

## 3U VME Conduction Cooled Video Tracker

The Vision4ce CHARM 3U 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

### 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 analog 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

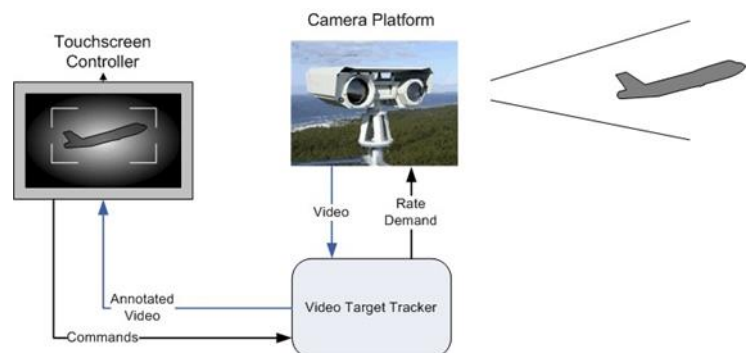
### Applications

- 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 is a high-performance video tracker that meets the mechanical requirements of a conduction cooled single height Eurocard (DIN41494).

### 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
- Two bidirectional serial interfaces
  - RS232 or RS422
  - Asynchronous
  - Baud rate variable up to 115,200

### Connectors

- Front panel
  - 1x 25 way Micro 'D' Plug
    - 2x serial interfaces
- 4x SMA Jacks
  - 2x video inputs
  - 2x video outputs
- Rear Connector
  - 96way DIN 41612 Type C
    - 2x serial interfaces
    - 2x video inputs
    - 2x video outputs
    - Power

### Power

- +5V, < 7 watts

### Mechanical

The CHARM 3U conforms to the 19" rack specification (DIN 41494) as a single Eurocard PCB module (3U x 4HP).

### Environmental

- Copper side strips provide surfaces for conduction cooling via wedge locks.
- 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

Designed and manufactured in the UK

✓RoHS

