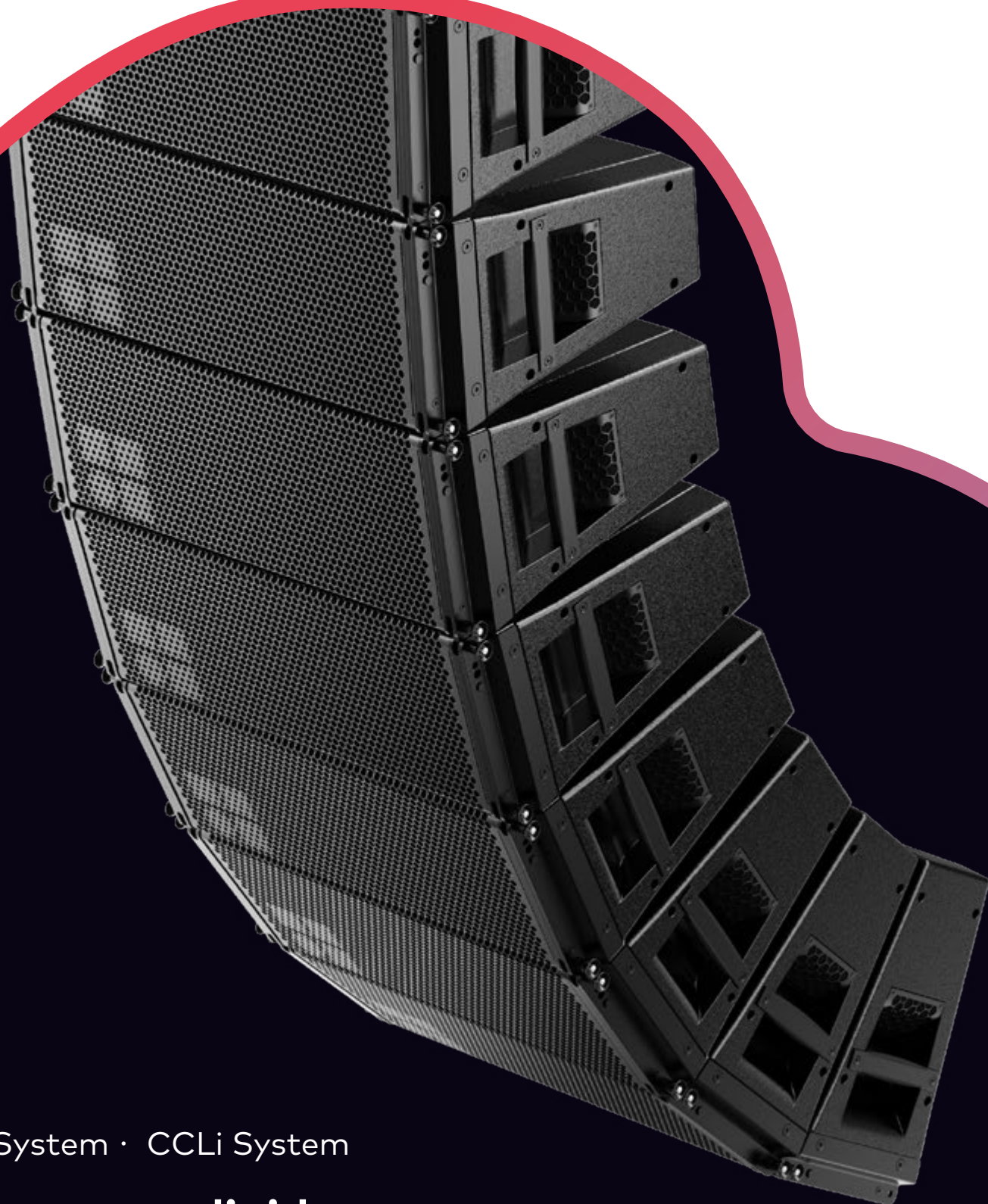




CCL System · CCLi System

**The new cardioid way.
Next level.
Scaled down.**

Introducing the CL-Series

As the first system in the CL-Series, CCL, the Compact Cardioid Line Array, introduces a new standard in compact line array performance by combining single-channel broadband directivity control and next-generation transducer and waveguide-horn architecture to bring clarity and scalability to a wide range of applications.

CCL's unparalleled high-frequency headroom ensures high performance across a wide range of array sizes, shapes, and applications. Lightweight and compact, CCL simplifies handling, optimizes transport and storage, and makes setup easier for stage crews. For installed applications, CCLi offers an elegant appearance and small form factor, delivering maximum performance, sound quality, and speech intelligibility in a compact footprint.



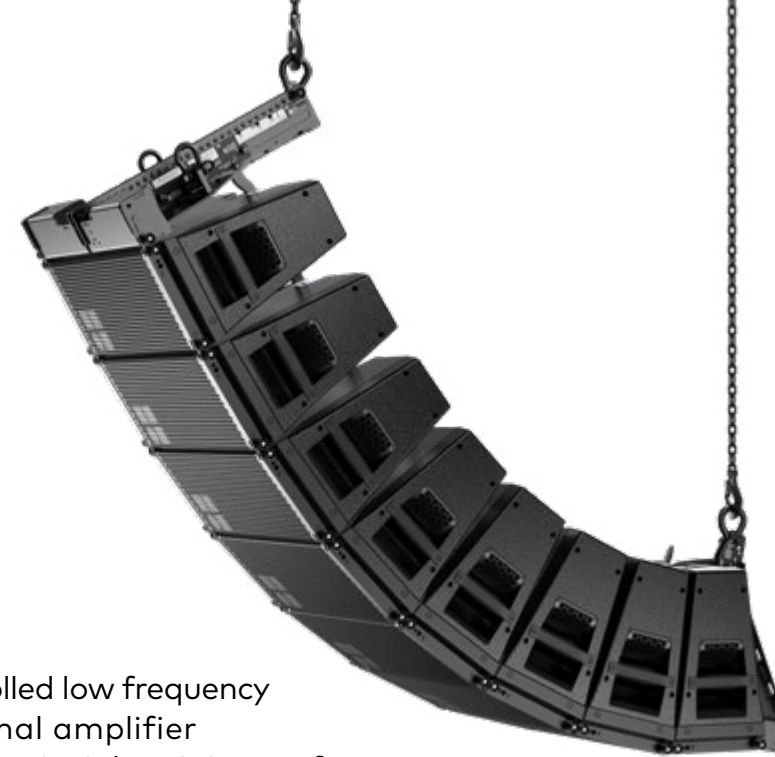
Benefits of Broadband Directivity Control

- **Incredible Sound** – By reducing room reflections that interfere with the program material, increasing clarity and speech intelligibility.
- **For Every Listener** – By maintaining consistent coverage across all frequencies, constant directivity ensures the same tonality for every listener throughout the coverage area.
- **Quieter stage** – By focusing energy toward the audience and away from the stage, improving the artist's experience and working environment for technical crews, and reducing feedback.
- **Reduced noise emissions** – By confining sound to intended audience areas, minimizing unwanted off axis sound into neighboring spaces or the environment.
- **Decreased interference** – By minimizing the overlap between individual sound sources and audience zones, reducing comb filtering and destructive interference.
- **Greater usable coverage** – By maintaining tonal consistency outside of the nominal dispersion, audience members to the sides



Passive Cardioid

Passive cardioid technology delivers controlled low frequency directivity without the need for additional amplifier channels or digital signal processing. The principle originates from cardioid subwoofer arrays (CSA), where a combination of front and rear facing omnidirectional subwoofers is digitally processed to achieve a cardioid dispersion pattern. In a passive cardioid system, this process is achieved mechanically rather than digitally. Using a combination of bass reflex and band pass chambers, the enclosure itself provides the required processing. The result is increased SPL to the front of the cabinet and reduced noise to the rear. Thanks to extensive experience implementing cardioid configurations and continuously evolving simulation and manufacturing techniques, CCL delivers consistent broadband directivity control in a compact form factor using a single amplifier channel.



High-Frequency Innovation

Covering a wide range of applications results in significant variations in throw distances, leading to differences in line array length and curvature. This variability places increased demands on high frequency performance. At the same time, broadband directivity control improves clarity over distance and enables longer throw applications, regardless of overall level requirements. As sound is projected further, high frequencies are increasingly attenuated by air absorption, making additional high frequency headroom a critical factor for audience coverage and tonal balance. To address these challenges, CCL features a next-generation transducer and waveguide-horn architecture that delivers higher sensitivity, lower distortion, and sufficient headroom to support flexible array configurations and extended throw distances.

