

## Rugged Video Processing and Distribution Unit

The Vision4ce VPDU20 combines a CHARM100 Video Processor with a separate Intel Core i7 CPU module into a single integrated enclosure. The CHARM100 is a standalone video processing board for embedded video and image processing applications based on a NVIDIA Jetson embedded processor which incorporates a multicore ARM processor and powerful GPU. It is designed to host the Vision4ce VMS software including the field proven DART video tracking software. Video interfaces are provided for HD and SD video in both analog and digital formats.



### Hardware

- 6th gen Intel Core i7 Mobile Processor, Quad Core
- Nvidia Jetson TX2
- Up to 256GB SLC SSD
- MIL-DTL-38999 connectors

### I/O Connections

- Ethernet – 5x 10/100/1000Base-T
- Serial – 4x RS422, 1x CAN
- USB
- DVI
- Video Inputs
  - 2 x PAL/NTSC
  - 2 x SD/HD/3G SDI
- Video Outputs
  - 2 x PAL/NTSC
  - 2 x SD/HD/3G SDI

### Environmental

- Sealed to IP67 – conduction cooled
- Operating temperature (w.r.t. baseplate) -32°C to +71°C
- Storage temperature -40°C to +85°C
- Designed to meet harsh environmental conditions including wheeled and tracked vehicles
- Environmental to MIL-STD-810G
- EMC to MIL-STD-461E

### Power

- Power – DC 18V to 36V MIL-STD-1275E
- Power consumption – <100W

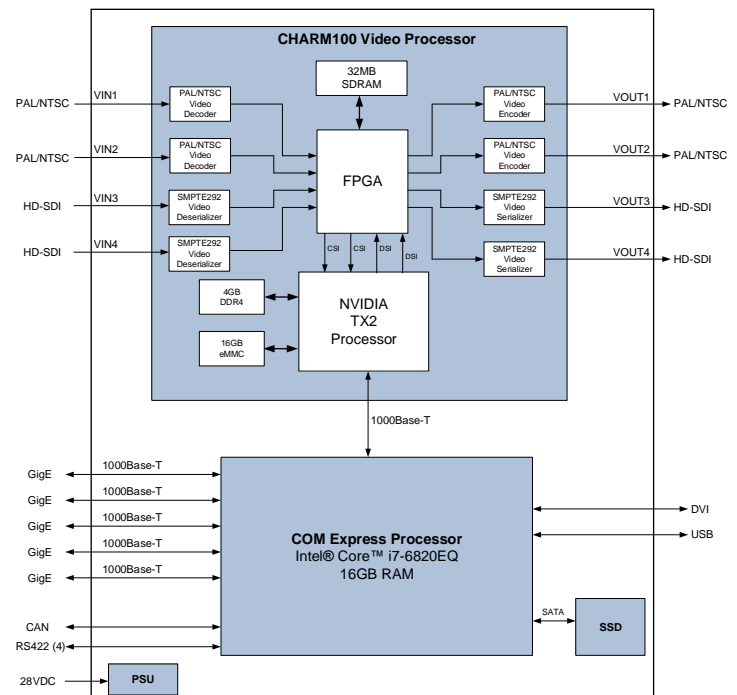
### Operating Systems

- Microsoft Windows embedded 10 IoT
- Ubuntu or RedHat Linux

### Mechanical

- Weight 15.4lbs, 7.0kg
- Dimensions 11.53" (d) x 9.05" (w) x 3.50" (h) (293 mm x 230mm x 89mm), including connectors and flanges

Designed and Manufactured in the UK



### CHARM100 Video Processor Software

The CHARM100 hosts the Vision4ce VMS software which can support the following capabilities

- Video detection and tracking
- Target classification
- Image fusion
- Electronic image stabilisation
- H.264 compression for recording and streaming
  - Standards include DVI over Ethernet, Def Stan 00-82, RTSP, MPEG-TS and STANAG 4609
- Synthetic target generator for embedded training

### Optional Additional I/O

- MIL-STD-1553 and ARINC 429 interfaces
- Additional Serial, USB, and LAN ports
- GPIO, WiFi, GPS CANbus and others

