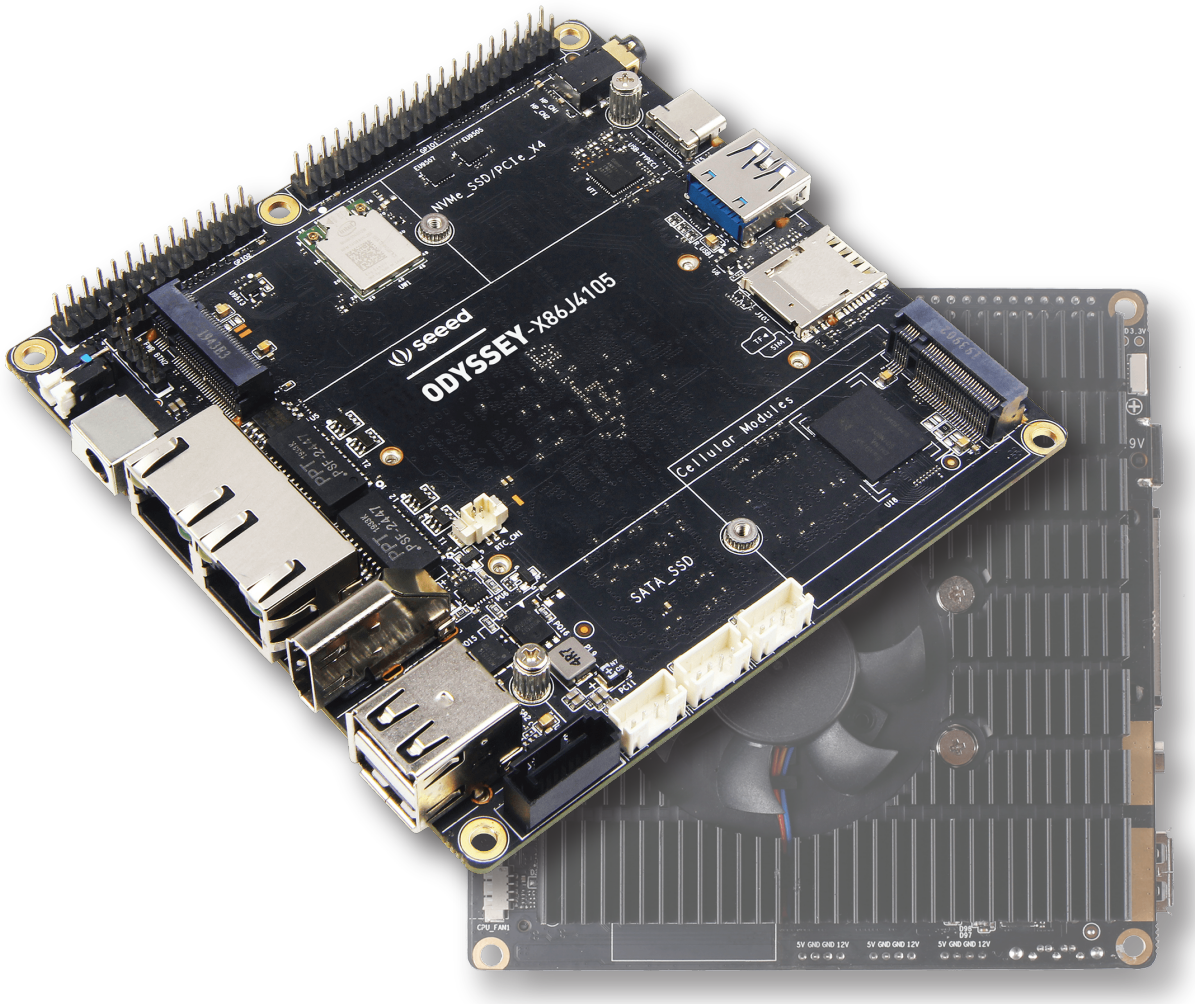
ODYSSEY - X86J4105

Most Expandable X86 Mini Computer



Reference Guide

Revision A
March 30, 2020

Table of Contents

Overview

Description 3

Features 3

Applications 3

Specifications 4

ODYSSEY - X86J4105 Variants 5

Hardware Overview

Component Details 5

Pinout Diagram 6

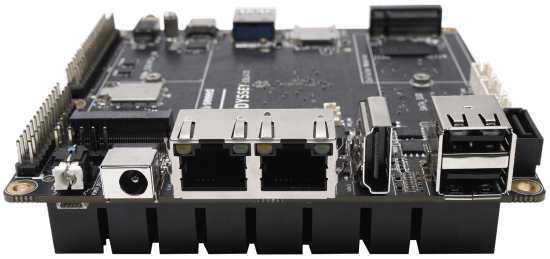
Overview

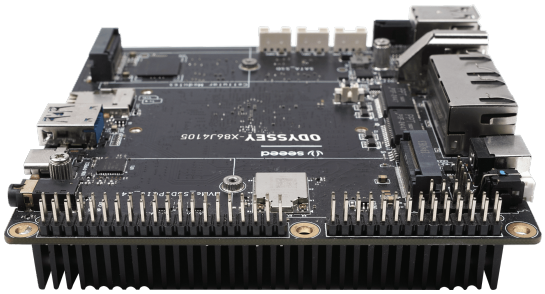
Description

ODYSSEY is a series of SBCs (Single Board Computer), allowing you to build Edge Computing applications with ease. The ODYSSEY - X86J4105, based on Intel Celeron J4105, is a Quad-Core 1.5GHz CPU that bursts up to 2.5GHz. It includes all the powerful features of a Mini PC including a 8GB LPDDR4 RAM, 64GB eMMC Storage(optional), onboard Wi-Fi/BLE, Dual Gigabit Ethernet Ports, Audio Input and Output, USB Ports, HDMI, SATA Connectors and PCIe. By connecting ODYSSEY - X86J4105 to a Mouse, Keyboard and a Monitor, a Desktop Mini PC can be built. The ATSAMD21 Arduino Core allows users to program Arduino on the X86 platform and also the 40-Pin Raspberry Pi compatible connector support various Pi HATs to expand projects.

Features

- Intel® Celeron® J4105, Quad-Core 1.5-2.5GHz
- Dual-Band Frequency 2.5GHz/5GHz Wi-Fi & Bluetooth 5.0
- Intel® UHD Graphics 600
- Dual Gigabit Ethernet
- Integrated Arduino Coprocessor ATSAMD21 Arm® Cortex®-M0+
