iRecord Bait Car (BC-200)

Bait and Covert Vehicle Surveillance and Tracking System

The Bait Car Box (BC-200) is a state-of-the-art vehicle surveillance and tracking system. It is designed and developed specifically for the needs of law enforcement agencies, operating bait vehicle program. The BC-200 is a bait vehicle solution with integrated communication, vehicle status monitoring, audio/video streaming and recording and input/output controls. The BC-200 system can also be used for a variety of covert vehicle surveillance and monitoring applications.

The BC-200 box can be connected with 4 analog covert cameras, 2 line-level analog microphones, 6 input sensors and 5 output sensors. Each bait vehicle is registered either with a Bait Car Server (BCS-200) or a Bait Car Mobile application (iCBaitcar). A state change in any of the input sensors will trigger an activation which gets reported to the associated monitoring and control application. The monitoring officer can remotely control the output sensors, for example enable/disable the ignition, lock/unlock the doors or honk the horn. The BC-200 system also has a Geofencing feature that provides notifications when a vehicle enters or leaves a specified geographical area.

Key Features:

- Integrated communication, recording and maps
- Supports 6 input and 6 output control sensors
- Supports 4 video and 2 audio analog inputs
- Monitoring & control via web app or mobile app
- No need for monitoring agency
- Headless server option available
- Activation notification to multiple agents
- Call transfer between multiple agents
- Google and ESRI maps support

Live Streaming / Recording
Simultaneous remote monitoring (streaming) and local recording of the audio/video streams. Four analog cameras and two analog microphones are supported. You can view video in single, dual or quad mode. On Mobile App, you can switch among cameras.

Built-in Cellular Modem and GPS
Sierra Wireless Modem module MC-7354 is used for cellular communi-cation and GPS data retrieval. All major cellular carriers are supported. Modem can be programmed in field to change cellular service providers.

WiFi Connectivity
BC-200 has built-in WiFi for setting up and testing a bait car vehicle. It can be enabled and disabled on demand.

Multiple Quality Streaming / Recording
Video resolutions are chosen by a user. For wide band connection, high resolution MJPEG is recommended, for narrow band connection QVGA resolution should be streamed. Video on the local storage is always recorded in high resolution at full frame rate using H.264 standard.

General Purpose Inputs and Outputs
BC-200 has 6 optically isolated sensor inputs and 5 optically isolated sensor outputs. Input sensor can be wired to door, trunk, hood, dome light, etc. The output sensors can be wired to door, horn, ignition, etc.

Email/SMS and Alarm (Event notification)
Email and SMS alerts can be sent upon low battery and an activation.

Multiple Portable Storage Media Support
Event log, video, audio, graphical locations, street path and speed are recorded on the SD card or on a USB storage media.

Monitor & Control Via Mobile and Web Applications
BC-200 has a built-in server which can be connected to a client through a web interface also known as Web App or through a Mobile App (iCBaitcar). Any activation is communicated both to Mobile and Web Apps. Mobile Application can handle 2 activations simultaneously. Mobile Applications can also communicate peer to peer to thereby creating a pseudo mesh network among handling agents.

