

SIEMENS



# RUGGEDCOM RMC8388

Rugged Media Converter

Brochure

Edition  
10/2015

[siemens.com/rmc8000](http://siemens.com/rmc8000)

# Overview

*The RUGGEDCOM RMC8388 is a rugged, small form factor time converter that can convert time signals between PTP (IEEE 1588) and IRIG-B.*

The RUGGEDCOM RMC8388 is a rugged, small form factor time converter designed to operate in electrically harsh environments with widely varying climatic and environmental conditions such as those found in utility substations. Designed and verified to withstand extreme temperature, vibration and shock, the RUGGEDCOM RMC8388 offers exceptional reliability.

With the capability to convert PTP time input to IRIG-B, the RUGGEDCOM RMC8388 allows migration to the newer PTP technology while still supporting working equipment that requires IRIG-B time input. This allows utilities to converge timing and data planes onto their Ethernet infrastructure saving cabling and maintenance costs.

## Benefits

### Time conversion

Provide or receive IRIG-B time signals to be converted from or to PTP (IEEE 1588).

### Form factor

Space saving design allows easy integration into existing equipment cabinets.

### Migration path

Allows migration to newer technology and still support existing equipment with no performance degradation.

### Rugged design

Withstands harsh environments allowing installation in almost any location.



### Rugged rated for reliability in harsh environments

- Immunity to EMI and heavy electrical surges
- Zero-Packet-Loss technology
- Meets IEEE 1613 class 2 (electric utility substations)
- Exceeds IEC 61850-3 (electric utility substations)
- Exceeds IEC 61000-6-2 (generic industrial)
- -40° C to +85° C operating temperature (fanless)
- Conformal coated printed circuit boards (optional)

### Extreme flexibility

- Support for a fiber or copper Ethernet port
- IP30 galvanized steel enclosure
- Supports Siemens FastConnect™ RJ45 cabling system
- Easy installation in confined spaces thanks to its compact dimensions (W x H x D: 65.1 mm x 180.6 mm x 132.5 mm)
- Flexible power supply and mounting options

### Rugged Operating System (ROS®) features

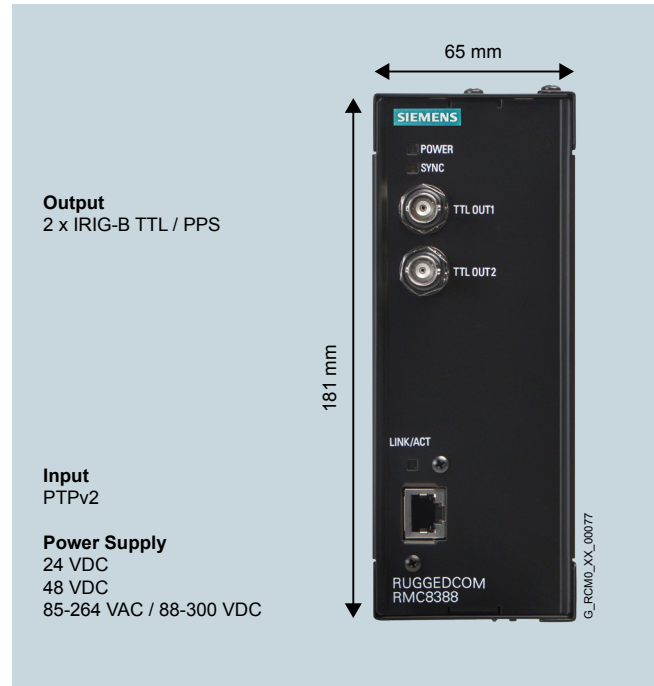
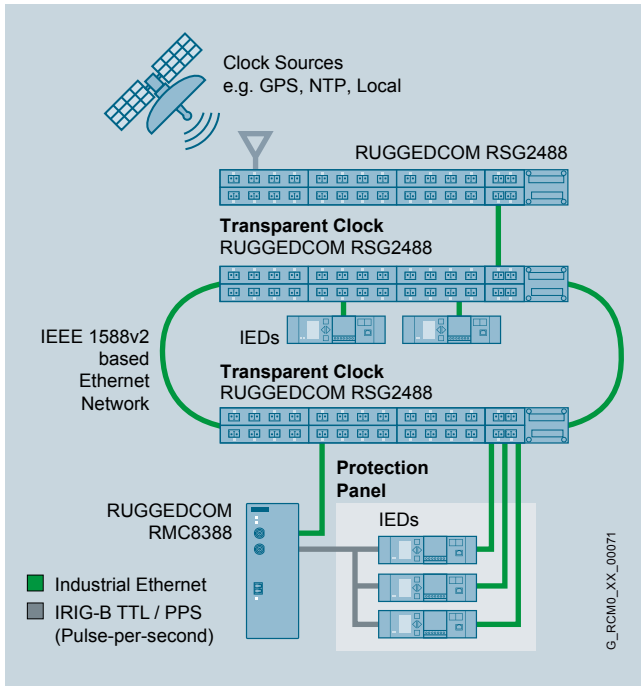
- Simple plug-and-play operation – automatic learning, negotiation, and crossover detection
- Port rate limiting
- Port configuration, status, statistics, security
- Web-based, Telnet, CLI management interfaces
- SNMP v1/v2/v3
- Rich set of diagnostics with logging and alarms

