



CODE 3 DNA
DISTRIBUTED NETWORK ARCHITECTURE

/// CODE 3®

DISTRIBUTED EMERGENCY WARNING SYSTEM



FLEXIBLE · INTELLIGENT · COHESIVE

WORLDWIDE LEADER IN EMERGENCY SYSTEMS

Code 3 has been operating since 1972, supplying local Police, Fire & Rescue, and Ambulance fleets with high performance emergency systems which includes LED lightbars, beacons, sirens, speakers, LED emergency lighting, digital video systems, scene lighting solutions and positive pressure ventilation blowers.

GLOBAL PRESENCE

Code 3's parent company, ECCO Safety Group (ESG), includes the ECCO and Xray Vision brands. ESG is a worldwide market leader in emergency lighting and audible warning equipment for commercial and emergency vehicles and is one of the world's largest manufacturers of back-up alarms and amber warning lights. Globally ESG has more than 800 team members, over 6,000 aftermarket distributors, and over 500 OEM customers. ESG boasts the world's most complete line of emergency warning products.

QUALITY ASSURED

ESG is ISO9001 certified, with AMECA certified test labs that do testing for three major global product brands. Products and parts are rigorously tested by our local engineering teams to ensure products are suitable for our market while meeting ISO9001.

STRONG LOCAL KNOWLEDGE

Always at the cutting-edge of LED technology with our products, Code 3 continually develops and improves product design and output. Our Pursuit™ lightbar, features light heads that produce more luminous intensity than most lightbars on the market. The state-of-the-art Pursuit Optics are at the heart of this powerful output capability, and they—along with the rest of the lightbar—were designed and engineered in Australia.

In addition to our industry leading local engineering capabilities we offer:

- Strong local technical support
- Dedicated customer service team
- Local testing and design capabilities
- Ability to offer extensive localised product customisation configurations

THE CODE 3 DNA HISTORY



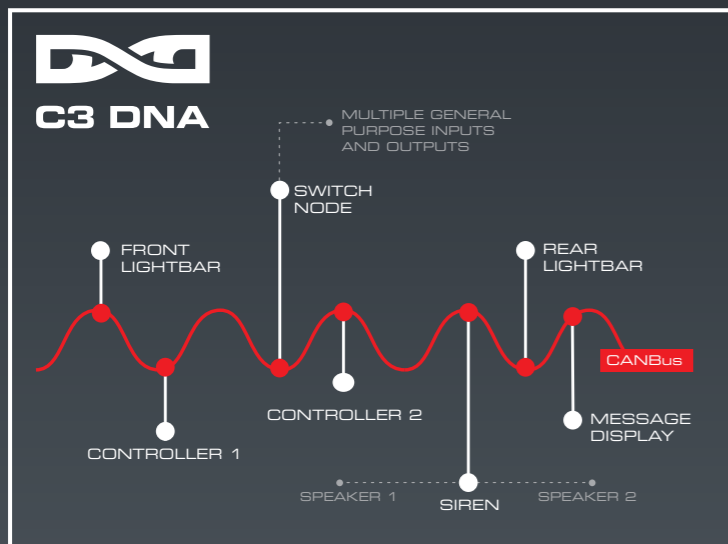
PEOPLE DRIVEN PERFORMANCE

We are the safety and productivity partner that builds relationships on trusted performance. At ECCO Safety Group we use respect and expertise to build performance across all areas of this business – from products to service. This reputation for excellence in all things has made us the world's largest manufacturer of commercial and emergency vehicle warning and safety products.

