

SmarTab-8 Datasheet



**The next generation of rugged Tablet
for Fleet and Mobile Workforce
Management**

powered by

ANDROID

Introduction

Micronet SmarTab-8 is a next generation Android rugged tablet designed for both in-vehicle and out-of-vehicle use. Coupled with a vehicle-connected cradle, it allows for a seamless shift between in-cab Telematics and standalone field-service modes of operation. Micronet SmarTab-8 provides a versatile, advanced and affordable mobile computing platform for a variety of Fleet Management and Mobile Workforce Management solutions.

Extended pool of services:

With ability to run multiple applications simultaneously, Micronet SmarTab-8 allows Telematics Service Providers and System Integrators to extend their offering beyond their own applications, provide their customers with advanced third-party mobility and field-service applications.

In the vehicle:

Placed in its vehicle-connected cradle, Micronet SmarTab-8 functions as a high-end on-board Telematics computer. With integrated GPS, cellular communication, various sensors and support for a variety of vehicle-bus and peripheral interfaces, Micronet SmarTab-8 enables a host of Fleet Management and mobility solutions such as: ELD/HOS, fleet tracking, driver behavior, real-time driver coaching, real-time fuel management, remote diagnostics and much more.

With a 8" multi-touch hardened screen, Micronet SmarTab-8 supports navigation solutions, routing and dispatch applications, task management, DVIR, real-time feedback to the driver and communication with head office and customers. Micronet SmarTab-8's two cameras, together with its powerful processor and extended memory, allow it to run the advanced algorithms required for applications like video analysis, driver fatigue recognition and ADAS.

With a rich set of wireless and wired interfaces – WiFi hotspot, BT tethering and BLE, Bluetooth Audio, NFC, WiFi direct, multiple CAN channels (including open/customizable CAN libraries) and multiple I/O – Micronet SmarTab-8 can function as an in-cab hub to which other devices, sensors and accessories easily connect.

In the field:

Once out of the vehicle, Micronet SmarTab-8 lets mobile workers remain effective and efficient with on-the-fly connectivity – anytime and anywhere – using cellular communication and WiFi. Its durable design withstands shocks, drops, water and dust (IP65) and a range of temperatures, allowing workers to operate freely in any environment. With a lightweight and pocket-sized form factor, Micronet SmarTab-8 is easy to carry and operate.

Ideal for signature capture, proof of delivery, field service applications, taking notes, managing tasks, taking high-quality photos, scanning barcodes, communicating with the back office and making video calls, Micronet SmarTab-8 is a superior and cost-effective solution for Mobile Workforce Management.

Micronet SmarTab-8 Device Cradle:

The Micronet SmarTab-8 Platform offers various types of vehicle Cradles allowing strong and protected Device mounting and electronic connection in the vehicle. Compatible with a standard “RAM” mounting arm, the Cradle supports easy solution installation and flexible Device position adjustment for convenience of use in nuanced vehicle cabin environment.

Two models of Micronet SmarTab-8 Cradles are available supporting various features and interfaces connection. The Standard Cradle model (pending) supports a basic set of the solution interface connectivity such as: Vehicle Power, Ignition switch signal and RS232 communication port. The Enhanced Cradle model supports a wide range of Serial communication ports, control I/O signals and various Vehicle BUS interfaces connection.

A user notification features – status LED and Buzzer are provided in addition for the Device connection control and Driver alerting purposes.

Device options:

Portable device: The unique “Detachment” mechanism of the SmarTab-8 Cradle allows strong Mounting and safe Device Removal options to support in-vehicle and out-of-cab Product operation. Cradle is available in two options: “Basic” (pending) – supporting only power / Ignition / RS-232 connectivity and “Enhanced” – adding also CANBUS, I/O, USB and LED/Buzzer interfaces.



