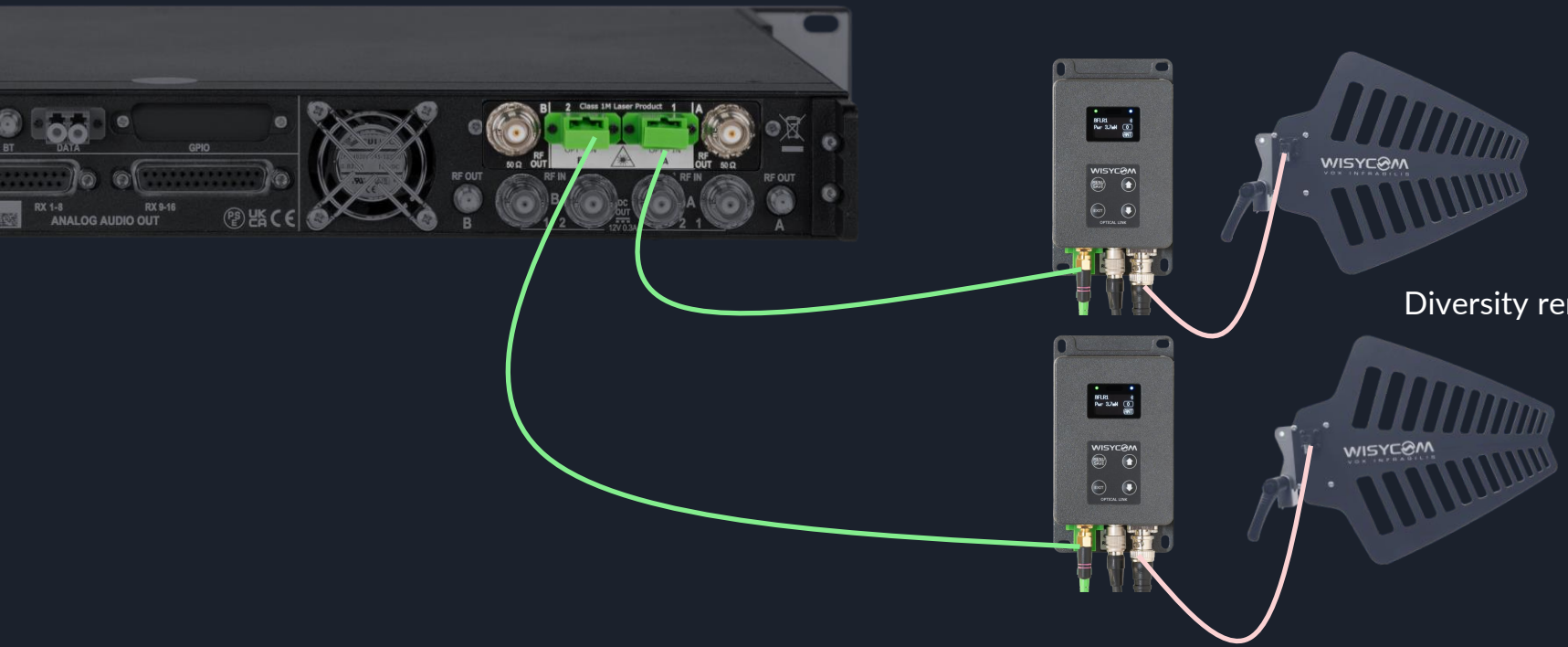
BFLT & BFLR – RF over Fiber

- Adjustable gain
- Remote control via Bluetooth on Wisycom App
- 0.4dB of loss per Km / 0.7dB loss per mile
- Plug and play device
- Integrated RF filter
- Booster to power active antennas
- Compatible with any system (bandwidth accordingly)