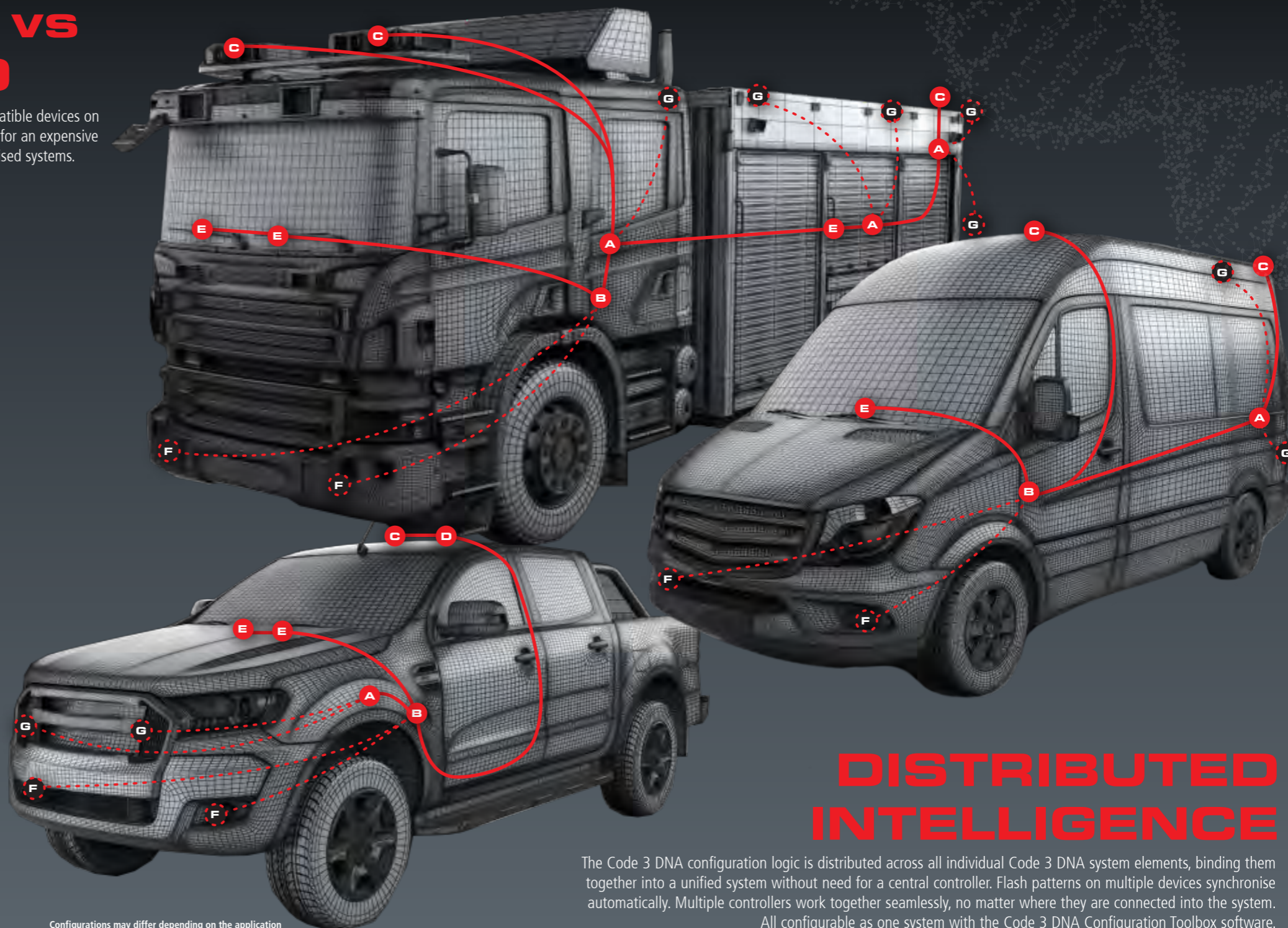
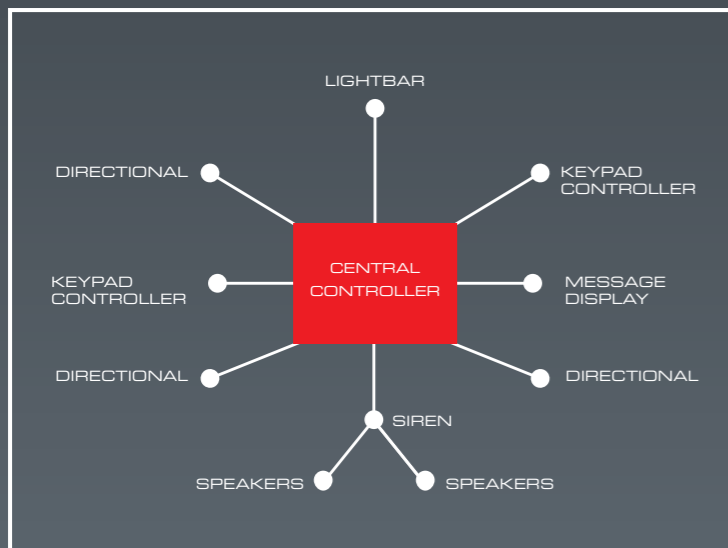
DISTRIBUTED vs CENTRALISED

The Code 3 Distributed Network Architecture (Code 3 DNA) allows all compatible devices on a vehicle to operate as a single, cohesive warning system, without the need for an expensive dedicated "master" control unit commonly required by conventional centralised systems.

