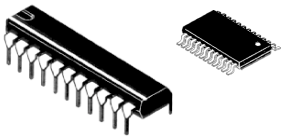
DPP

DE Protocol Processor

PRELIMINARY

DESCRIPTION



The **DPP**, **DE Protocol Processor** is a single chip I.C. that simplifies embedded designs requiring Honeywell DE Protocol input from *Smartline*™ field instruments.

The **DPP** extracts all PVs, SVs and STATUS values broadcasted by the field instrument and presents reformatted data to a host processor.

The **DPP** is optimized for use within RTUs, PLCs, controllers and recorders.

BENEFITS

- **Simplifies embedded designs.**
- **Single chip solution.**
- **Eliminates need for DE Protocol familiarity.**
- **Provides secure PV/SV values and STATUS.**
- **Cost-effective solution.**
- **No licensing required.**

HOW IT WORKS

The **DPP** works by monitoring a single transmitter's digital PV/SV and STATUS. The **DPP** converts the PV/SV data into a standard IEEE floating point value. The field instrument STATUS is converted into a simple binary status.

The **DPP** is a listen-only device which monitors all DE communication activity and extracts only pertinent field instrument *measurement* and *status* information.

The **DPP** does NOT extract any parameters that the field instrument provides as embedded database parameters.

The **DPP** is designed to be placed after the signal conditioning circuitry and communicate with a host microcomputer.

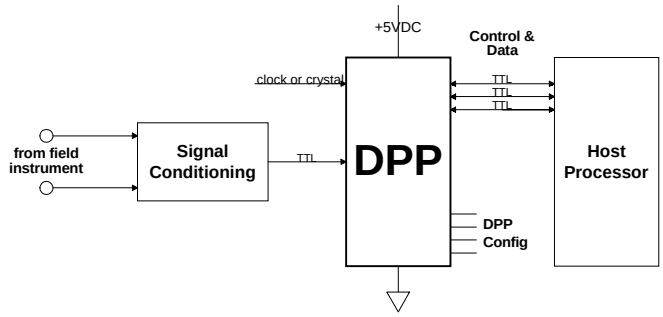
The **DPP** operates as a slave device to the master host processor by presenting the next item of data translated when requested by the host. The order of the data presented is fixed by the field instrument and is not configurable in the **DPP**.

The **DPP** has no data buffer and must be serviced by the host at a rate fast enough to avoid data loss.

The **DPP** will operate in any environment with legal DE communication traffic (e.g. SFC, SCT, STI-MV, etc.) and still provide the required field instrument data.

FEATURES

- Provides "BAD PV" protection.
- Translates DE data into standardized formats.
- Compatible with all DE broadcast modes and formats.
- Processes all DE communications traffic.
- Provides all UART related functions.
- Operates as a slave device to host.
- Accommodates handhelds and host DCS activity.



COMPATIBILITY

The **DPP** is fully compatible with all commercially available DE products and DE Protocol broadcast modes.

The **DPP** is compatible with all single and multivariable DE transmitters. It can also be used in conjunction with any DE control system interface.

In addition, handheld communicators may be used with **no** disturbances.

ORDERING INFORMATION

MODEL: DPP-DIP70

Other packages, operating temperature ranges and power requirements are available. Consult factory.

Vektron Corporation

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Specifications:

# Inputs:	1
Input Types:	Honeywell DE, 4 or 6 byte, multivariable broadcast formats A thru F [*listen* only]
DE Compliance:	SFN Specification SW-927-020 -0101, Rev. 10.0
PV/SV: (available) (format)	PV1, PV2, PV3, PV4, SV1, SV2 IEEE floating point
"Smart Status": (available) (format)	Transmitter PV/SV status, forced I/O manual mode, DE signal integrity and DPP fault. TBD
Throughput Delay:	50 msec., max.
Host Interface:	3-wire similar to SPI slave or 2-wire I²C slave
Clock:	external clock or crystal, 3.579 MHz
Power Supply:	+5VDC @ 3 mA. typical
Package:	28-lead plastic DIP (300mil) or 28-lead plastic SOIC (300mil body)
Operating Temperature:	0°C to +70°C or -40°C to +85°C

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