logic I⊕

The M2M Enabler

CAM-100
Technical Manual

Version 1.01

Introduction

This manual contains technical documentation allowing easy installation and use of the CAM-100 camera module designed for the RTCU X32 units. For information on the high-level programming of the CAM-100, please refer to the RTCU IDE documentation.

The CAM-100 extends the capability of the RTCU platform with the ability to take JPEG compressed snapshots. Snapshots can be taken in four different resolutions.

A whole new range of applications becomes available with CAM-100, such as:

- Remote monitoring of equipment, devices, work areas or locations.
- Any triggered event application.
- Security application.
- *"A picture is worth a thousand words…"*

Snapshots taken can either be saved to a SD-CARD, which can be accessed remotely, or it can be sent directly over GPRS to a server.

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Graphical view

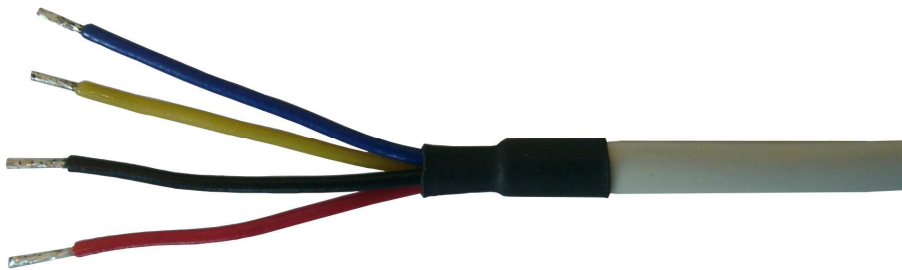**Figure 1: Front and backside view**

Installation

MX2i Pro/Pro+ and DX4 Pro Connection

The CAM-100 is connected to serial port 1 (service port) on the RTCU MX2/DX4. For this purpose a 3 meter cable is delivered, which also allows placement of the CAM-100 away from the RTCU X32 unit itself.

Power supply for the CAM-100 is controlled by the RTCU X32i. This keeps the power consumption kept at a minimum, only turned on when taking snapshots.

AX9 Pro Connection

The CAM-100 is delivered with the same 3 meter cable as for MX2i and DX4, but there isn't a 6-poled tyco connector for easy-to-plug. The color coded 4 cables need to be connected to the AX9 manually. Cables are color coded, and these colors will be used in the following description:
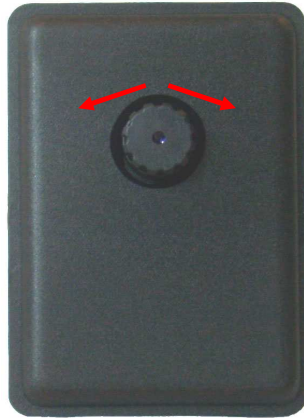

As seen on the above picture, there are 4 signals to be connected to the AX9 Pro. The cable color and the signal name on the AX9 Pro is given in the following table:

Color	Signal Name
Black	SGND
Yellow	SER1_RXD
Blue	SER1_TXD
Red	DCOUT33

Connect the 4 colored cables to their respective labeled angled screw terminals as mentioned in the above table. Please refer to AX9 Pro Technical Manual to locate the terminals.

Lens adjustment

After the CAM-100 is placed correctly, the focus needs adjustment. This is done by turning the lens carefully left or right manually, depending on the distance to the objective to focus on.

Figure 2: Lens adjustment

Bracket

The combination of the bracket and the way the CAM-100 is fastened to the bracket makes it possible to install the CAM-100 so that any angle can be achieved.

The metal bracket only requires two screws for mounting the CAM-100 on a wall, ceiling or anywhere else the application requires.

When the bracket has been mounted in the correct place, place the CAM-100 and use the two M3x6 screws to fasten the CAM-100.

Below, in Figure 3, the dimensions and guidelines of the bracket can be found.
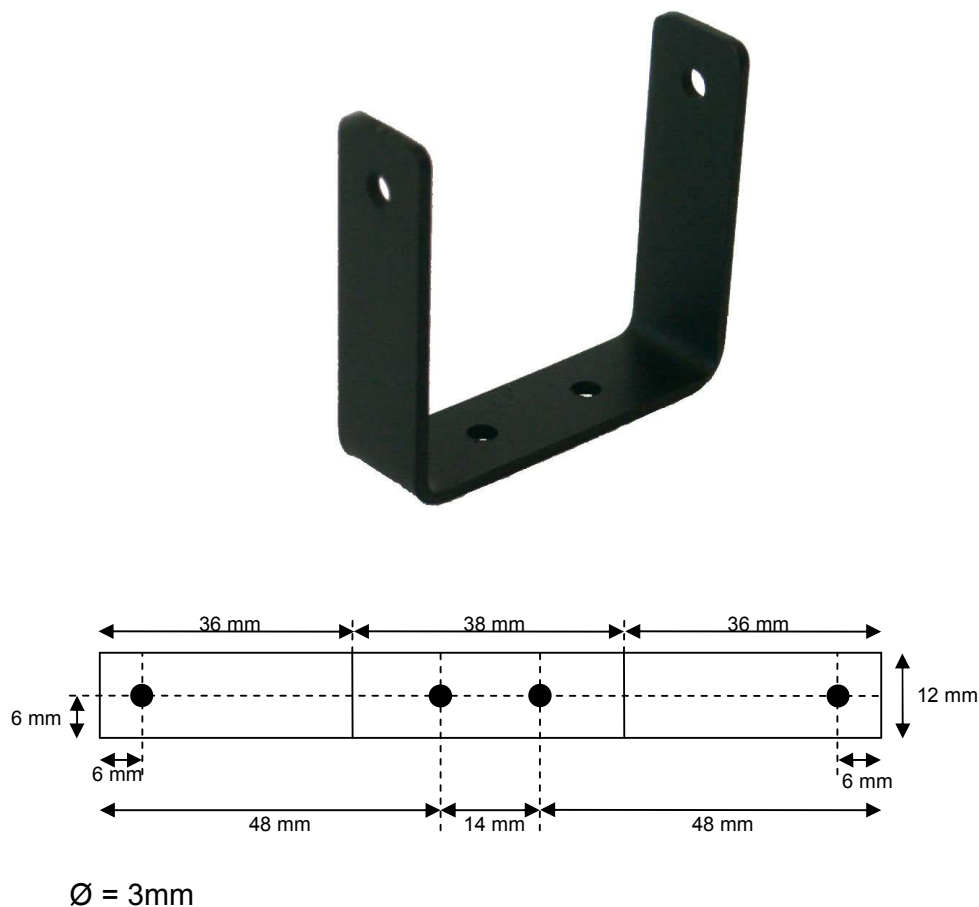

Ø = 3mm

Figure 3: Bracket

Specifications

Camera type	Still Image JPEG Compression VGA Camera Module			
Power supply (VDC)	3.0		3.3	3.6
Field of View (degrees)	57		42	16
External Dimensions (mm)	W 36 x H 50 x D 20		Without mounting bracket	
Resolution	80 x 64	160 x 128	320 x 240 (QVGA)	640 x 480 (VGA)

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Appendix A

Figure 4: Area overview

Figure 5: Room overview

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