



Bus Guardian

Cal/Amp®  
*Synovia Solutions, LLC*  
*a CalAmp Company*

# World-Class Telematics

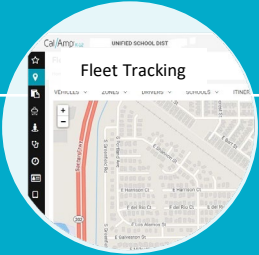
## CalAmp K-12

Dave Hoppa Senior Account Manager

November 2024

# Complete bus and white fleet transportation management

## Advanced Fleet Tracking



- Precision GPS location and event tracking
- **Get more efficient**

## Here Comes The Bus



- Award winning bus tracking app for parents
- **Boost parent goodwill**
- **Improve safety**

## Routing Integration/Tools



- Seamless routing platform integration
- Turn-by-turn navigation
- Planned vs actual
- Identify/assign uncovered routes
- **Get more efficient**
- **Ensure coverage**
- **Leverage existing investment**

## Student Ridership



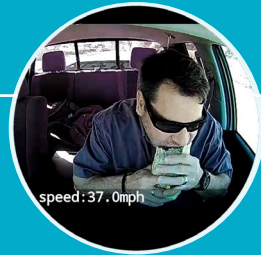
- Secure, reliable student tracking via barcode/RFID
- Contact tracing
- **Improve safety**
- **Get more efficient**

## Driver Tools & Maintenance



- Time & attendance
- 2-way communications
- Inspections
- Engine diagnostics
- Maintenance scheduling
- Safety scoring
- **Reduce costs**
- **Avoid downtime**
- **Ensure compliance**
- **Improve safety**

## Vision Dash Cam



- Dual-facing hi-res video
- Events automatically captured/curated for coaching
- **Improve safety**
- **Get more efficient**
- **Reduce costs**

# Ensure Full Route Coverage with Dispatch Monitor

- Displays consolidated, current view of route coverage:
  - Drivers who've clocked in
  - Vehicles they are operating
  - Routes they are assigned
- Immediately identify at-risk routes
- Check in drivers not clocked in
- Assign substitute buses or drivers
- Supports multiple drivers/aids per bus (disabled student transportation)



# Dispatch Monitor

- Uses Schedules Imported from Routing for TAA
- Vehicle Information imported from Routing System

## Dispatch Monitor



Setting

Home / Dispatch Monitor

Currently showing: AM route (12:00 AM - 10:00 AM)

**Important! Monitor is only displaying routes based on driver schedules with assigned vehicles**

Currently there are **536** route(s) with no driver schedules and **113** driver(s) schedules with no vehicle assigned.

[Click Here To See](#)

Route Name	Scheduled Start Time	Scheduled Employee	Scheduled Vehicle	Tier Name	Actual Employee	Actual/Substitute Vehi...	Clock In	Status	Deviation
B-042/AM	05:24 AM	TATIANA HERBAS	B-042		TATIANA HERBAS	B-042	09:43:37 AM	N/A	259
B-739/AM	09:35 AM	SANDRA SORIA MERCADO	B-739	99A2S03A	SANDRA SORIA MERCADO	B-739	06:10:43 AM	N/A	-205
B-430/AM	06:05 AM	ROBERT JENKINS	B-430	99A2S01A	ROBERT JENKINS	B-430	06:22:42 AM	Late	17
B-337/AM	06:15 AM	REBECCA BOLT	B-337		REBECCA BOLT	B-337	06:23:16 AM	On-Time	8
B-027/AM	06:10 AM	PEDRO J MENDOZA	B-027				06:03:33 AM	On-Time	-7
B-451/AM	05:45 AM	NAYADEE VERNA	B-451				05:55:13 AM	On-Time	10
B-771/AM	05:20 AM	MICHELLE L HARMAN	B-771		MICHELLE L HARMAN	B-771	05:25:28 AM	On-Time	5
B-347/AM	06:00 AM	MARISELA MADERA CAR...	B-347		MARISELA MADERA CAR...	B-347	09:31:53 AM	N/A	211