### Cyber security

- Multilevel user passwords
- Secure File Transfer Protocol (SFTP) using SSH
- Web-based management using SSL
- RADIUS-Authentication service for device management
- 1024-bit RSA encryption for key management and key exchange

# Features

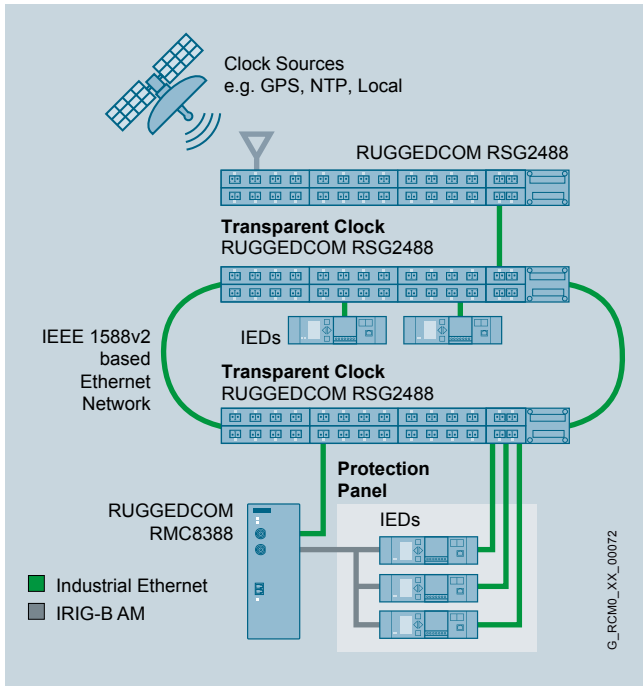
## IEEE 1588v2 > IRIG-B TTL / PPS



RUGGEDCOM RMC8388 with “last meter” local time conversion from IEEE1588 to legacy PPS.

Technical data	
IRIG-B	Unmodulated (PWM)
PPS	PWM
IRIG specifications	
IRIG time code supported	IRIG-B
IRIG formats supported	B000 – B007
PTP specifications	
Version support	PTP version 2 (IEEE 1588)
Supported profiles, configurable	Power, P2P and E2E
PMU protocol support	IEEE 1344, C37.118-2005, C37.118-2011
PPS specifications	
Pulse width, configurable	1 to 200 ms
Pulse interval, configurable	1 to 86400 seconds

