Connect Tech

POLARIS EMBEDDED SYSTEM

POWERED BY NVIDIA® ORIN™ NX OR ORIN™ NANO

PART NUMBER: ESG604, ESG608

Harnessing the Jetson Orin™ NX and Orin™ Nano and built for robotics, smart city and autonomous machines, the rugged Polaris system provides a wide range of connectivity in an IP67 rated package.

NVIDIA Elite Partner

Polaris is ideal for deployable computer vision and deep learning applications in rugged environments

FEATURES

- ✓ IP67 Rated, Actively or Passively Cooled
- ✓ 2x USB 3.1, 4x GMSL2 via sealed FAKRA connectors
- ✓ Rugged M12: 2x GbE, 2x CAN, GPIO, wide-range isolated power input (+18V - +48V)
- ✓ 4G/5G/LTE, WiFi/BT, GNSS, M.2 2280 NVMe M-Key

SPECIFICATIONS

NVIDIA® GPU SoC Module Compatibility	Pre-integrated with: • Jetson Orin™ NX or Jetson Orin™ Nano	**CAN Bus**	• 2x CAN FD Isolated Ports (M12 A-Code)
Networking	• 2x Gigabit Ethernet (M12 X-Code) • 1x Gigabit Ethernet (RJ45) • All ports are from KSZ9897 unmanaged switch	**GPIO**	ISOLATED GPIO ports (M12 D-Code): • 2x 3.3V input (12V tolerant) • 1x 12V output (100mA max)
Wireless Expansion	• 1x WiFi Module (M.2 2230 E-KEY) • 1x 5G Module (M.2 3042/3052 B-KEY) w/ nano SIM Card Slot • 5x FAKRA SMB Plug C/D/I-codes for antenna connections	**Misc.**	• 1x CR2032 RTC battery holder • 1x RGB status LED • 1x Back-up power button • 1x Reset/Forced-Recovery button • 1x CAN mode/self-test rotary switch
Display Output	• 1x HDMI 1.4b (Type-A)	**Fan (Active Cooling Variant)**	• 2x 12V BLDC Fans with Tachometer and PWM speed control
Camera Input	• 4x FAKRA SMB Plug Z-code, GMSL cameras	**Input Power**	• +18 to +48V DC Wide Input Power (M12 B-Code)
USB	• 3x USB 3.1 (Type-A) • 1x USB 2.0 OTG (Micro-AB connector)	**Dimensions**	• 285mm x 150mm x 70mm (11.22" x 5.91" x 2.76")
UART	• 1x USB based Debug UART (USB Micro-AB connector)	**Operating Temperature**	• -20°C to +50°C (-4°F to +122°F) • (14.4CFM is needed to operate higher than 35°C or 95°C)
Storage	• 1x M.2 Key-M (NVMe) slot (4-lane PCIe Gen 3/4)		

RoHS

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