

Atomic GPS Base

SKU:A134



Description

Atomic GPS Base is a GPS positioning module specifically designed for the ATOM series main controller. It incorporates the M8030-KT positioning navigation chip and is equipped with built-in FLASH memory. The module also includes a button cell battery that supports power-off retention of user configurations. The module finds applications in various scenarios, such as geographic coordinate viewing, bus stop announcements, vehicle and marine navigation, and trajectory tracking. It provides accurate positioning information that can be utilized in these applications.

Atomic GPS Base outputs data in the NMEA-0183 protocol, which is a common standard for GPS data communication. It supports multiple satellite systems, including GPS, GLONASS, GALILEO, BDS, SBAS, and QZSS. With a 72-channel search capability, it can accurately acquire and track satellite signals for precise positioning.

Furthermore, the Atomic GPS Base includes a MicroSD card slot located below the GPS module. This slot allows people to read GPS or other file data from a MicroSD card. For example, you can export GPS data in a specific format to view movement trajectories in map software. The module can also function as a regular card reader, enabling file reading and writing operations.

Regarding the UART parameter settings, the recommended settings for communication with the Atomic GPS Base are as follows:

UART Parameter Settings:

- Baud Rate (9600bps)
- Start Bit (1 bit)
- Stop Bit (1 bit)
- Parity Bit (None)

Features

- Applicable to Atom Lite/Atom Matrix/AtomS3/AtomS3 Lite
- High signal acquisition sensitivity
- Support single system positioning of BDS / GPS / GLONASS / Galileo / SBAS / QZSS multiple satellite navigation systems
- Built in self elastic TF (microSD) card slot
- Low power

Includes

- 1x Atomic GPS Base

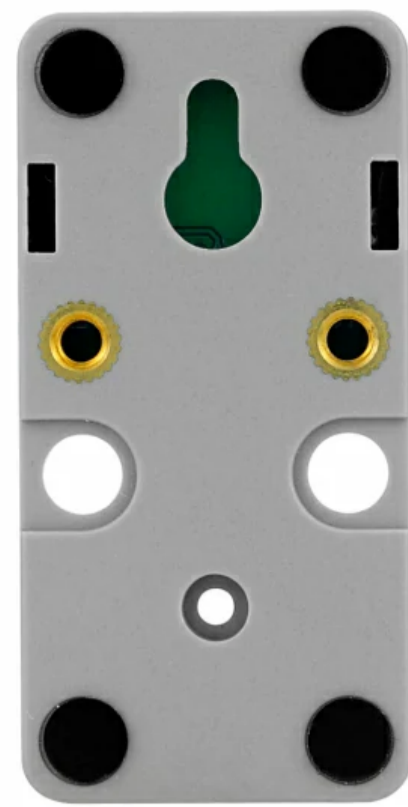
Applications

- Vehicle and ship positioning and navigation
- Track record
- File reading and writing

Specification

Resources	Parameters
Frequency accuracy	GPS L1, GLONASS L1, BDS B1, GALILEO E1, SBAS L1, QZSS L1
Accuracy	Horizontal: 2m, Speed: 0.1m/s, Time: 1us
Channels	72 search channel

