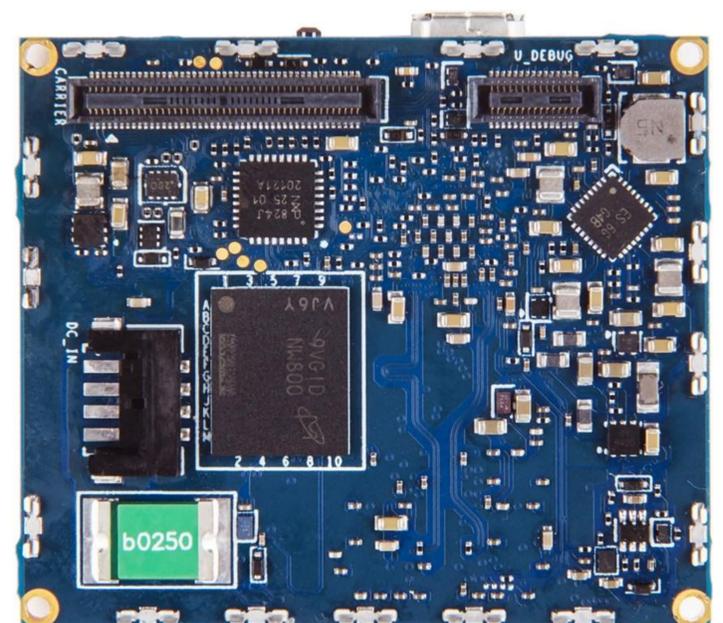
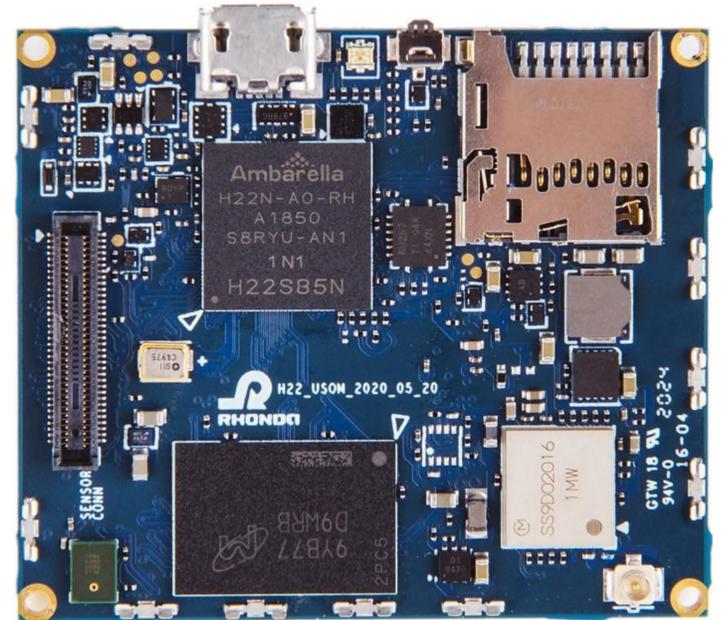


H22 System On Module

Overview

H22 System On Module (H22 SoM) is a hardware platform for consumer and professional imaging products. H22 SoM is based on Ambarella® H22S85N™ SoC. H22 SoM contains a main board and a set of daughter boards, allowing flexible functionality.

H22 SoM is low-power, ready-to-integrate and production ready for rapid prototyping, quick development and the production of robots, drones, or other applications.



