

3U CompactPCI Video Tracker

The Vision4ce CHARM 3U cPCI video tracker uses the DART (Detection & Acquisition, with Robust Tracking) detection and target tracking software hosted on an embedded multicore ARM processor board for video tracking and image processing applications.



Tracking a jet-ski using IR video



CHARM-3U cPCI

Key Features

- Multiple object detection and tracking
- Centroid & edge measurement
- Feature based correlation algorithm
- Moving object detection
- Adaptive background removal
- Automatic coast
- Grey level invariant algorithms
- Robust clutter rejection

Interfacing

- Two analogue video (NTSC, RS710, PAL or CCIR) inputs
- Two analogue video (NTSC, RS710, PAL, CCIR) video outputs with selectable symbology overlay
- Host interface through RS-232 or RS422 serial interfaces
- Direct interface to sensors and Pan & Tilt platform through RS-232 or RS-422 serial interfaces

Additional Image Processing options

- Electronic image stabilization
- Image enhancement

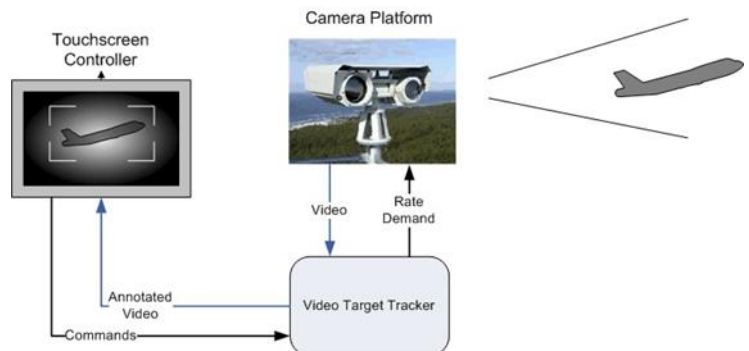
Applications

- Security and surveillance
- UAV & UGV
- Manned vehicles
- Automated video

Video Detection & Tracking

A video tracker analyses video image sequences from a sensor system (one or more cameras), mounted on a servo controlled pedestal (platform) to keep the camera pointing at the nominated person or object. In this context, a Tracker has two primary processing functions:

- Detecting and locating objects of interest in the video image (object location).
- Controlling the platform (Pan and Tilt) position and rate such that the camera follows the designated object (Pan and Tilt Control).



CHARM-3U

The CHARM 3U cPCI is a high-performance video tracker which complies with the requirements of the CompactPCI standard

Interfaces

- Two analogue video inputs
 - 1.0V peak to peak into 75 Ohm
 - 625 / 525 line
 - CCIR, RS170, PAL or NTSC
- Two analogue video outputs
 - 1.0V peak to peak into 75 Ohm
 - 625 / 525 line
 - CCIR, RS170, PAL or NTSC (depending on input)
 - Selectable symbology overlay
- Bidirectional serial interfaces
 - 2 x RS232 and 2 x RS422
 - Asynchronous
 - Baud rate variable up to 115,200

Connectors

- Front panel
 - 1x 25 way Micro 'D' Plug
 - 4x serial interfaces
- 4x SMA Jacks
 - 2x video inputs
 - 2x video outputs
- Rear Connector
 - CompactPCI J1 and J2 (110 pin)
 - 4x serial interfaces
 - Power

Power

- +5V, < 7 watts

Environmental

- Forced air convection cooled
- Temperature
 - Operating -40C to +71C
 - Non-operating -55C to +95C
- Thermal shock (operating) > +/- 5C per minute
- Humidity
 - 5% to 95% non-condensing
 - Optional conformal coating available

Ordering Information

- CHARM3U cPCI
 - Part No. V4/TRK/049/100

Designed and manufactured in the UK

✓RoHS