SmarTab-8 Model	Mount	Power	Ignition	RS232	I\O	CAN	USB	MMI
Portable Enhanced	Portable	✓	✓	✓	✓	✓	✓	✓

Compatibility with Micronet SmartHub:

The Micronet SmarTab-8 is based on the same hardware and software platform as the Micronet SmartHub, the Micronet's next generation Android On-Board-Computer. Telematics Service Providers who develop applications for Micronet SmartHub can easily adjust and run them also on Micronet SmarTab-8 for fleet customers who need tablets as part of their solution.

Shorter development cycles:

Powered by Android open platform, Micronet SmarTab-8 platform offers a comprehensive development environment for independent application programming and system integration. With a huge ecosystem of Android development tools and software frameworks – and with a flourishing community of developers – working with Android devices leads to rapid development and integration cycles.

Lower Total Cost of Ownership:

Designed to operate in harsh automotive and field environments, withstand shocks and vibrations and function reliably in broad-ranging temperatures, Micronet SmarTab-8 lowers the Total Cost of Ownership.

SmarTab-8 Platform Key Features

Device Key Features	Details
Platform Core	
Operating System	Google Android™ 9.0
Application Development Environment	Google Android™ ADT
Processor	Qualcomm, SDM450 – 2 GHz (8 x ARM® Cortex™ A53)
RAM	3 GB
ROM	32 GB
Memory Card Support	Micro SD card slot - up to 128 GB (internal)
Watchdog	<ul style="list-style-type: none"> - SW based for application recovery - HW based for system recovery
User Interface	
Display	8" Color TFT LCD, HD (1280 X 800)
Backlight	LED, 500 nits
Touch Screen	CTP - Capacitive Multi-touch panel (5 points)
Glass Hardness	Gorilla Glass 4
HW Keys	1 X Power On/Off, 2 X Volume Up, Down
SW Keys (Touch panel based)	3 X Home, Back, Menu, 2 X SW configurable, multifunction
Light Sensor	Configurable for device backlight adjustment
Internal Microphone	High sensitive
Internal Speaker	1 X 1W
External Audio jack	OMTP
USB	Type-C, USB 3.0
Wireless Communication (with Integrated, Onboard internal antennas)	
Cellular (LTE)	<ul style="list-style-type: none"> - FDD 1/2/3/4/5/7/8/12/13/17/20/28 - GSM 850/900/1800/1900 - WCDMA 1/2/4/5/8 (DC-HSPA+) - 3FF, Micro SIM (Internal)
GPS	<ul style="list-style-type: none"> - 50 Channel, NMEA 0183, AGPS. - Satellite Systems Support: GPS, GLONASS, Beidou, Galileo
Wireless LAN	<ul style="list-style-type: none"> - WiFi - 802.11 b/g/n/ac, 2.4/5 GHz - Dual mode, WiFi Direct, HotSpot - up to 10 users
Bluetooth	V4.1 (Voice and Data) / BLE
Near Field Communication	NXP, PN547, 13.56MHz, IS15693 and IS18000-3
Motion Control	
Motion Sensors	<ul style="list-style-type: none"> - Compass - Gyroscope - Accelerometer

Device Key Features	Details
Integrated Cameras	
Rear Facing	13 MP + Flash
Front Facing	5 MP
Power	
Internal Battery	Li-Ion 6,000mA, Fast charge support
Mechanical	
Vibration	SAE J1455 Compliant
Mechanical Shock	SAE J1455 Compliant
Environmental	
Temperature Range	<ul style="list-style-type: none"> - Operating: -4 °F to +158 °F (-20 °C to +60 °C) - Storage: -22 °F to +176 °F (-30 °C to +80 °C)
Humidity	95% ±5%RH, +40°C, non-condensing
IP	IP65
Drop	MIL-STD-810G Compliant
RoHS	RoHS II Compliant
Certifications	
Standards Compliance	FCC, PTCRB, IC, CE, E-Mark