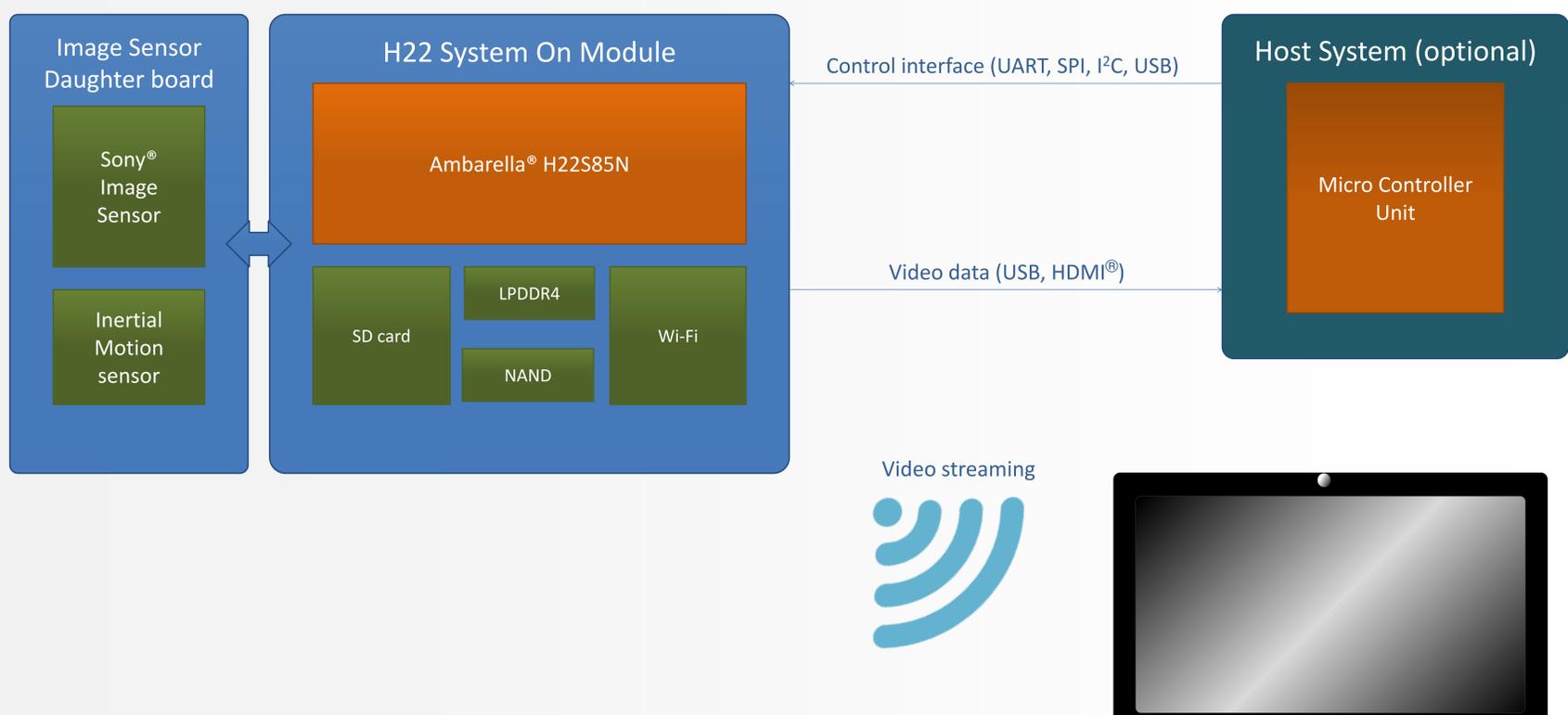
Default package size is 45 x 39 mm

Key Features

- 4Kp60 H.264/H.265 video recording
- 12Mpx still capture
- Superior image quality of Sony® Exmor R™ image sensor
- Wi-Fi streaming
- USB streaming
- Inertial Motion sensor
- SD card
- USB Host for 4G Mobile connectivity

Block Diagram

The diagram below illustrates the high-level architecture of H22 System On Module



General Specification

- Ambarella® H22S85N™ SoC
- Dual image sensor support:
 - Primary sensor: MIPI CSI-2 4-lane or SLVS 8-lane
 - Secondary sensor: MIPI CSI-2 4-lane or SLVS 4-lane
- 8Gb LPDDR4 DRAM
- 2Gb internal NAND storage
- Wi-Fi (802.11a/b/g/n/ac)
- Sony® 12Mpx (Type 1/2.3") image sensors with tuned image quality²
- Optical lens DFOV 165°, physical dimensions 23 mm (length) x 18 mm (diameter)²
- Power input: 5V from USB or 3.5-5V from board-to-board connector
- Li-ion battery support²
- On-board mono digital microphone
- Speaker and stereo analog microphones support²
- SD card support
- 3-axis accelerometer, 3-axis gyroscope, 3-axis magnetometer²
- GNSS²
- Interfaces:
 - 8-bit parallel video output interface for LCD
 - HDMI® 2.0
 - I²S
 - Wide range of peripheral interfaces (UART 3x, I²C 2x, SPI, ADC x2, GPIOs)
 - USB 2.0 DEVICE
 - USB 2.0 HOST²
- Operating temperature -20°C to 75°C³
- Main board physical dimensions 45 x 39 mm

² Available on daughter boards

³ Temperature range of main board; daughter boards temperature range may be different

Development platform

H22 System On Module is a HW platform for integration with Host systems. H22 SoM provides interfaces for:

- Control (UART, SPI, I²C, USB)
- Video streaming (USB, HDMI®)

H22 System On Module has several working configurations, the startup configuration is flexible and can be easily changed.

To speed up product development, H22 System On Module is provided with:

- Reference application for integration with Host system
- Configuration file for H22 System On Module control (settings changing, quick feature testing)
- Detailed documentation including reference board pinout, HW guide, application notes.

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