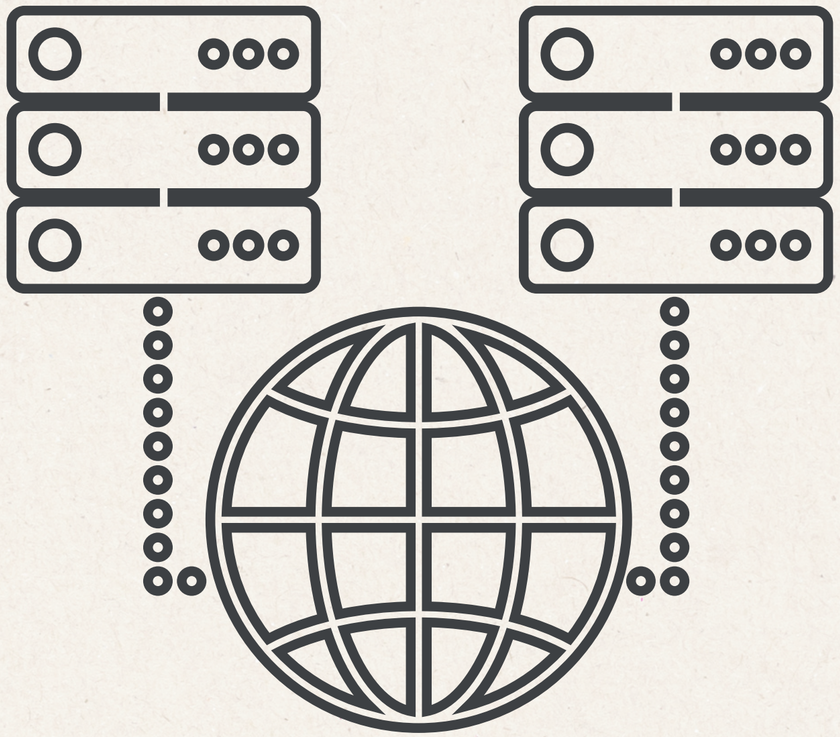


NETWORK ATTACHED STORAGE

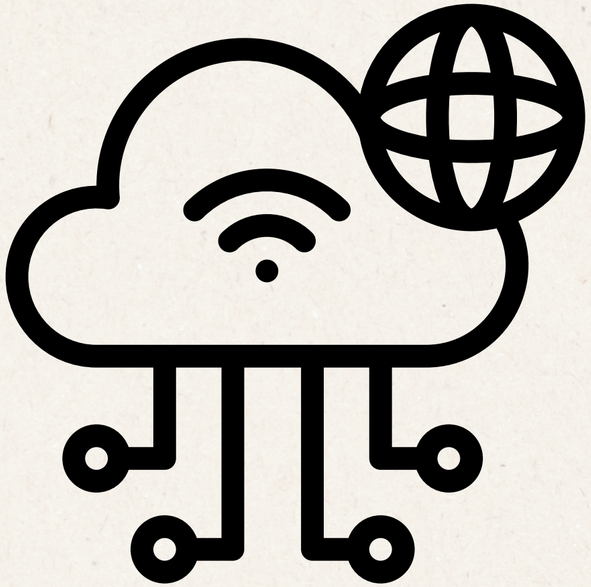
Internet of things

Janni Chandu

A.Sai Ram Charan

Ch.Krishna Dheeraj Reddy

Objectives and Goals



Goal # 1

Affordable NAS Solution: Develop a cost-effective NAS using Raspberry Pi.

Goal # 2

Access Anywhere: Enable seamless data access locally and remotely.

Goal # 3

Data Security: Implement robust security measures.

Goal # 4

Plex Integration: Incorporate Plex Media Server for multimedia streaming.