Enhanced Cradle Key Features

Communication Interfaces	
RS-232	<ul style="list-style-type: none"> - 1 X EIA-232 5 Wires (Tx, Rx, RTS, CTS, GND) - 3 x EIA-232 3 Wires (Rx, Tx, GND)
USB	1 X USB 2.0 Host Port (LS/FS/HS)
Peripherals Control	
Inputs	<ul style="list-style-type: none"> - 7 X inputs (0 – 32V) - Configurable Analog/Digital functionality
Outputs	4 x Open Collector Outputs
Status indication	
LED	1 X Status LED
Buzzer	1 X Notification Buzzer
Audio	
External Audio interfaces	<ul style="list-style-type: none"> - 1 X external Microphone connection - 1 X external Speaker connection
Vehicle Diagnostic	
CAN BUS	2 X CAN channels
J1708	1 X SAE-J1708
Power	
Input Power	<ul style="list-style-type: none"> - Direct vehicle battery connection (8-32V) - ISO 7637 Compliant
Mechanical	

Vibration	J1455 Compliant
Mechanical Shock	J1455 Compliant
Device Mounting	RAM® Mount mounting arm compatible
Environmental	
Temperature Range	- Operating: -4 °F to +158 °F (-20 °C to +70 °C) - Storage: -22 °F to +176 °F (-30 °C to +80 °C)
Humidity	95% ±5%RH, +40°C, non-condensing
IP	IP45
RoHS	RoHS II Compliant
Certifications	
Standards Compliance	FCC, CE, IC

Portable Tablet



Portable Tablet in Cradle



Portable Enhanced model



Enhanced model – pinout

GCAB577 \ GCAB596

SIGNAL	J1	P1	P2	P3	AWG	COLOR
IGNITION	3	1			24	RED/WHITE
POWER_INPUT	1	4			24	RED
PWR_GND	2	3			24	RED/BLACK
GP_IN1	14		1		24	YELLOW
GP_OUT1	9		2		24	PURPLE
UART_TX	8		5		24	TAN
UART_RX	12		4		24	BLACK
GND	13		6	8 3	24	RED/BLUE
OTG_USB_VBUS	6			5	24	ORANGE/BLACK
OTG_USB_DN	4			6	24	WHITE
OTG_USB_DP	5			7	24	GREEN
USB_GND	7			4	24	WHITE/BLACK
DBG_TX	10			1	24	BLUE
DBG_RX	11			2	24	ORANGE/GREEN

GCAB597

SIGNAL	J1	P2	P3	AWG	COLOR
CAN1_P	5	1		26	RED
CAN1_N	15	2		26	WHITE
CAN2_P	22	3		26	GREEN
CAN2_N	23	4		26	YELLOW
J1708_P	24	5		26	BLUE
J1708_N	25	6		26	PINK
GND	9	7		26	BLACK
SWC	26	9		26	BROWN
GP_IN2	4		1	26	ORANGE
GP_OUT2	6		2	26	PURPLE

