

CHARM-80SDI



Video Tracker board 80mm x 90mm

The Vision4ce CHARM-80SDI video tracker uses the CHARM Module and 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. The CHARM-80SDI has HD resolution HD-SDI video interfaces.



Tracking a jet-ski using IR video



CHARM-80SDI

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 digital video (HD-SDI) inputs
- Two digital video (HD-SDI) outputs
- Selectable symbology overlay on one video output
- Host interface through RS-232 or RS422 serial interfaces
- Gigabit LAN

Additional Image Processing options

- Electronic image stabilization
- Video compression and streaming

Applications

- Security and surveillance
- UAV & UGV
- Manned vehicles

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).

Enclosure

A rugged enclosure is available for the CHARM-80HD. The enclosure includes an input power supply which allows the CHARM-80 to be powered directly from vehicle and aircraft power sources.



CHARM-80SDI

The CHARM-80SDI is a high performance standalone video tracker for operation independent of any bus interface requirements. HD-SDI/SDI video interfaces are provided and host interface is through either an Ethernet port or multiple serial links.

Interfaces

- Two digital video inputs
 - SMPTE 292M, HD-SDI
 - 75 Ohm
 - 480i60, 576i50, 720p50/60, 1080p25/30, 1080i50/60
- Two digital video outputs
 - SMPTE 292M, HD-SDI
 - 75 Ohm
 - 480i60, 576i50, 720p50/60, 1080p25/30, 1080i50/60
 - Selectable symbology overlay on one output
- Four bidirectional serial interfaces
 - 2 x RS232 and 2 x RS422
 - Asynchronous
 - Baud rate variable up to 115,200

Connectors

- 2X3 2mm Datamate L-Tek
 - 2x RS232 serial
- 2x5 2mm Datamate L-Tek
 - 2x RS422 serial
- 4xMMCX Jacks
 - 2x video inputs

- 2x video outputs
- RJ-45
 - Gigabit Ethernet
- 1x4 2mm Datamate L_Tek
 - Power +5VDC

Power

+5V, < 8 watts

Mechanical

The CHARM-80 is a single 77mm by 90mm assembly incorporating the CHARM Module

Environmental

- Temperature
 - Operating -40C to +71C
 - Non-operating -55C to +85C
 - Thermal shock (operating) > +/- 5C per minute
- Humidity
 - 5% to 95% non-condensing
 - Optional conformal coating available
- Shock
 - 30g, 11ms

Designed and manufactured in the UK

