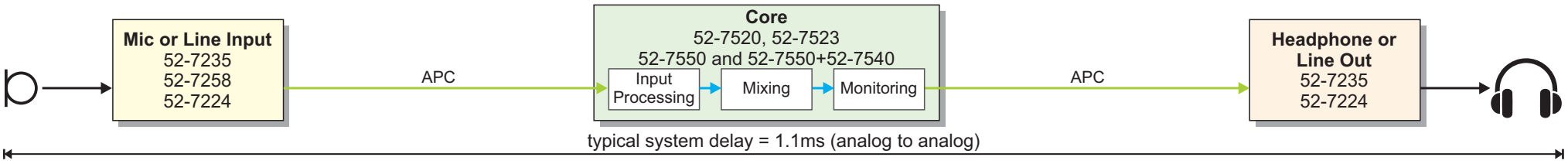
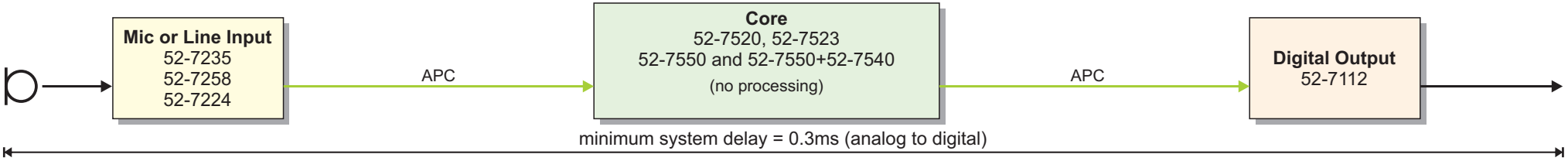
Audio Signal Delays of XC3/XD3 Cores & XC I/O Modules

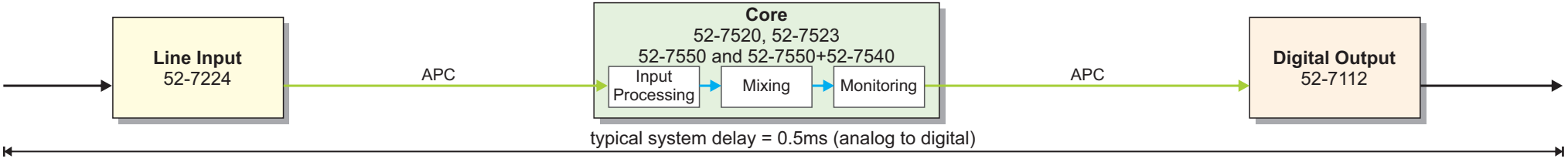
Example 1, typical system signal flow:
microphone/line input – core (input processing, mixing, monitoring) – headphone or analog line output



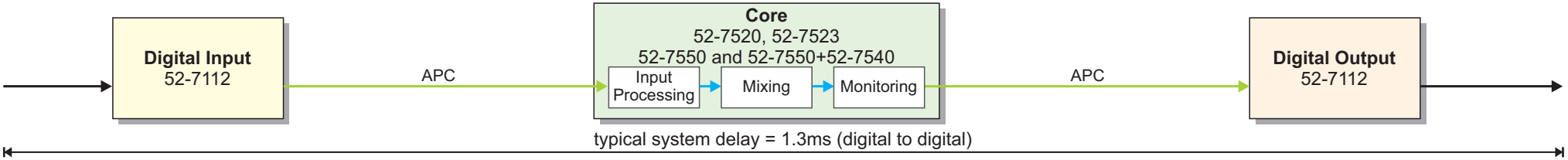
Example 2, minimum delay:
microphone/line input – core (no processing) – digital output



Example 3, typical system signal flow:
analog line input – core (input processing, mixing, monitoring) – digital output



Example 4, typical system signal flow:
digital input with sample rate converter (SRC=on) – core (input processing, mixing, monitoring) – digital output



Input Processing, typical: subsonic filter, 4 band EQ, compressor, limiter
(Note: the delay is constant and independend of the number of functions inside the processing chain)
Mixing: program bus
Monitoring: output function

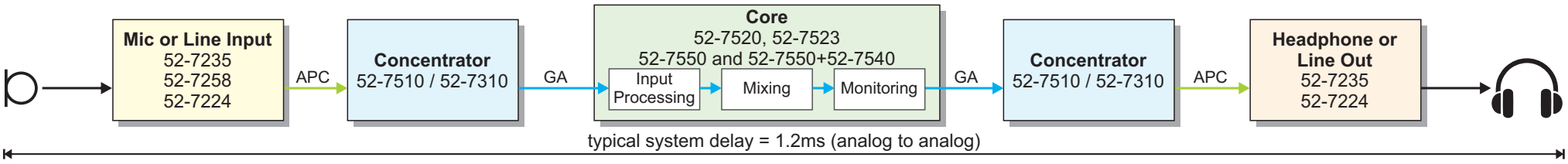
DHD.audio

APC -Audio, Power, Control/ Controller Network, Ethernet CAT5/6
Analog / Digital Audio

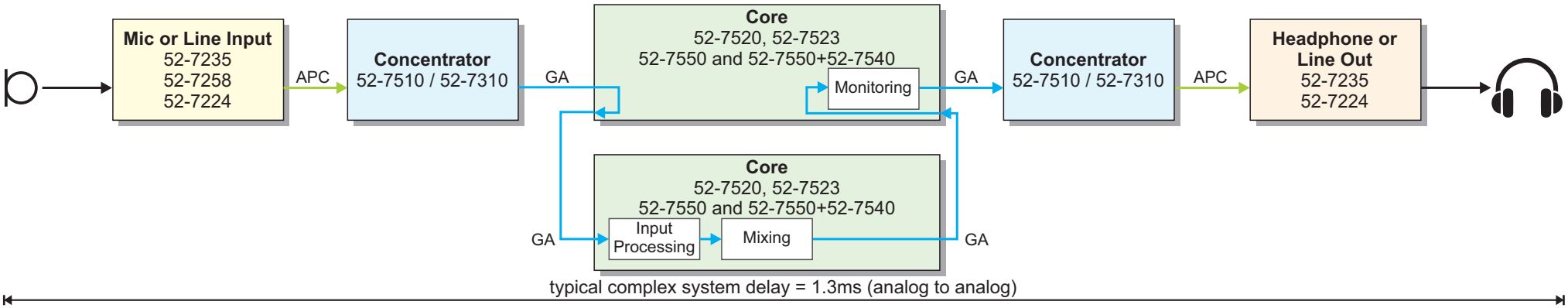
FM, 15.02.2023, file: xc3-xd3_audio-signal-delays_common_1-1.cdr

Audio Signal Delays of XC3/XD3 Cores, Concentrators & XC I/O Modules

Example 1, typical system signal flow:
microphone/line input – concentrator – core (input processing, mixing, monitoring) – concentrator – headphone or analog line output



Example 2, complex system signal flow (studio connected to control room via another core):
microphone/line input – concentrator – core 1 (routing) – core 2 (input processing, mixing) – core 1 (monitoring) – headphone or analog line output



Input Processing, typical: subsonic filter, 4 band EQ, compressor, limiter
(Note: the delay is constant and independend of the number of functions inside the processing chain)
Mixing: program bus
Monitoring: output function

512 Ch. DHD Gigabit Audio, bidirectional, LWL, LC
APC -Audio, Power, Control/ Controller Network, Ethernet CAT5/6
Analog / Digital Audio / GPIO

DHD.audio

FM, 15.02.2023, file: xc3-xd3_audio-signal-delays_common_1-1.cdr