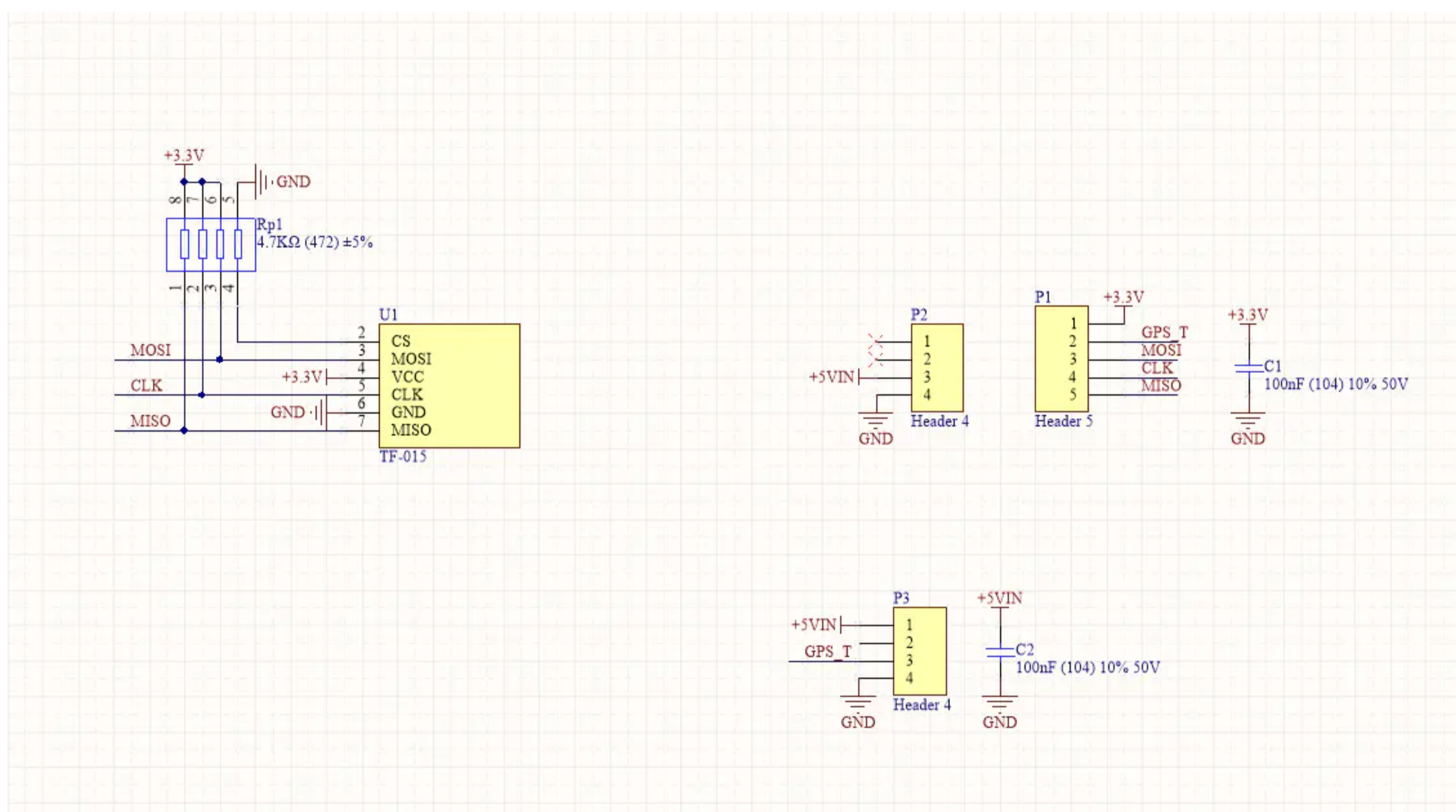
Update frequency	1-10Hz
Maximum speed	515m/s
Maximum acceleration	< 4g
Sensitivity	Trace: - 167dbm, capture: - 160dBm, cold start: - 148dbm, hot start: - 156dbm
Start time	Cold start: 26 seconds, warm start: 25 seconds, hot start: 1 second
Baud rate	9600bps
Output protocol	NMEA-0183
NMEA sentence	RMC, VTG, GGA, GSA, GSV, GLL
Indicator light	TX: the power on blue light flashes, indicating that there is data output, PPS:3D Blink after positioning, and it will not light if it is not positioned
Working temperature	-40°C - 85°C
Product Size	64*18*18mm
Package Size	136*92*20mm
Product Weight	14.4g
Package Weight	18.1g



Related Link

- [CASIC multi-mode satellite navigation receiver protocol specification](#)
- [ATOMGPS method of changing the navigation system](#)