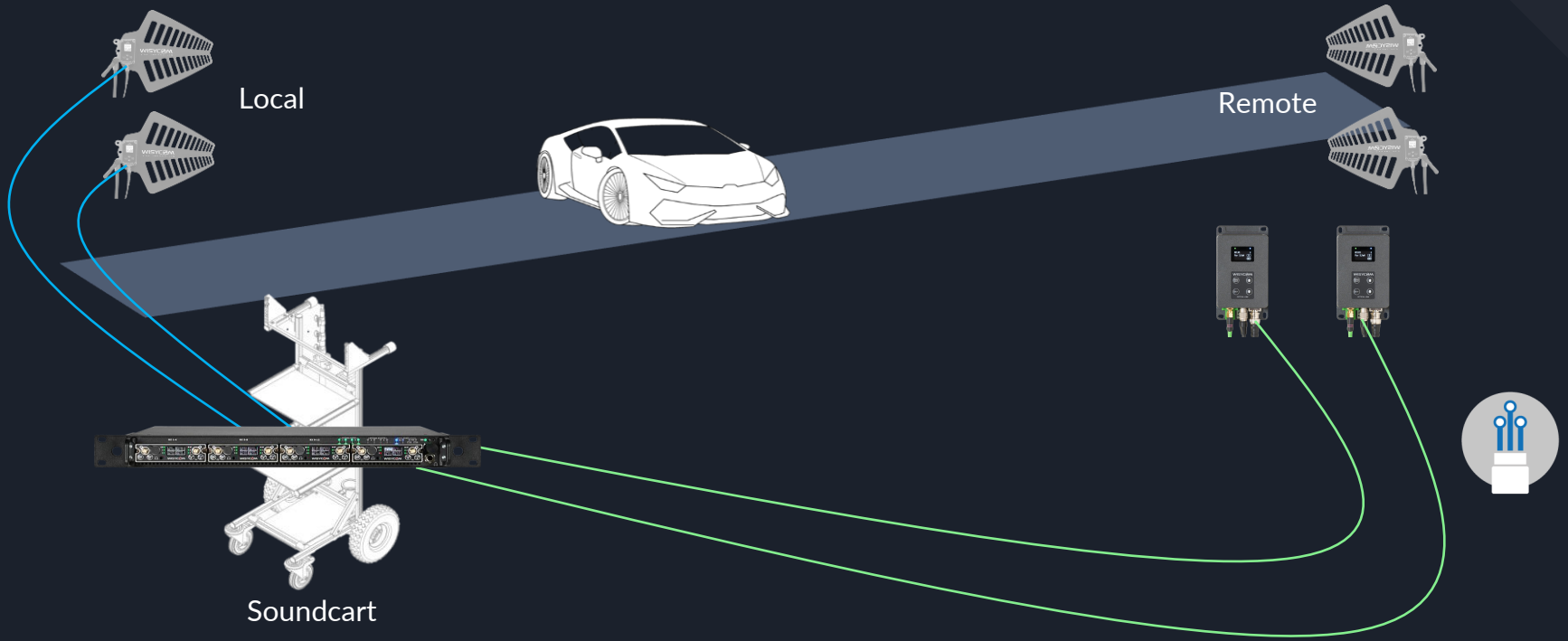




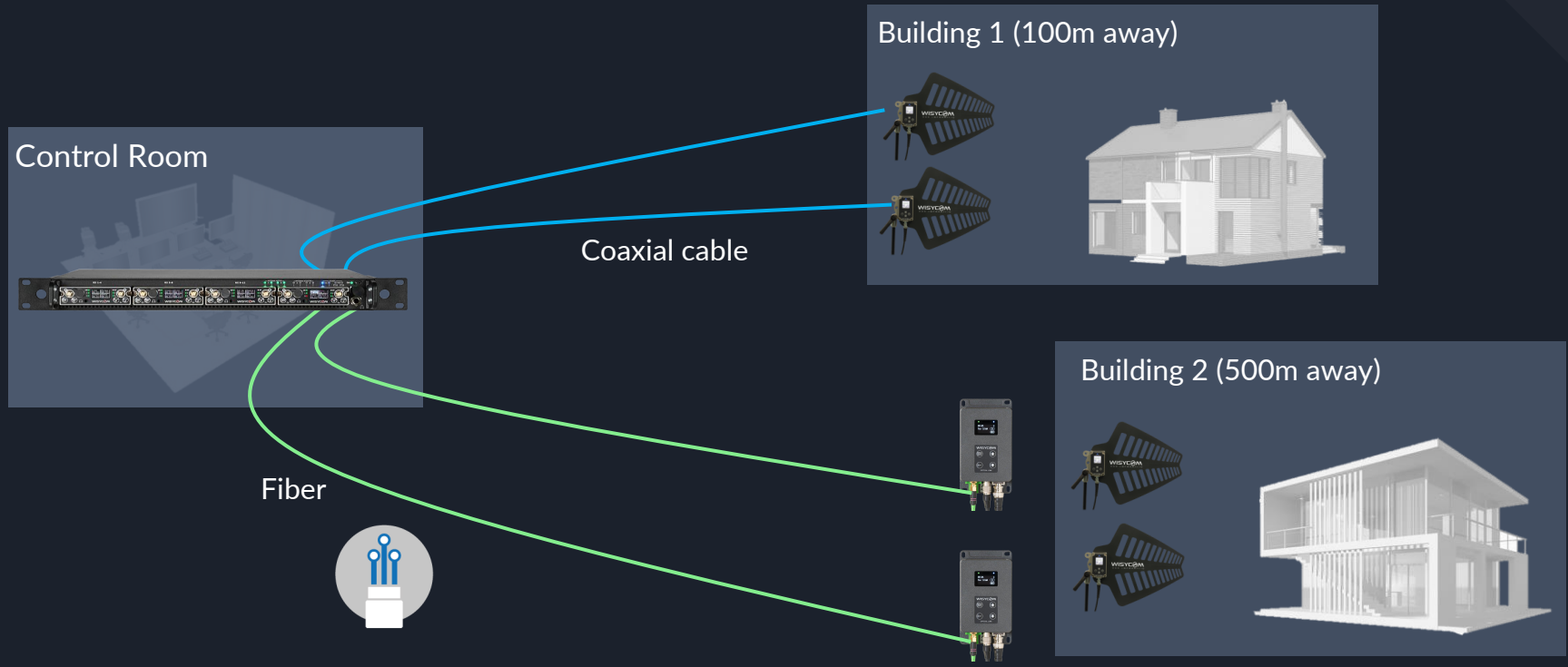
EX3 & BFLx - RF over Fiber



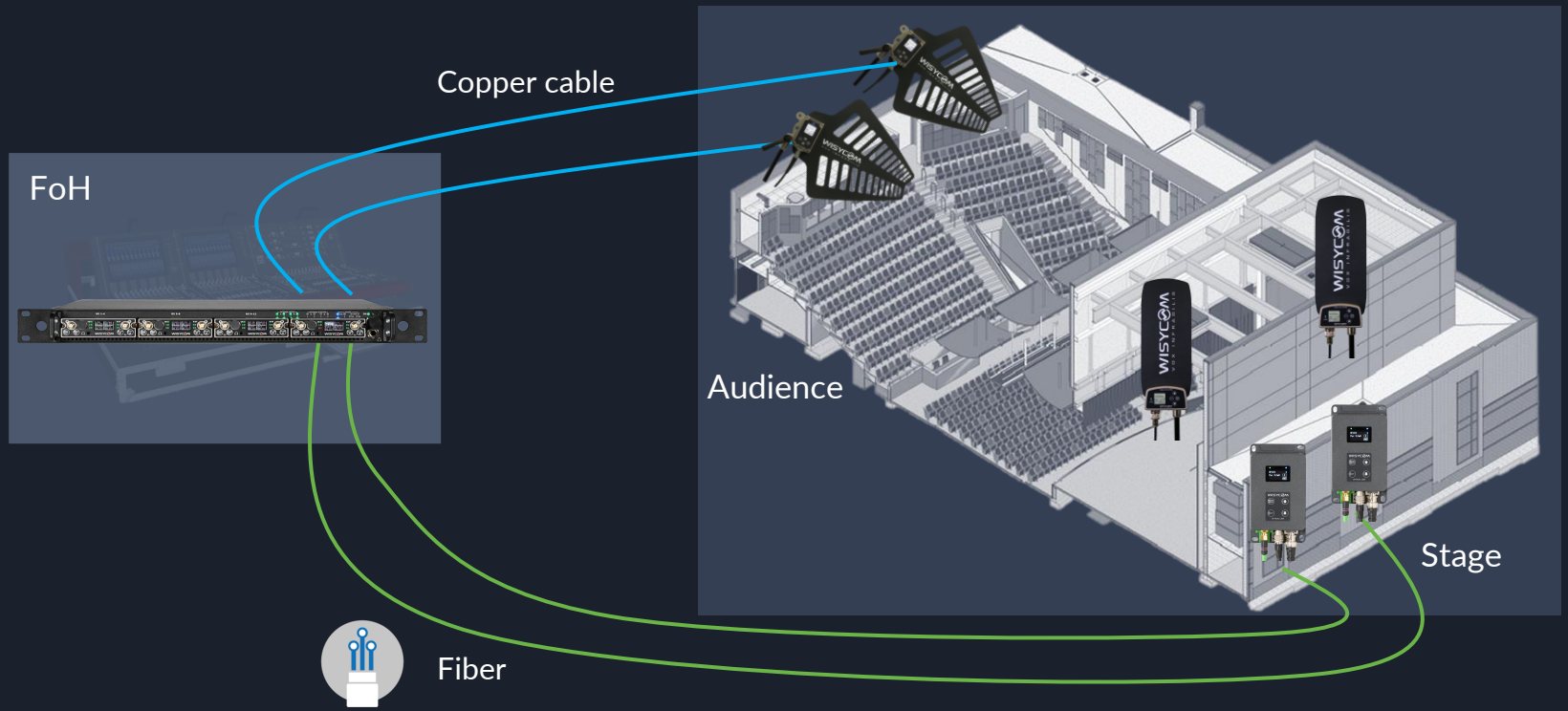
Case scenario: feature film



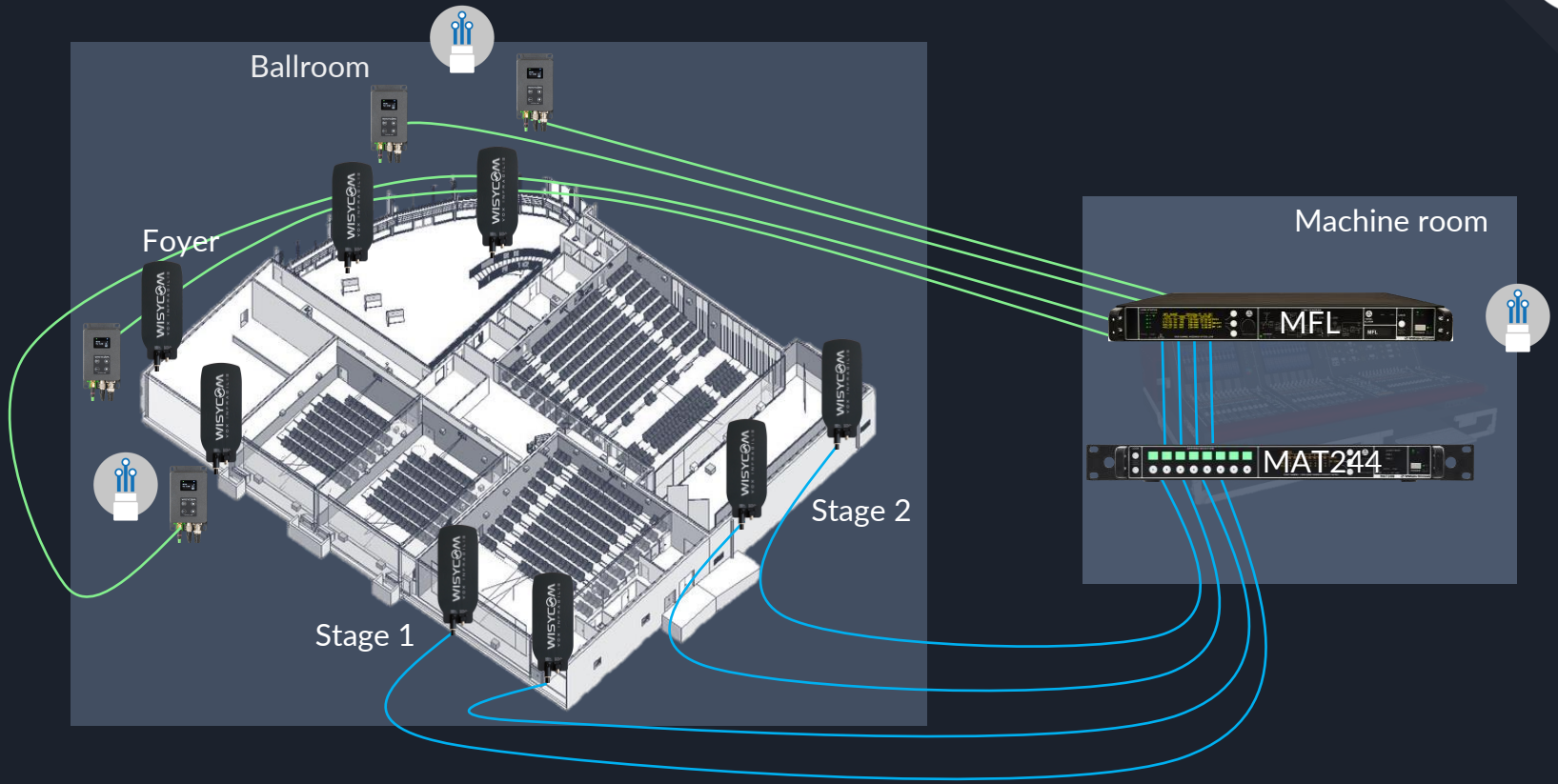
Case scenario: reality show



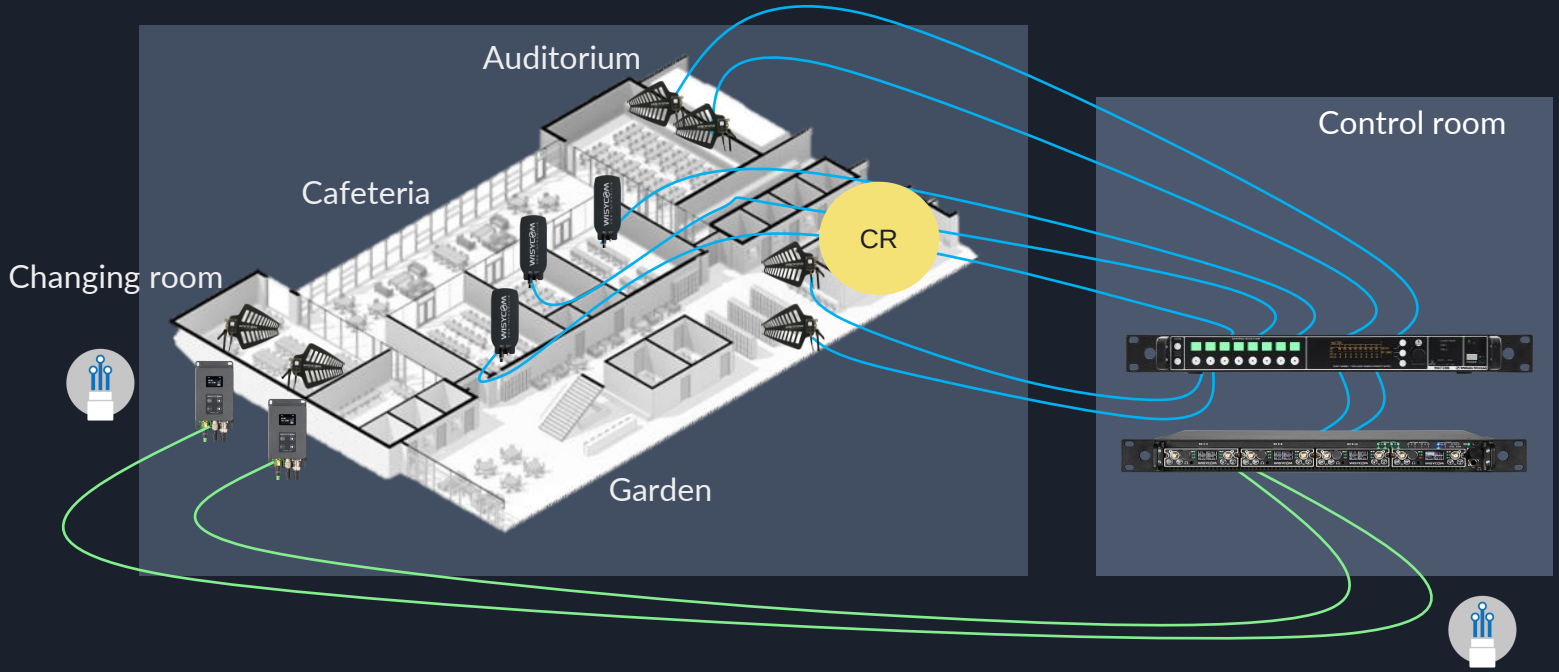
Case Scenario: Theatre



Case Scenario: Multizone Theatre reception



Case Scenario: Reality Show