Google and ESRI Maps Support
The BC-200 Server supports both Google and ESRI Maps to display detailed street maps and trajectory of the stolen bait vehicle.
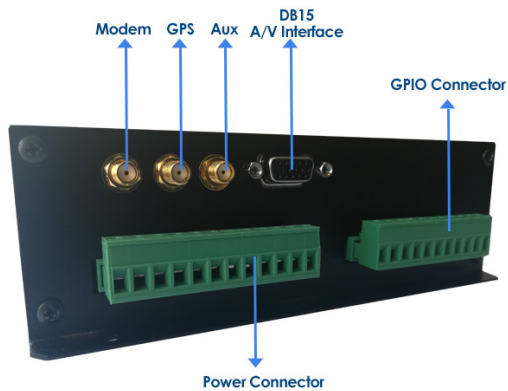
Headless Server
Headless Server is an unattended data logger including video & audio. Data from the edge storage is uploaded to the server upon termination of a call.
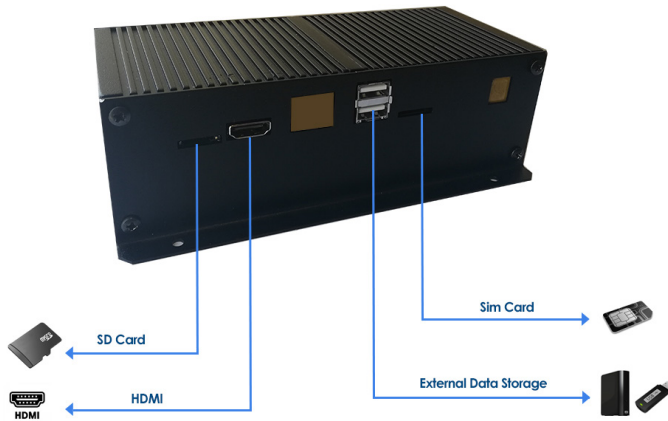
Bait Car Server
Bait Car Server runs on a Windows platform in a virtual mode. A version of the Server also comes with a Keylock. It has a SKU which supports multiple agencies. Each agency can see only its registered bait vehicle.

Syslog Server
Syslog Sever records the heartbeat for all the bait vehicles regardless of their state. Every 5 minutes, a bait vehicle sends it Battery Voltage, Temperature, Status and Event logs related to input and output sensors.

Modem GPS Aux DB15 A/V Interface

GPIO Connector

Power Connector

SD Card

HDMI

Sim Card

External Data Storage

DB15 AV cable with 4 video inputs and 2 audio inputs

Input Sensors Mapping

Trunk Sensor	Pin 2	Senses trunk open/close state
Door Sensor	Pin 3	Senses door open/close state
User Input 2 Sensor	Pin 6	User defined (motion/pressure sensor)
User Input 1 Sensor	Pin 7	User defined (motion/pressure sensor)
Ignition Sensor	Pin 10	Senses ignition on/off state

Output Controls Mapping

Horn	Pin 1	To activate the horn
Door Unlock	Pin 4	Unlocks the door
Door Lock	Pin 5	Locks the door
User Output 2	Pin 9	User defined (audible alarm/flasher)
User Output 1	Pin 8	User defined (audible alarm/flasher)
Ignition Disable	Pin 11	Disables/Enables ignition

Bait Car (BC-200) Specifications

SOFTWARE	Video encoding	MJPEG, H.264 with frame rate up to 30 fps
	Resolution	Standard Definition (SD): 720x480; 350x240
	Audio encoding	MP3 stereo (32kbps, 8KHz); MP3 mono (16kbps, 8khz)
	Multiplexing	AVI container for video and audio data
	Circular / Linear mode recording	Circular non-stop recording (overwriting the oldest data first), or Linear where recording stops when storage media is full
	Streaming / Recording	Location-free monitoring (live view); Simultaneous streaming and recording
	File Playback / Download	A recorded file can be played back over the internet. The files can also be downloaded or deleted
	Archiving	Entire recordings or a video segment of interest can be extracted and archived on the same drive or onto another USB drive
	Smart search & play	Timestamp-based and event-based search and video playback
	Web server	File management (delete/download/update list)
HARDWARE	Protocols supported	HTTP, TCP, UDP, DHCP, SMTP, RTP, RTSP Web server File management (delete/download/update list)
	Sim card Jacket	For mobile connectivity
	Video input	Four video analog inputs (15 pin DB connector)
	Audio input	One stereo input (15 pin DB connector)
	Network connectivity	One 100/1000 Base Ethernet port (RJ45); Supports built in WiFi
	USB connectivity	Two USB 2.0 host ports (Type A connector) for external USB storage devices
	Power input	8 to 30 V DC
	Max. power consumption	Approx. 14 watt excluding cameras

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