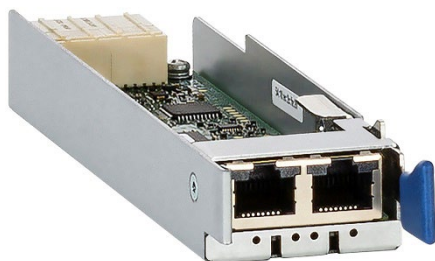**muRata Ps**
Murata Power Solutions

PRODUCT OVERVIEW

MWOC-RMU is a Remote Management Unit (RMU) for the MWOCS series, supporting OCP system power shelves. The MWOC-RMU can monitor and control the PSU modules and/or peripheral equipment installed in the MWOCES-211, MWOCES-192, MWOCES-191-M-B, and MWDCES-191 shelves via PMBus™. Communication with the host system via Ethernet by SNMP is also supported. The MWOC-RMU includes LED status indicators, and two (2) x RJ45 connectors.

Hot-swap capability along with comprehensive communication and reporting features make this product excellent for data center applications.

FEATURES
- RMU for Power Shelf Applications
- Communicates internally via PMBus™
- Communicates externally via SNMP
- LED Status Indicators
- Two (2) RJ45 Connectors
- Available for BBU
- Measurement data can be displayed graphically
- Available for Web API
- Available for REDFISH (MWOC-RMU-3 only)

ORDERING GUIDE

Part Number	Function	Applicable shelf
MWOC-RMU-2	Monitor and Control Unit	MWOCES / MWDCES series
MWOC-RMU-3	Monitor and Control Unit	MWOCES / MWDCES series

RJRJ45 INTERFACE

Port	MWOC-RMU-2	MWOC-RMU-3
1	Ethernet (100BASE-TX)	Ethernet (1000BASE-T)
2	Serial console (RS-232C)	

NETWORK PROTOCOLS (Port 1)

Protocol	MWOC-RMU-2, 3
IP	Ver. 4
DHCP client	Ver. 4
DNS client	Available
SNMP agent	Ver. 1 (RFC1155) Murata RMU-MIB available
telnet server	NA
SSH v2 server	Available for CLI
HTTP server	Available for Web GUI
Syslog	BSD format (RFC3164)
NTP client	SNTP Ver. 4

SERIAL-PORT PROTOCOLS (Port 2)

Feature	MWOC-RMU-2, 3
Serial console	Available same CLI as SSH2

FUNCTION AVAILABLE WITH MWOC-RMU-2, 3

Application	Action	Description
SNMP	Control the unit	ON/OFF control of installed PSUs Selection of the power source
	Reporting to the host	ON/OFF Status of each unit Presence information of each unit Status of input power sources Fault information of each PSU, BCU, ATS Input/output power of PSU(s)
CLI	Control the unit	In addition to SNMP, ON/OFF control of installed PSUs, BBUs Execute ATSes Auto self-check
	Report to the host	Same as SNMP
	RMU configuration	Set RMU's IP address (selectable "Static" or "DHCP")
	SNMP configuration	Set Trap receiver's IP address, Set Community names
Web GUI	IP configuration	Same as CLI
	SNMP configuration	Same as CLI

RoHS COMPLIANT **25**

For full details go to
www.murata.com/rohs

www.murata-ps.com/support

FUNCTION AVAILABLE WITH MWOC-RMU-2, 3

Application	Action	Description
Syslog	Send log messages to the host	Send log messages of the following events: Occurrence or recovery of alarms Operation of each unit
Event Log	Store log messages to the internal flash	Store same events as Syslog
CLI	DNS configuration	Set DNS server's IP address
	NTP configuration	Set NTP server's hostname or IP address
	Time configuration	Select a time zone, Set daylight saving time
	Syslog configuration	Set SYSLOG server's hostname or IP address
	User configuration	Available commands depend on the user's role
Web GUI	DNS configuration	Same as CLI
	NTP configuration	Same as CLI
	Time configuration	Same as CLI
	Syslog configuration	Same as CLI

FUNCTION AVAILABLE WITH MWOC-RMU-3

Application	Action	Description
CLI	Time configuration	Select an **IANA's** time zone
Web API	T.B.D	Compliant with Redfish API

ENVIRONMENTAL CHARACTERISTICS

Parameter	Conditions	Min.	Typ.	Max.	Units
Storage temperature range		-40		70	℃
Operating temperature range		0		40	℃
Storage humidity	Non-condensing	5		90	%RH
Operating humidity	Non-condensing	5		85	%RH
Altitude (without derating at 40℃)				3,000	m
MTBF	Per Telcordia SR-332 M1C1 @ 40℃	400k			hrs
Shock	30G non-operating				
Vibration	Operating, random vibration, 5-500Hz 1.11G				
Weight	130g				

STATUS INDICATION AND CONTROL SIGNAL WITH MWOC-RMU-2

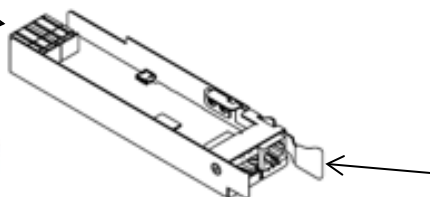| LED	Function	Status
LED1	Link	Blinking Green: Communication with the host via LAN1 is available
LED2	Power	Solid Green: RMU powered up
LED3	Alarm	Solid Amber: One or more alarms occurred in the power shelf
LED4	For internal use	

STATUS INDICATION AND CONTROL SIGNAL WITH MWOC-RMU-3

LED	Function	Status
LED0	Link	Solid Green: Communication with the host via LAN1 is available
LED1	Link	Solid Yellow: 1000Base-T is available
LED2	Power	Solid Green: RMU powered up
LED3	Alarm	Solid Amber: One or more alarms occurred in the power shelf

