No.1 in Track Record

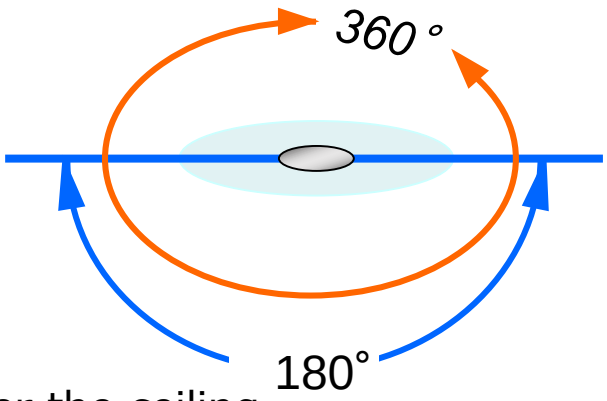
Train Car Camera: CFCT-360F

Rev.5

General

- For the prevention of crimes or molesters, and the ease and safety in the train car, we are glad to introduce the best surveillance camera.
- Our camera has the proven track record of more than 9,800 units installed to more than 2,900 train cars in China since 2008. These have played active roles as the surveillance camera in the trains accessed to the main sites of the Beijing Olympic Games and the Shanghai Expo.
- Also, our camera has been installed in Japanese JR super express trains.
- Because of its omnidirectional view, not like conventional surveillance cameras, without any blind spot, the number of cameras can be reduced and the system can be simpler.

Key features of the camera



- 3 Mega pixel color CMOS sensor
- **Horizontal 360° omnidirectional view**
- Ultra wide view angle of 180° allows to see all under the ceiling.
- Built-in high-speed processor converts a hemispherical image from the fish-eye lens to a flat image and can zoom or scroll any portion of the images.
- Because of its **small body,** it can **fit into a narrow space behind the ceiling** of the train car. The volume of projection part under the ceiling is a little and the sight is not spoiled.
- Small and lightweight. No moving parts result in a **very long life**. Actually, no defect or malfunction in these 10 years in Chinese trains.
- Because of its omnidirectional view, it has **no blind spot, and the number of cameras can be reduced**. In parallel, the time, cost and effort for the wiring can be reduced as well as the labor for monitoring.

Style of the camera

◎ Custom design is available

Small fish-eye camera module NM33-F

CFCT-360F

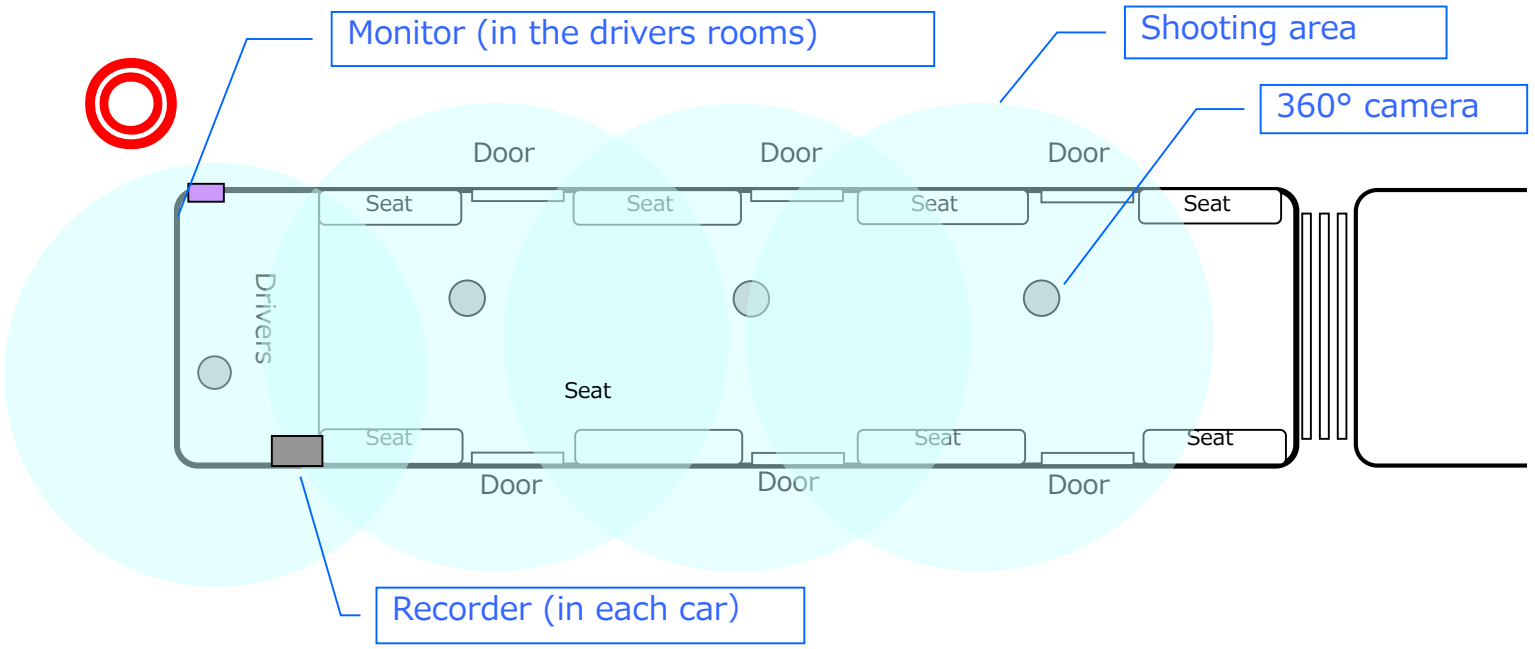
Example of installation in Shanghai Sub-way car