Showing 1 to 50 of 172 entries

<< 1 2 3 4 >>

Show: 50

# Boost Efficiency with Advanced Fleet Tracking

**Fleet Tracking**  
Home / Fleet Tracking

VEHICLES ▾ ZONES ▾ DRIVERS ▾ SCHOOLS ▾ ITINERARIES ▾

Vehicle	Vision Video	Primary Group	Employee	Route	Activities	Time	Event	Ignition	Speed	Heading	Location	Distance	Student Count On Board
73 TURKEY	H	USD School Bus Fleet	ALEX	70 TURKEY/PM		03/04/24 03:18:23 PM	GPS Update	ON	0	W	East Peccos Road	41.32	10
77 CAMEL	H	USD School Bus Fleet	Kim	77 CAMEL/PM		03/04/24 03:17:54 PM	Amber Lights Off	ON	0	N	21774 South 184th Way	42.00	38
100 GRAFFE	H	USD School Bus Fleet	LAURA	100 GRAFFE/PM		03/04/24 03:18:10 PM	GPS Update	ON	19	N	South Posee Trail	53.02	4
106 CAT	H	USD School Bus Fleet	BRITTANEY	106 CAT/PM		03/04/24 03:18:22 PM	GPS Update	ON	22	NW	3719 South Athenon Boulevard	68.62	5
75 BUFFALO	H	USD School Bus Fleet	ELLEN	75 BUFFALO/PM		03/04/24 03:18:11 PM	GPS Update	ON	14	N	5255 South Solobos Street	43.10	7

S Joshua Tree Lane

S Peccos Rd

18 - 65 WHALE

17 - 65 WHALE

16 - 65 WHALE

15 - 65 WHALE

14 - 65 WHALE

13 - 65 WHALE

12 - 65 WHALE

11 - 65 WHALE

10 - 65 WHALE

9 - 65 WHALE

8 - 65 WHALE

7 - 65 WHALE

6 - 65 WHALE

5 - 65 WHALE

4 - 65 WHALE

3 - 65 WHALE

2 - 65 WHALE

1 - 65 WHALE

## Consolidated view:

- Vehicles (buses & white fleet)
- Dash cam clips
- Drivers
- Events (amber lights, stop arm, entrance door, etc. )
- Heading
- Location
- Distance
- Student Count

## Configurable history:

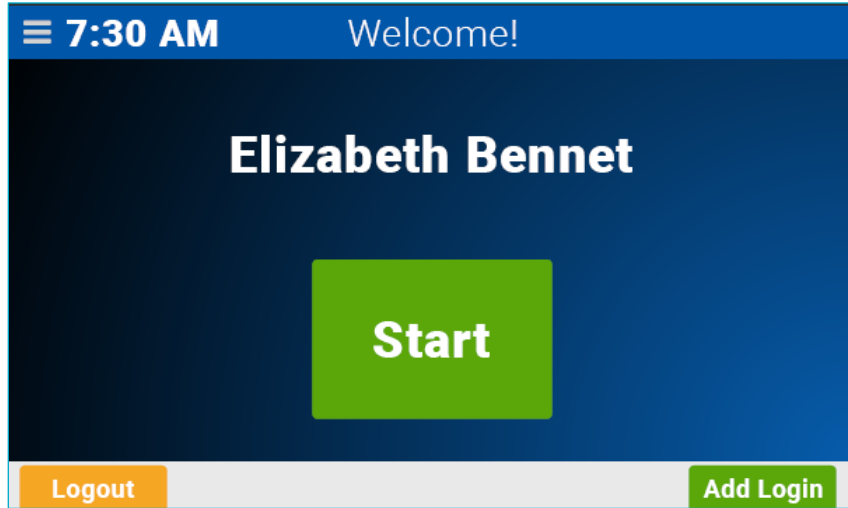
- Vehicles (buses & white fleet)
- Drivers
- Dash cam clips

