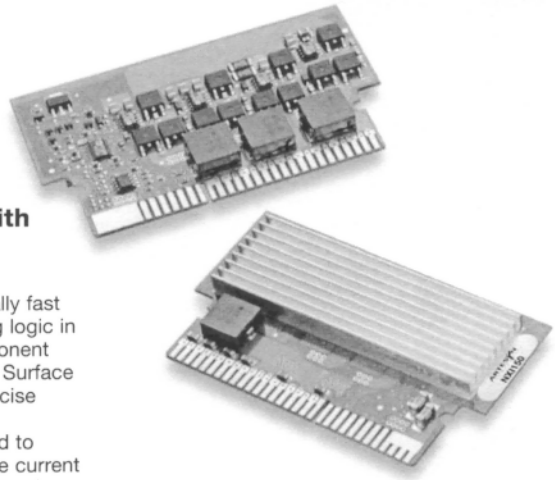
NEW Product

- **Meets VRM9.1 specification**
- **Microprocessor voltage identification input**
  - **5 Bit VID input**
  - **1.10V to 1.85V in 25mV steps**
- **Up to 50A/µsec load transient**
- **Democratic current sharing, no need for master/slave configuration**
- **Remote sense for improved load regulation**
- **Vertical plug-in to standard motherboard connector with or without retention latch**



The NXI150 non-isolated DC/DC converter is designed to meet the exceptionally fast transient response requirements of today's microprocessors and fast switching logic in a compact size at a very affordable price. Advanced circuit techniques, component selection and placement optimization, state-of-the-art thermal packaging, and Surface Mount Technologies provide a high power density, highly reliable, and very precise voltage regulation system for advanced microprocessors. Multi-phase power conversion techniques allow the NXI converters to lead the industry with regard to conversion efficiency without adding unneccesary complexity. On-board active current sharing circuit guarantees the current sharing specification is met during static and dynamic load conditions.

2 YEAR WARRANTY

SPECIFICATIONS

All specifications are typical at nominal input, full load at 25°C unless otherwise stated

OUTPUT SPECIFICATIONS

Voltage adjustability		1.10V to 1.85V
Output setpoint accuracy	Vout	±0.8%
Ripple and noise (See Notes 1 and 2)	20MHz bandwidth	15mV pk-pk
Transient response peak dev. settling time	See Note 3	50mV 25µs
Short circuit protection		Continuous current limit, foldback automatic recovery

INPUT SPECIFICATIONS

Input voltage range	12Vin nominal	11.0 to 12.6VDC
Input current	Operation No load Remote OFF	16.2A max. 250mA 45mA max.
UVLO turn ON voltage UVLO turn OFF Voltage		10.45V typ. 8.55V typ.
Start-up time	Nominal line	10ms max.
OUTEN Logic compatibility ON OFF	Open circuit	Ref. to -input >1.8VDC <0.8VDC

GENERAL CHARACTERISTICS

Efficiency	1.5V output @ 65A	85%
Switching frequency	Fixed (See Note 4)	1MHz
Standards		94V-0 Flammability rating
Weight		70g (2.46oz)
MTBF	Telecordia SR-332	500,000 hours
Mating connector		(See Note 5)

ENVIRONMENTAL SPECIFICATIONS

Maximum temperature shock	Operating	5°C/10 min.
Temperature shock	Operating Non-operating	10°C/hour 20°C/hour
Humidity (Non-condensing)	Operating Storage	85% RH 95% RH
Altitude	Operating Storage	10,000 feet max. 50,000 feet max.
Shock	Operational and non-operational	50G 11ms, half sine wave
Vibration (See Note 6)	Operational and non-operational	$0.02G^2/Hz$ max.
Electrostatic discharge IEC61000-4-2 (See Note 7)	Operating non-operating	ESD 15kV ESD 25kV
Thermal performance (See Note 8)	Operating ambient temperature non-operating	0°C to +60°C -40°C to +100°C

For the most current data and application support visit www.artesyn.com/powergroup/products.htm **NEW Product**

INPUT VOLTAGE	OUTPUT VOLTAGE	OVP	OUTPUT CURRENT (MIN)	OUTPUT CURRENT (MAX.)	EFFICIENCY (TYP.)	REGULATION LOAD	MODEL NUMBER
12VDC	1.10V to 1.85V	120% of VID setting	0A	81A	85%	0.95mV/A	NXI150-12P1V8C

Notes

1 Recommended output capacitance, 8 x 560µF/16V OSCON and 10 x 4.7µF/16V MLCC.
2 15mV pk-pk ripple. Vin = 12V, Vout = 1.5V, Iout = 65A.
3 125mV peak deviation when slewing load from no load to full load at 50A/µsec. Recommended capacitors (per Note 1) required across output.
4 Each phase operates at a fixed 250kHz. Effective fundamental output frequency is 1MHz / 4 phases each at 250kHz interleaved.
5 Recommended mating connector is AMP 1489162-1 or equivalent.
6 From 5Hz to 20Hz, maintaining $0.02G^2/Hz$ from 20Hz to 500Hz, all axes.
7 When included in the users system ESD event shall cause no out-of-regulation conditions.
8 Please consult your local application support for: Longform Datasheet and Application Note for the de-rating curves.

TABLE 1: PIN CONNECTIONS

PIN NO.	FUNCTION	PIN NO.	FUNCTION
1	Vin+	62	Vin-
2	Vin+	61	Vin-
3	Vin+	60	Vin-
4	Vin+	59	Vin-
5	Reserved	58	VRM-pres
6	Key	57	VID4
7	VID3	56	VID2
8	VID1	55	VID0
9	Reserved	54	Ishare
10	PWRGD	53	OUTEN
11	Vo sen-	52	Vo sen+
12	Reserved	51	Reserved
13	Vo-	50	Vo+
14	Vo+	49	Vo+
15	Vo-	48	Vo-
16	Vo+	47	Vo+
17	Vo-	46	Vo-
18	Vo+	45	Vo+
19	Vo-	44	Vo-
20	Vo+	43	Vo+
21	Vo-	42	Vo-
22	Vo+	41	Vo+
23	Vo-	40	Vo-
24	Vo+	39	Vo+
25	Vo-	38	Vo-
26	Vo+	37	Vo+
27	Vo-	36	Vo-
28	Vo+	35	Vo+
29	Vo-	34	Vo-
30	Vo+	33	Vo+
31	Vo-	32	Vo-

TABLE 2: VOLTAGE IDENTIFICATION (VID) CODES

VID4	VID3	VID2	VID1	VID0	VDAC
1	1	1	1	1	Off
1	1	1	1	0	1.100
1	1	1	0	1	1.125
1	1	1	0	0	1.150
1	1	0	1	1	1.175
1	1	0	1	0	1.200
1	1	0	0	1	1.225
1	1	0	0	0	1.250
1	0	1	1	1	1.275
1	0	1	1	0	1.300
1	0	1	0	1	1.325
1	0	1	0	0	1.350
1	0	0	1	1	1.375
1	0	0	1	0	1.400
1	0	0	0	1	1.425
1	0	0	0	0	1.450
0	1	1	1	1	1.475
0	1	1	1	0	1.500
0	1	1	0	1	1.525
0	1	1	0	0	1.550
0	1	0	1	1	1.575
0	1	0	1	0	1.600
0	1	0	0	1	1.625
0	1	0	0	0	1.650
0	0	1	1	1	1.675
0	0	1	1	0	1.700
0	0	1	0	1	1.725
0	0	1	0	0	1.750
0	0	0	1	1	1.775
0	0	0	1	0	1.800
0	0	0	0	1	1.825
0	0	0	0	0	1.850