- Raspberry Pi 40-Pin Compatible
- 2 x M.2 PCIe (B Key and M Key)
- Compatible with Grove Ecosystem





Applications

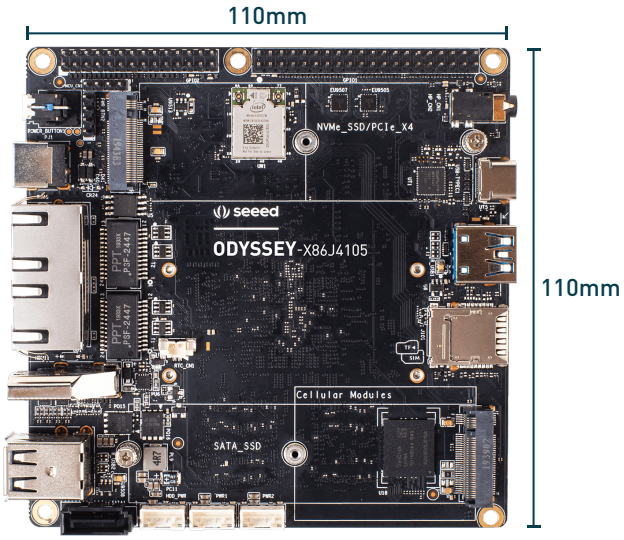
- Mini PC
- NAS (Network-Attached Storage)
- Edge Computing
- Router
- Robotics
- Industrial Applications
- Media Center
- IT Industry
- Education
- Thin Client
- Server Cluster
- IoT Gateway

Specifications

- Processor: Intel® Celeron® J4105 (Frequency: 1.5 - 2.5GHz)
- Coprocessor: Microchip® ATSAMD21G18 32-bit Arm® Cortex® M0+
- Graphics: Intel® UHD Graphics 600 (Frequency: 250 – 750MHz)
- Memory: LPDDR4 8GB
- Storage: 64GB eMMC V5.1 (eMMC version)
- Wireless: Wi-Fi 802.11 a/b/g/n/ac @ 2.4/5 GHz HT160 & Bluetooth® 5.0
- Networking: Intel® I211AT PCIe Gigabit LAN (Supports Wake-On-LAN, Supports PXE)
- Audio: Microphone + headphone Combo Connector
- Headers:
  - 1 × 40-Pin Header Compatible with Raspberry Pi
  - 1 × 28-Pin Header (SAMD21G18)
  - 1 × Front Panel Audio Connector
  - 1 × 4-Pin Header (UART function from SAMD21G18)
  - 1 × Fan Port (4 pin 1.25mm PWM 5V)
  - 3 × 4-Pin SATA Power Connector
  - 1 × 4-Pin herder (Power and Switch)
- Expansion Slots:
  - M.2 (Key B, 2242/2280): SATA III, USB2.0, UIM
  - M.2 (Key M, 2242/2280): PCIe 2.0 ×4
  - Micro SD card Socket
  - SIM Card Socket
  - SATA III
- USB:
  - USB 2.0 Type-A x2
  - USB 3.1 Type-A x1
  - USB 3.1 Type-C x1
- Video Interfaces:

  HDMI2.0a: Up to 4096x2160 @ 60Hz 24bpp

  DP1.2a: Up to 4096x2160 @ 60Hz 24bpp
- RTC: JST 1.0 CR2032 3V
- TPM: Built-in TPM (2.0)
- Power: DC Jack 5.5/2.1mm or Type-C PD (DC Jack input: 12-19V DC; Type-C input: 12V DC)
- Dimensions: 110x110mm
- Certifications: FCC, CE



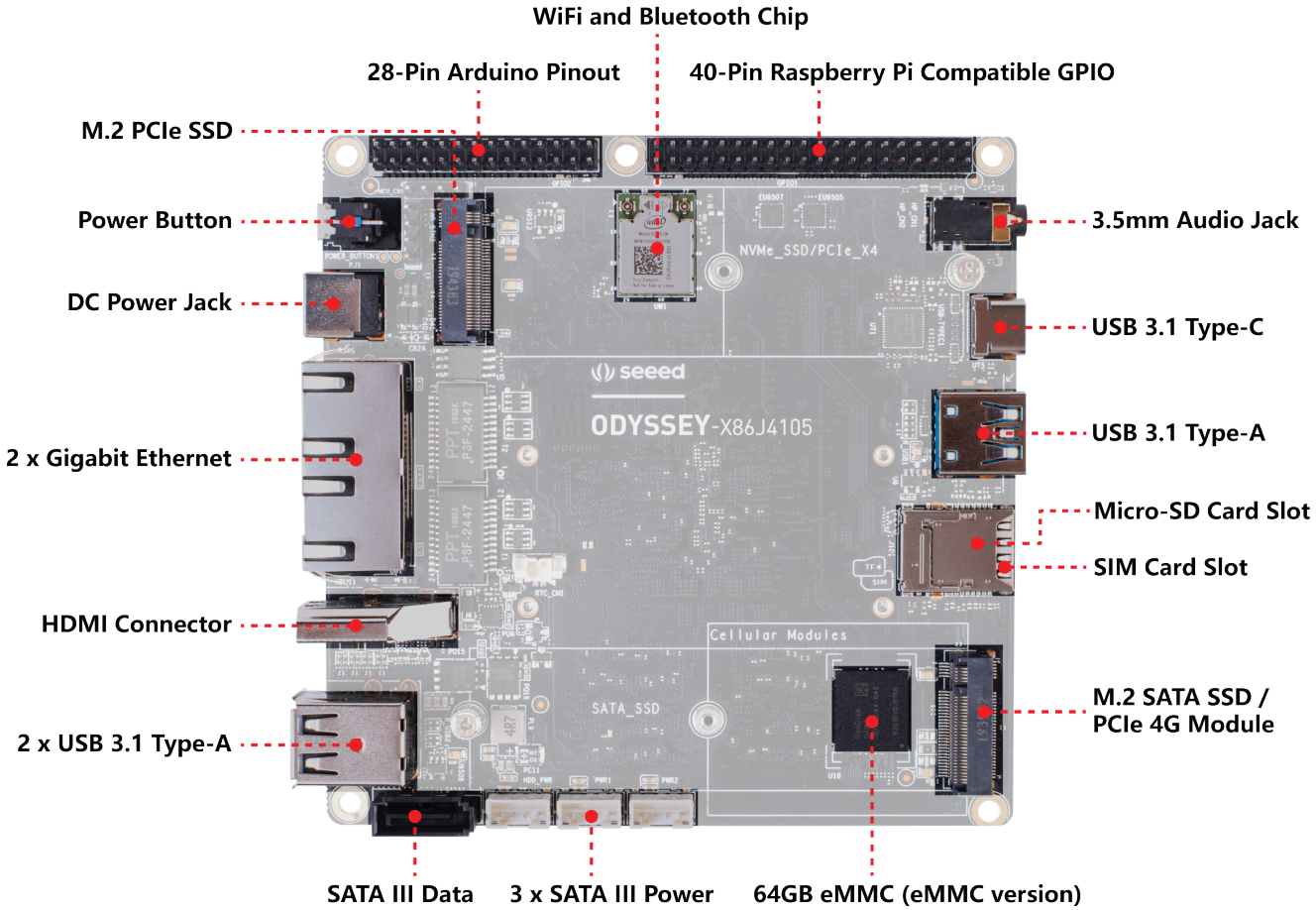
ODYSSEY - X86J4105 Variants

ODYSSEY - X86J4105 is offered in different versions based on the pre-installed operating system and the onboard storage capacity.