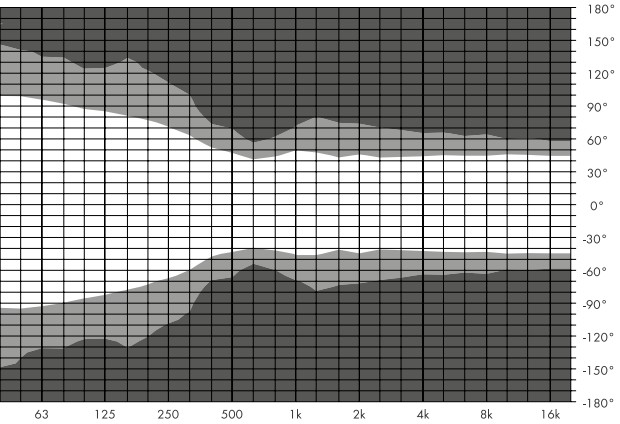
CCL Loudspeakers

The CCL is a compact, 2 way passive cardioid line array system designed for small to medium scale sound reinforcement applications. Owing to the arrangement of forward and side firing low frequency drivers, combined with dedicated processing functions, directivity is maintained across the entire operating bandwidth. The system frequency response extends from approximately 60 Hz to above 18 kHz.

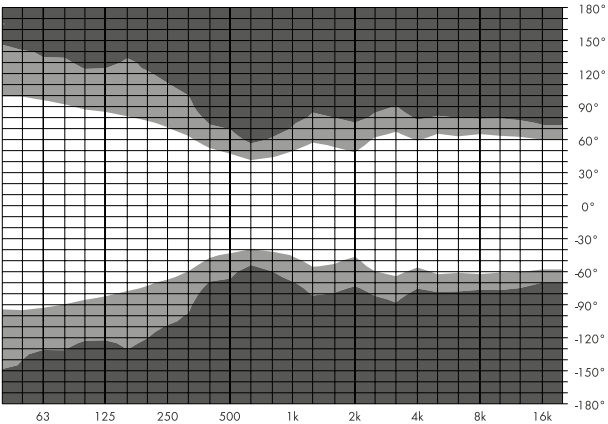
The cabinets are 2-way passive designs housing 2 x 7" neodymium forward LF drivers, 2 x 5" neodymium side-firing LF drivers, and two 1.75" exit HF compression drivers mounted to a dedicated wave-shaping device. The cylindrical wave segments of each cabinet couple without gaps and sum up coherently.

When used with the corresponding flying frame, up to 24 cabinets can be flown in vertical columns, with adjustable splay angles between 0° and 14° in 1° increments. This enables precise vertical coverage adaptation while maintaining constant horizontal directivity. CCL and CCLi come in two horizontal dispersion options, 80° and 120°, to accurately address different audience and venue geometries.

The enclosure is injection molded from ABS polycarbonate and finished with an impact and weather protected 2K coating. Mobile and installation models are acoustically identical, differing only in aesthetics, connectors, and accessories, and are optimized for their respective applications.



CCL8/CCLi8 isobar diagram horizontal

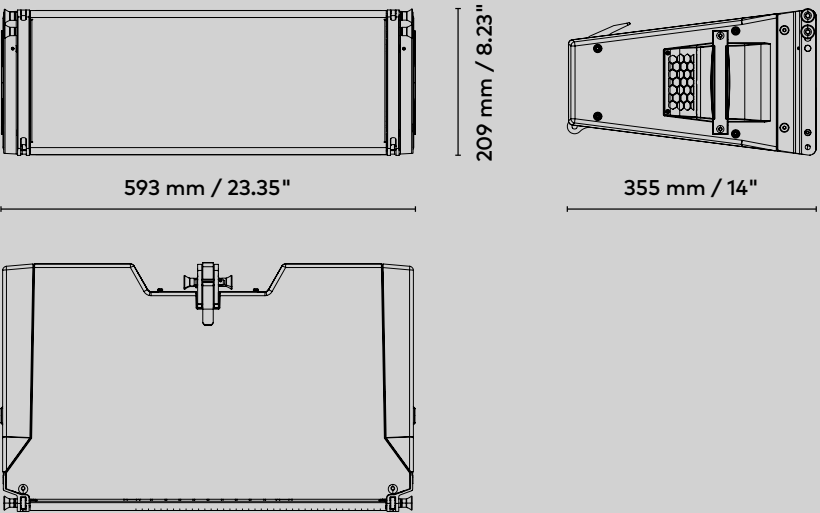


CCL12/CCLi12 isobar diagram horizontal

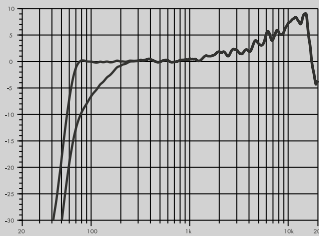


	CCL 8 · CCL12	CCLi 8 · CCLi12
Components	LF 2 x 7" + 2 x 5" HF 2 x 1.75" (2 x 8.7" total equivalent LF driver size)	LF 2 x 7" + 2 x 5" HF 2 x 1.75" (2 x 8.7" total equivalent LF driver size)
Max. sound pressure (1m) ^{1,2} 4x top unit array ^{2,3}	137 dB · 136 dB 149 dB · 148 dB	137 dB · 136 dB 149 dB · 148 dB
Frequency response (-5dB)	62 Hz - 18 kHz	62 Hz - 18 kHz
Nominal dispersion angle (h)	80° · 120°	80° · 120°
Connections	NLT4 F/M	Phoenix Socket
Dimensions (h/w/d)	209 x 593 x 355 mm 8.23 x 23.35 x 14"	209 x 593 x 355 mm 8.23 x 23.35 x 14"
Weight	17.6 kg / 38.8 lb	18.1 kg / 40 lb

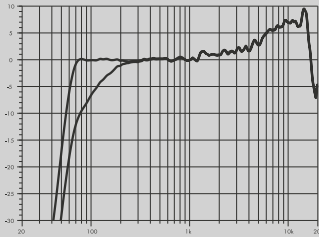
¹ SPLmax: Broadband signal IEC60268, ² max output only available with D40, 40D, D80, D90 amplifier, ³ far field scaled to 1 m



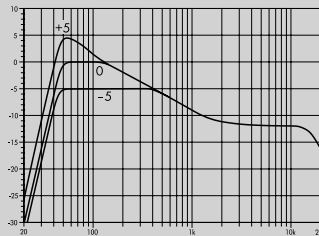
Controller Settings



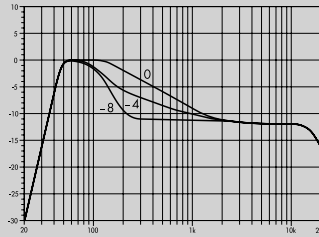
CCL8/CCLi8 Frequency response, Standard and CUT modes



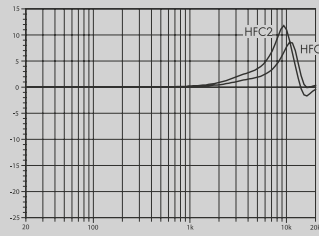
CCL12/CCLi12 Frequency response, Standard and CUT modes



Frequency response correction of the CPL function for low frequency level



Frequency response correction of the CPL function for low- mid frequency level



Frequency response correction of the HFC function

CCL-SUB and CCLi-SUB

The CCL SUB is a compact, high performance cardioid subwoofer. Designed to complement the CCL system, the CCL-SUB delivers powerful low-end extension in a compact, flyable format.

It houses two long excursion neodymium drivers in an integrated cardioid setup: a 15" driver in a bass-reflex design facing to the front and a 10" driver in a 2-chamber bandpass design radiating to the rear. The arrangement and tuning provide a cardioid dispersion pattern using a single amplifier channel. Its frequency response extends from 39 Hz to 150 Hz.

When used with the corresponding flying hardware, the subwoofer can be flown in standalone or mixed arrays.

