

CHARM-70

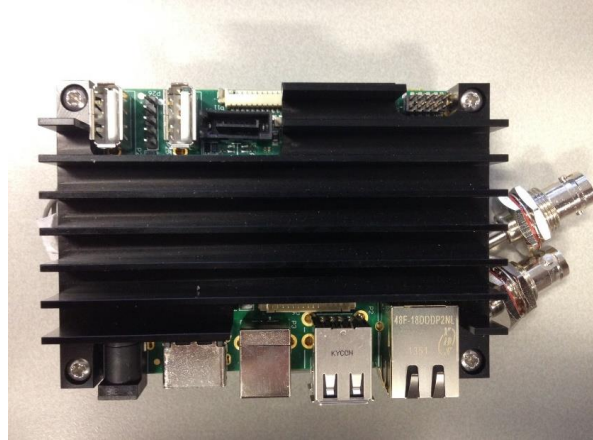
Embedded Video Tracker (Compact Hardware – ARM)



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 thermal IR video



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

- Digital (HDMI, HD-SDI) or 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, RS422 or LAN ports
- Local control via either a directly connected joystick, touch screen or keyboard
- PAL/NTSC and/or VGA/DVI/HDMI video out with overlay symbology

Additional Image Processing options

- Electronic image stabilization
- Image enhancement
- Image Fusion
- Snapshot or Short loop H.264
- Digital video recording & playback
- Streaming of SD & HD video
- Multiple (x8) PAL/NTSC input option

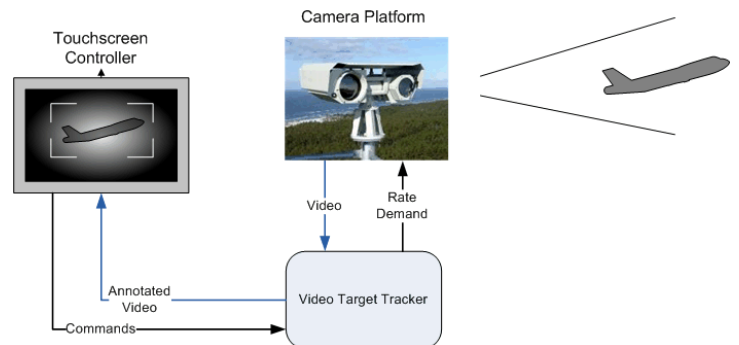
Video Detection & Tracking

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).

Applications

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



CHARM 70

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
- 4 x USB2.0
- GPIO
- 10/100/1000 Ethernet
- Two NTSC/PAL/SECAM Composite Camera inputs
- Digital video input selectable from HD-SDI, HDMI, RGB or YPbP
- Two independent video outputs - HDMI and 24 bit LCD
- Serial ATA 2.5 (SATA) @ 3 Gb/s

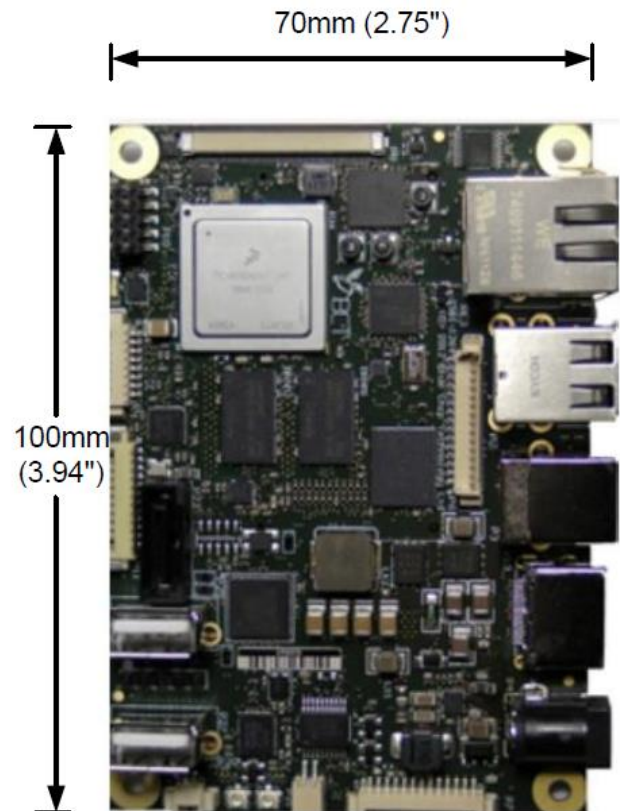
Power

7-36 VDC (7 watts)

Environmental

- Temperature
 - Operating -40C to +70C
 - Non-operating -55C to +95C
 - Thermal shock (operating) > +/- 5C per minute
- Humidity
 - 5% to 95% non-condensing
 - Optional conformal coating available

CHARM Module



UK Designed and Manufactured. UK and US Technical Support