Goal # 5

Optimized Performance: Ensure smooth operation and efficient media streaming.
& **User-Friendly Setup**

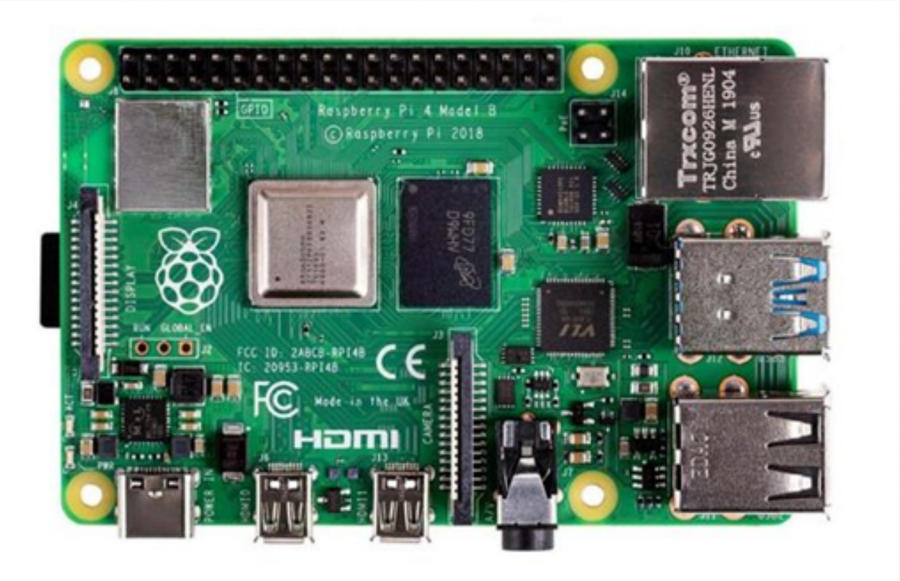
PROBLEM IDENTIFICATION

- **Cost Barrier**: Traditional NAS solutions are often expensive, limiting accessibility for individuals and small businesses.
- **Complex Setup:** Setting up a NAS system can be complicated, requiring technical expertise and time-consuming configurations.
- **Limited Media Access**: Storing multimedia content on separate devices can lead to fragmented access and inconvenience.
- **Security Concerns**: Data security and privacy are paramount, especially when storing sensitive information on networked storage devices.
- **Resource Intensive Solutions:** Some NAS solutions require significant power and resources, leading to higher operating costs and environmental impact.

PROBLEM STATEMENT

Addressing the need for an affordable, user-friendly, and feature-rich Network Attached Storage (NAS) solution with integrated media streaming capabilities, while ensuring robust data security and efficient resource utilization

