



RNS200 12-Port GbE L2+ /L3 Managed Switch

Features

- MIL-STD-810, MIL-STD-461, MIL-STD-704 compliant
- Conduction cooled
- 12-Gigabit Ethernet ports
- L2+/L3 managed fabric
- Support for IPv4 and IPv6 (L3 IPv4 routing table support)
- High performance wire speed on all ports - 24Gb aggregate total
- Up to 32 million frames per second switching rate
- Cell and packet based "head of line" blocking prevention
- 1MB of onboard memory for packet buffering
- Extended Ethernet frame sizes to 9KB
- Fully compliant to IEEE 802.3 including auto negotiation
- Rules-based layer 2-7 packet classification and filtering
- 802.1Q VLANs, 802.1D spanning tree and priority-based 802.1D/802.1p CoS
- RMON, SNMP, Ethernet and extended MIB Statistics
- Onboard microcontroller for configuration, management and health monitoring

Summary

Phillips' RNS200 is a stand-alone rugged, conduction cooled, full-featured L2+/L3 Gigabit Ethernet switch fabric module designed for harsh environment applications. Internal components are conformal coated and mechanically stabilized to provide a high level of resistance to extreme temperature and high shock, vibration and high humidity. It features 12 ports of 10/100/1000 BaseT Gigabit Ethernet over copper through D38999 interface connectors.

The model RNS200 uses the latest advanced high-performance, full-featured and highly integrated 12-port Broadcom® BCM5696 (L3+) or BCM5698 (L2+) switch devices and BCM5464SR quad-port transceivers and is fully 802.3 compliant. It provides a fully non-blocking 24Gb/32 million frames per second aggregate switching fabric. The switching function supports an extended list of features including layer 3 switching, link aggregation, 802.1Q VLANs, 802.1D spanning tree and priority-based 802.1D/802.1p CoS/traffic class expediting and dynamic multicast filtering. It has an onboard RISC microcontroller for operating in unmanaged mode.

The RCP200 uses two 55-socket D38999 connectors for I/O and one 6-pin D38999 connector for MIL-STD-704 compliant input power.

The RNS200 12-port switch system has been developed for mil-aero system integrators designing data and telecommunications applications including switching, multiplexing, routing, media gateways and video broadcasting. It is well suited for support of embedded broadband applications including internet voice, digital video, IP security, network monitoring, military applications and test equipment.

Mechanical

Dimensions:	11"L x 2"H x 8"W
Weight:	2.5kg (5.5 lbs)
Connectors:	J1: MS27508E16F35S J2: MS27508E16F35SA P1: MS27508E10F98PA

Qualifications

MIL-STD-810E

- High temp methods 501.1, low temp method 502.1
- Altitude, method 504.1, cat 1 except 45,100 ft and 1,000 ft
- Vibration, 2.05 GRMS for up 2 hours in each direction of 3 axes
- Shock, method 516.2, Proc II, 40 Gs 11 ms, sawtooth, 3 shocks in each direction of 3 axes
- Acceleration, 3 Gs in each of six directions for one minute
- Humidity, method 507.1

MIL-STD-461D

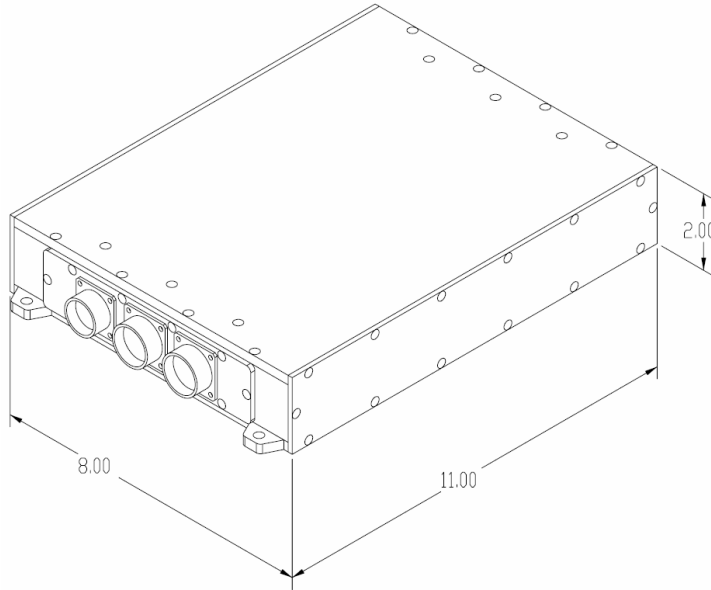
- CE102 section 3.2.1
- CS114 section 3.2.1
- RS103, 10kHz to 18 GHz, @ 60 V/m max per section 3.2.1
- Lighting induced transient susceptibility per section 3.2.1.1
- Power line spike susceptibility per section 3.2.1.2