◎ Small body can fit behind the ceiling.

◎ No projection under the ceiling does not spoil the sight.

Example of usage in the Shanghai sub-way cars

3 cameras in a car×8 cars / train + front & rear drivers room = 26 cameras / train



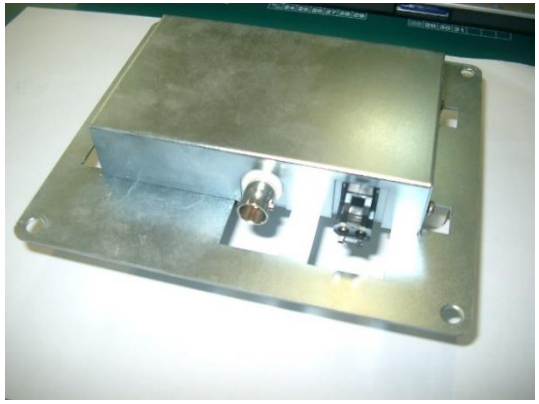
✕ More number of conventional cameras are necessary to cover the blind spot of each others.

◇ Overhead rack is in the view area.

Note: Need to check the affection of hanging displays.

Example of usage in the JR express train cars

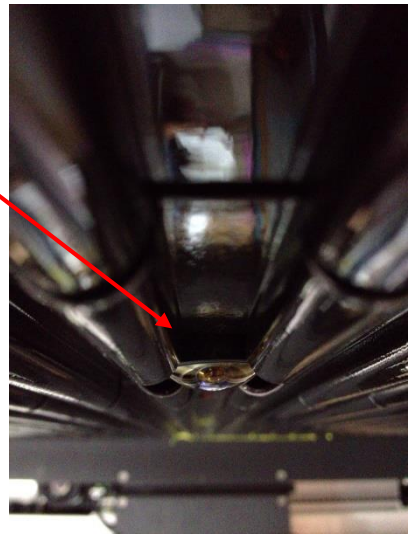
Housing (camera side)



Housing (back side)

NM33-F

Appearance (ceiling louver)

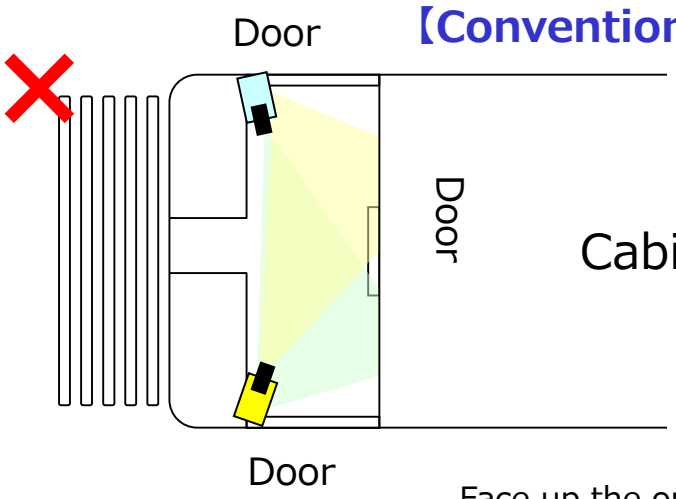


As the camera is buried in the ceiling and only the lens in a sight, the aesthetic is not spoiled.