COMPONENTS USED

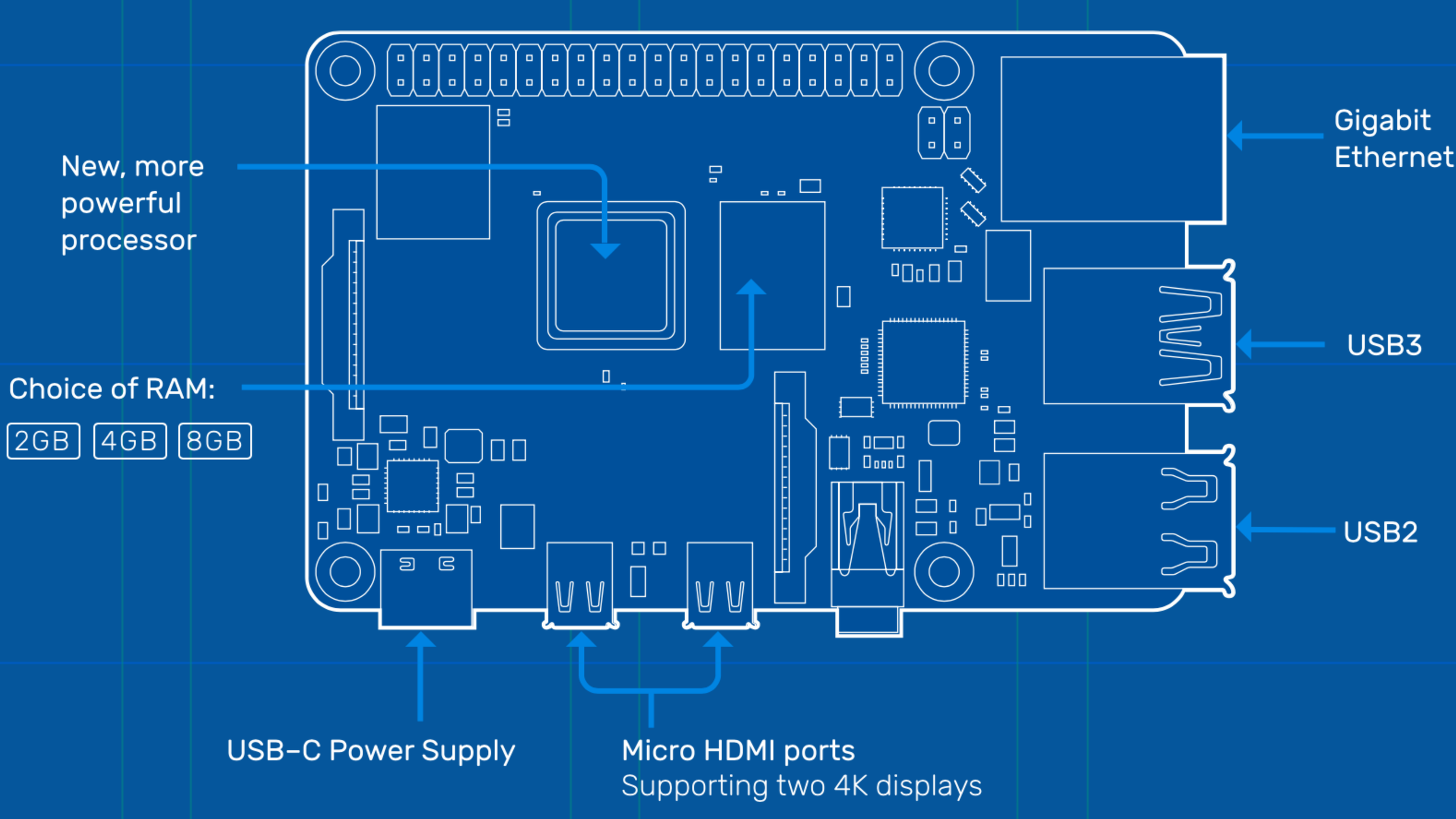


RASP BERRY PI 4

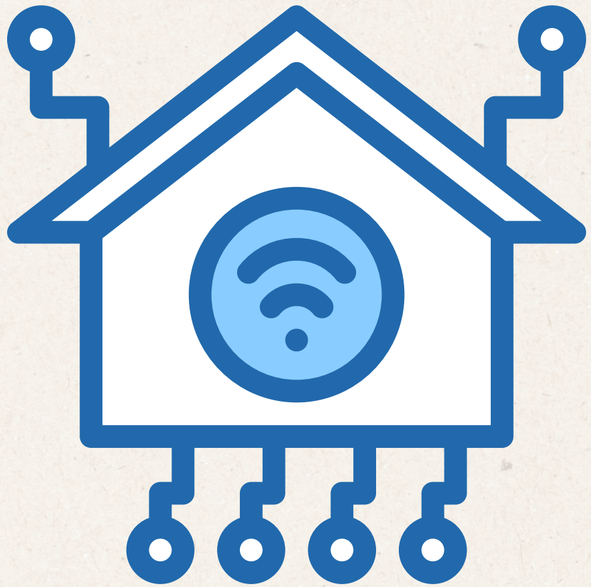
EXTERNAL STORAGE

Raspbian

RASP BERRY PI OS LITE(32BIT)


New, more powerful processor
Choice of RAM:
2GB
4GB
8GB
Gigabit Ethernet
USB3
USB2
USB-C Power Supply
Micro HDMI ports
Supporting two 4K displays

COMPONENTS LIST



HARDWARE	SOFTWARE
• Raspberry Pi 4B 8GB RAM • 32GB microSD for OS storage • NASPi NAS storage kit • 15-20W USB-C power adaptor • 500GB internal SSD (USB 3.0) • 2TB external HDD (USB 3.0)	• Raspberry Pi OS Lite (with no desktop environment) • OMV for NAS file server • Plex media server providing streaming service

Thank you