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IEM System

MTK982–Dual channel stereo transmitter



- 330Mhz of Bandwidth (470-800Mhz)
- 2000mW max RF power out
- Remote control and monitor thanks to Wisycom Manager
- Intermodulation free (LINEAR)
- 0.4ms delay
- Multi brand compatibility
- Iso frequency technology

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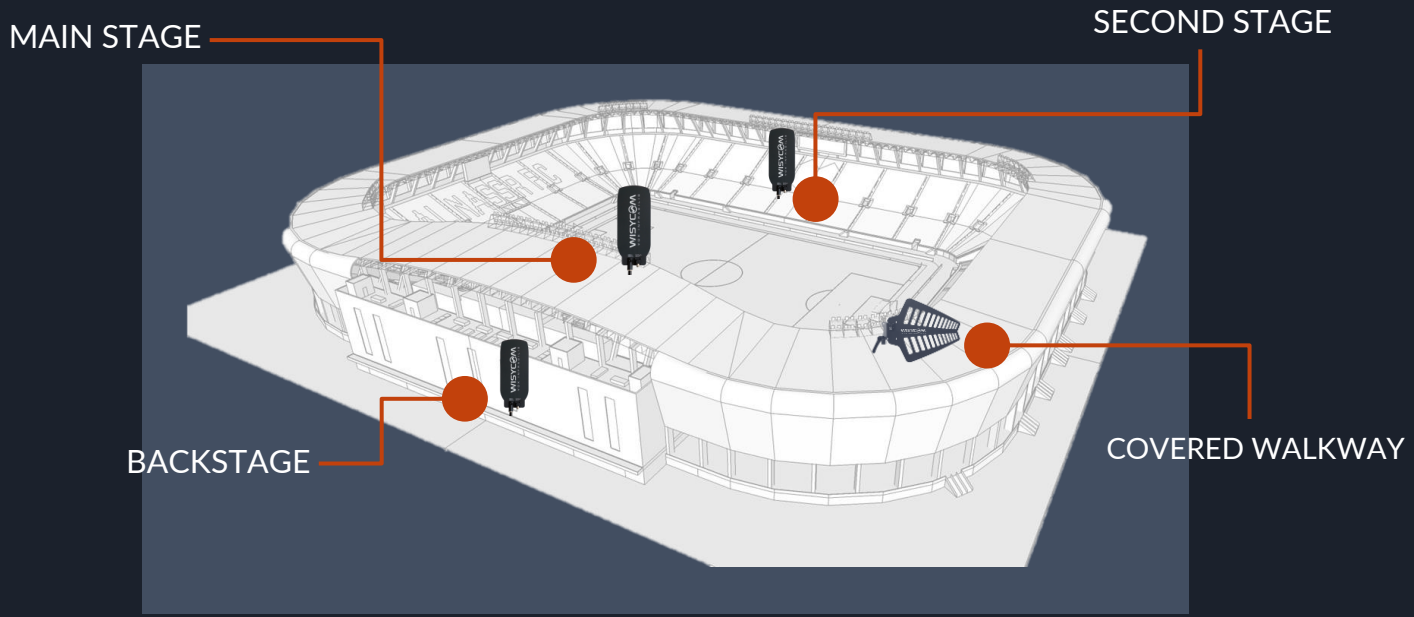
MPR50-IEM