# Reliable, Heavy-duty Mobile Data Terminal (MDT)

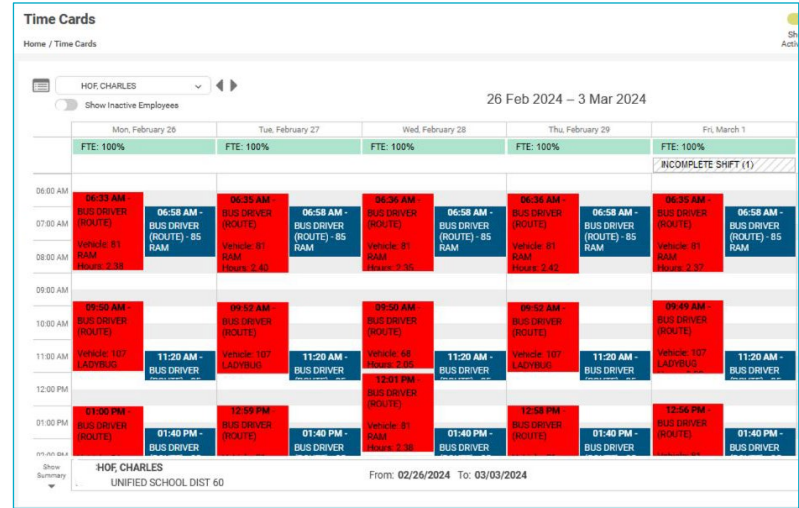
- 7" touch screen display - 1024 x 600 IPS
- IP54 rating for dust and water spray resistance
- Shock and vibration resistance
- Wide operating temperature (-4° to +140°F)
- Android 9.0
- Battery life 10+ hours (depending on usage)



# Efficient Time and Attendance



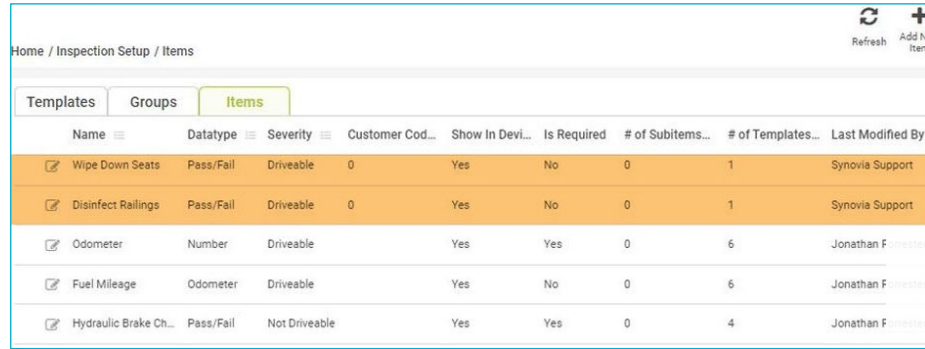
- MDT view:
  - Start
  - Employee ID
  - Employee Type
  - Job Type
  - Trip ID
  - Authenticated
  - Optional reminders



- K-12 app view:
  - Employee IDs
  - Schedules
  - Absences
  - Payroll system integration (ADP, MUNIS, and more)
  - Filters/Reports
  - Supervisor edits
  - Field Trips

# Ensure Compliance with Inspections

- CalAmp K-12 app view:
  - Manage DVIR templates and reports
  - Manage inspection results



