SIEMENS

Data sheet 6GK6083-8AC21-0BA1

Product type designation	**RUGGEDCOM RMC8388**
Product description	IEEE 1588 (PTP) Time Converter The RUGGEDCOM RMC8388 is a time converter that can convert time signals between PTP (IEEE 1588) and IRIG-B. Supports RJ45 and LC for Ethernet and BNC for IRIG-B/PPS. 24 (11 - 36) VDC . Din Rail Mounting IEEE 1588 in, IRIG-B TTL out Conformal Coating

Transfer rate	
Transfer rate	100 Mbit/s

Interfaces	
Number of electrical/optical connections / for network components or terminal equipment / maximum	1; Options: 1 x 100TX RJ45 or 1 x 100FX LC
Number of electrical connections	
• for network components or terminal equipment	1
• for power supply	1
Type of electrical connection	
• for network components or terminal equipment	RJ45 port
• for power supply	5-pole terminal block
Number of optical interfaces	
• for network components or terminal equipment / maximum	1
• for fiber optic cable / at 100 Mbit/s	1
Design of the optical interface	
• for network components or terminal equipment	LC (Lucent Connector)
• for fiber optic cable / at 100 Mbit/s	LC (Lucent Connector)
Range / at the optical interface / depending on the optical fiber used	2 km

Supply voltage, current consumption, power loss	
Product options / wide range power supply	Yes
Supply voltage / 1 / Rated value	24 V
• Supply voltage / 1 / rated value	11 ... 36 V
• Type of voltage / 1 / of the supply voltage	DC
Supply voltage / 2 / Rated value	48 V
• Supply voltage / 2 / rated value	38 ... 72 V
• Type of voltage / 2 / of the supply voltage	DC
Supply voltage / 3 / Rated value	
• Supply voltage / 3 / rated value	100 ... 300 V
• Type of voltage / 3 / of the supply voltage	DC
Supply voltage / 4 / Rated value	

• Supply voltage / 4 / rated value	85 ... 264 V
• Type of voltage / 4 / of the supply voltage	AC
Product component / fusing at power supply input	Yes
Power loss [W]	
• maximum	7 W

Ambient conditions	
Ambient temperature	
• during operation	-40 ... +85 °C
• during storage	-40 ... +85 °C
• during transport	-40 ... +85 °C
• Note	A maximum ambient operating temperature of +85 °C is permissible for a duration of 16 hours
Relative humidity / at 25 °C / without condensation / during operation / maximum	95 %
Operating condition / fanless operation	Yes

Design, dimensions and weights	
Design	Compact
Width	66 mm
Height	181 mm
Depth	66 mm
Net weight	1.1 kg
Product feature / conformal coating	Conformal Coating optional
Material / of the enclosure	21 AWG galvanized steel
Mounting type	
• 35 mm DIN rail mounting	Yes
• 19-inch installation	No
• wall mounting	Yes

Product features, product functions, product components / general	
Product component / Integrated / Ethernet switch	No

Product functions / time	
Type of oscillator	1 ppm TCXO
Temperature stability of oscillator	1 µs/s
Product function / Temperature Compensated Oscillator (TCXO)	Yes

Product functions / PTP	
Number of interfaces / for PTP	1
Type of interfaces / for PTP	100TX
Operating mode / according to PTP	
• Grandmaster	Yes
• transparent	No
• Boundary	No

• Slave	Yes
• Hybrid	No
Type of communication / at PTP	
• Layer-2-Transport	Yes
• Layer-3-Transport / Multicast	No
Type of path delay operation / peer-to-peer (P2P)	Yes
Type of path delay operation / end-to-end (E2E)	Yes
Operating mode / according to PTP	
• one-step	Yes
• two-step	Yes
Accuracy	
• at operating mode Grandmaster / according to PTP	100 µs RMS, standard deviation of 10 µs (1-s)
• at operating mode slave / according to PTP	200 ns RMS, standard deviation of 25 ns (1-s)
Drift during buffering / at PTP	
• during 1 h	42 µs
• during 24 h	700 µs

Product functions / IRIG-B

Number of interfaces / for IRIG B	
• maximum	2
• Modulated In	1
• Modulated Out	1
• Unmodulated Out	2
Type of electrical connection / for IRIG-B	BNC
Time coding / is supported	
• unmodulated	B000 to B007
• modulated	B120 to B127
IRIG-B enhancement	
• IEEE 1344	Yes
• IEEE C37.118-2005	Yes
• IEEE C37.118-2011	Yes
Cable compensation / at IRIG B operation	Yes
Accuracy / at IRIG B	
• Modulated In	50 µs RMS, standard deviation of 2 µs (1-s)
• Modulated Out	65 µs RMS, standard deviation of 2 µs (1-s)
• Unmodulated Out	1 µs RMS, standard deviation of 100 ns (1-s)
Drift during buffering / at IRIG B	
• modulated / during 1 h	5000 µs

Product functions / SNTP

Type of SNTP client / is supported	
• version 3	Yes

• version 4	Yes
Type of SNTP server / is supported	
• version 3	Yes
• version 4	No
Type of communication / according to SNTP / Layer-3-Transport	
• Multicast	No
• Broadcast	No
• Unicast	Yes

Standards, specifications, approvals

Standard	
• for EMC	FCC Part 15 (Class A), EN55022 (CISPR22 Class A)
• for safety / from CSA and UL	UL 60950-1, CSA C22.2 No. 60950-7
• for emitted interference	EN 61000-6-4 (Class A)
• for interference immunity	EN 61000-6-2
Certificate of suitability	EN 61000-6-2, EN 61000-6-10
• CE marking	Yes
• C-Tick	No
• IEC 61850-3	Yes
• IEEE 1613	Yes
Product conformity	
• acc. to IEEE 802.3u-100BaseTX	Yes
• acc. to IEEE 802.3u-100BaseFX	Yes
• acc. to IEEE 802.3x-Flow Control	Yes

Further information / Internet-Links

Internet-Link	
• to website: Industry Mall/RUGGEDCOM selector	http://ruggedcom-selector.automation.siemens.com
• to website: Siemens RUGGEDCOM	http://siemens.com/ruggedcom
• to website: Selector for cables and connectors	http://www.siemens.com/snst
• to website: Industrial communication	http://www.siemens.com/simatic-net
• to website: Industry Mall	https://mall.industry.siemens.com
• to website: Information and Download Center	http://www.siemens.com/industry/infocenter
• to website: Image database	http://automation.siemens.com/bilddb
• to website: CAx Download Manager	http://www.siemens.com/cax
• to website: Industry Online Support	https://support.industry.siemens.com

Security information

Security information	Siemens provides products and solutions with industrial security functions that support the secure operation of plants, solutions, machines, equipment and/or networks. They are important components in a holistic industrial security concept. With this inmind, Siemens' products and solutions undergo continuous development. Siemens recommends strongly that you regularly check for product updates. For the secure operation of Siemens products and solutions, it is necessary to take suitable preventive action(e.g. cell protection concept) and integrate each component into a holistic, state-of-the-art industrial security concept. Third-party products that may be in use should also be considered. For more information about industrial security, visit http://www.siemens.com/industrialsecurity. To stay informed about product updates as they occur, sign up for a product-specific newsletter. For more information, visit http://support.automation.siemens.com. (V3.4)
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