# Charged Coupled Devices (CCD) - proximity electronics

Preliminary Short Form Datasheet

## Package:

## Summary:

The CCD proximity electronics has originally been developed to run scientific CCDs with up to 16 outputs at up to 2 MHz pixel rates during sensor outbound testing. It can be used by camera-developers to mitigate the risks for their own developmental efforts. Significant features include:

- Standardized interface: Gigabit network interface, copper or fiber (Small Form-factor Pluggable = SFP module)
- Master Clock: 100 MHz frequency, 10 ns time resolution
- CCD clock supply: 28 Digital-to-Analog Converters at 100 MHz, 16-bit, each, for the creation of slew-rate controlled clocks
- Input and output trigger: by means of a BNC-connector, opto-isolated
- CCD reading: over 16 Analog-to-Digital Converter channels at 100 MHz each, using digital Correlated Double Sampling, converters fully differential
- CCD voltage supply (DC -low power): 40 x 0… +30 V @ 10 mA, 40 x -14… +14 V @ 10 mA
- CCD voltage supply (DC - high power): 10 x 0… +30 V @ 200 mA, 10 x -14… +14 V @ 200 mA
- Frame tempory store: 4 GB RAM for flexible readout
- Selectable gain settings: 1.33 V or 4 V input range, selected by software
- Dynamic range: 115 dB at 100 kHz, 105 dB at 1 MHz using 16 or 32 bits per sample
- Synchronization: multiple proxy electronics can be synchronized to a master clock over Category 5 cable
- Operating temperature range: - 20 °C to + 40 °C
- Power consumption: 30 W, using 100 – 240 VAC
- Weight: 4.5 kg (10 lbs)
- Mechanical Dimensions: 30.5 x 20.5 x 7.6 cm (12 ” x 10 ” x 3 ”)
- Example Software: Control and capture applications for Windows and Linux



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