Product Brief - Dolphin

Introduction

Dolphin is an Android based smart module community development platform offered by Green Dot. It is built on a 4G Android smart module developed on the Qualcomm QCM2290 platform.

Dolphin offers additional amazing features, which provides a more creative edge to the developers and enthusiasts in the domain of IOT. It offers an inbuilt modem which supports cellular / data connectivity, enabling users to have audio/video calling capabilities on the go.

Key Benefits

- 4-lane MIPI DSI (up to 1680*720 @60fps)
- 2x ISP (13 MP + 13 MP or 25 MP) at 30 fps
- Support recording and playback of 1080P videos at 30 fps
- Support global multi network mode (LTE Cat 4)
- Integrates Android OS, Wi-Fi, Bluetooth and GNSS into one module

- Integrate GNSS function, supports rapid accurate positioning under different environment
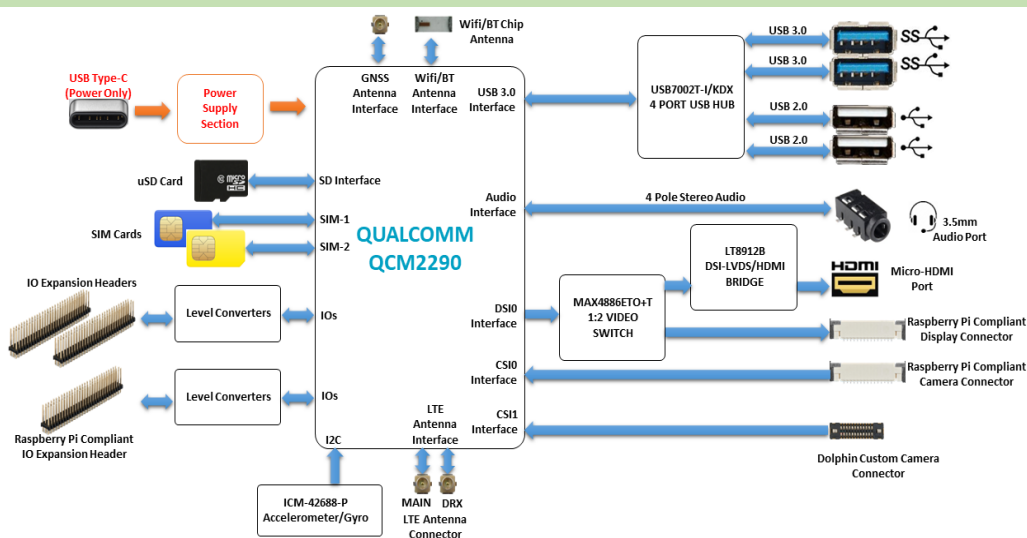
Applications

Dolphin is a highly integrated product, which can be widely used for various applications in the field of the Internet of Things (IOT). This smart solution can easily be embedded and integrated at the end use of the design in significantly less time, and which will enable them quick time to market the product.

Dolphin can be widely used as an integral part or as a sub-system in the areas of

- Single Board Computers
- POS (Point of Sale)
- Audio/Video Communication Equipment
- Media Platforms
- Industrial Mobile/Tablet community
- IOT & Sensor Integrations

Block Diagram

GREEN DOT TECHNOLOGY

Interface

Processor	Qualcomm QCM2290, Equipped with the Cortex A53 CPU architecture
Memory	16GB eMMC + 2GB LPDDR4x
Display	4-lane MIPI DSI HD + 1680*720 60fps
Camera	Primary camera: 4-lane MIPI CSI, up to 13MP Secondary camera:4-lane MIPI CSI, up to 13MP
Audio	3-Channel Analog Audio Input 3-Channel Analog Audio Output
USB	USB 3.0 Ports - 2 Nos USB2.0 Ports - 2 Nos
WLAN	2.4G/5G, 802.11a/b/g/n/ac
BT	BT 5.0
GNSS	GPS /GLONASS /BEIDOU/Galileo
UART	3 Nos
I2C	Support up to ten I2C for touch screen, camera, sensor, and other peripherals
SPI	Support up to 2*SPI interfaces, support master mode, the highest rate 50MHz
UIM Card	2 Nos, dual cards dual standby
SD Card	SDC2 external interface supports SD3.0 TF card (Max 256G), hot-join support
Keypad	PWRKEY, VOL UP, VOL DOWN
Antenna	On Board: Wi-Fi/BT External: Main & Diversity & GNSS connectors

Media & Software Features

Operating System	Android 12
Video encoding and decoding	Encode: 1080p30 8-bit HEVC (H.265), H.264 Decode: 1080p30 8-bit H.264, HEVC (H.265), VP9
Audio encoding and decoding	Audio Codec: MP3, AAC, He-AAC v1, v2, FLAC, APE, ALAC, AIFF Voice Codec: EVS, EVRC, EVRC-B, and EVRC-WB
Firmware Upgrade	USB/OTA/TF Card

General Features

Supply Voltage	4.5V~5.5V, Type-C Power Inlet port
Temperature	TBD
Dimensions	175 X 95 mm
Weight	TBD

Data Transfer

LTE	50Mbps (UL) 150Mbps (DL)
HSPA+	5.76Mbps (UL) 42Mbps (DL)
UMTS	384bps (UL) 384Kbps (DL)
EDGE	236.8Kbps (UL) 296Kbps (DL)
GPRS	85.6Kbps (UL) 107Kbps (DL)