

MRX.ControlBox

Central distribution box for MRX.marine



Quick Start Guide

System Overview

The MRX.marine system is a modular solution for use in port and offshore environments. It consists of:

- * One or more camera modules,
- * one or two touch monitors,
- * one or more distribution boxes, which carry all the electronics and offer connection to clients.

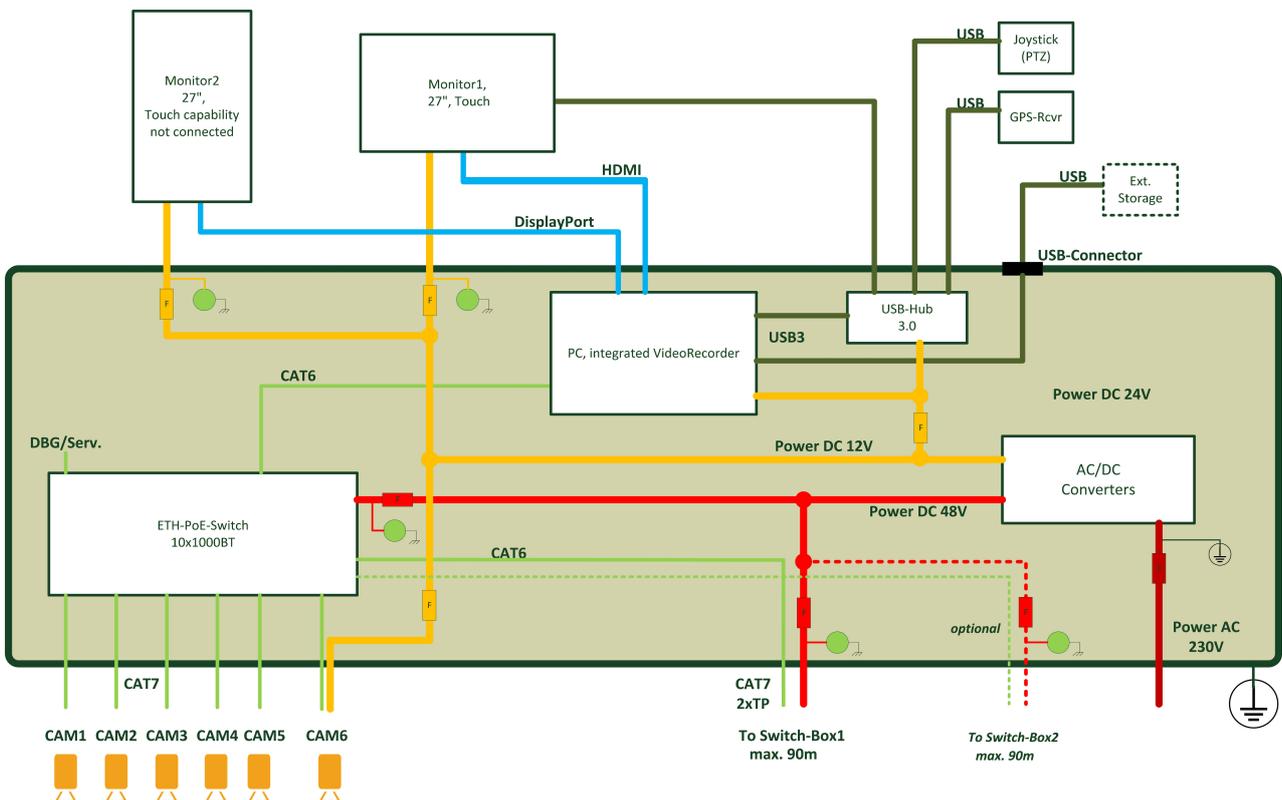


The present MRX.ControlBox is the central unit of MRX.marine system. It contains all required AC/DC converters, connection to monitors, cameras and remote distribution box(es). Inside MRX.ControlBox there is a powerful PC and video storage equipment. External control clients can be connected via USB.

Scope of delivery

- * 1x MRX.controlBox,
- * 1x installation set "Ethernet" (content: 9x RJ45 to be mounted on CAT7),
- * 1x installation set "external mount" (content: 1x multiple cable gland (dual port), 1x cable USB3 (3.0m)),
- * 1x Rittal key,
- * 1x this QSG.

System Overview



All connections to MRX.ControlBox must be made in accordance with the cable diagrams.



Installation

MRX.ControlBox can be mounted on a wall or floor using the external mounting brackets.

Connections

MRX.ControlBox has a series of cable glands that are used to feed the connection cables to external components. Suggestions for using the cable glands are engraved on the cover, but their use is not specified. One dedicated USB-port exists for storage.