# IEEE 1588v2 > IRIG-B AM

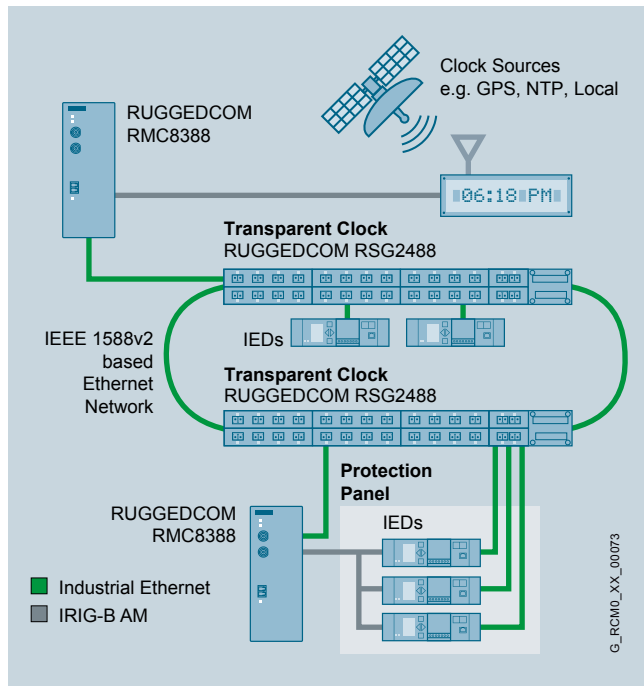


RUGGEDCOM RMC8388 with “last meter” local time conversion from IEEE1588 to legacy IRIG-B.

Technical data	
IRIG-B	Amplitude modulated
PPS	PWM
IRIG specifications	
IRIG time code supported	IRIG-B
IRIG formats supported	B120 – B127
PTP specifications	
Version support	PTP version 2 (IEEE 1588)
Supported profiles, configurable	Power, P2P and E2E
PMU protocol support	IEEE 1344, C37.118-2005, C37.118-2011

# Features

## IRIG-B AM > IEEE 1588v2



RUGGEDCOM RMC8388 with “last meter” local time conversion from legacy IRIG-B to IEEE 1588.



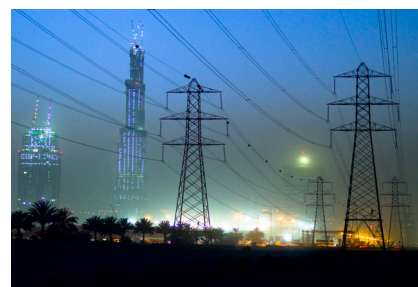
**Input**  
1 x IRIG-B AM

**Output**  
PTPv2

**Power Supply**  
24 VDC  
48 VDC  
85-264 VAC / 88-300 VDC

Technical data	
IRIG-B	Amplitude modulated
PPS	PWM
IRIG specifications	
IRIG time code supported	IRIG-B
IRIG formats supported	B120 – B127
PTP specifications	
Version support	PTP version 2 (IEEE 1588)
Supported profiles, configurable	Power, P2P and E2E
PMU protocol support	IEEE 1344, C37.118-2005, C37.118-2011

# Order options



Product	Article Number				
RUGGEDCOM RMC8388	6GK6083-8AC2	.	-	0	. . . - Z
RUGGEDCOM RMC8388NC	6GK6083-8AC1	.	-	0	. . . - Z
Power supply					
24 VDC nominal		1			
48 VDC nominal		2			
High-voltage (85-264 VAC / 88-300 VDC)		3			
Mounting kit					
No mounting option				A	
DIN rail mounting kit				B	
Panel mounting kit				C	
Conversion variant					
IEEE 1588 in IRIG-B TTL out				A	
IEEE 1588 in IRIG-B AM out				B	
IRIG-B AM in IEEE 1588 out				C	
Manufacturing modification					
Standard					0
Conformal coating					1

Z-options	Port
100BASE-T, RJ45	A00
100BASE-T, FastConnect	A01
100BASE-FX, LC, 2 km	A02

Examples	Article Number
RUGGEDCOM RMC8388 with low voltage 24 VDC, no mounting option, variant IEEE 1588 in IRIG-B TTL out, standard and 100FX LC 2 km.	6GK6083-8AC21-0AA0-Z A02
RUGGEDCOM RMC8388NC with HI voltage, DIN rail mounting kit, variant IRIG-B AM in IEEE 1588 out, conformal coating and 100TX RJ45.	6GK6083-8AC13-0BC1-Z A00

## 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 in mind, 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>.

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