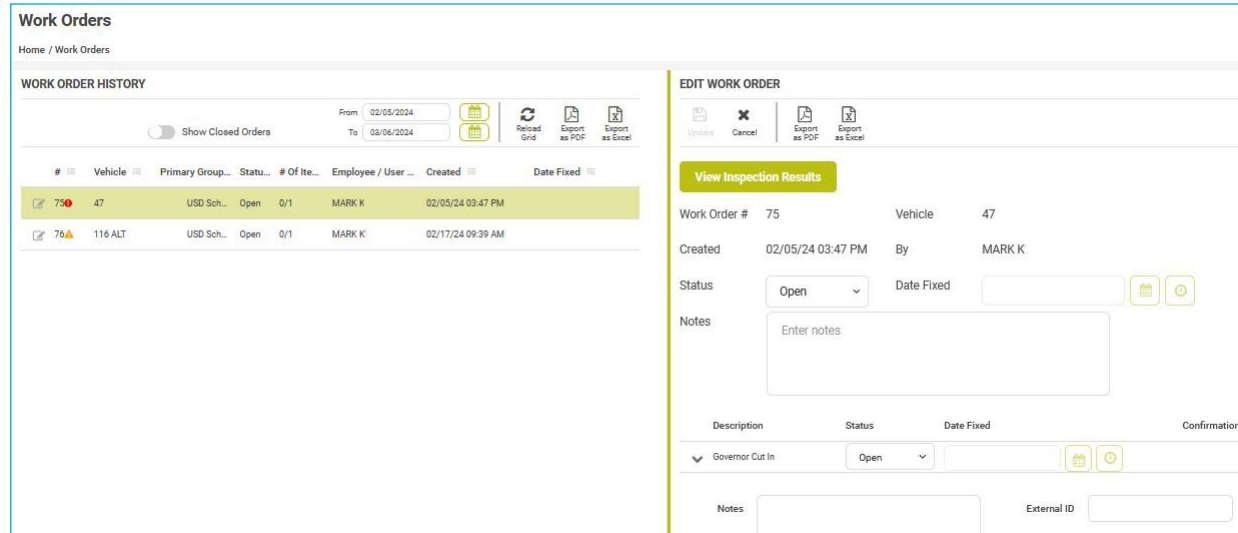
Home / Inspection Setup / Items

Refresh Add New Item

Templates Groups **Items**

Name	Datatype	Severity	Customer Cod...	Show In Devi...	Is Required	# of Subitems...	# of Templates...	Last Modified By
Wipe Down Seats	Pass/Fail	Driveable	0	Yes	No	0	1	Synovia Support
Disinfect Railings	Pass/Fail	Driveable	0	Yes	No	0	1	Synovia Support
Odometer	Number	Driveable		Yes	Yes	0	6	Jonathan F...
Fuel Mileage	Odometer	Driveable		Yes	No	0	6	Jonathan F...
Hydraulic Brake Ch...	Pass/Fail	Not Driveable		Yes	Yes	0	4	Jonathan F...

- Create work orders



Work Orders

Home / Work Orders

WORK ORDER HISTORY

Show Closed Orders

From: 02/05/2024 To: 03/06/2024

Reload Grid Export as PDF Export as Excel

#	Vehicle	Primary Group...	Statu...	# of It...	Employee / User ...	Created	Date Fixed
75	47	USD Sch...	Open	0/1	MARK K	02/05/24 03:47 PM	
76	116 ALT	USD Sch...	Open	0/1	MARK K	02/17/24 09:39 AM	

EDIT WORK ORDER

Update Cancel Export as PDF Export as Excel

**View Inspection Results**

Work Order # 75 Vehicle 47

Created 02/05/24 03:47 PM By MARK K

Status **Open** Date Fixed

Notes

Enter notes

Description	Status	Date Fixed	Confirmation
Governor Cut In	Open		

Notes External ID

# Boost Safety with Driver Feedback

- Drivers ranked based on safety scores
- Individual feedback following each run, based on critical driving events:
  - Speeding
  - Harsh acceleration
  - Harsh braking
  - Harsh cornering
  - Idle time
  - Overall ride smoothness



## Student Ridership with Barcode or RFID

### 1) Student Scans on/off bus

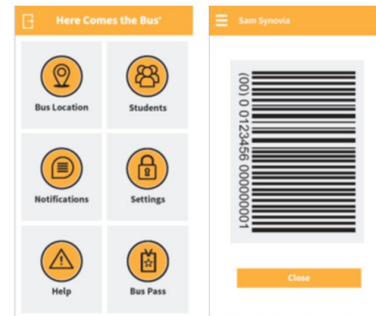
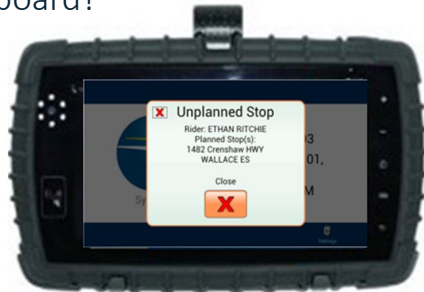
-Where's Tom, Dick and Harriet?