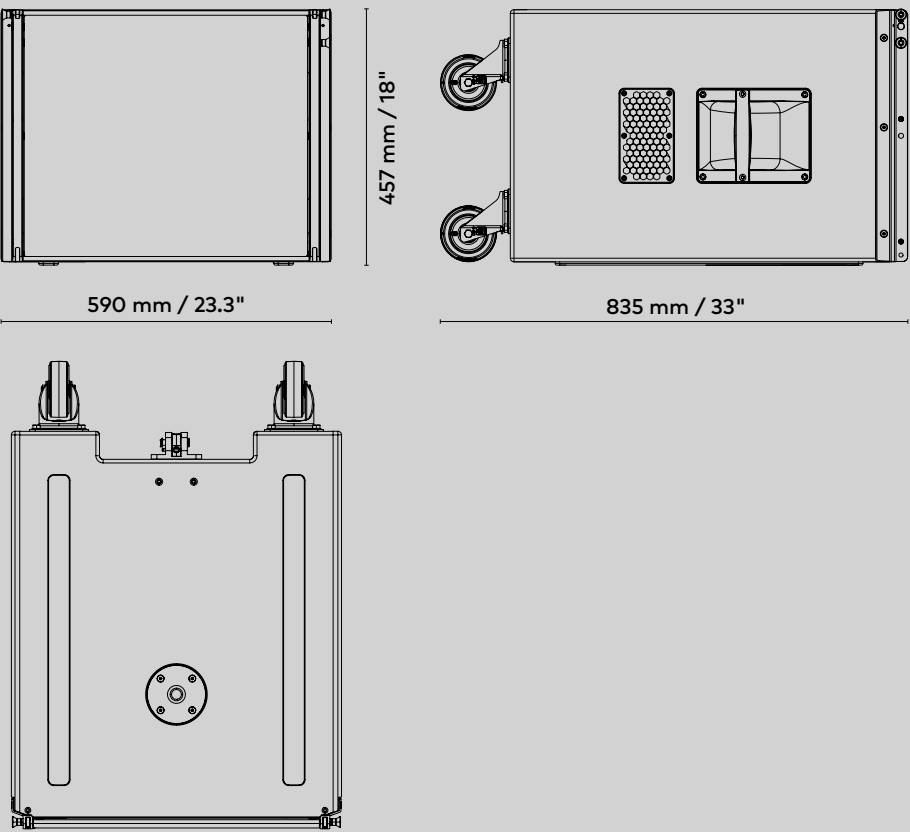
The enclosure is constructed from plywood and finished with an impact and weather protected 2K coating. The front and rear of the cabinet are protected by a rigid metal grill backed by an acoustically transparent and water-repellent fabric. Mobile and installation models are acoustically identical, differing only in aesthetics, connectors, and accessories, and are optimized for their respective applications.

The mobile model includes two runners that extend from the rear to the front panel of the cabinet, protecting the bottom panel against scratching. Two correspondingly shaped recesses are incorporated in the top panel to accept these runners and prevent cabinet movement when stacking. An M20-threaded flange in the top panel accepts a corresponding pole for deploying TOP cabinets.

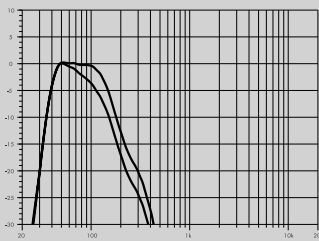


	CCL-SUB	CCLi-SUB
Components	1x 15" 1x 10"	1x 15" 1x 10"
Max. sound pressure (1m) ^{1,2}	132 dB	132 dB
Frequency response (-5dB)	39 - 150 Hz	39 - 150 Hz
Dispersion	cardioid	cardioid
Connections	NLT4 F/M	Phoenix Socket
Dimensions (h/w/d)	457 x 590 x 710 ³ /835mm 18 x 23.3 x 28 ³ /33"	457 x 590 x 710 18 x 23.3 x 28"
Weight	44.5 kg / 98 lb	42.4 kg / 93.5 lb

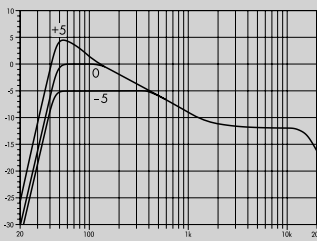
¹SPLmax: Broadband signal IEC60268, ²max output only avaialbale with D40, 40D, D80, D90 amplifier, ³dimensions without wheels



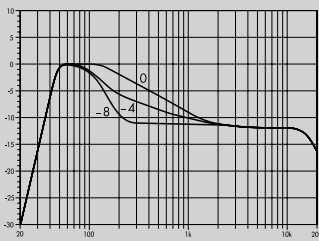
Controller Settings



Frequency response Standard and 100 Hz mode



Frequency response correction of the CPL function for low frequency level



Frequency response correction of the CPL function for low- mid frequency level

B12-SUB and Bi12-SUB

The B12 SUB is a compact, high performance cardioid subwoofer. Complementing the CCL system, the ground subwoofer B12-SUB delivers powerful low-end extension in a compact format.

It houses two long excursion neodymium drivers in an integrated cardioid setup: a 15" driver in a bass reflex design facing to the front and a 10" driver in a 2 chamber bandpass design radiating to the rear. The arrangement and tuning provide a cardioid dispersion pattern using a single amplifier channel. Its frequency response extends from 39 Hz to 150 Hz.

The B12 SUB and Bi12 SUB are intended exclusively for ground stacked operation and do not incorporate rigging components.

The enclosure is constructed from plywood and finished with an impact and weather protected 2K coating. The front and rear of the cabinet are protected by a rigid metal grill backed by an acoustically transparent and water repellent fabric. Mobile and installation models are acoustically identical, differing only in aesthetics, connectors, and accessories, and are optimized for their respective applications.

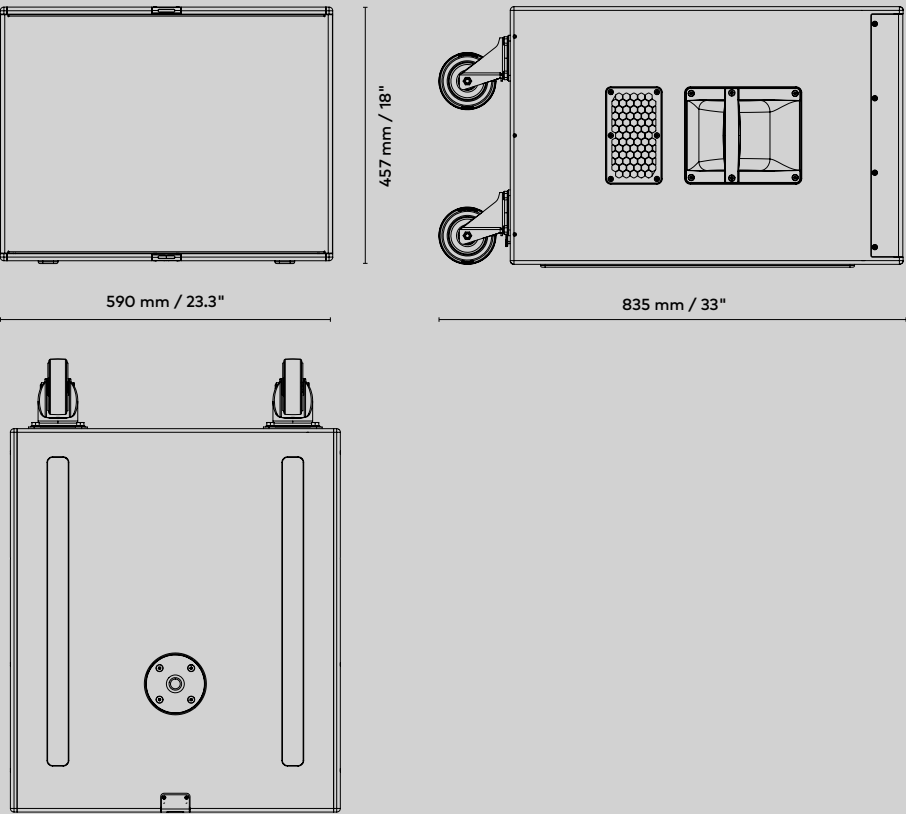
The mobile B12 SUB includes rear mounted heavy duty wheels and two runners that extend from the rear to the front panel of the cabinet, protecting the bottom panel against scratching. Corresponding recesses are incorporated in the top panel to accept these runners and prevent cabinet movement when stacking. An M20-threaded flange in the top panel accepts a corresponding pole for deploying TOP cabinets.

The installation specific Bi12 SUB is optimized for fixed deployments, featuring installation grade connectors and stacking elements designed for secure, discreet integration into permanent system environments.

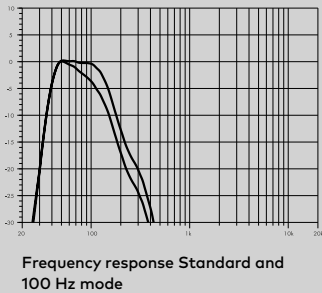


	B12-SUB	Bi12-SUB
Components	1x 15" 1x 10"	1x 15" 1x 10"
Max. sound pressure (1m) ^{1,2}	132 dB	132 dB
Frequency response (-5dB)	39 - 150 Hz	39 - 150 Hz
Dispersion	cardioid	cardioid
Connections	NLT4 F/M	Phoenix Socket
Dimensions (h/w/d)	455 x 590 x 687 ³ / 812mm 18 x 23.3 x 27 ³ / 32"	457 x 590 x 688 18 x 23.3 x 27.1"
Weight	42 kg / 92.6 lb	37 kg / 81.6 lb

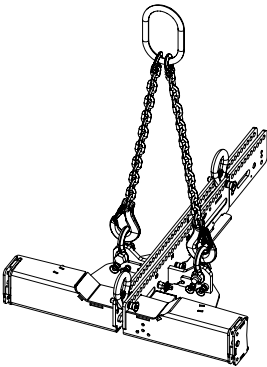
¹SPLmax: Broadband signal IEC60268, ²max output only avaialbale with D40, 40D, D80, D90 amplifier, ³dimensions without wheels