Proposal to use at the entrance of train

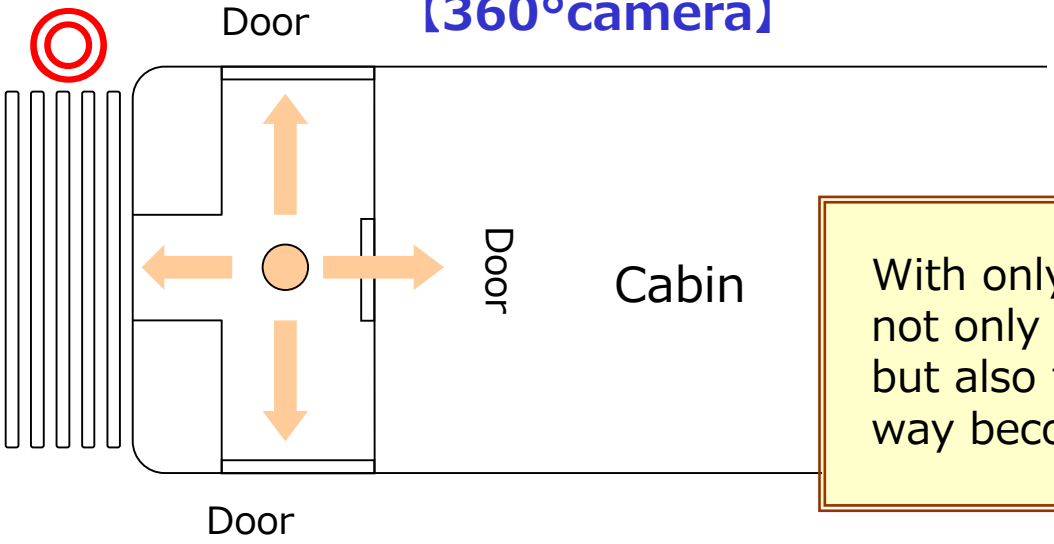
- Simplify the system
- Better usage

【Conventional】



Face up the one-directional cameras to monitor each door.

【360°camera】



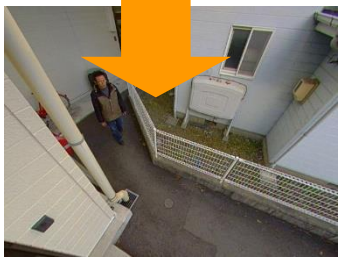
With only one camera, not only both doors but also the entrance way becomes in view.

Sample Images (installing under the ceiling downwards)

Dewarped into two
180° panoramic images

Hemispherical all around
image from fish-eye lens

Dewarped into
four 90° images



Easy to Pan, Tilt and Zoom in a designated area

Note2 **Possible to P/T/Z without moving mechanically.**

Note 2: Remote Controller is required for the analog use.

Specification of the camera Model : CFCT-360F

CAMERA	
Model No.	CFCT-360F
Image Signal Output	NTSC/PAL（pre-setting at ex-factory）
Imaging Sensor	3 Mega pixels 1/2 inch color CMOS sensor
Effective Pixels (H x V)	2048 X 1536, approx. 3.15 Mega pixels
Usable Pixels	approx. 1.70 Mega pixels
Viewing Angle	180°, 360°
Object Distance	0 mm～infinity (from the lens surface)
Minimum Light Required	5 lux
White Balance	automatic
Exposure	automatic
Image Development	15 patterns
INTERFACE	
Image Output	BNC female, 1 Vp-p, 75Ω
USB	USB 1.1 mini type
POWER	
Input Voltage	12.0 V ± 10 %
Current Consumption	250 mA (max.)
Others	
Operation Temperature	0 ℃～40 ℃
Dimensions	W:140 x D:125 x H:48 mm
Weight	approx. 350 g

Appearance Model : CFCT-360F