## Manufacture

- Manufacture
- Chips

Manufacture

Name

PixArt Imaging Inc.

Logo

Intro

Headquartered in Hsinchu Taiwan, is established in July 1998. We specialize in CMOS imaging sensing technology and navigation related integrated chip designs, and offer a broad selection of sensor products and services to support today's complex human-machine interface designs. Today, our offices scattered across Silicon Valley, Malaysia, China, Japan, Korea and Denmark and is endeavored to provide efficient and targeted support for our worldwide customers.

PixArt is expertized in CMOS image sensors (CIS), capacitive touch controllers and related imaging applications. With our extensive experiences in mixed-signal image processing design and systems development, we are devoted in the development of novel technologies to bridge the human-machine interface barrier. In order to meet specific customer product requirements, we also provide customized ASICs design services in addition to sensor chip designs.

We are currently the world-leading supplier in optical mouse sensor chips for conventional PC and high-end gaming applications, and is an industry leader for Smart Sensor SoC solutions incorporating CMOS Imager, optics and proprietary algorithm engines. With the comprehensive competencies in CIS design and development, PixArt is working to continuously expanding our application portfolios including Optical Navigation, Object Motion Sensing, Touch, CMOS Image Sensor, Health Management and Custom ASICs.

PixArt's core technology utilizes CMOS image sensor as the vision for image analytics, and allow complex tasks to be performed on one single SoC. With our ability to provide end-to-end solutions, proprietary algorithms and decent IC packaging, PixArt is able to offer one-stop-shop services to fulfill a comprehensive list of project and application needs. As an insider with sharp insight on the market trend, we are dedicated to provide value-adding products with top quality, low power architectures, effective costs and minimized form factors to impress you and your customers. It is also one of our key capabilities to deliver competitive turnkey solutions through short design cycles, thanks to our strong and trustworthy relationships with the world's top companies in wafer fabrication, testing, packaging and optical lens manufacturing.

In recent years, PixArt has been actively driving the collaboration with various industry-leading companies worldwide to develop new applications for the human machine interaction (HMI). The encouraging response and recognition that we received were highly inspirational, and have motivated us to accelerate our design pace to offer better and more powerful sensor technologies.

Our Philosophies:

- Inspire innovation by providing challenging and proficient working environment to unleash one strengths.
- Understanding the affiliation of customers and partners to pursue best interests of both sides.
- Be respect on intellectual property rights, rewarding on invention in dynamically strategizing global patent.

- Sharing the success of operating results with shareholders and employees as well as contributing utmost to the community.

Website

https://www.pixart.com
Country

中国.台湾
Brand

原相

Chips
Core Type

ARM Cortex-M0
Dimension

6mm*6mm
UART

Current

Sleep Mode Current <8 μA
Deep Sleep Mode Current <3μA
Transceiver Compatible

Intro

Debugging

DSP RAM

Voice Services

Crystal

no
Power fail

no
Wifi

-
AoA/AoD

Operating Frequency [Max] (MHz)

32 MHz
SSI

Sensor Controller

Receiver Sensitivity

-93 dBm
Upgrade Type

Manual

Package Type

QFN
DSP Technology

General

on chip (PLL)

no
I2S

Chip Name

PAR2801QN-GHVC
Flash (kB)

128
I2C

-
Standby

Output Power

Max. TX Power: +4dBm
CPU Clock Speed

Pins

48
DSP Clock Speed

Features

802.15.4 (Zigbee, Thread)
crystal (optional)

no
PDM

LE Audio

Type

蓝牙低功耗
Bluetooth Version

Bluetooth Low Energy 5.0
I2S

no
Frequency Regulation

CPU Features

Pitch

on-chip RC

no
PWM

Brand

原相
SRAM (kB)

80
Real-Time Clock

no
CPU Architecture

Channels

External clock

no
Protocols

-
RADIO

SAADC

Country

EEPROM (kB)

24
Crypto Accelerator

Programmable channels

Watchdog timer

no
TWI

no
Bluetooth 5 PHYs

-
SPIM

NFC Tag

SPI

Public Key Hardware Accelerator

Fixed channels

QDEC

-
bluetooth 5.1 support

-

SPIS

CMP

Overview

- Fully qualified Bluetooth Low Energy 5.0 peripheral device
- Cortex M0 32-bit MCU with max. 32MHz clock rate
- Highly integrated SOC with 128kB Flash memory and 80kB SRAM
- DC-to-DC converter with boost or buck mode
- Communication interfaces: I2C master, SPI master, UART
- Peripherals: PWM, SAR ADC, quadrature decoder
- Support SWD (Serial Wire Debug) mode

GPIO

30

Accelerator

Channel groups

PDM

-

Security

TWIM

Features

UART,
SPI Master,
I2C Master,
PWM,
AES,
RNG,
ADC,
Quad.
Decoder
CAN

True Random Number Generator

USB

no

TWIS

Block Diagram

CAN FD

Monitor

SPI

no
UARTE

RAM(KB)

Application Note

Wireless Mouse Transmitter; Wireless Keyboard Transmitter; Dongle (Receiver); Data Transmission/Transparent Transmission
Human Machine Interface

-
Quad SPI

-
NFCT

Development Board

Security Modules

Debug interface

-
LDO

no
USBD

Datasheet

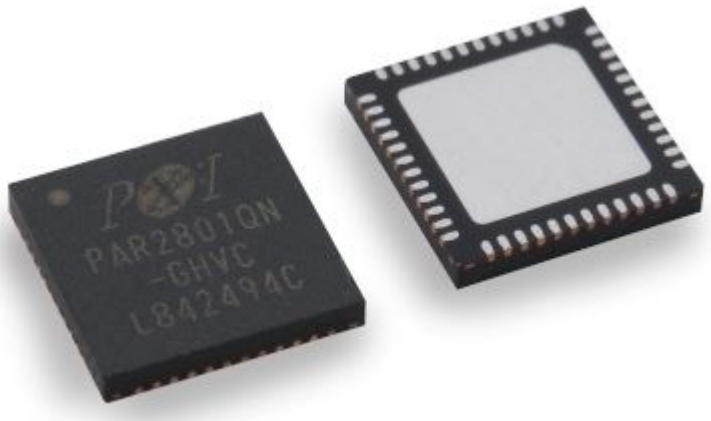
Timers [Number, bits]

no
On-chip VBUS

no
QSPI

PWM [Number, bits]

Image




Regulated supply for external components

-

ADC [Number, bits]

Price

0.00

DAC [Number, bits]

RMB

□

Supply Voltage [Min to Max] (V)

Buck: 1.9~3.6 / Boost: 0.9~1.65

Rating

no

Analog comp

no

Ambient Operating Temperature (Min to Max) (℃)

-40~+85

low-power comp

no

Cache

-

Junction Temperature (Min to Max) (℃)

Temperature sensor

no