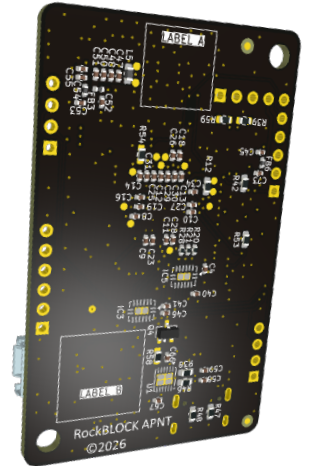
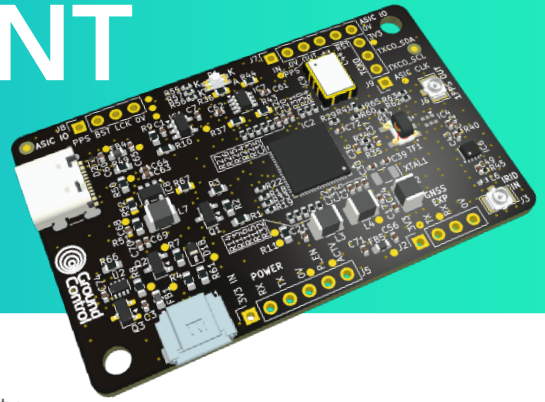


RockBLOCK APNT

Resilient positioning and timing for your application



RockBLOCK APNT makes it simple to evaluate and integrate Iridium® PNT into new and existing systems without having to design your own PCB around the Iridium PNT ASIC.

Designed for developers and systems integrators, the compact PCBA provides access to the full capabilities of the Iridium PNT ASIC, together with practical power, antenna and host interfaces including USB-C and serial.

Iridium PNT provides an independent source of positioning and precise timing using signals from the Iridium Low Earth Orbit satellite network. Its signal is approximately 1,000 times stronger than standard GPS/GNSS signals, providing greater resilience in environments where GNSS may be unavailable, degraded, jammed or spoofed.

KEY FEATURES

Ready-to-use Iridium PNT

Access the full capabilities of the Iridium PNT ASIC without having to design and manufacture your own carrier board.

Resilient positioning

Provides an independent Iridium PNT position source for applications where GNSS may be unavailable, degraded, jammed or spoofed.

Precise timing

Supports resilient timing applications with Iridium PNT-derived 1PPS output and highly accurate UTC-referenced timing.

Simple USB-C development

Power the board and connect to a virtual COM port over USB-C for straightforward evaluation and development.

Flexible host integration

Connect via serial or use additional exposed interfaces including SPI, I²C, UART and GPIO for embedded applications.

Compact, lightweight design

At 59 x 36.5 x 7.7 mm and 10 g, RockBLOCK APNT integrates easily into compact systems.

External antenna support

A u.FL connection supports a suitable Iridium-capable antenna for the application.

TECHNICAL CHARACTERISTICS

Subject to change – please check [Documentation](#)

PHYSICAL AND ENVIRONMENTAL

Form Factor	Printed Circuit Board Assembly (PCBA)
Size	59 x 36.5 x 7.7 mm (2.32 x 1.44 x 0.30 in)
Weight	10 g (0.35 oz)
Operating Temperature	-20°C to +70°C (-4°F to +158°F)
Mounting	2 mounting holes, positioned diagonally across board corners

ELECTRICAL POWER

Power Input	5 V via USB-C or 3.3 V via Molex PicoClasp 5015680607
Peak Power Consumption	1.2 W
Idle Power Consumption	0.95 W

IRIDIUM PNT SERVICE

Satellite Service	Iridium PNT
Receiver Type	Receive only
Position Source	Iridium PNT only; no integrated GPS/GNSS receiver
Position Accuracy	Varies by latitude and operating conditions; field testing demonstrated median accuracy of 25 m (82 ft) at 69°N and 42 m (138 ft) at 19°N
Timing Stability	Less than 50 nanoseconds
Timing Accuracy	Verified average time offset within 5 nanoseconds of UTC(NIST) over 60 days

HOST INTERFACES

Host Connection	USB-C / Molex PicoClasp 5015680607
Serial Interface	LVTTTL UART, 3.3 V logic, 5 V tolerant
Serial Configuration	115,200 baud
Communication Protocol	Proprietary NMEA-0183 sentences
SPI	1 port, available via 0.1 in (2.54 mm) pitch header
I ² C	Up to 3, available via 0.1 in (2.54 mm) pitch header
UART	Up to 3, available via 0.1 in (2.54 mm) pitch header
GPIO	Up to 6, available via 0.1 in (2.54 mm) pitch header

RF AND ANTENNA

Antenna Connector	u.FL
Antenna Type	Iridium-capable external antenna
Frequency Range	1616–1626.5 MHz
Recommended Antenna	Calian 33-HC610-28