- 230MHz Bandwidth
- True Diversity Receiver
- Up to 6 hours of battery life
- 200mW audio output power
- “Clone” function
- Digital gain
- >70dB stereo separation

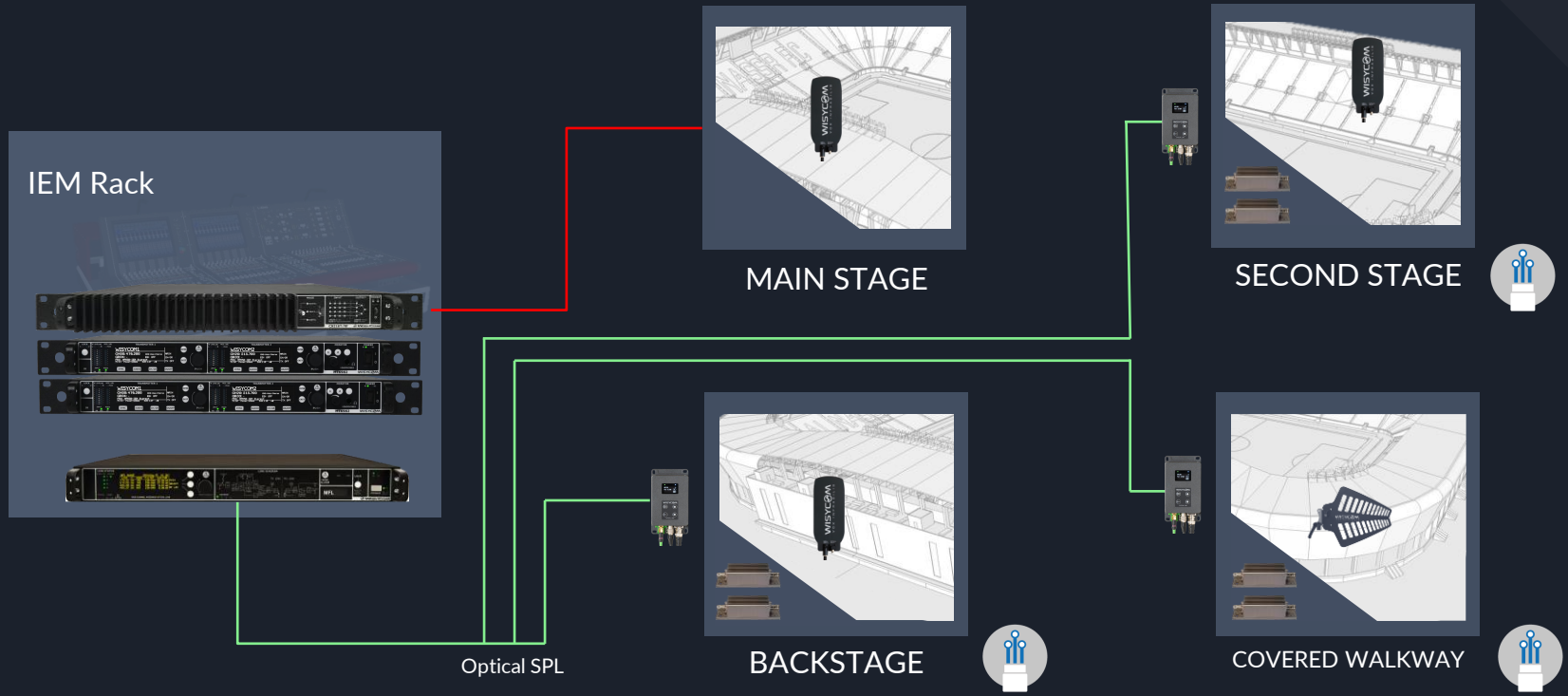




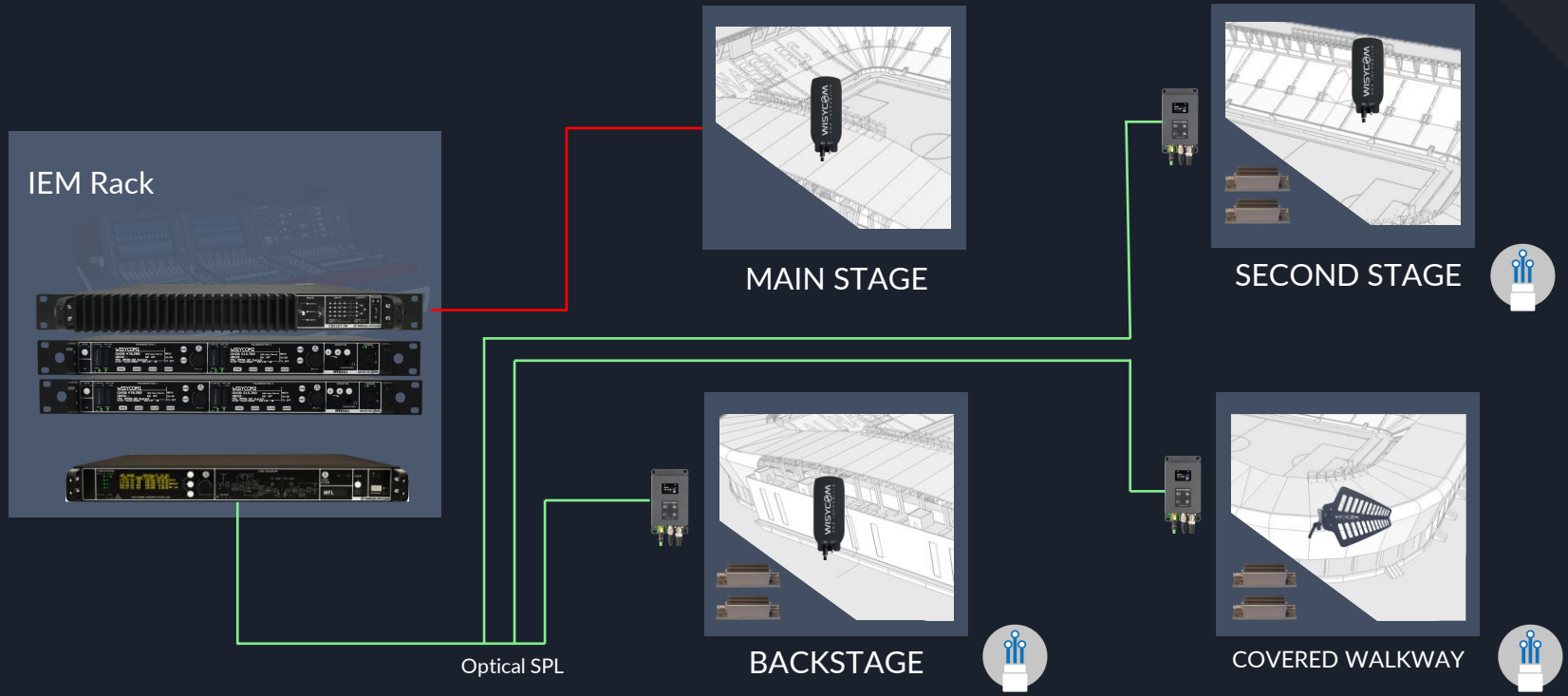
Case Scenario: Arena Multizone Transmission