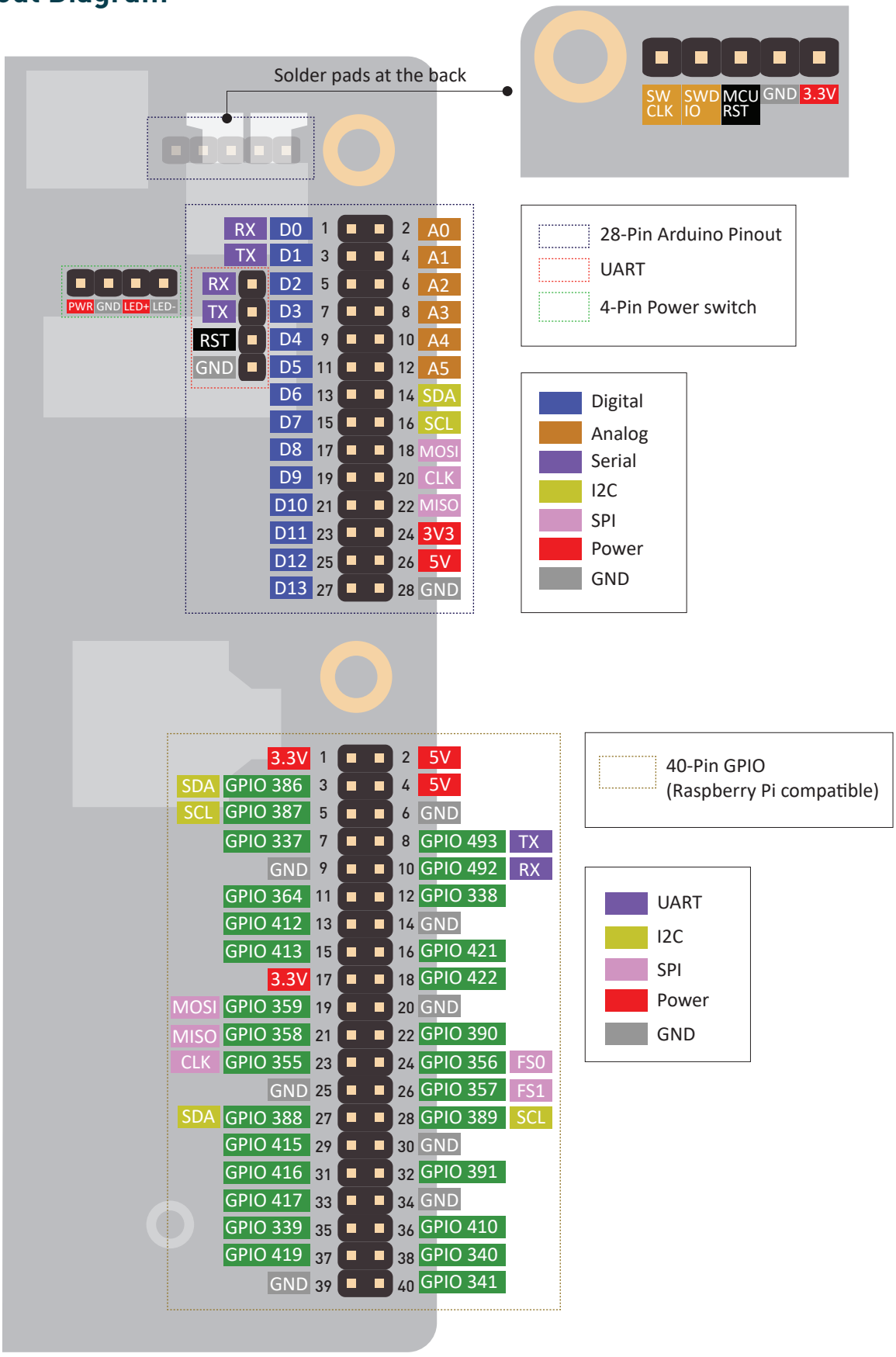
SKU	Model	Memory	Operating System
102110397	ODYSSEY - X86J4105864	64GB eMMC	Windows 10 Enterprise (Unactivated)
102110398	ODYSSEY - X86J4105864 (Win 10 Enterprise Activated)	64GB eMMC	Windows 10 Enterprise (Activated)
102110399	ODYSSEY - X86J4105800	No eMMC	No Operating System

Hardware Overview

Component details



Pinout Diagram



If you want to learn about getting started with this board such as setting up the software and other details, please visit the product wiki at
http://wiki.seeedstudio.com/ODYSSEY-X86J4105/

If you still have any further questions, please visit
forum.seeedstudio.com

© 2008-2020 Seeed Technology Co.,Ltd. All rights reserved.