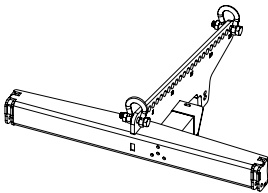
Controller Settings



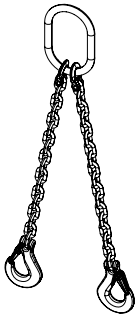
Accessories



Z5820
CCL Flying frame set



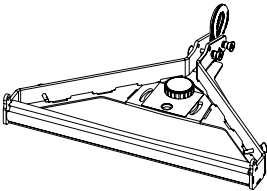
Z5821
CCL Top mounting frame



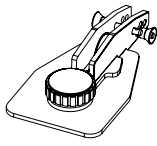
Z5831
Safety chain set 1,4t



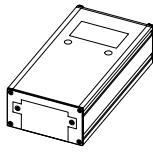
Z5832
Hoist Connector Chain 1,4t



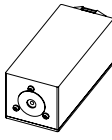
Z5824
CCL Pullback frame



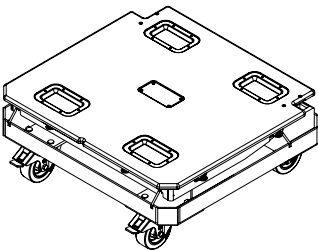
Z5825
CCL Stack adapter



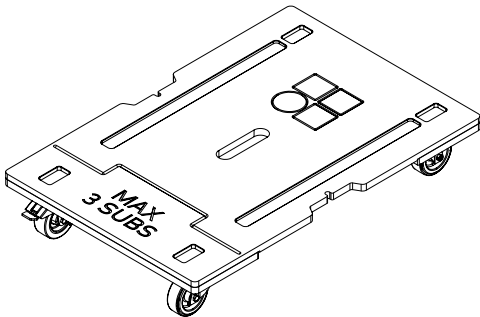
Z5762
ArraySight meter unit



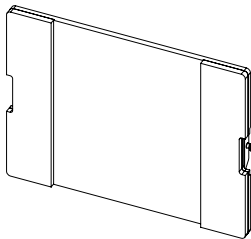
Z5761
ArraySight sender unit



Z0881
CCL Cart package
(excl. loudspeakers)

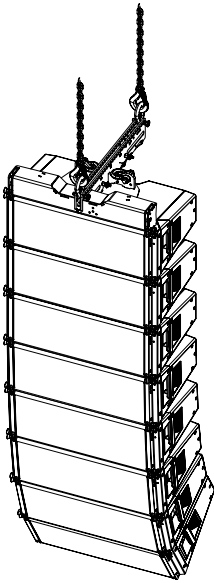


E7842
CCL-SUB Wheelboard

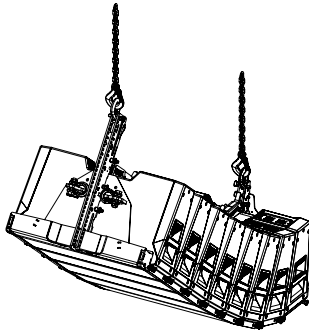


E7843
CCL-SUB Transport lid

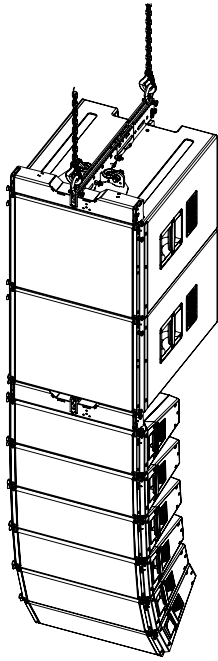
Mounting Examples



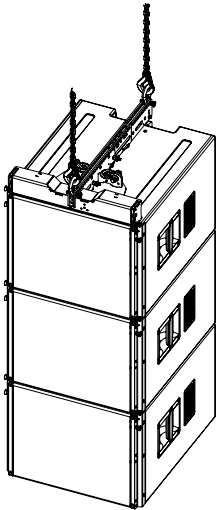
CCL8/12
Line array 8-deep



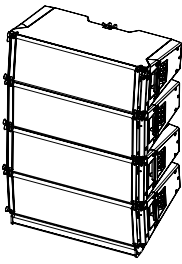
CCL8/12 Line array,
Pullback mode setup



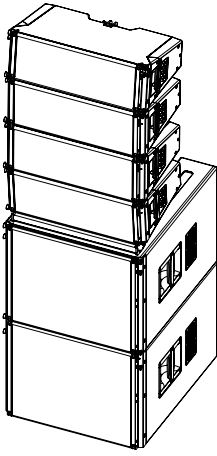
Mixed CCL array
configuration



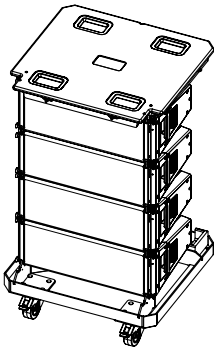
CCL-SUB Column



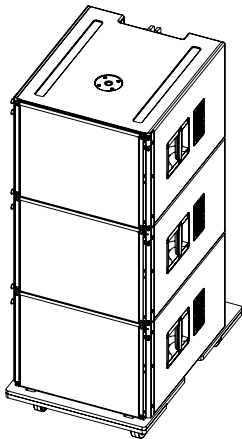
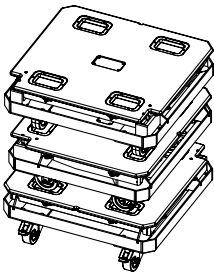
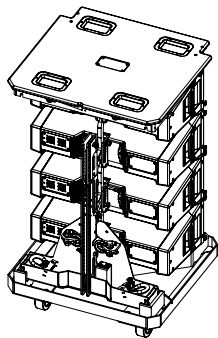
CCL Ground stack
setup



Mixed CCL
Ground stack setup

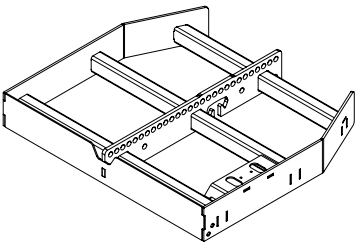


CCL Touring cart setup

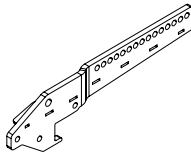


CCL-SUB Ground stack
setup on Wheelboard

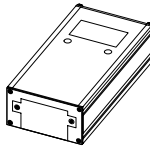
Accessories



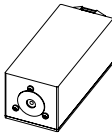
Z5826
CCLi Flying frame



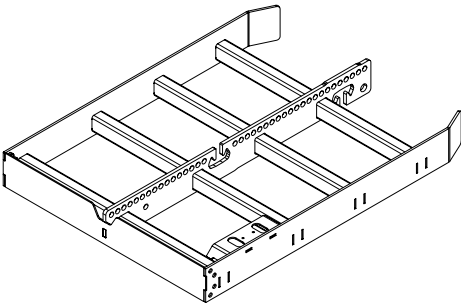
Z5828
CCLi Beam extension



Z5762
ArraySight meter unit

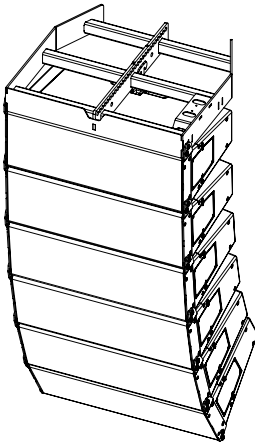


Z5761
ArraySight sender unit

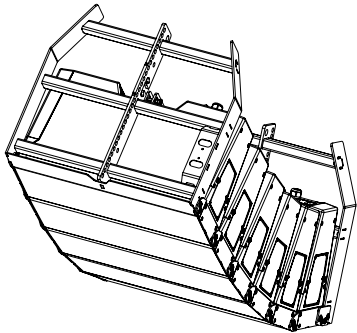


Z5827
CCLi-SUB Flying frame

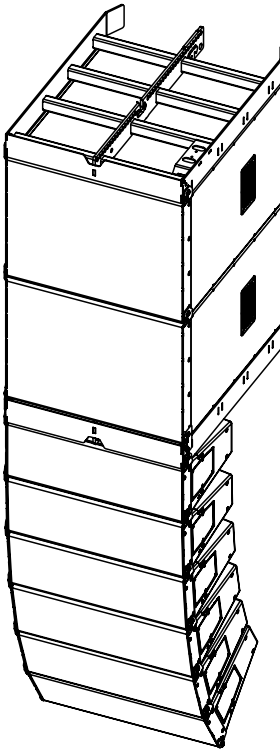
Mounting Examples



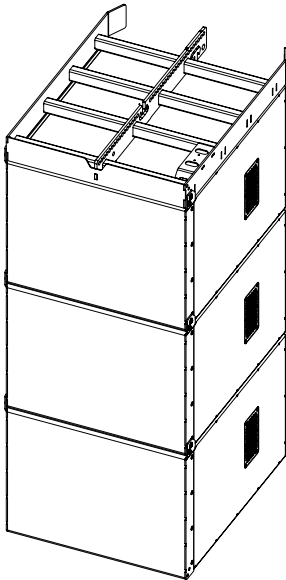
CCLi8/12 Line array



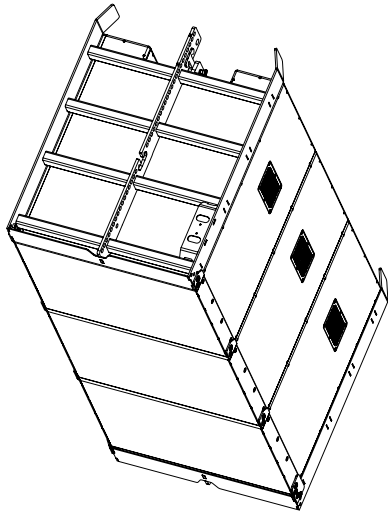
CCLi8/12 Line array,
Pullback mode setup