Case Scenario: Arena Multizone Transmission



Case Scenario: Arena Multizone Transmission



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Antenna Distribution

MAT288–Diversity Matrix combiner



- Diversity combiner 8:1 / 8:4 / 2x 4:2 (SW configurable)
- 150-1160MHz bandwidth
- Remote control and monitor thanks to Wisycom Manager
- Smart Antenna control
- Antenna booster supply
- Auto loss compensation
- Adjustable gain on each input

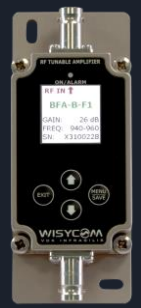


LFA/BFA/ADFA–Smart boosters & antennas

- Adjustable gain from -12 to +27dB
- 150-1160MHz bandwidth
- Remote control via MAT2xx, SPL22xx and MRK16
- Smart Antenna control
- Integrated bandpass and tunable RF filters



LFA



BFA



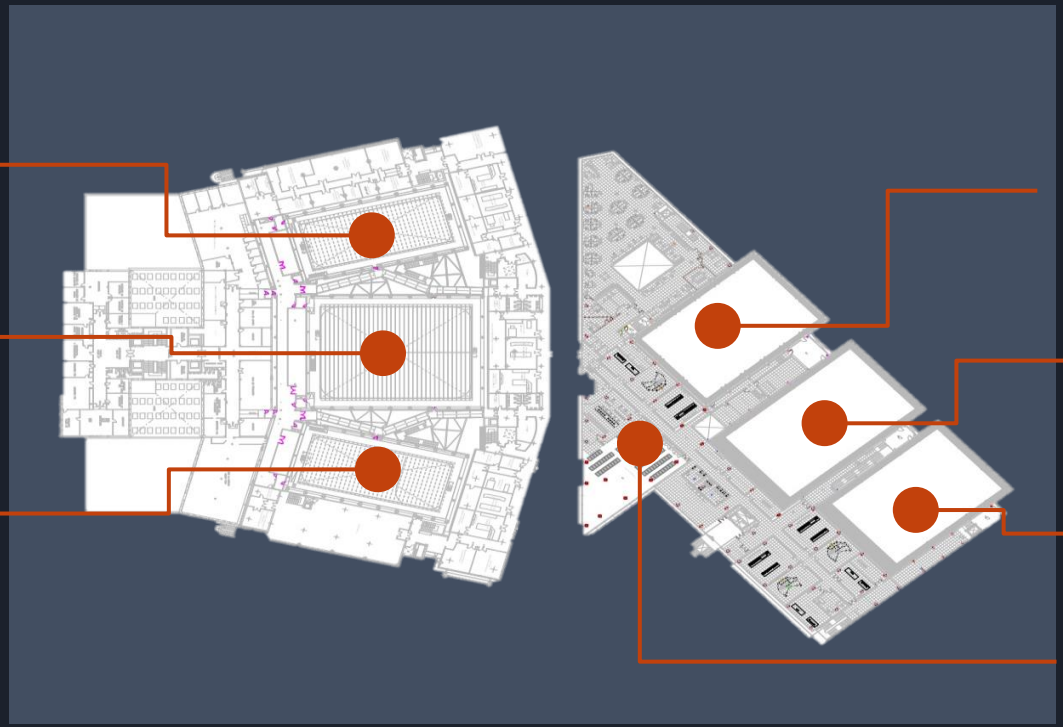
ADFA



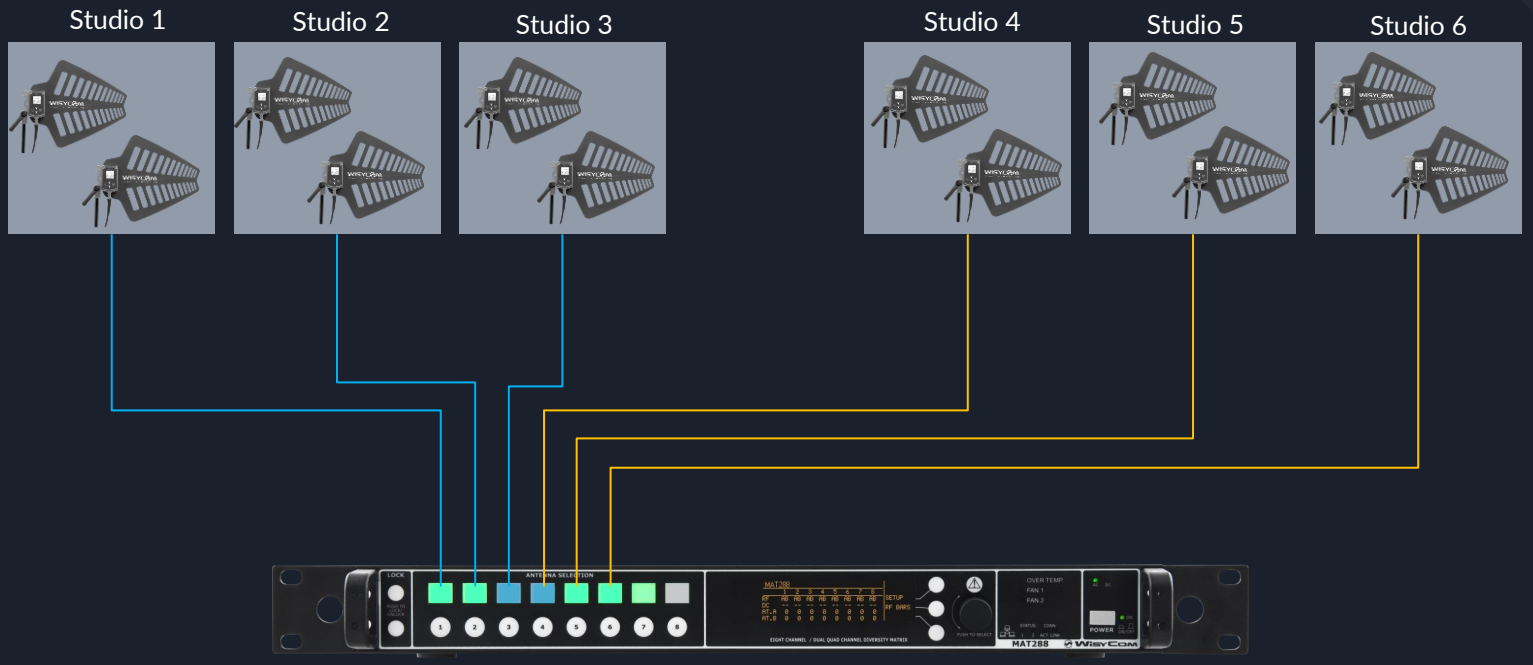