Link back to product description

CONNECTORS

Internal communication I/O

RJ45 Connectors

RJ45 CONNECTOR PIN ASSIGNMENT (PORT 1) WITH MWOC-RMU-2

Pin	Signal	Description
1	TXD+	Sending data (+)
2	TXD-	Sending data (-)
3	RXD+	Receiving data (+)
4	-	-
5	-	-
6	RXD-	Receiving data (-)
7	-	-
8	-	-

Link back to product overview

RJ45 CONNECTOR PIN ASSIGNMENT (PORT 2) WITH MWOC-RMU-2

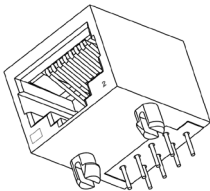| Pin	Signal	Description
1	RTS	Hardware flow control data
2	+5V	Power supply for an optional part.
3	TXD	Sending data
4	GND	-
5	GND	-
6	RXD	Receiving data
7	-	-
8	CTS	Hardware flow control data

Note: A Cisco compatible console cable can be applied to Port2.

RJ45 CONNECTOR PIN ASSIGNMENT (PORT 1) WITH MWOC-RMU-3

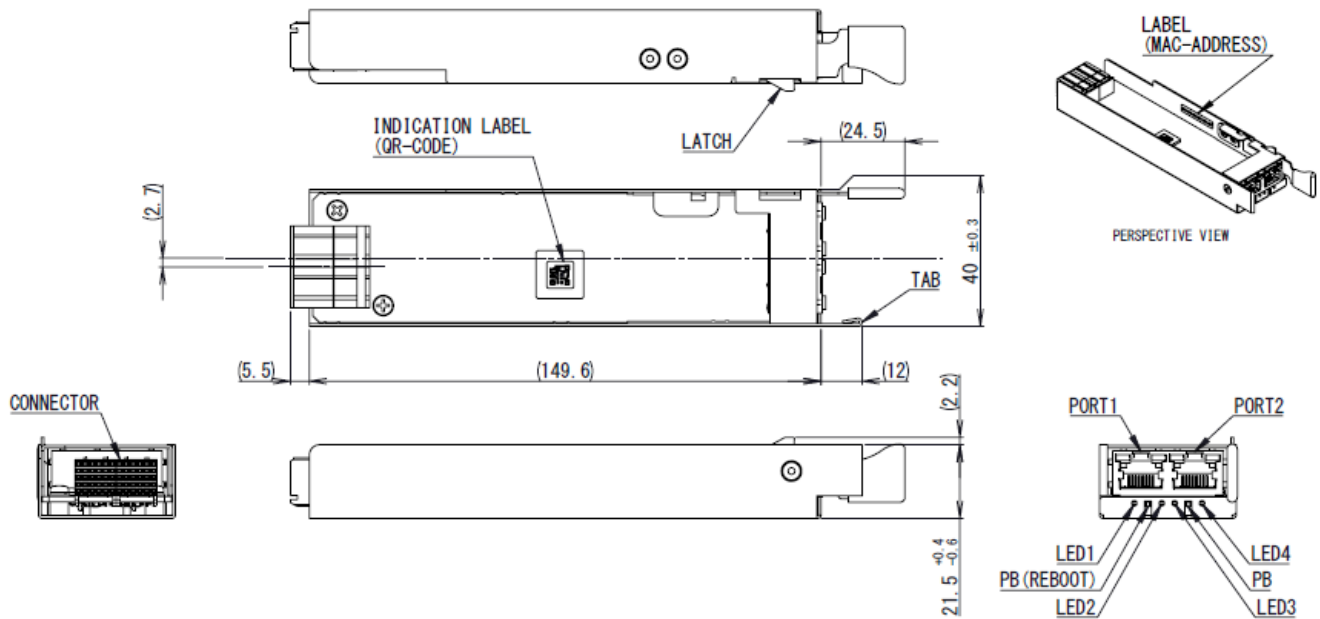| Pin	Signal	Description
1	TXD+	Sending data (+)
2	TXD-	Sending data (-)
3	RXD+	Receiving data (+)
4	BID+	Bi-directional data (+)
5	BID-	Bi-directional data (-)
6	RXD-	Receiving data (-)
7	BID+	Bi-directional data (+)
8	BID-	Bi-directional data (-)

RJ45 CONNECTOR PIN ASSIGNMENT (PORT 2) WITH MWOC-RMU-3

Pin	Signal	Description
1	-	-
2	+5V	Power supply for an optional part.
3	TXD	Sending data
4	GND	-
5	GND	-
6	RXD	Receiving data
7	-	-
8	-	-

Note: A Cisco-compatible console cable can be applied to Port2.

SHELF FUNCTIONAL BLOCK DIAGRAM (MWOCES-192-M Delta connection SHOWN)

MECHANICAL DRAWING

MWOC-RMU-2

MWOC-RMU-3

RELTED PRODUCT DATASHEETS		
Document Number	Description	Link
MWOCES-192	19" OCP power shelf	MWDCES-192 series	Datasheet	19" OCP Power Shelf	Murata Power Solutions
MWOCES-211	21" OCP power shelf	MWOCES-211	Datasheet	21" OCP Power Shelf	Murata Power Solutions
MWOCES-211-P-C	21" OCP power shelf(ORV3)	MWOCES-211-P-C	Datasheet	Murata Power Solutions
MWDCES-191	19" OCP power shelf	MWDCES-191 series	Datasheet	19" OCP Power Shelf	Murata Power Solutions
MWOCES-191-M-B	19" OCP power shelf	MWOCES-191-M-B	Datasheet	Murata Power Solutions