Mixed CCLi array
configuration



CCLi-SUB Column



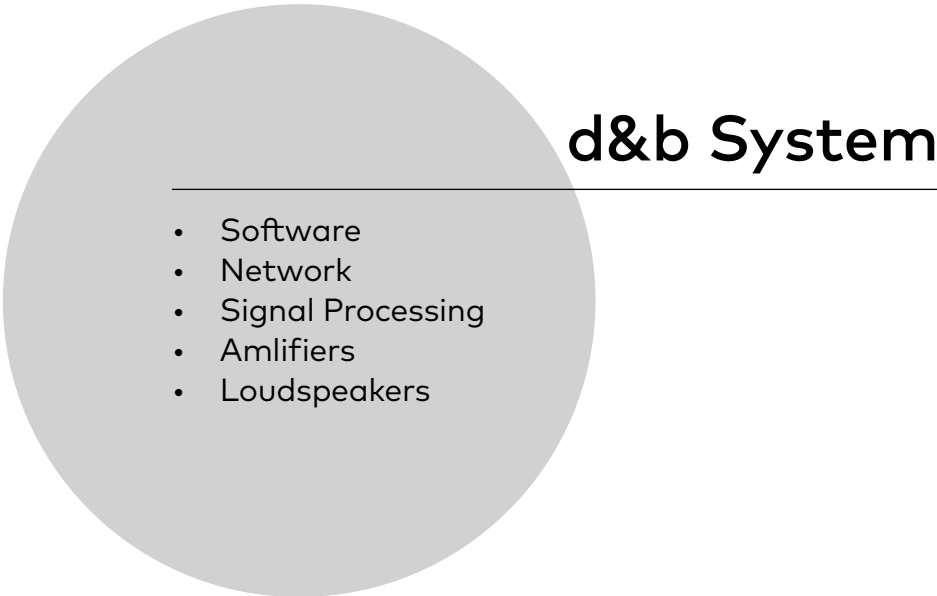
CCLi-SUB Column,
Pullback mode setup

The d&b System

A d&b audiotechnik system is designed as a complete and integrated sound reinforcement solution. Loudspeakers, amplifiers, signal processing, software, networking, and accessories are developed together, with each element precisely specified and carefully aligned to function as part of a coherent whole. This system approach enables predictable results, accurate planning, and efficient deployment across a wide range of applications.

Consistent broadband directivity control preserves artistic intent, while long term reliability and comprehensive support ensure that systems perform as intended throughout their lifecycle.

The result is an accurately planned sound system that delivers incredible sound for every listener, efficiently and reliably.



Signal Distribution

A d&b system includes signal distribution devices for flexible signal routing. Interfaces for multiple networked, digital, and analog audio formats and processing and matrix devices ensure straightforward integration and interoperability for all applications.

DS22 Audio Network Bridge

The d&b system interface for AES3 and analog to Milan-AVB

- 16 inputs of AES3 digital audio channels, 4 of which can be switched to analog
- 1 RU device with Milan-AVB-enabled integrated 5-port switch, with 3 primary and 2 secondary network sockets
- Choose from the following input options: 16 x AES3, 14 x AES3 and 2 x analog, or 12 x AES3 and 4 x analog
- 2 Milan talker streams, with 8 channels per stream

DS22 Audio Network Bridge



DS20 Audio Network Bridge

The d&b system interface between Milan-AVB and AES3

- 16 outputs and 4 inputs of AES3 digital audio channels
- 1 RU device with Milan-AVB-enabled integrated 5-port switch, with 3 primary and 2 secondary network sockets
- 4 Milan listener streams, with 8 channels per stream and 1 Milan talker stream, with 4 channels per stream

DS20 Audio Network Bridge



DS10 Audio Network Bridge

The d&b system interface between Dante, AES67, and AES3

- 16 outputs and 4 inputs of AES3 digital audio channels
- 1 RU device with integrated 5-port switch, with switched, redundant, multicast filter, and VLAN modes
- Bypass mode for AES3 distribution device

DS10 Audio Network Bridge

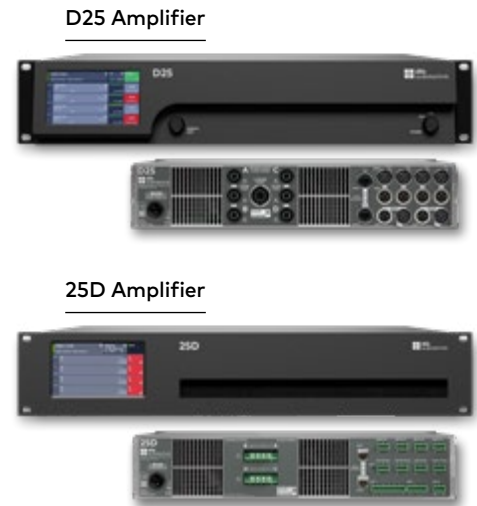


System Amplifiers

d&b system amplifiers form the heart of the d&b system, integrating amplification, digital signal processing, OCA control, onboard networked audio, and protection into a unified platform. All models include dedicated loudspeaker presets featuring advanced limiter structures for maximum reliability, along with user definable control settings and comprehensive monitoring options. The range spans both installation and mobile amplifiers, with feature sets optimized to meet the specific operational, interface, and performance requirements of each application type.

D40 and **40D** Amplifier are the natural amplifier options for CCL, with the output power needed to unlock the system’s full performance potential. The result is a balanced, scalable CCL system that performs confidently across a wide range of audience sizes and applications.

SPLmax (dB) with D40/40D	
CCL8 • CCLi8	137
CCL12 • CCLi12	136
CCL-SUB • CCLi-SUB	132
B12-SUB • Bi12-SUB	132



D25 and **25D** Amplifier offer a highly efficient amplification option for applications where broadband directivity control is desired but maximum output is not. The D25 & 25D have a lower output power than the D40 & 40D, resulting in a small difference in output level depending on the program material. This delivers an optimal balance of performance, practicality, and system value.

SPLmax (dB) with D25/25D	
CCL8 • CCLi8	135
CCL12 • CCLi12	134
CCL-SUB • CCLi-SUB	129
B12-SUB • Bi12-SUB	129



d&b mobile system amplifiers are designed to meet the demands of touring and temporary sound reinforcement, with rugged etherCON, XLR, and NL connectors and a touch screen for quick system adjustments.

- XLR inputs, 4 AES3, and 4 analog
- 6 NL4 outputs (4 dual channel, 2 2-way active)
- 1 centralized NL8 (4 channel) output

Touring Racks

The D40 and D90 touring racks bring amplification, power distribution, and signal distribution together in pre configured rack solutions to simplify system deployment. With multichannel loudspeaker cabling options, touring racks enable clean, scalable system layouts without compromise.

- Available in 3 and 6 rack versions
- DN1 network switches for OCA control, primary and secondary Milan-AVB, and PoE for ArraySight
- I/O panels for analog and AES3 inputs
- NL8 (4 channel) and LKA25 (12 channel) loudspeaker outputs
- 32 A CEE mains connector or 30 A NEMA male connector socket



d&b installed-system amplifiers are purpose built for fixed-sound-reinforcement applications, focusing on cable-efficient integration and system security.

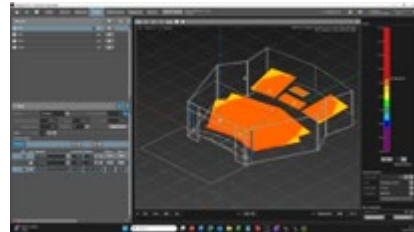
- Phoenix Euroblock inputs, 4 AES3 and 4 analog
- Phoenix Euroblock outputs
- 8 GPI and 4 GPO

Software Solutions

The full functionality of any d&b system is instantly inherited from the software suite and end-to-end workflow for planning, modeling, and control.