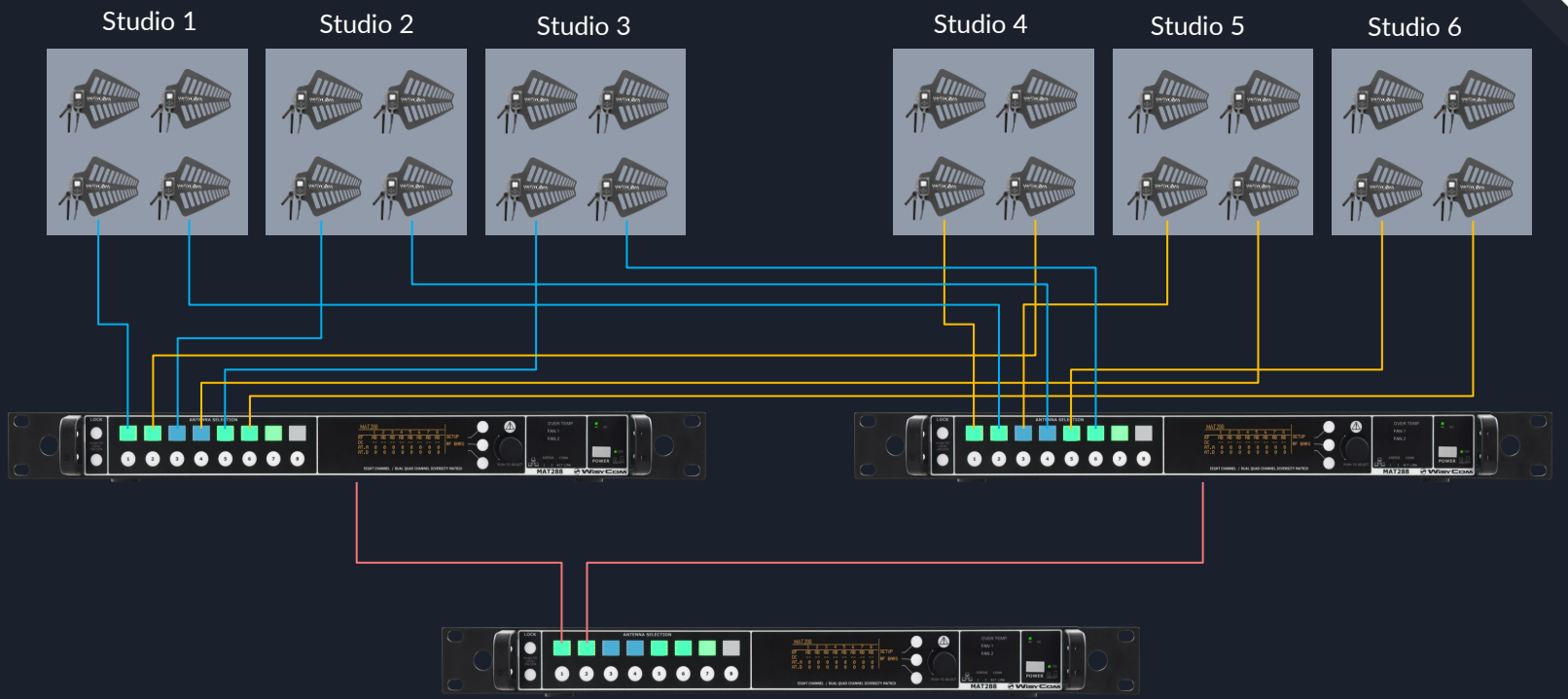
Case Scenario: TV studio



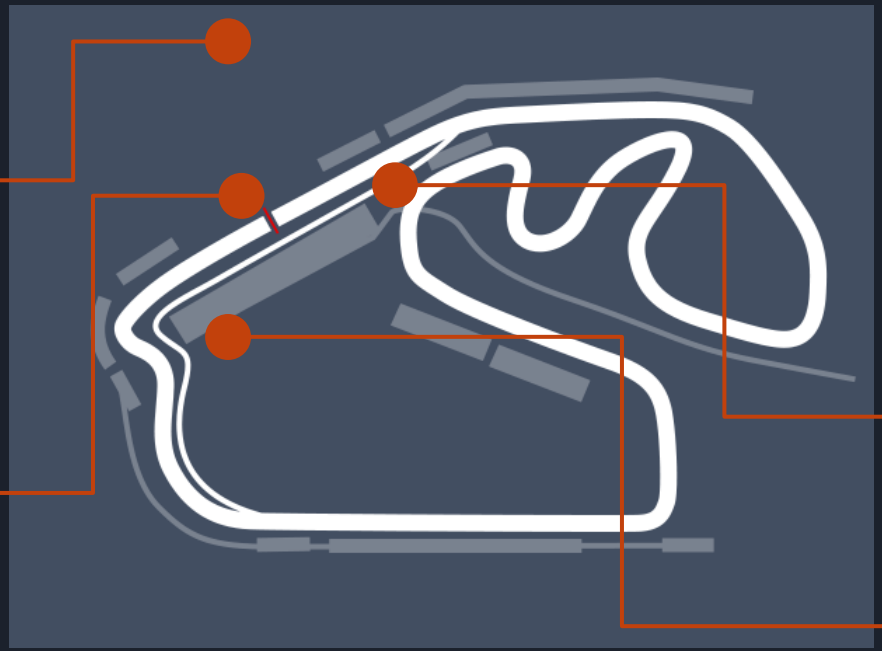
Case Scenario: TV studio



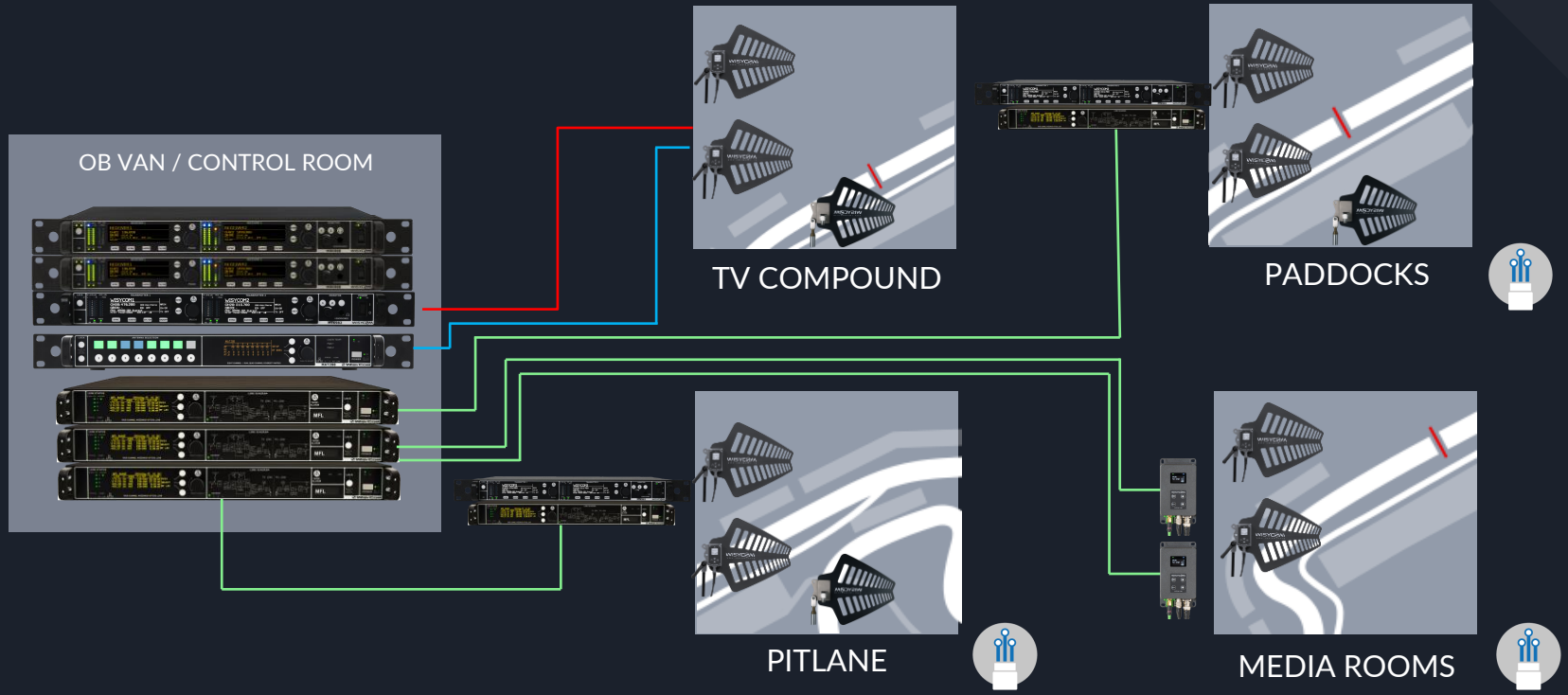
Case Scenario: TV studio



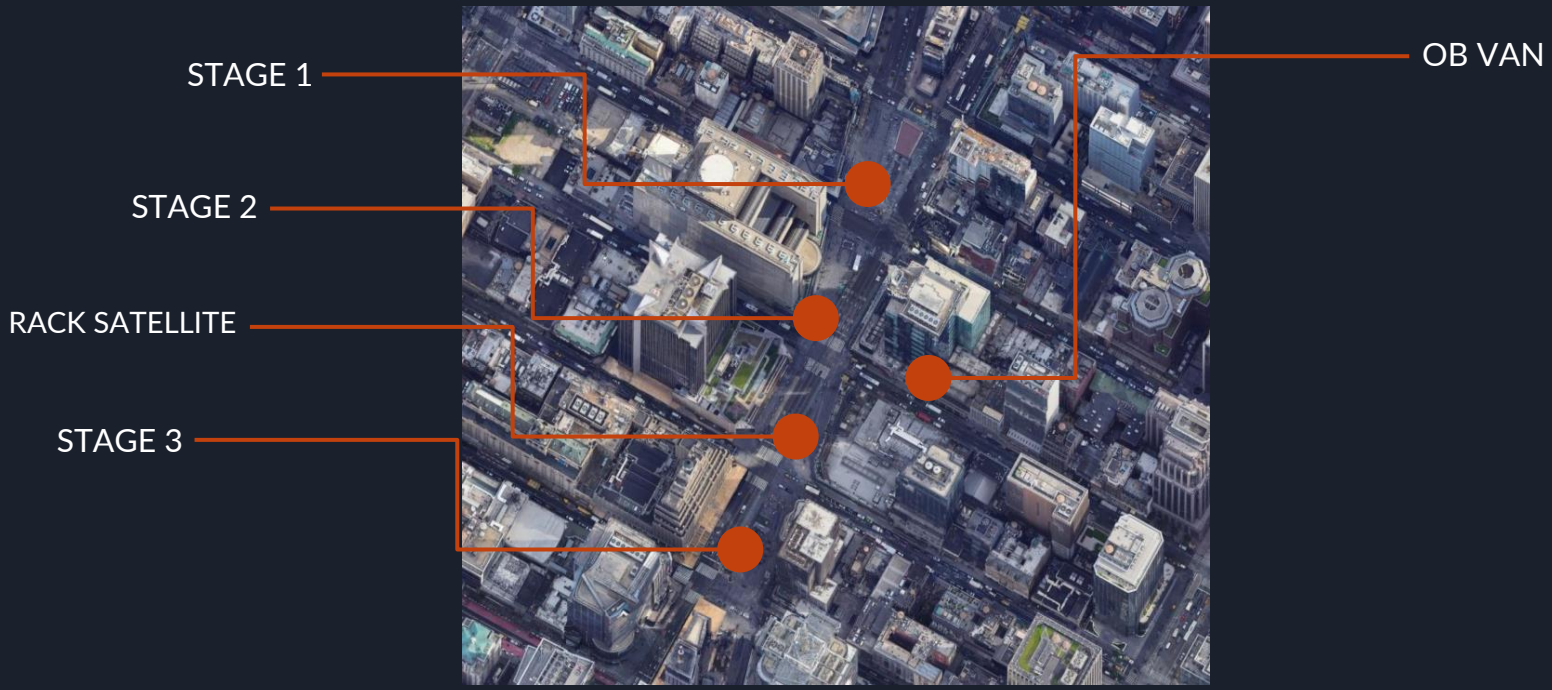
Case Scenario: F1 race track



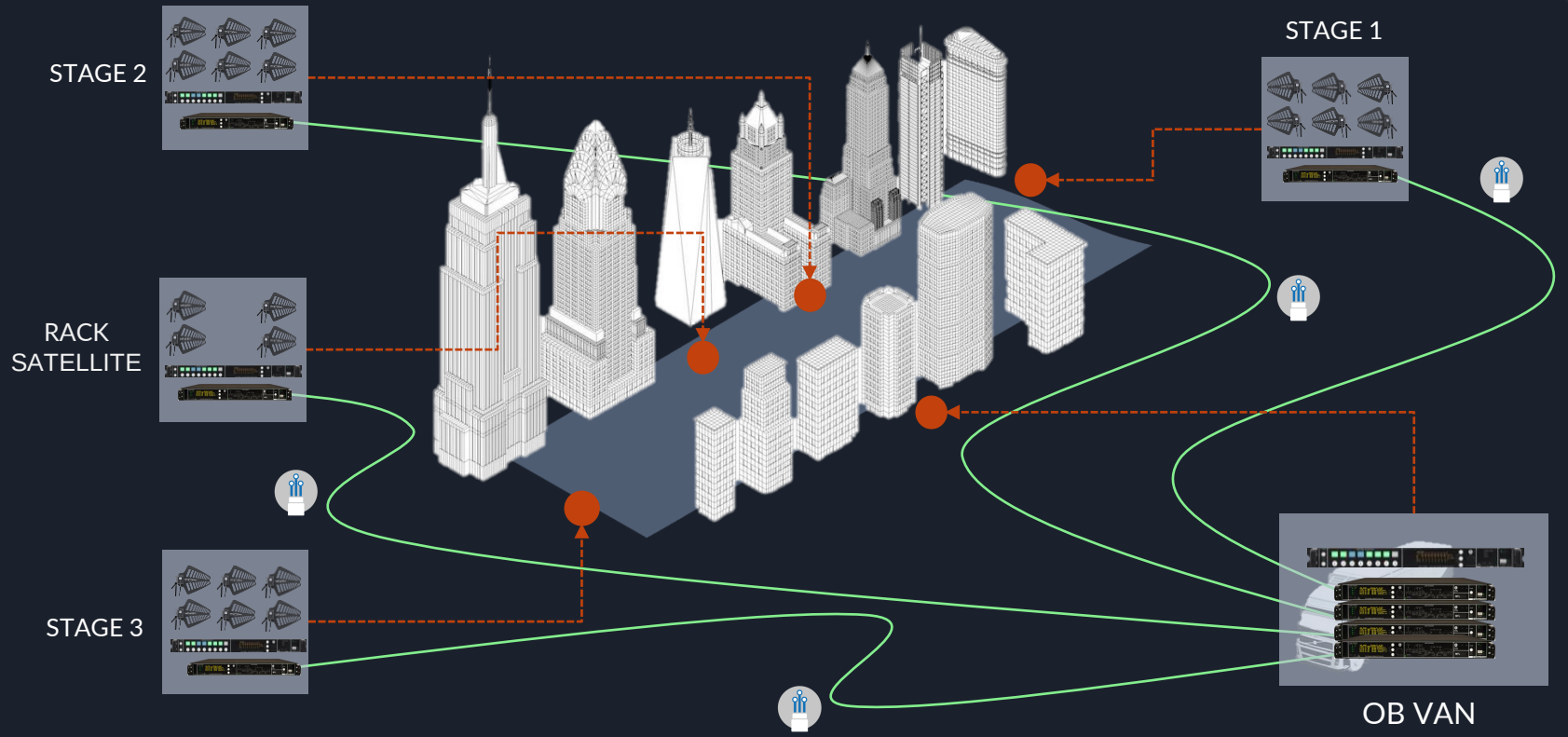
Case Scenario: F1 race track



Case Scenario: Time Square NYE



Case Scenario: NYE in Time Square (US)



