SLX Porcupine

Industrial-grade, Raspberry-Pi compatible, secure single-board computer for various IoT applications, edge computing and gateway functionality

Why Porcupine?

There is a need in the market for a versatile, secure, industrial-grade single-board computer. SLX Porcupine is built for that purpose, and because of Porcupine's Raspberry Pi form factor and compatibility, you have enormous resources at your disposal, as you can use many Raspberry Pi hats, as well as the series of SLX Porcupine connectivity hats, allowing you to integrate with various PLC and other device assets. Porcupine features SLX OS with automatic cloud connectivity.

Key Features

- Industrial grade, Raspberry Pi form factor
- 72 GPIOs
- Onboard flash
- Shielded flash and MCU
- Preconfigured OS
- Secure boot
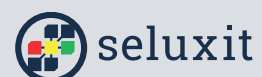- Direct cloud connection

Benefits

- Quicker development time
  - ▸ *Prototyping and product development in one seamless process*
  - ▸ *Raspberry Pi hardware / software compatible*
  - ▸ *Preconfigured cloud connection*

- Robust industrial-grade operation
  - ▸ *On-board flash*
  - ▸ *Industrial specifications (temperature range, EMC compliance, etc.)*

- Easy maintenance
  - ▸ *Over-the-air firmware updates*
  - ▸ *Automatic provisioning and Seluxit cloud connection*

Key Specifications

OS	SLX OS (Linux kernel 4.9.123) / native version without OS also available)
Dimensions	85 x 56 mm (Size and pin layout compatible with Raspberry Pi)
Temperature	-40 to +85°C (industrial grade)
Power supply	+5.0V/3.0A (protected by fuse and transient voltage suppressor)
Processor	NXP MCIMX6G3CVM05AB (MX 32-bit MPU, ARM Cortex-A7 core, 528MHz)
Processor security options	TRNG, Crypto Engine (AES with DPA/TDES/SHA/RSA), Secure Boot, tamper monitor, PCI4.0 pre-certification and on-the-fly (OTF) DRAM encryption
Memory	512 MB DDR3 RAM 4 GB eMMC FLASH
Peripherals	10/100M Ethernet port USB 2.0 host port Micro USB OTG 2.0 SD card interface WiFi (IEEE 802.11b/g/n, WiFi compliant) Bluetooth (v4.2)
Pinheaders	Raspberry Pi compatible 40-pin pinheader. Signals routed to pinheaders could be up to: • 8 x serial ports • 4 x I2C • 2 x CAN • 4 x SPI • 8 x ADC - 12 bit • 8 x PWM • 3 x I2S
RTC	Connector for RTC backup battery
Hats	ZigBee, Lemonbeat, LoRa®, Z-Wave, NB-IoT / LTE-M, RFID, Spider, PROFIBUS, Modbus, M-Bus, Profi Net, EtherNet/IP, EtherCAT, CANOpen, DMX, OPC UA
Cloud connectivity	Pre-configured to Seluxit IoT Cloud Data forwarding to AWS, Azure, and other enterprise clouds