ArrayCalc Venue view



ArrayCalc 3D plot view

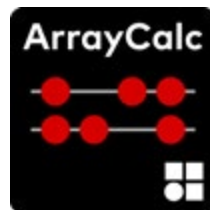


R1 Configuration view



R1 Tuning view

Application



Design



Set up

Tune

Operate

Gather application information including program material, audience profile, architectural details, network requirements, and production constraints. Evaluate this data and import it into ArrayCalc.

ArrayCalc Exchange

- d&b ArrayCalc Exchange is a SketchUp extension that allows users to convert CAD and EASE files into an ArrayCalc venue file (*.dbacv) for direct import into ArrayCalc

Build the venue model, design the system, and verify that it meets all performance requirements. Plan system devices and patching.

d&b ArrayCalc

- A comprehensive toolbox for system design, acoustic prediction, alignment, rigging, and device planning.

HeadroomCalc

- Import any audio file to simulate system headroom and resulting SPL over time
- Time-domain processing allows accurately modeled system dynamics, including limiter activity and gain reduction over time
- Verify compliance with sound-level regulations and optimize system design for headroom and efficiency using predictable real-world behavior

Set up, check, and verify your system to ensure it is performance-ready. Apply any required fine-tuning on site, then control and monitor the system from anywhere on the network.

d&b R1 Remote Control

- Remotely control d&b devices via Ethernet networks
- Verify amplifiers are connected to the correct loudspeakers, in the correct order, using System Check and Array Verification
- Create snapshots and system configurations for different performance scenarios
- Configure GPIO settings and amplifier presets for third-party control

Networking

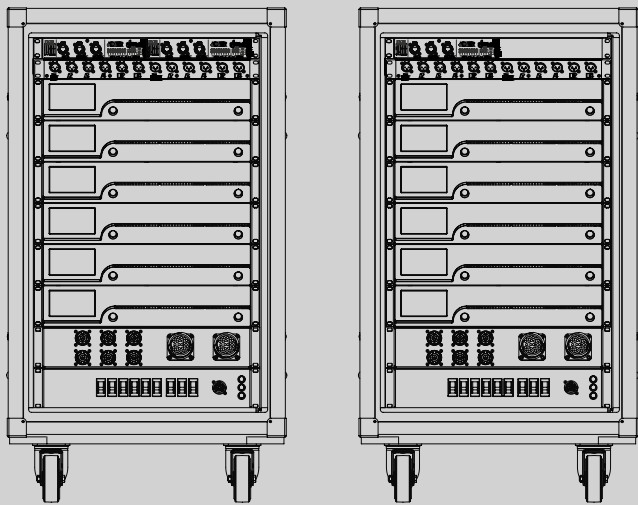
- Configure and manage Milan or Dante networks using Milan Manager or Dante Controller

d&b ArrayCalc Viewer

- Share ArrayCalc files to any iOS or Android device and the ArrayCalc Viewer app will display rigging information such as pick points, splay angles, array heights, aiming, and weight, along with device and cabling information