### 2) Verify – Scan Reports

- Did he get off at home?
- What time did he scan on?
- What address?

### 3) Accurate Manifest

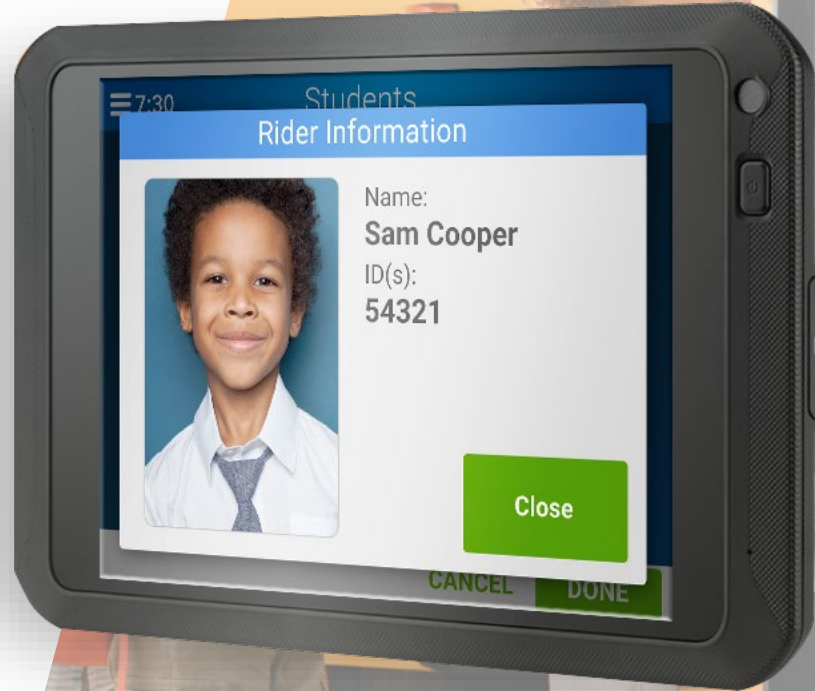
-Who's onboard?



# Bus Guardian

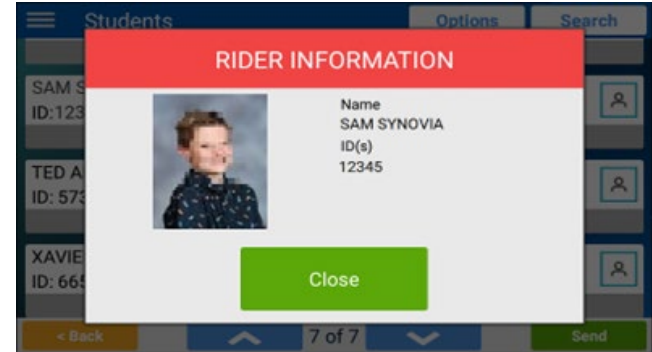
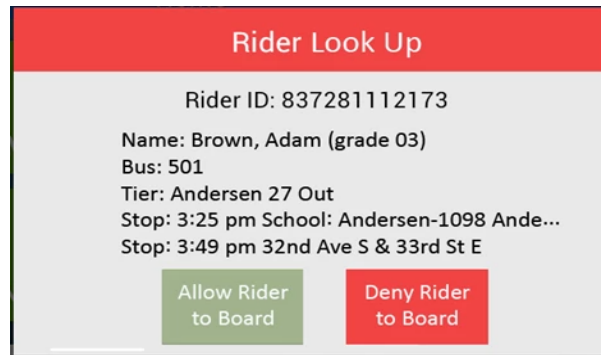
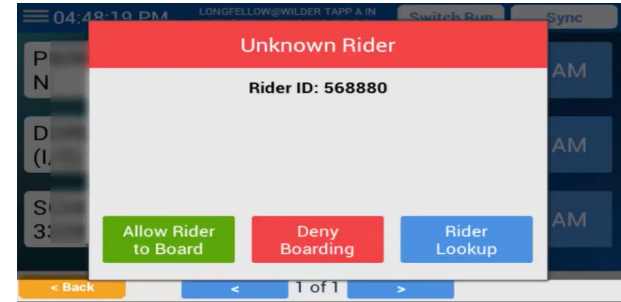
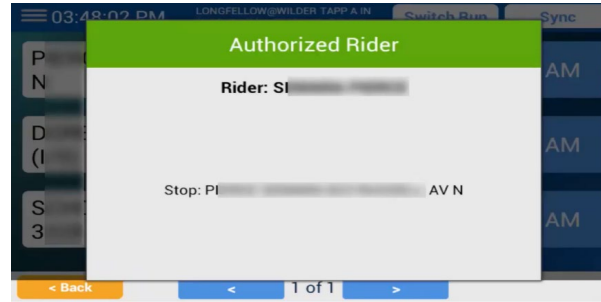
# Improve Safety with Student Ridership