Schematic



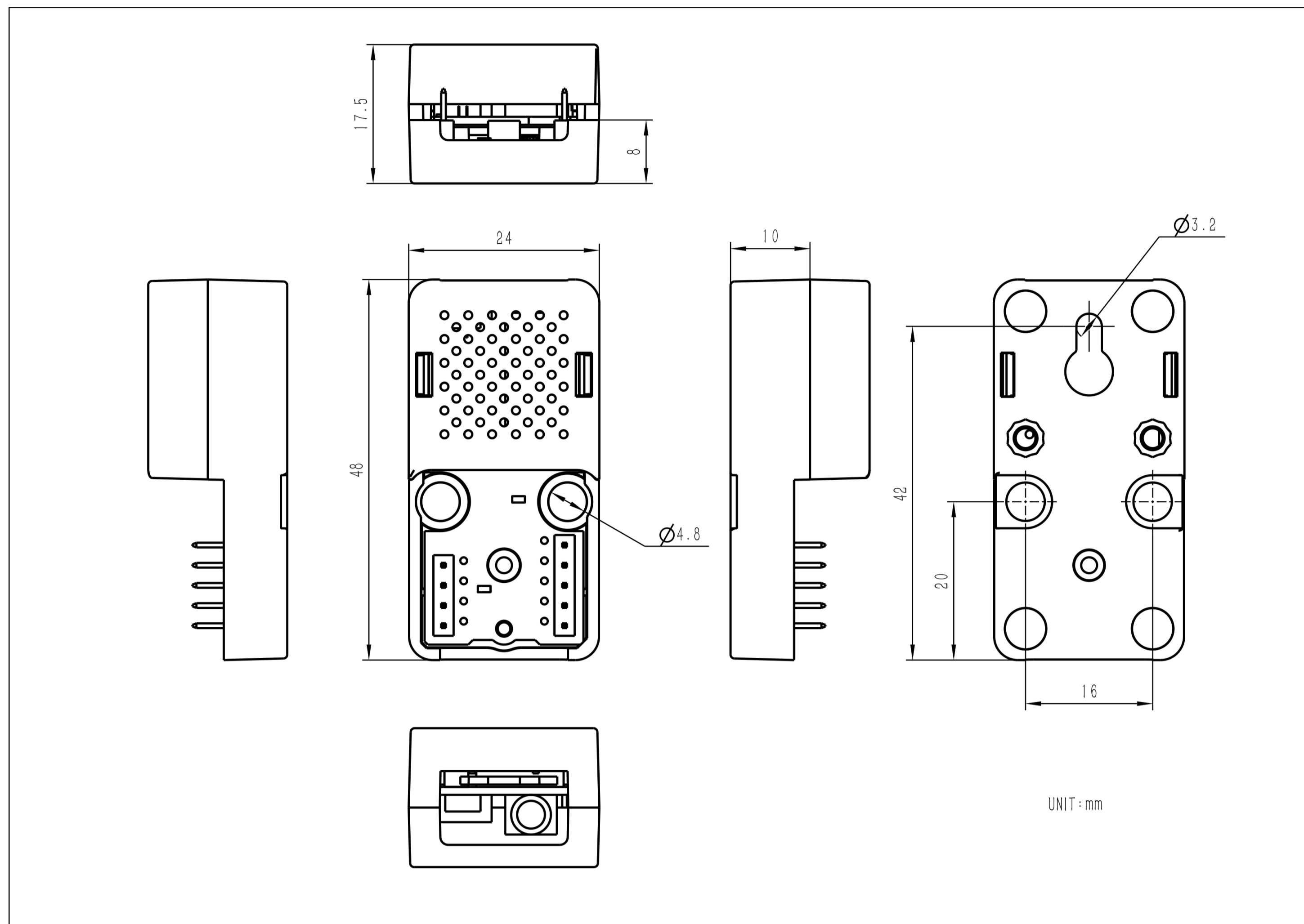
EasyLoader

- **Windows**
 - [EasyLoader_Atomic_GPS](#)

PinMap

ATOMIC GPS Base	TX	MOSI	CLK	MISO
ATOM LITE	GPI022	GPI019	GPI023	GPI033
ATOM Matrix	GPI022	GPI019	GPI023	GPI033
ATOMS3 LITE	GPI05	GPI06	GPI07	GPI08
ATOMS3	GPI05	GPI06	GPI07	GPI08

Module Size



Examples

Arduino

- [Atomic GPS Base Get GPS information \(ATOMS3/ATOMS3 Lite\)](#)
- [Atomic GPS Base Read GPS information stored in SD card \(ATOM Lite/ATOM Matrix\)](#)

Video

- [Connect to the mobile wireless serial port tool to view GPS information.](#)

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