FREQUENTLY ASKED QUESTIONS

P400 RANGING & COMMUNICATIONS MODULE

What are the physical interfaces on the P400 RCM?

The P400 RCM has the following physical interfaces: Ethernet, USB, TTL 3-pin Serial UART header, a power connector, and two conventional SMA antenna connectors.

Which communication interface should I use?

We recommend using the Ethernet connection. It is the easiest to use, supports the highest data rate, and is the most stable. The UART is available for use, but its utility is limited by its low data rate. At this time the USB interface is not supported. If you need USB, please contact us and we can discuss.

Is a host PC required to use the P400 RCMs?

The P400 RCM can operate as a respond-only device without a host connection (the RCM automatically powers up in response mode). A host (PC or microprocessor) is required to receive the data overheard in range requests, range responses, or data-only packets and to program the RCM (see the API document on the P400 page of our website for more information).

What is the temperature range on the P400 RCM?

The standard operating temperature range for the P400 RCM is -20˚C to +55˚C. For storage, the specification is -40˚C to +60˚C.

What is included with a P400 RCM? Are there different packages available?

The P400 RCMs are sold as individual printed circuit assemblies. The Broadspec ™ UWB antenna and power supply are sold separately. The Development Kit includes 4 RCMs, 4 antennas, 4 power supplies, Ranging and Communications Reconfiguration and Evaluation software, a Quick Start Guide, sample code, and 5 hours of remote technical support (phone or email).

Do you offer a housing for the P400 RCM?

At this time, we do not offer a housing for the P400 RCM. Please contact us if you have special housing needs.

Is the P400 RCM made in the USA?

Yes.

How do I power the P400 RCM? Are batteries included?

The Development Kit contains a power supply for each RCM. The RCM, when purchased individually, does not include a power supply or battery. The power supplies are available for purchase from Time Domain. The RCM can be powered by any battery supplying 5W at 5.5V to 28VDC.

What are the P400 RCM's voltage and power requirements?

The P400 RCM has built-in regulators allowing it to operate on voltage ranges from 5.5V to 28VDC.

It will consume 5W total. The amperage depends on the supply (Watts = Volts*Amps.) For example, the AC/DC converter provided with the RCM outputs 7V. When powered with the AC/DC converter, the RCM will draw 5Watts/7Volts ~= 0.7Amps.

Can I purchase extra support from Time Domain for my specific project?

Yes, Time Domain offers options for technical services and support. We sell support in blocks of 10 or 25 hours, and the blocks can be used to address a wide variety of issues, from basic troubleshooting to custom application development. Please email sales@timedomain.com for more information.

Is training available for the P400?

Outside of the product documentation included with the unit, we do not offer a formal training program for the P400 at this time. If the user has special training needs, we could discuss options on how to address those. Please email sales@timedomain.com for more information.

How do I contact someone to discuss a P400 application?

Please email sales@timedomain.com to discuss the feasibility of using P400 in your application.

Do you have a network we can use?

At this time, we do not offer a network for the P400 RCM. Time Domain has an accomplished Contract Services team who could perform network development and other services under contract. Please email sales@timedomain.com for more information.

SOFTWARE

What is the P400 API? How stable is it?

The P400 Applications Programming Interface (API) describes the information exchanged over the interface between the RCM and its host. There are slight variations depending on the type of physical interface used. The Ethernet version is the oldest and most stable, followed by the UART.

Do you plan to offer periodic software updates for the P400?

Yes. Software updates will be available from our website.

ANTENNA

Does the P400 RCM include an antenna? What are its specifications?

The Broadspec™ UWB antenna has been designed for use with the Company's PulsON series of UWB products and are sold separately from the P400 RCM. (Antennas are included as part of the Development Kit.) Specifications for the Broadspec™ antenna can be found on the PulsON products page of the Time Domain website (www.timedomain.com/p400.php.)

How many antennas does the P400 RCM support?

There are two antenna ports on the P400 RCM board, designated "A" and "B" (the "A" antenna port is by convention closer to the corner of the board.)

Can I use a different antenna?

Yes. Both the A and B connectors are standard SMA female type, accepting a standard SMA male cable or antenna.

REGULATORY AND SAFETY

Is the P400 RCM FCC-certified?

The P400, using the default settings and using Time Domain's Broadspec™ UWB antenna, meets the US FCC guidelines for indoor UWB transmissions. It has not been formally certified. The P400 RCM is a single printed-circuit board (PCB) OEM module that is designed to be integrated into third-party products, using custom enclosures and, in some cases, custom antennas. Time Domain has experience with the FCC certification process for UWB products and can support your efforts when the time comes.

Is UWB safe?

Yes – UWB technology is extremely safe due to its low transmit power. When in its default FCC-compliant mode, the P400 RCM transmits less than 50 microWatts (-13.5dBm) total power. This is around 4,000 times less power than the standard cell phone, which can legally transmit up to 200 milliwatts (+23dBm) total power. The maximum programmable transmit power of the P400 RCM is around 1mW, which is still 200 times less power than the standard cell phone.

PRICING

How much does the P400 RCM cost?

For the complete P400 pricing schedule, please email sales@timedomain.com.

Is there a minimum purchase requirement?

Yes – we recommend you purchase the P400 RCM Development Kit (part number 400RC01). The Kit contains 4 P400 RCMs plus all of the hardware, software, and accessories you will need to test the ranging and communications capabilities of the module and begin integrating it into your product or application. The Kit also includes 5 hours of technical support from one of Time Domain's UWB experts. All of this is provided at a discounted cost. Please contact sales@timedomain.com for pricing and delivery options.

Are volume discounts available?

Yes, and they are substantial. If you are considering large volumes, then please contact us so we can discuss your needs. Tailoring the RCM to match your application is likely to further reduce cost.

FOR MORE INFORMATION

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