- Capture ID when boarding or exiting bus:
  - Barcode on card or phone
  - RFID tag
- Student identity verified
  - If unknown, driver can look up rider and allow or deny
  - Notifications for wrong stop and duplicate rider



# MDT - Student Ridership

- When the student scans their ID, the Driver sees a response.
- Student presents ID at BOARDING and EXITING.
- RFID/Bar Code Scan
- Verify Right Bus – Right Stop
- Parent Notification of Scan with HCTB app



# Improve Safety with Award Winning Parent App

- Android and iOS downloads
- Ability to display and notify when:
  - Student scans
  - Bus is approaching
  - Bus arrived
- Supports custom push and email notifications
- Over 1.7 million downloads



Here Comes The Bus



4.6 • 72.9K Ratings

# Flexible Alert Configurations

250 ft | 2 mi

Andrew E

Devan C

Luke A

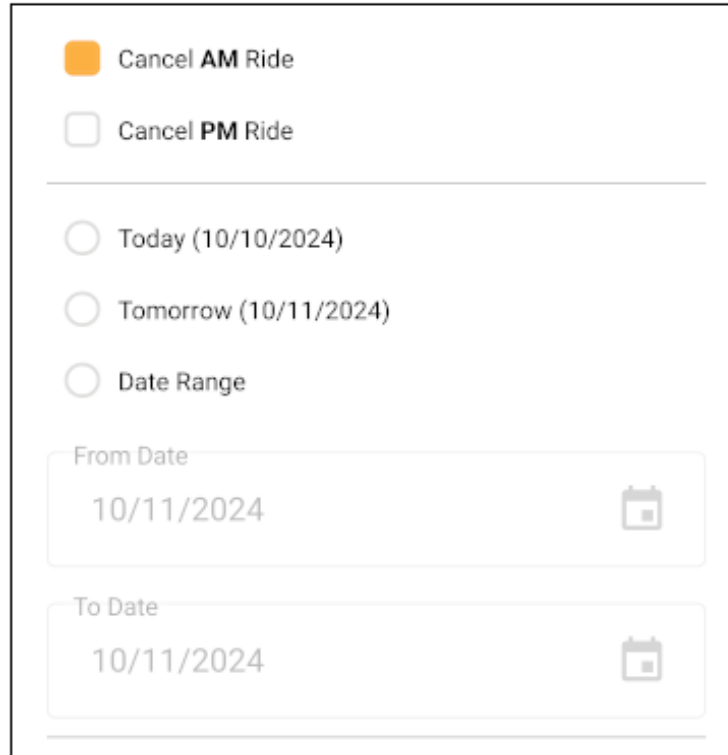
AM Stop  
SUNRISE DAYCARE DRIVEWAY

PM Stop  
SUNRISE DAYCARE DRIVEWAY

Event Type	Contact	Arrives	Leaves
AM Stop SUNRISE DAYCARE DRIVEWAY	ag_75@email.com	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Sunrise Andy	<input checked="" type="checkbox"/>	<input type="checkbox"/>
PM Stop SUNRISE DAYCARE DRIVEWAY	ag_75@email.com	<input type="checkbox"/>	<input type="checkbox"/>
	Sunrise Andy	<input type="checkbox"/>	<input type="checkbox"/>
Scan	ag_75@email.com	Enabled	
	Sunrise Andy	<input checked="" type="checkbox"/>	
Bus Substitution	ag_75@email.com	Enabled	
	Sunrise Andy	<input type="checkbox"/>	<input type="checkbox"/>
Calendar Exception	ag_75@email.com	Enabled	
	Sunrise Andy	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

