

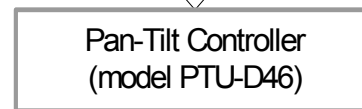
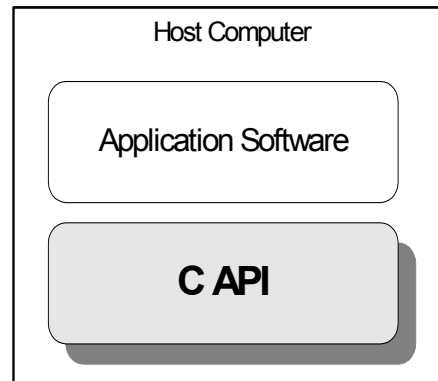
# PTU C Language Programmers Interface

## Model PTU-CPI

### Portable C Language Interface

The PTU C Language Interface (PTU-CPI) allows you to write custom programs that directly control PTU-D46-xx products. Some feature highlights of the C Language Interface include:

- C Language Interface (ANSI and K&R) provides easy portability across machines and operating systems
- Compile and link with your host computer program: source code is provided
- Host computer serial port interface code provided for popular operating systems
- Employs binary communications with PTU for high-speed, real-time applications like tracking and scanning



```
PTU-CPI: C Language Programmer's Interface Page 1 of 1

C LANGUAGE INCLUDE FILE:

/*****
***** PTU C LANGUAGE PROGRAMMER'S INTERFACE INCLUDE FILE
*****
***** (C)1995, Directed Perception, Inc.
***** All Rights Reserved.
*****
***** Licensed users may freely distribute compiled code including
***** this code and data. Source data and code may NOT be
***** distributed without the prior written consent from
***** Directed Perception, Inc.
*****/
#include "c:\gcb\develop\src\opcodes.h"

/* return status codes */
#define PTU_OK 0
#define PTU_ILLEGAL_COMMAND_ARGUMENT 1
#define PTU_ILLEGAL_COMMAND 2
#define PTU_ILLEGAL_POSITION_ARGUMENT 3
#define PTU_ILLEGAL_SPEED_ARGUMENT 4
```

### Features

- Provides full access to all PTU commands for:
  - Position Control and Queries
  - Initialization/Setup
  - Position Limits
  - Speed & Acceleration Control and Queries
  - Power Control Commands
- Allows control bandwidths over 60Hz

### Benefits

- Reduce development time
- Reduce development risk via proven software
- Eliminate complexity from application
- Eliminate need to program device command parsers
- Binary communications provides high bandwidth control

Field-proven in 100's of Installations

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### Technical Specifications

```
*****
****
****      SAMPLE FUNCTION LISTING (Partial)
****/

/* open_host_port(<portname>, <addr of status variable>) ==> <portstream> */
extern portstream_fd open_host_port(char *);

/* close_host_port(<portstream>) ==> <status> */
extern char close_host_port(portstream_fd);

/* reset_PTU_parser(<timeout_in_msec>) ==> [PTU_OK|PTU_NOT_RESPONDING] */
extern char reset_PTU_parser(long);

/* set_desired( [PAN|TILT], [POSITION|SPEED|ACCELERATION|BASE|UPPER|LOWER],
               [<position>|<speed>|<acceleration>],
               [RELATIVE|ABSOLUTE]) ==> <status>
   set_desired([PAN|TILT], HOLD_POWER_LEVEL, <power mode>, NULL) ==> <status>
   set_desired( [PAN|TILT], [HOLD_POWER_LEVEL,MOVE_POWER_LEVEL],
               [PTU_REG_POWER|PTU_LOW_POWER|PTU_OFF_POWER],
               NULL) ==> <status> */
extern char set_desired(char, char, PTU_PARM_PTR *, char);

/* get_current( [PAN|TILT], [POSITION|SPEED|ACCELERATION|BASE|UPPER|LOWER]
               HOLD_POWER_LEVEL|MOVE_POWER_LEVEL|RESOLUTION)
   ==> <value> */
extern long get_current(char, char);

/* get_desired( [PAN|TILT], [POSITION|SPEED|ACCELERATION|BASE|UPPER|LOWER]
               HOLD_POWER_LEVEL|MOVE_POWER_LEVEL|RESOLUTION)
   ==> <value> */
extern long get_desired(char, char);

/* set_mode( COMMAND_EXECUTION_MODE,
            [EXECUTE_IMMEDIATELY|EXECUTE_UPON_IMMEDIATE_OR_AWAIT])
   ==> <status>
   set_mode( ASCII_VERBOSE_MODE, [VERBOSE|TERSE|QUERY_MODE]) ==> <status>
   set_mode( ASCII_ECHO_MODE, [ON_MODE|OFF_MODE|QUERY_MODE]) ==> <status>
   set_mode( POSITION_LIMITS_MODE, [ON_MODE|OFF_MODE|QUERY_MODE]) ==> <status>
   set_mode( DEFAULTS, [SAVE_CURRENT_SETTINGS|RESTORE_SAVED_SETTINGS|
                       RESTORE_FACTORY_SETTINGS]) ==> <status> */
extern char set_mode(char,char);
/* halt([ALL|PAN|TILT]) ==> <status> */
extern char halt(char);
/* await_completion() ==> <status> */
extern char await_completion(void);
/* reset_PTU() ==> <status> */
extern char reset_ptu (void);
```

Specifications subject to change without notice.

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