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

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
- Video Compression and streaming
- Electronic image stabilization

Applications
- Security and surveillance
- UAV & UGV
- Manned vehicles

CHARM-80SDI

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).

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-80 SDI

The CHARM-80SDI is a high performance standalone video tracker for operation independent of any bus interface requirements. Analogue SD 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
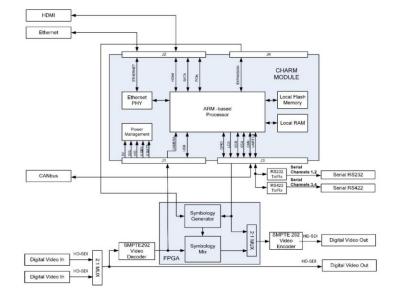- Power +5VDC

Power
+5VDC, <8 Watts

Mechanical
The CHARM-80 is a single 77mm by 90mm PCB carrier with CHARM Module (50mm x 50mm) attached using high density connectors

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