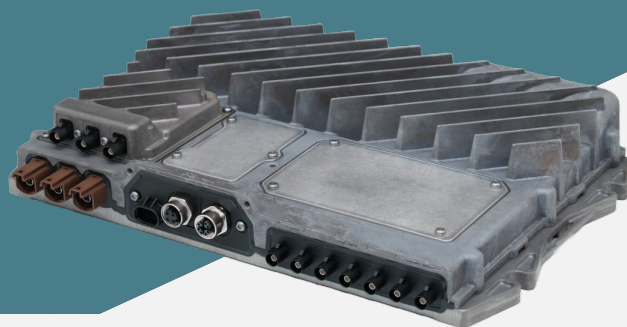# HYDRA
CPAC Productivity Hub

NEXT-GEN
Integration Experience

The CPAC Productivity Hub is an automotive and marine grade ECU with a powerful processor, decoupled processing strategy, and impressive features. The Hub is a central part of CPAC's next-generation productivity platform and sports a wide range of communication interfaces such as CAN (and CAN FD with support for NMEA2000), LIN, Ethernet, Wi-Fi and Bluetooth 5.0 as standard. The flexible backpack system allows for expandable functionality with optional battery and connectivity modules. The Hub supports a wide range of peripheral equipment, like multiple touch displays, camera inputs, and antennas, all of which can be supplied by CPAC Systems. With the choice of either infotainment capabilities (Radio, Microphone inputs, integrated amplifier) or analogue interfaces it can act as the central node of any HMI system.

CPAC's Productivity Hub is designed and tested to withstand harsh conditions, and fulfills automotive requirements. The fanless design allows for great installation flexibility. CPAC's productivity platform is expandable with a wide range of products in CPAC's Product portfolio with Touch Screens, Cameras, Thermal imaging, I/O modules, RTK/GNSS positioning, Inertial Measurement Units and more. CPAC's Productivity Platform is currently homologated in EU and North America, with Latin America, Oceania and Japan upcoming.

FEATURES

Multiple communications interfaces

Optional backpacks for expandable functionality

Infotainment capabilities or analogue interfaces

Multiple Camera support

Touch screen support

Robust enclosure

Supports 12V and 24V systems

HYDRA
Productivity Hub
SPECIFICATIONS

The Hub is available in two different configurations: **Deep Integration** or **Infotainment**. Both configurations can be equipped with optional backpack modules for Satellite communication, LTE & GPS, and a battery low-power mode.

3× PROCESSOR AUTOMOTIVE SYSTEM

CPU & GPU / *Powerful graphics & Connectivity*
- Qualcomm Snapdragon SA8155P Android Processor
- 64-bit Kryo octa-core system based on ARMv8
- Custom Qualcomm Adreno Generation 6 GPU
- Automotive Grade-3 Thermals

Dedicated NXP CPU / *Reliable vehicle interface*
- NXP 5764

Dedicated Low Power Mode CPU / *Telematics & Anti-theft*
- STM32

GENERAL SPECIFICATIONS

Power
Supply voltage	9-32VDC
Rated current 12V/24V	10A/5A
With amplifier 12V/24V	15A/10A
Battery (Low-Power)	Backpack option

Environmental
Operating temperature	-40°C ≤ T ≤ 85°C
Cooling	Fanless design
Enclosure protection	IP64

Connectors
Superseal	34 & 26 PIN
FAKRA (Cameras)	4× GMSL2
FAKRA (Antennas)	6×
USB-C	DP Alt Mode
HSAL-2 (FHD Displays)	2× FPD-Link, 2× USB 3

Physical
Dimensions (W × D × H)	350 × 70 × 300mm
Weight	2.5kg < W < 3kg

Vehicle Interfaces
BroadR-Reach HSD	3× 100BASE-T1
CAN ISO & FD	4×
CAN ISO & FD isolated	2× (NMEA2000)
LIN	2×

Network
Ethernet M12 D	1× 100BASE-TX
Ethernet M12 X	1× 1000BASE-TX
WiFi	802.11b/g/n
Bluetooth	5.0

CONFIGURATIONS

DEEP INTEGRATION
Relay driver	2×
Button inputs	4×
Throttle inputs	2× with 5V supply
Fuel level inputs	2×

INFOTAINMENT
Amplifier 12/24V	4× 20W
Line out	2 Channel DAC
Radio tuner	FM/AM/DAB
Audio input	2× Microphone, 1× AUX, USB
Bluetooth hands-free	Echo cancelling & noise reduction

SYSTEM DETAILS

OPERATING SYSTEM
Android Automotive	12.1

MEMORY & STORAGE
RAM	6 GB
Internal storage	32 GB

HYDRA
Productivity Hub

SPECIFICATIONS

PERIPHERALS

Displays / *2× FPD-Link*

Display size	12.8"
Active area	283 × 159 mm
Resolution	1920 × 1080 at 60Hz
Aspect ratio	16:9
Cover glass	Strengthened AGARAF
Backlight	Auto-adjust white LED
Multi-touch display	Up to 10 points

Displays / *2× USB 3.0 (DP)*

Display size	Custom
Resolution	4K

Cameras

Resolution	1280 × 960 / 30fps
Coaxial cable	4× GMSL2

Peripherals are available on demand.

Industrial Antenna Option
❯ Roof mounted double shark fin:
  - ❯ 1× LTE
  - ❯ 1× Positioning
  - ❯ 1× WiFi
  - ❯ 1× AM/FM/DAB
❯ In-cab/body mount:
  - ❯ 1× WiFi/BT
  - ❯ 1× LTE

Compact Antenna Option
❯ 5-in-1 in-cab/body mount:
  - ❯ 2× LTE
  - ❯ 2× WiFi/BT
  - ❯ 1× Positioning

OPTIONAL MODULES

SATELLITE BACKPACK

Modem	Orbcomm Q1000

LTE CAT 4 & GPS BACKPACK

Sim card slots	2× Micro-SIM
Compatibility 5G	Optional upgrade
Compatibility 4G	LTE/UMTS
Compatibility 2G/3G	GSM/GPRS/EDGE
Positioning	GPS, GLONASS, BeiDou/Compass/ Galileo/QZSS

BATTERY BACKPACK

Low Power Mode	Anti-theft

REGULATIONS AND STANDARDS

Road vehicles
ISO 16750-1
ISO 16750-2:2010
ISO 16750-3:2007
ISO 16750-4:2010
ISO 16750-5:2010

Code letters:
Z-ZS-G-Z-ZD-IP64

Marine vessels
IACS E10
ISO 25197:2012
IEC 60945
ABYC P-27
ABYC P-24
ABYC E-11

Vibration
IEC 60068-2-64
IEC 60068-2-14
IEC 60068-2-6
IEC 60060-2-6
IEC 60068-2-27

EMC
ISO 13766-1:2018
ISO 25197
IEC 60945
UN ERE R10
RED 2014/53/EU

Installation guidelines upon request.

TESTING

All our automotive environment tests are run in sequence to ensure quality and reliability over time.

HOMOLOGATION

Approved	CE, FCC, KCC
Upcoming	Anatel, Ramatel, Comatel, Sutel, Icasa

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