Power

- 28VDC, 20W
- 50ms hold up time
- OC, OV, and inrush protection
- Meets MIL-STD-704E

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RNS200



P1 and P2 Ethernet Signals Connector Pin Assignments

Connector	Pin	Signal Name	Connector	Pin	Signal Name	Connector	Pin	Signal Name	Connector	Pin	Signal Name
P1	1	MDIA_P-1	P1	28	MDID_P-4	P2	1	MDIA_P-7	P2	28	MDID_P-10
P1	2	MDIB_P-1	P1	30	MDID_P-3	P2	2	MDIB_P-7	P2	30	MDID_P-9
P1	3	MDIC_P-1	P1	31	MDIC_N-3	P2	3	MDIC_P-7	P2	31	MDIC_N-9
P1	5	MDIA_N-1	P1	32	MDIA_N-4	P2	5	MDIA_N-7	P2	32	MDIA_N-10
P1	6	MDIB_N-1	P1	33	MDIB_N-4	P2	6	MDIB_N-7	P2	33	MDIB_N-10
P1	7	MDIC_N-1	P1	34	MDIC_N-4	P2	7	MDIC_N-7	P2	34	MDIC_N-10
P1	8	MDID_P-1	P1	35	MDID_N-4	P2	8	MDID_P-7	P2	35	MDID_N-10
P1	9	MDID_N-1	P1	36	MDIC_P-5	P2	9	MDID_N-7	P2	36	MDIC_P-11
P1	10	MDIA_P-2	P1	37	MDIB_P-5	P2	10	MDIA_P-8	P2	37	MDIB_P-11
P1	11	MDIB_P-2	P1	38	MDIA_P-5	P2	11	MDIB_P-8	P2	38	MDIA_P-11
P1	12	MDIC_P-2	P1	39	MDID_N-3	P2	12	MDIC_P-8	P2	39	MDID_N-9
P1	13	MDID_P-2	P1	40	MDIA_P-6	P2	13	MDID_P-8	P2	40	MDIA_P-12
P1	15	MDIA_P-3	P1	41	MDIB_P-6	P2	15	MDIA_P-9	P2	41	MDIB_P-12
P1	16	MDIB_P-3	P1	42	MDIC_P-6	P2	16	MDIB_P-9	P2	42	MDIC_P-12
P1	17	MDIA_N-2	P1	43	MDID_P-5	P2	17	MDIA_N-8	P2	43	MDID_P-11
P1	18	MDIB_N-2	P1	44	MDIC_N-5	P2	18	MDIB_N-8	P2	44	MDIC_N-11
P1	19	MDIC_N-2	P1	45	MDIB_N-5	P2	19	MDIC_N-8	P2	45	MDIB_N-11
P1	20	MDID_N-2	P1	46	MDIA_N-5	P2	20	MDID_N-8	P2	46	MDIA_N-11
P1	22	MDIA_N-3	P1	47	MDIA_N-6	P2	22	MDIA_N-9	P2	47	MDIA_N-12
P1	23	MDIB_N-3	P1	48	MDIB_N-6	P2	23	MDIB_N-9	P2	48	MDIB_N-12
P1	24	MDIC_P-3	P1	49	MDIC_N-6	P2	24	MDIC_P-9	P2	49	MDIC_N-12
P1	25	MDIA_P-4	P1	50	MDID_N-5	P2	25	MDIA_P-10	P2	50	MDID_N-11
P1	26	MDIB_P-4	P1	51	MDID_P-6	P2	26	MDIB_P-10	P2	51	MDID_P-12
P1	27	MDIC_P-4	P1	55	MDID_N-6	P2	27	MDIC_P-10	P2	55	MDID_N-12

Ordering

- Managed RNS-200-12M
- Unmanaged RNS-200-12U

P3 Power Pin Assignments

Connector	Pin	Signal Name
P3	A	+28V
P3	B	+28V
P3	E	+28V
P3	C	+28V_RTN
P3	D	+28V_RTN
P3	F	+28V_RTN



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