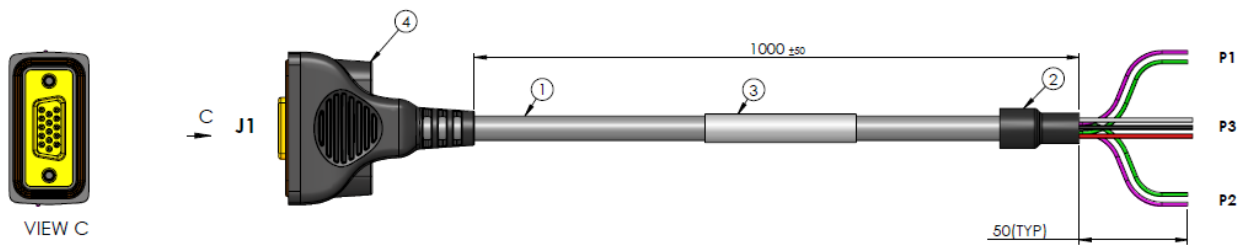
GCAB579

COLOR	J1	AWG	TWISTED PAIR	P2	P3	P4	P5	P6	FUNCTION
RED	5	26	T1	1					CAN1_P
WHITE	15	26	T1	2					CAN1_N
GREEN	22	26	T2	3					CAN2_P
YELLOW	23	26	T2	4					CAN2_N
BLUE	24	26	T3	5					J1708_P
PURPLE	25	26	T3	6					J1708_N
BLACK	18	26		7					GND
RED/WHITE	26	26		9					SWC
ORANGE	17	26			1				CTS
BLUE	20	26			2				RTS
BROWN	21	26			3				UART_TX2
YELLOW	8	26			4				UART_RX2
PURPLE	9	26			5			10	GND
BLACK	10	26	T4				1		MIC_P
BLACK/WHITE	19	26	T4				2		MIC_N
SHIELD	9	26				03	3		GND
BROWN	1	26	T5			1			SPEAKER_P
BROWN/WHITE	11	26	T5			2			SPEAKER_N
SHIELD	9	26				3	03		GND
BLUE	4	26						1	GP_IN2
PURPLE	14	26						2	GP_IN3
LIGHT BLUE	3	26						3	GP_IN4
GRAY	13	26						4	GP_IN5
PINK	2	26						5	GP_IN6
BROWN	12	26						6	GP_IN7
WHITE	6	26						7	GP_OUT2
GREEN	16	26						8	GP_OUT3
LIGHT GREEN	7	26						9	GP_OUT4

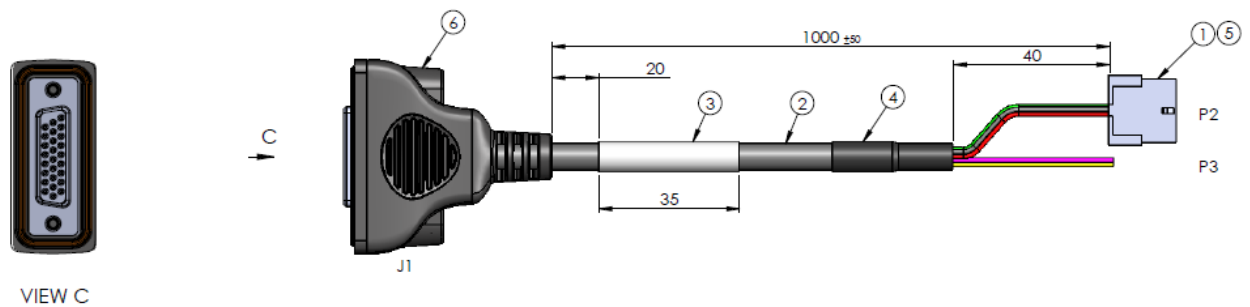
Cables

Standard cables for production units:

GCAB577 (Basic)

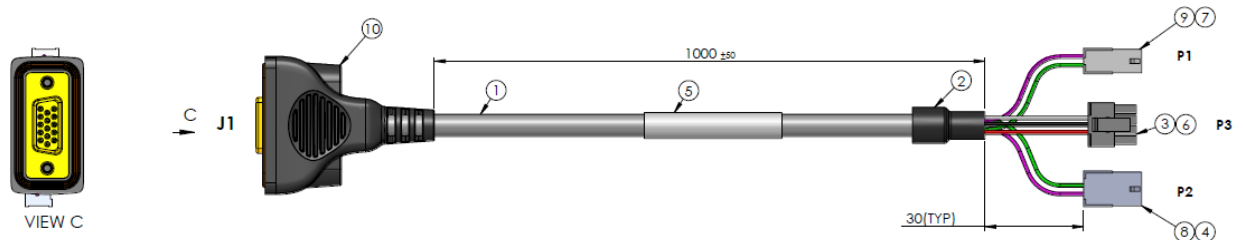


GCAB597 (Enhanced)



Development Kit (DTK) cables:

GCAB596 (Basic)



GCAB579 (Enhanced)