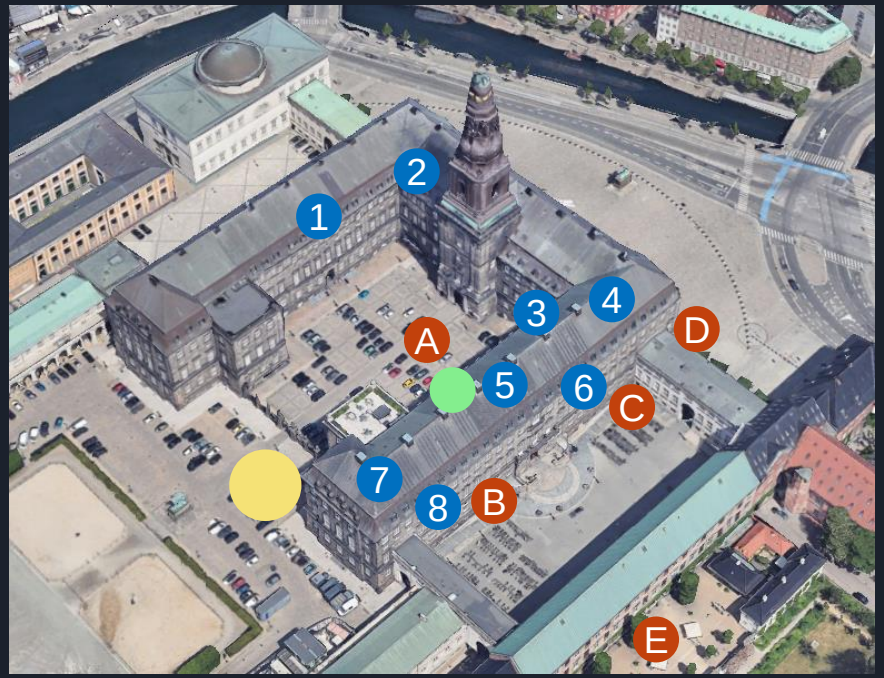
Case Scenario: Election Day (DK)

OB van

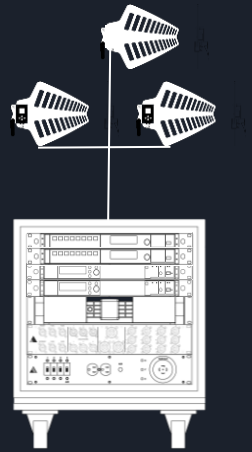
X Indoor rack satellites

Y Outdoor rack satellites

Parlament Machine room and fiber patch bay

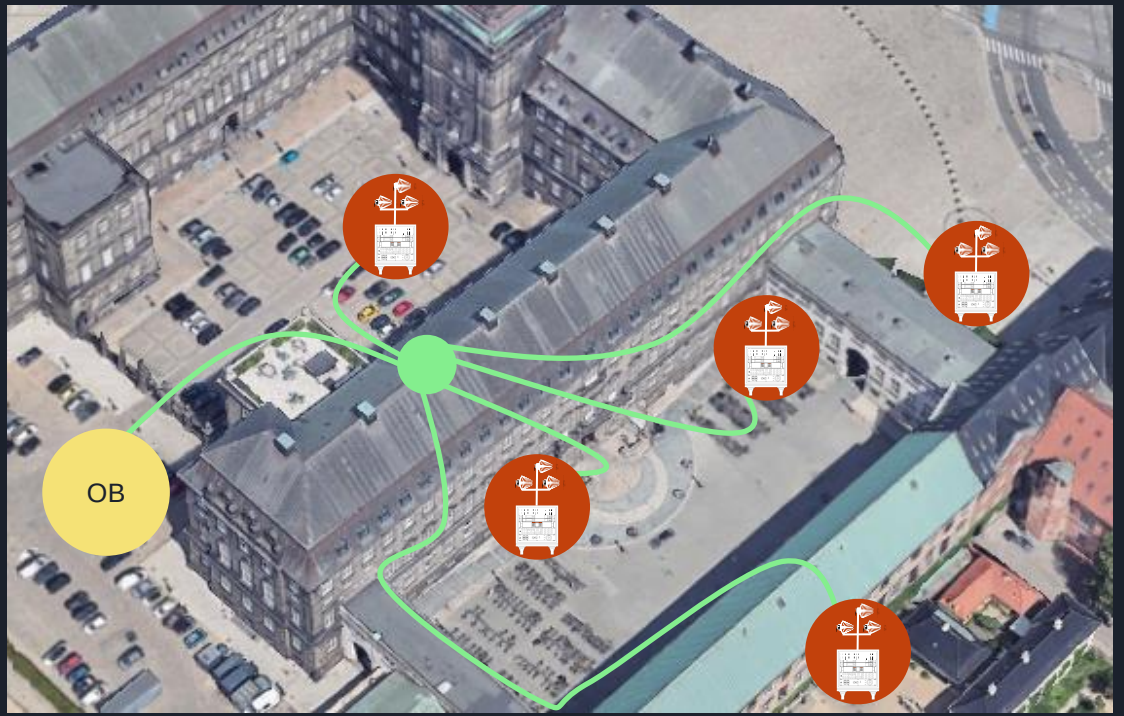


Case Scenario: Election Day (DK) / Outdoor racks



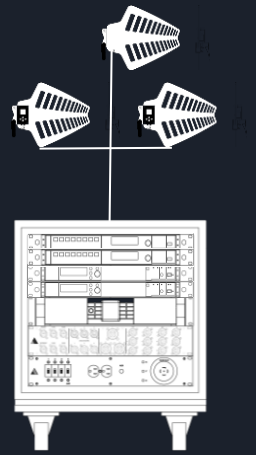
WHAT'S IN THE RACK?

- RF over fiber link
- IEM Amplifier
- Intercom
- Network Switch



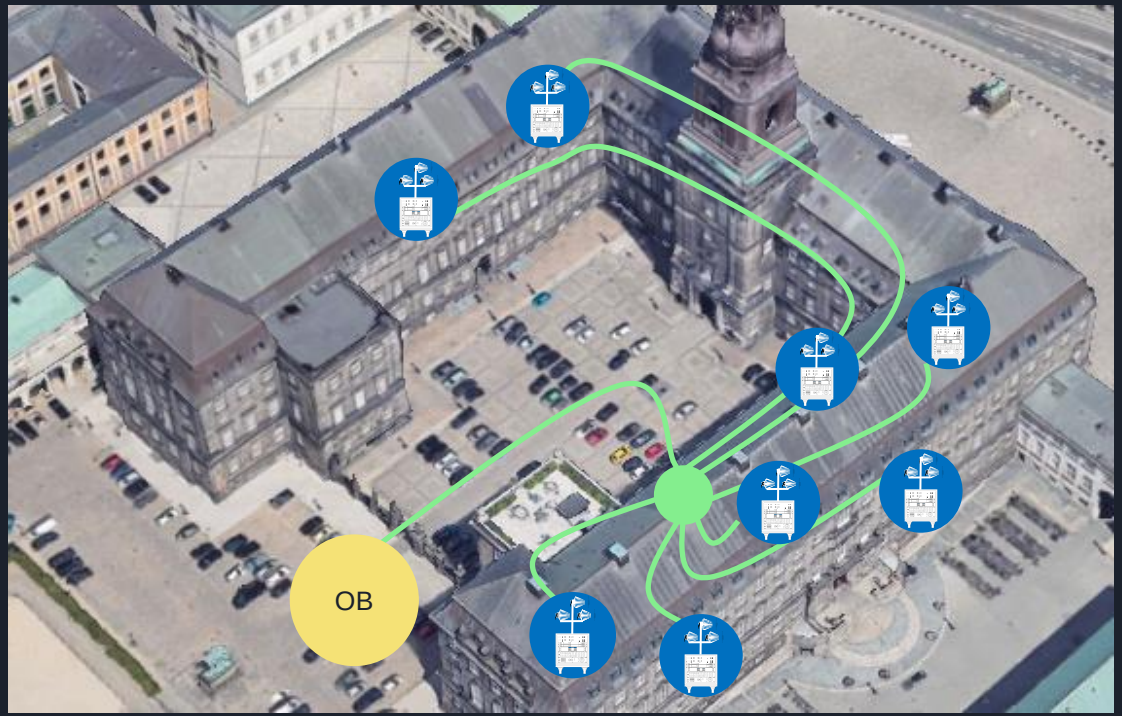
Outdoor rack satellites

Case Scenario: Election Day (DK) / Indoor racks



WHAT'S IN THE RACK?

- RF over fiber link
- IEM Amplifier
- Intercom
- Network Switch



Indoor rack satellites