NVR-3576

Standalone Onboard Network Video Recorder

TECHNICAL SPECIFICATION

Product Overview

The NVR-3576 is designed for video acquisition and local recording in locomotive applications. The platform combines an RK3576 processor and Debian 12 with three AHD inputs, Fast Ethernet and a SATA storage interface. Wireless connectivity, satellite positioning and power-loss-triggered shutdown are also included in the design.

Recording, playback and platform integration capabilities must be confirmed against the software supplied with the device.

Product Views

Front view



Rear panel / interface view



System & Recording

System Configuration

Item	Specification
Model	NVR-3576
Processor	RK3576
System-on-Module (SoM)	SOM7609-S1-D4E32
RAM / onboard storage	4 GB RAM + 32 GB storage / 8 GB RAM + 64 GB storage
Operating system	Debian 12
Component grade	Industrial-grade

Video Inputs & Display Output

Item	Specification
Analog video inputs	3 AHD channels; 3 x 4-pin circular connectors
IP camera inputs	8 channels
Display output	1 x HDMI

Video Compression & Recording

Item	Specification
Video compression	H.264 / H.265
Recording resolution / frame rate	1280 x 720 at 25 fps
Recording bitrate	4 Mbps; configurable from 0.25 to 20 Mbps
Recording modes	Continuous, scheduled and event recording; cyclic cleanup according to retention and recording-protection rules
Search, playback & export	Search by camera, time and event; single-channel browser playback at 0.25x to 4x speed; recording download
Live viewing	Browser-based multiview via WebRTC / HLS; layouts with up to 36 tiles
Fault handling	Automatic reconnection after stream loss; disk fault detection
Audio & alarms	Audio monitoring, audio recording with video and two-way audio when supported by the connected IP camera

Storage & Connectivity

Storage Configuration

Item	Specification
Drive data interface	1 x SATA
Storage media	SATA solid-state drive (SSD)
Drive power connector	1 x XH2.54-2P header
SD card interface	1
Storage maintenance	Unlocking initiates shutdown before drive removal. This is not powered hot-swap support.

Network & Wireless Communications

Item	Specification
Ethernet interfaces	2 x 100 Mbps Ethernet
Onboard Ethernet switch	One Ethernet interface connects to an onboard 5-port switch, with four external connections via 4-pin headers.
Dedicated Ethernet port	The other Ethernet interface is routed to an RJ45 connector.
4G expansion	1 x Mini PCIe module socket
SIM card	1 x SIM card socket
Wi-Fi	Wi-Fi module
Satellite positioning	BeiDou module; provision for an IPEX antenna connector on the carrier board

Service Interfaces & Status Indicators

Item	Specification
USB	1 x USB Type-A
Firmware programming	USB Type-C OTG programming port and 2-pin programming-button interface
Serial debug port	1 channel; 3-pin header
Serial communications	RS-485
Status LEDs	6: positioning, storage, alarm, network, recording and power
Lock-state detection	1 I/O channel for enclosure lock/unlock status detection

Power & Installation

Power Supply & Shutdown Management

Item	Specification
Power input	110 V DC
System power capacity	Up to 100 W
External power monitoring	Detects loss of external power and initiates an emergency shutdown sequence.
Backup power	Supported
Lock-controlled power	Unlock to shut down; lock to power on

Mechanical & Environmental Specifications

Item	Specification
Mounting	Fixed installation in a rack or equipment cabinet
Dimensions / weight	320 x 263 x 70 mm / 4.8 kg
Operating temperature	-40 °C to +70 °C

Installation Notes

Allow sufficient clearance for cabling, heat dissipation and storage-media maintenance.

Complete the prescribed shutdown sequence before removing the drive.

Verify the vehicle power supply and connector pin assignments against the applicable installation drawings.