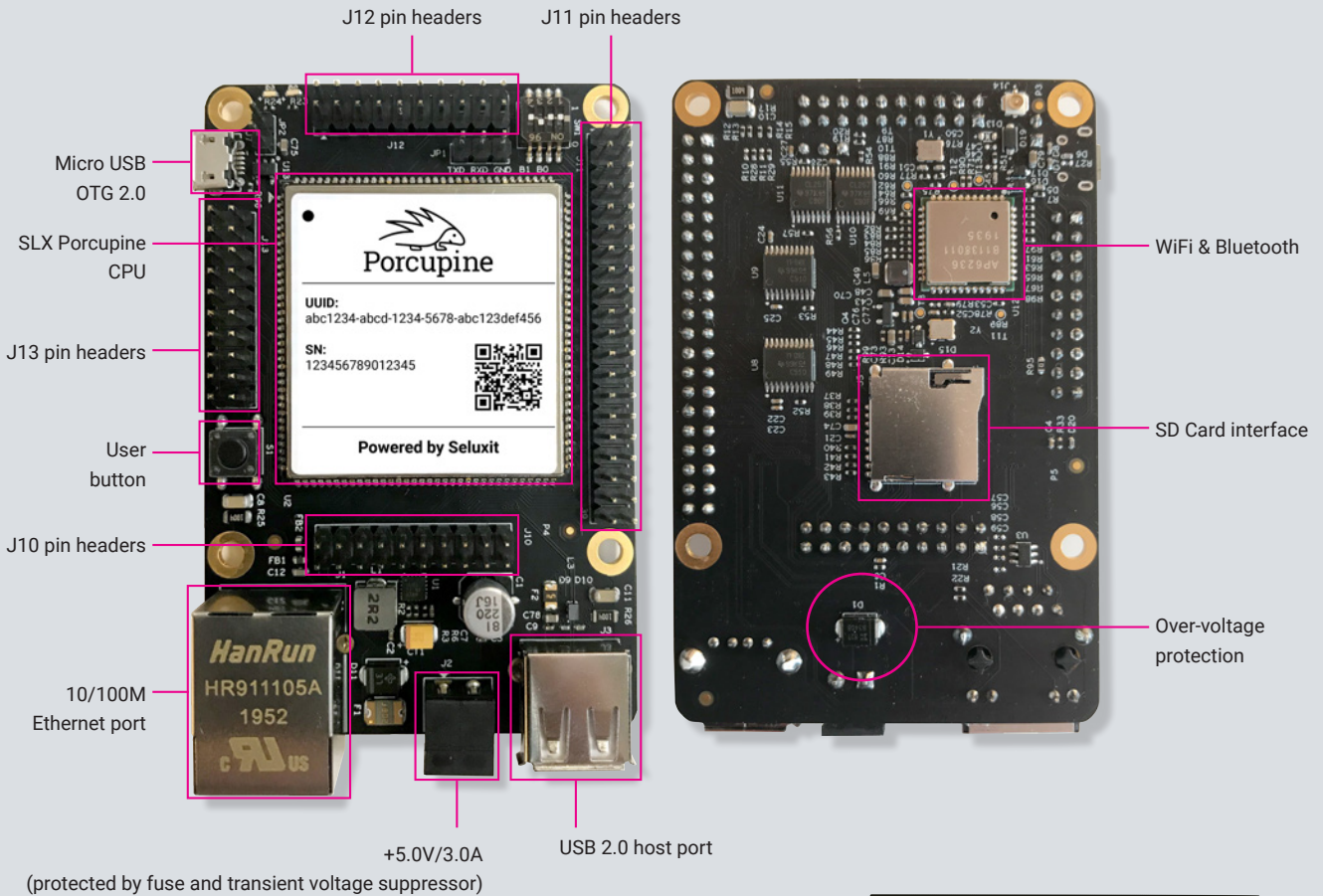The LoRa® mark is a registered trademark of Semtech Corporation.

Visit seluxit.com/porcupine

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NB: This is an initial offering and therefore subject to change.

SLX Porcupine

The SLX Porcupine single-board computer has the same form factor and pinheaders as the Raspberry Pi, a drop-in product suitable for industrial usage. SLX Porcupine CPU is also sold separately, see **seluxit.com/porcupinesom** for more information.

J12 pin headers   J11 pin headers

Micro USB OTG 2.0

SLX Porcupine CPU

J13 pin headers

User button

J10 pin headers

10/100M Ethernet port

WiFi & Bluetooth

SD Card interface

Over-voltage protection

+5.0V/3.0A
(protected by fuse and transient voltage suppressor)

USB 2.0 host port

Porcupine

UUID:
abc1234-abcd-1234-5678-abc123def456

SN:
123456789012345

Powered by Seluxit

IoT Rapid Prototyping

With Seluxit's IoT Rapid Prototyping kits, you're only 10 minutes away from sensor to dashboard and making your own intelligent applications. Pictured here is the SLX Climate kit, which includes the SLX Connector Hat and various supported sensors and actuators, including CO_2 sensor and barometer.

Check out **seluxit.com/shop** to learn more and get a hold of your own kit.

Visit **seluxit.com/porcupine**

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