Power IN (AC)	MRX.ControlBox requires a 230VAC connection. All components of the MRX.marine system are supplied via this central connection. No further supply connections are necessary.
USB Storage	USB interface for external storage media to export video data. Also universal external USB interface for e.g. software updates.
USB1 (GPS)	Cable gland for USB cable of the GPS receiver.
USB2 (joystick)	Cable gland for USB cable of MRX.ptzController.
HDMI1	Cable gland for HDMI cable to Monitor1.
DP	Cable gland for DP cable to Monitor2.
Monitor1 USB	Cable gland for USB cable to Monitor1 (touch function).
Monitor1 PWR	Cable gland for PWR cable to Monitor1.
Monitor2 PWR	Cable gland for PWR cable to Monitor2.
CAM1-CAM5	Cable gland for ETH cable to the 5 bullet cameras.
CAM6 ETH	Cable gland for ETH cable to junction box of dome camera 1.
CAM6 PWR	Cable gland for PWR cable to junction box of dome camera 1.
SwitchBox1 ETH	Cable gland for ETH cable to SwitchBox on the boom.
SwitchBox1 PWR	Cable gland for PWR cable to SwitchBox on the boom.
SwitchBox2 ETH	<i>Cable gland to a second SwitchBox, not used.</i>
SwitchBox2 PWR	<i>Cable gland to a second SwitchBox, not used.</i>
RES2	Reserve cable gland, can be used when mounting the ControlBox outside the cabin. See below.



LEDs

Five LEDs indicate the status of the different internal power supplies:

- Power ETH: 48V power supply for PoE switch (internal) operational
- Monitor1 PWR: 12V power supply for both monitors operational
- Monitor2 PWR: 12V power supply for both monitors operational
- SwitchBox1 PWR: 48V power supply to SwitchBox1 operational
- SwitchBox2 PWR: *The second power reel is not equipped in present installation. The LED will never lit.*

Lock

Door lock for Rittal switch cabinet key type #5. Turn clockwise to **OPEN**.

Fuses (internal)

- * Power IN: 2x 10A
- * 48VDC PoE switch (internal): 1x 5A
- * 48VDC SwitchBox1: 1x 5A
- * 48VDC SwitchBox2 (n.e.): 1x 5A
- * 12VDC: 4x 10A (1x PC + USB, 1x Monitor1, 1x Monitor2, 1x CAM6)

Mounting RJ45 plug (and socket) to CAT7

The delivered field wireable connectors, which are part of the installation set "Ethernet", enables fast, cost-effective and reliable cabling thanks to modular separation of cable and connector:

1. crimp the termination block onto the CAT7, as shown in the enclosed instructions. This can be done inside or out side the ControlBox.
2. place the plug (or socket) on the terminal block. This must be done inside the ControlBox, otherwise the cable plus plug does not fit to the cable glance.

The following link gives you more information about installation:

[youtube.com/watch?v=IEL7KivLR4](https://www.youtube.com/watch?v=IEL7KivLR4)



Connection Monitor1 & Monitor2

There are two video ports on the internal PC, which are used for the two monitors:

1. HDMI port is dedicated for Monitor1. The HDMI cable is part of Monitor1.
2. DisplayPort (DP) is dedicated for Monitor2. The DP cable is part of Monitor2.

ATTENTION: One end of the two video cables has been specially modified so that it can be inserted through the cable gland. Please do not connect this end to the monitor; it must be connected to the control box.

The packaging for Monitor1 also contains an USB cable. The USB cable is required for the touch function of Monitor1. Pass this USB cable through a cable gland and plug it into the USB hub.

(Internal) service interface

MRX.ControlBox offers an internal service interface for accessing the device via a laptop or remote connection. This is port 10 on the internal ETH switch. When the cover is open, a LAN cable can be connected to establish (remote) access. The service interface functions as a DHCP server, so that the connected PC/laptop is automatically assigned an IP address: 192.168.1.100.

Special feature when mounting the ControlBox outside the cabin

If MRX.ControlBox is mounted outside the cabin, it is difficult to access the service interface and the USB storage port. In this case, it makes sense to extend both interfaces into the cabin:

To do this, remove the blind plug from cable gland 'RES2' and use the dual cable gland from the enclosed 'external mount' set. Feed the enclosed USB3 extension cable and an approx. 3-5 metre long CAT7 cable through the dual cable gland.

The CAT7 cable must be fitted with an RJ45 plug as described above and then plugged into interface 10 of the ETH switch.

It is ESSENTIAL that the USB3 cable is plugged into the back of the PC. The two front USB ports are only USB2.