- Edit radius, types of events, bus substitutions, and calendar exceptions

# Reduce Daily Parent Phone Calls



The screenshot shows a mobile application interface for managing ride cancellations. It features two toggle switches at the top: 'Cancel AM Ride' (which is turned on, indicated by an orange square) and 'Cancel PM Ride' (which is turned off, indicated by a grey square). Below these is a horizontal separator line. Underneath the line are three radio button options: 'Today (10/10/2024)', 'Tomorrow (10/11/2024)', and 'Date Range'. The 'Date Range' option is selected. Below the radio buttons are two date input fields. The first field is labeled 'From Date' and contains the date '10/11/2024'. The second field is labeled 'To Date' and also contains '10/11/2024'. Each date field has a small calendar icon to its right. The entire interface is enclosed in a thin black border.

- Enable parents to easily cancel pickups with “Cancel-a-Ride”

# Built on Advanced AI Technology – Transform Fleet Safety and Coaching



## Critical Driving Events Captured:

- Distracted driver/cell phone
- Drowsy driver
- Forward collision warning
- Harsh acceleration, braking, cornering
- Speeding, maximum speed
- Tailgating
- Manual recording “SOS” button:
  - Saves clip from being overwritten

## Pre-event Duration

9 seconds

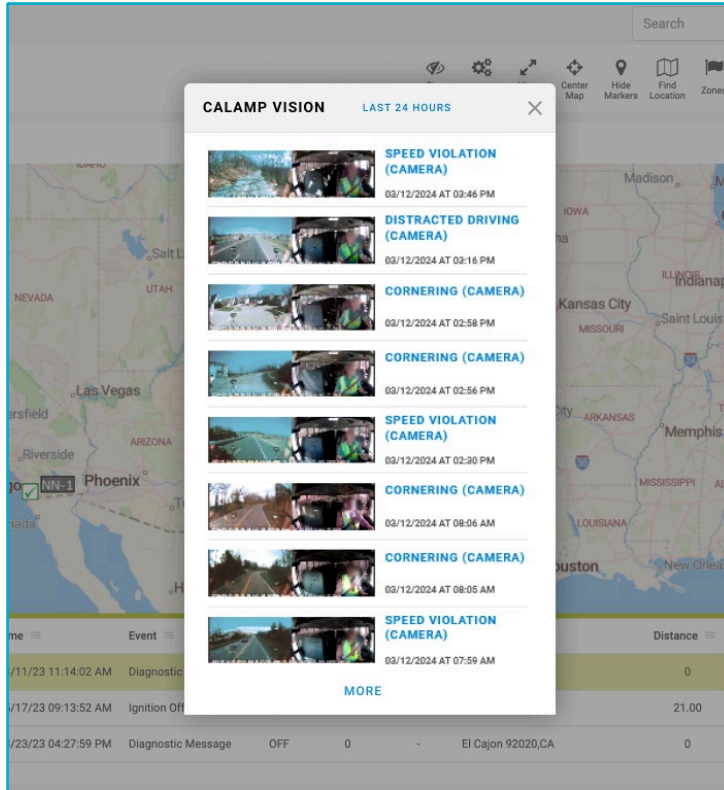
## Post-event Duration

5-6 seconds

## Video Retention:

- Bookmarked clips available for 6 months from the time of the event
- On-demand video availability based on size of memory card (coming soon)

# Bookmarked Events Are Curated in CalAmp



- Click thumbnails to review clips.
- Download videos with a simple right-click.

Thank you.  
Next steps?

Presented by:  
Dave Hoppa  
[dhoppa@calamp.com](mailto:dhoppa@calamp.com)  
303-478-4406

