CHARM-70

VISION4CE

Embedded Video Tracker 100mm x 70mm (Compact Hardware – ARM)

The Vision4ce CHARM-70 product 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 complex image processing applications.

Tracking a jet-ski using IR video

CHARM 70

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
- Platform filters (optional)

Interfacing
- Analog (NTSC, PAL) video input
- Host interface through RS-232, RS422 or LAN ports
- Direct interface to sensors and Pan & Tilt platform through RS-232, RS-422 or LAN ports
- Local control via either a directly connected joystick, touch screen or keyboard

Additional Image Processing features
- Electronic image stabilization
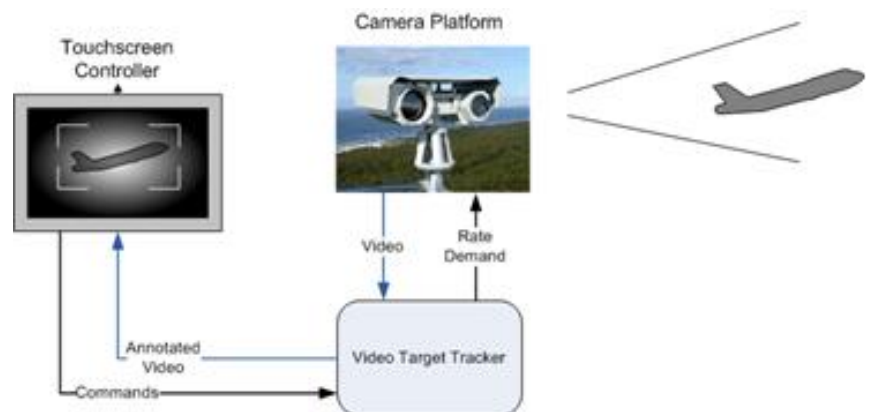- Image enhancement
- Streamed video output

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

Video Detection & Tracking

A video tracker analyzes 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).

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The CHARM-70 board is a standalone video tracker board of dimensions just a little larger than a business or credit card. Various connectors allow for direct connection to standard industry video and data interfaces. Remote operation is available as an option with control and video data being streamed over the LAN.

Interfaces
- 1 x RS232
- 1 x RS422/485
- 1 x USB2.010/100/1000 Ethernet
- Two NTSC/PAL/SECAM Composite Camera inputs
- Two independent video outputs - HDMI and 24 bit LCD
- Serial ATA 2.5 (SATA) @ 3 Gb/s

Power
- 7-36 VDC (7 watts)

Environmental
- Operating temperature -40C to +70C
- Passive heat sink available

Designed and manufactured in the UK

70mm (2.75")

100mm (3.94")