DISTRIBUTED SYSTEM



CONVENTIONAL CENTRALISED SYSTEM



Configurations may differ depending on the application

DISTRIBUTED INTELLIGENCE

The Code 3 DNA configuration logic is distributed across all individual Code 3 DNA system elements, binding them together into a unified system without need for a central controller. Flash patterns on multiple devices synchronise automatically. Multiple controllers work together seamlessly, no matter where they are connected into the system. All configurable as one system with the Code 3 DNA Configuration Toolbox software.

Code 3 DNA System Elements



A Switch Node

- Features battery-management and run-lock
- Interface for Code 3 directional lights
- Allows synchronised flash patterns



B Pursuit Siren

- Embedded low frequency "Banshee" tones
- Supports simultaneous wail/yelp (mix)
- Variety of horn input options



C Pursuit Lightbar

- Industry leading light output
- Low profile dual-level lighting
- Top level: Warning lights
- Bottom level: Scene lights, alley lights, take-downs and amber rear advisor



D M5 Message Display

- Includes a touch controller with OLED screen
- Latest surface mount LEDs and custom optics



E Controller

- Keypad controller
- Rotary controller with push button (coming soon)

Code 3 DNA Compatible Products



F Speakers



G Directionals

CODE 3

INDUSTRY LEADING WARNING SYSTEM

DISTRIBUTED NETWORK ARCHITECTURE

- Allows all compatible devices on a vehicle to operate as a single, cohesive warning system
- Does not require a dedicated “master” control unit commonly required by conventional systems
- Advanced distributed intelligence which enables maximum flexibility
- Configurable to suit users’ requirements
- Flexible message display and flash pattern configuration and lightbar layout

FLEXIBLE LOGIC

- Utilises a universal script-based logic language across all devices
- Allows customisable system behaviour to meet users’ needs through:
 - A set of pre-defined logic functions or
 - Customised logic functions
- Configurable logic functions include:
 - Timers
 - Latches
 - Toggles
 - Edge sensing
 - Math operations
 - Filtering
 - Advanced Battery Management
 - Ignition Bypass
 - Runlock

SYSTEM-WIDE FLASH PATTERNS

- The Code 3 DNA flash pattern sequencer allows for virtually unlimited control over all warning lights in the system, including lightbar-heads and body-mounted directionals. Each flash pattern, each lightbar-head prioritisation and intensity control is easily achievable and can apply to individual heads, devices or across the entire vehicle
- System-wide flash patterns automatically maintain synchronisation

Standard Flash Patterns	Description
Sweep	Often used as a Level 1 (Secondary) warning pattern
2F (Double-Flash)	Often used as either Level 1 (Secondary) or Level 2 (Primary) warning pattern
4F (Quad-Flash)	Often used as either Level 1 (Secondary), Level 2 (Primary) or Level 3 (Code 3) warning pattern
Hyperflash	“Random” type pattern often used for Level 3 or Level 4 (intersection clearing)
Superfence	“Picket-Fence” type pattern commonly used on lower-level white light heads
Forward-Pulser	High-intensity pattern with minimal dark-time optimised for intersection clearing
Arrow Patterns	For directional traffic management, typically using lower-level light heads






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AUDIO-VISUAL COORDINATION

- Enhanced coordination between compatible devices
- Allows user specified synchronisation between compatible devices via the Code 3 DNA network without any extra wiring

Common Scenario	Action	Result
Intersection clearing mode 	Short tap on horn	<ul style="list-style-type: none">• Speaker: Low frequency tone• Lightbar: “Hyperflash” flash patterns and intense white pulse around the front and side• Revert to previous warning level after a configurable time-period• White-pulse pattern is disabled during night time
Visual Horn Assist 	Holding vehicle horn	<ul style="list-style-type: none">• Speaker: Air horn tone• Lightbar: Turns on all forward lighting at full intensity while existing flash patterns continues at rear lighting. Rapid on & off flashing of forward lighting if horn is held continuously.
Driver Side-Cut (Also available for passenger doors) 	Open driver’s side door (can be configured for night time only)	<ul style="list-style-type: none">• Lightbar: warning lights on driver’s side disabled for a configurable time-period



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Worldwide leader in
commercial and emergency
vehicle warning and safety
products

Brands of ECCO SAFETY GROUP® Australia Pty Ltd



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Visit eccosafetygroup.com.au for the entire Code 3 range