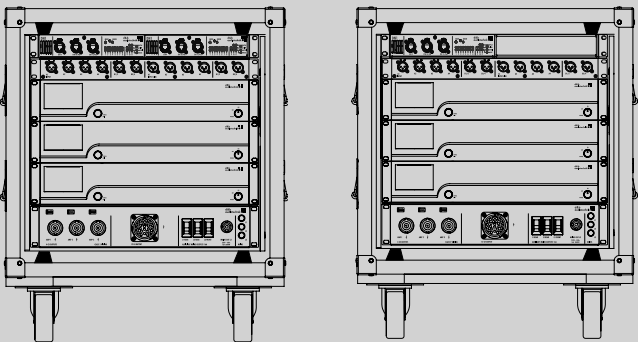


Cabling CL-Series



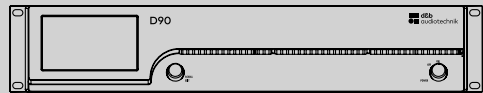
Z5603.xxx
6 x D90 Rack

Z5601.xxx
6 x D40 Rack

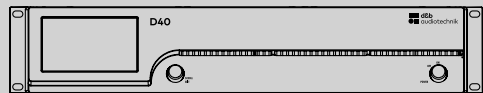


Z5602.xxx
3 x D90 Rack

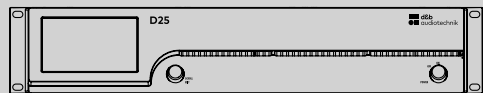
Z5600.xxx
3 x D40 Rack



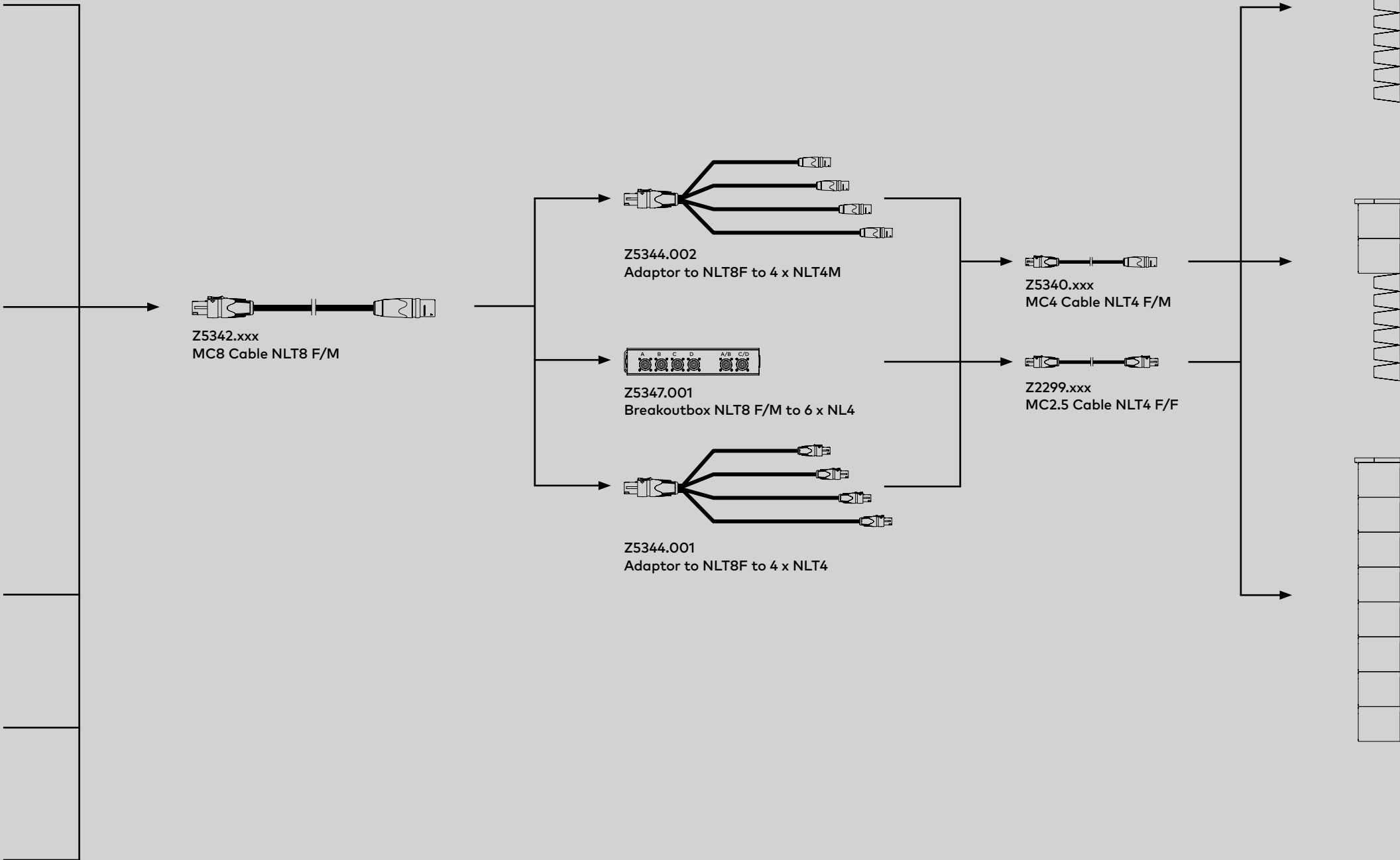
Z2860.xxx
D90 Amplifier



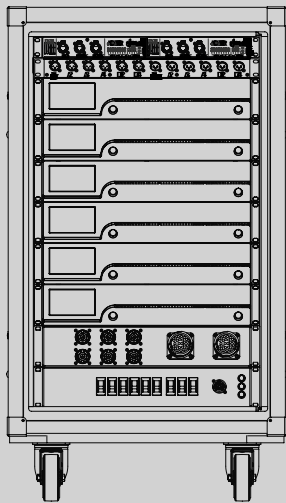
Z2850.xxx
D40 Amplifier



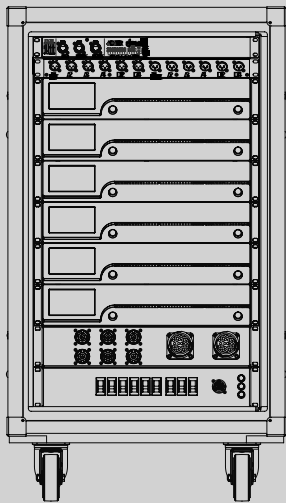
Z2820.xxx
D25 Amplifier



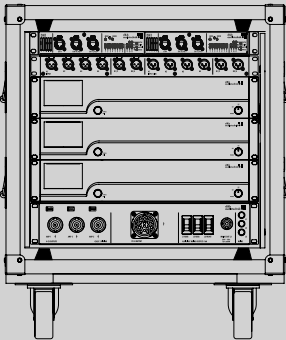
Cabling CL-Series



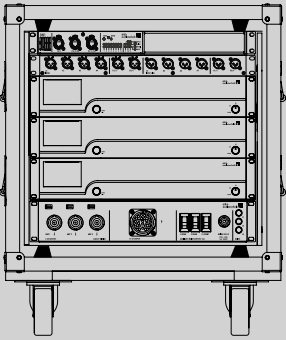
Z5603.xxx
6 x D90 Rack



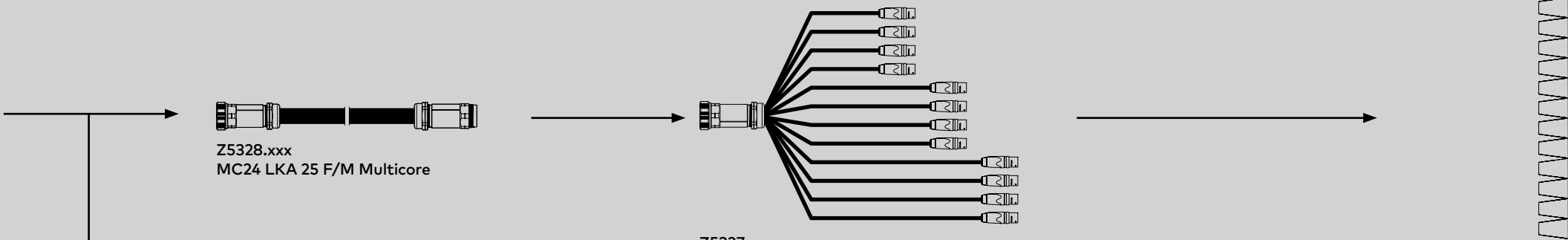
Z5601.xxx
6 x D40 Rack



Z5602.xxx
3 x D90 Rack



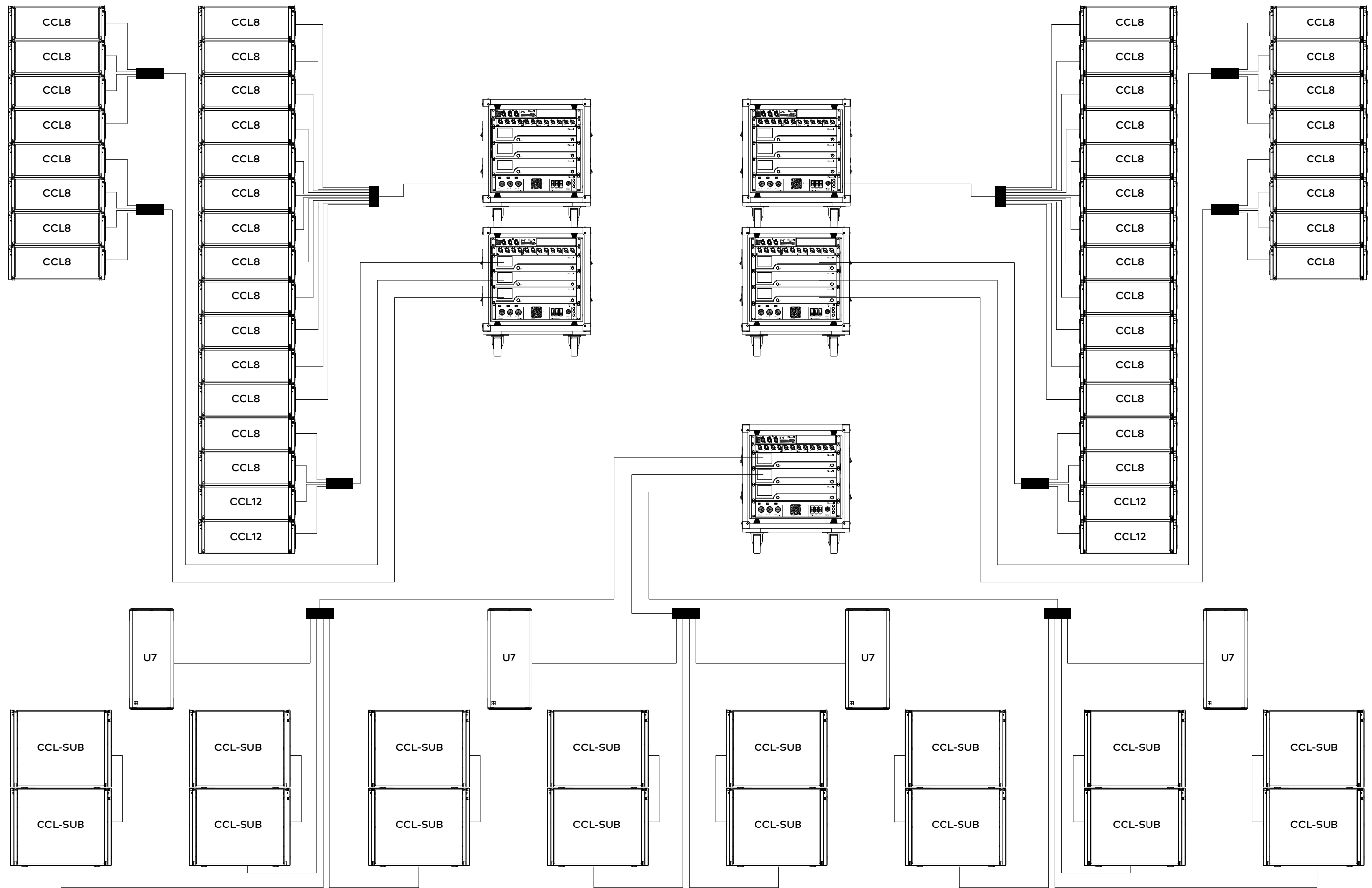
Z5600.xxx
3 x D40 Rack



Z5328.xxx
MC24 LKA 25 F/M Multicore

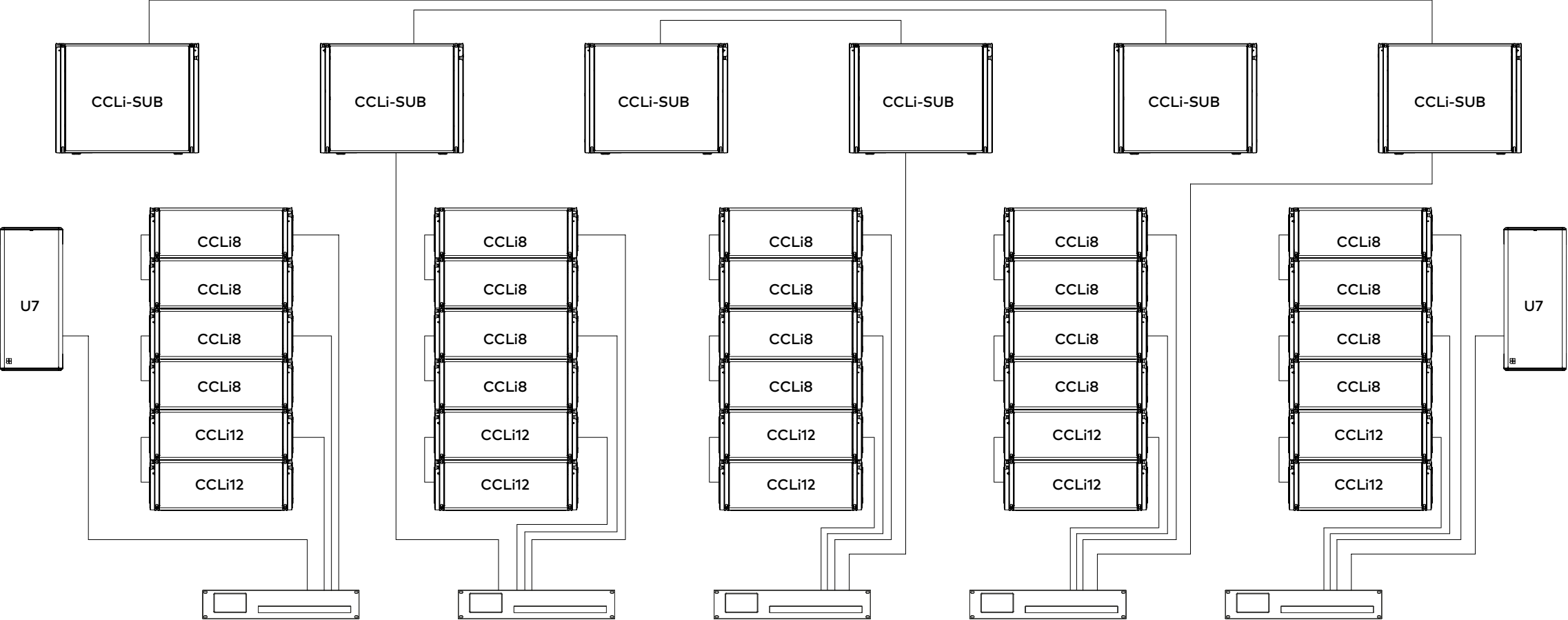
Z5327.xxx
Adapter LKA25M to 12x NLT4M

CL-Series Configuration Examples

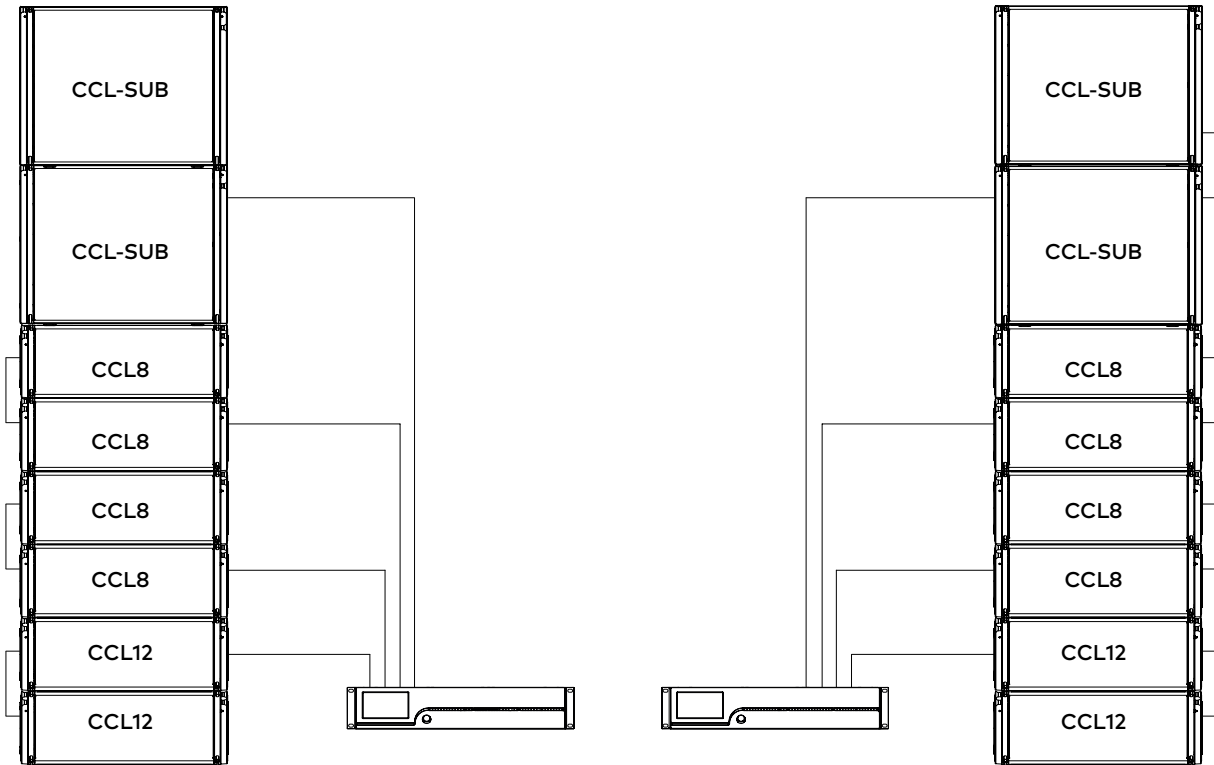


CCL System comprising of CCL8/12 mains and outfills using ArrayProcessing, ground-stacked CCL-SUB array, U7 front fills, and D40 touring racks

CL-Series Configuration Examples



CCLi Soundscape 180° system with CCLi8/CCLi12s, CCLi-SUB, and U7s on 25D amplifiers



CCL System comprising of mixed CCL8/12 and CCL-SUB mains, linked, and D25 amplifiers

Product Overview

Loudspeaker	CCL8 Loudspeaker	Z0880.000
	CCL12 Loudspeaker	Z0882.000
	CCL-SUB Subwoofer	Z0884.000
	B12-SUB Subwoofer	Z0870.000
	CCLi8 Loudspeaker	Z0890.xxx ¹
	CCLi12 Loudspeaker	Z0891.xxx ¹
	CCLi-SUB Subwoofer	Z0892.xxx ¹
	Bi12-SUB Subwoofer	Z0871.xxx ¹
Accessories	CCL Flying frame set	Z5820.xxx ²
	CCL Top mounting frame	Z5821.xxx ²
	CCL SUB Mounting frame	Z5822.000
	CCL Pullback frame	Z5824.000
	CCL Stack adapter	Z5825.000
	CCLi Flying frame	Z5826.xxx ¹
	CCLi-SUB Flying frame	Z5827.xxx ¹
	CCLi Beam extension	Z5828.xxx ¹
	Bi12-SUB Horizontal bracket	Z5833.xxx ¹
	d&b ArraySight sender unit	Z5761.000
	d&b ArraySight meter unit	Z5762.000
	Safety chain set 1,4t	Z5831.000
	Hoist connector chain 1,4t	Z5832.000
Carts & Cases	CCL8 Cart package	Z0881.000
	CCL12 Cart package	Z0883.000
	Touring cart 4 x CCL 8/12	E7840.000
	CCL SUB Wheelboard	E7842.000
	CCL SUB Transport lid	E7843.000
	CCL Top frame case	E7844.000
	CCL SUB frame case	E7845.000
	B12-SUB Transport lid	E7846.000
	B12-SUB Cover	E7847.000
Processing and Distribution	DS10 Audio network bridge	Z4010.000
	DS20 Audio network bridge	Z4011.000
	DS22 Milan audio bridge	Z4012.000
	DS100 Signal Engine	Z4100.000
	DS100M Signal Engine	Z4102.000
Amplifier	D25 amplifier	Z2820.xxx ³
	D40 amplifier	Z2850.xxx ³
	D90 amplifier	Z2860.xxx ³
	25D amplifier	Z2810.xxx ³
	40D amplifier	Z2830.xxx ³

Amplifier rack assemblies	3 x D40 Touring Rack	Z5600.xxx ³
	6xD40 Touring Rack	Z5601.xxx ³
	3xD90 Touring Rack	Z5602.002 ³
	6xD90 Touring Rack	Z5603.002 ³
Amplifier rack assemblies	19" Touring Rack 2HE D80/D40/D90	E7468.001
	19" Touring Rack 3HE DS100	E7483.000
Cables and adaptors	MC4SD NL8 Cable 1m	Z2293.100
	MC4SD NL8 Cable 1m	Z2293.100
	Extension adapter NL4	Z2296.000.00
	MC2.5 Cable NL4 F/F	Z2299.xxx ⁴
	Adapter LKA25M to 6x NLT4M	Z5325.000
	Adapter 3xNLT8F to LKA25F	Z5326.000
	Adapter LKA25M to 12x NLT4M	Z5327.000
	MC24 LKA 25 F/M Multicore	Z5328.xxx ⁵
	MC4 Cable NLT4F/M 1m	Z5340.xxx ⁶
	MC8 Cable NLT8F/M 5m	Z5343.xxx ⁷
	Adapter NLT8F to 4 x NL4	Z5344.001
	Adapter NLT8F to 4 x NLT4M	Z5344.002
	Adapter 4 x NL4 to NLT8M	Z5345.001
	Breakoutbox NLT8F/M to 6xNL4	Z5347.001
	WR 5,5m cable 2x2.5mm²	Z5763.000

¹Special Color on request
²Available with d&b ArraySight sender unit
³Different connector options available
⁴Available in 1/3/5/10/15/20/25/50 meters
⁵Available in 1/3/5/10/15/27.5/30/45 meters
⁶Available in 1/3/5/10/15/20 meters
⁷Available in 5/10/15/20/30 meters

